The WTO Agreement on Technical Barriers to Trade and Environmental Protection

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List of Abbreviation

AIDCP	Agreement on the International Dolphin Conservation Program
CAP	conformity assessment procedures
CTE	Committee of Trade and Environment
CGB	central government body
CSO	civil society organisation
GATT	The General Agreement on Tariffs and Trade
IATTC	Inter-American-Tropical-Tuna-Commission
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
LGB	local government body
MEA	multilateral environmental agreement
MFN	Most-favoured-nation
NGB	non-governmental body
NT	National Treatment

NPR-PPM-measure	non-product-related PPM-measure
PPM	process and production method
PR-PPM-measure	product-related PPM-measure
SCP	sustainable consumption and production
SPS Agreement	Agreement on the Application of Sanitary and Phytosanitary Measures
TBT Agreement	Agreement on Technical Barriers to Trade
TBT Committee	Committee of the Technical Barriers to Trade
TNLF requirement	Requirement of Treatment No Less Favourable

List of cases

Appellate Body Report, *Japan - Alcoholic Beverages, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R (Adopted 1 November 1996)* (1996)

——, *United States - Standards for Reformulated and Conventional Gasoline ('US - Gasoline'), WT/DS2/R* (1996)

——, *European Communities - Measures Concerning Meat and Meat Products ('EC - Hormones'), WT/DS26/AB/R and WT/DS48/AB/R* (1998)

——, *European Communities - Measures Concerning Meat and Meat Products (Hormones) ('EC - Hormones'), WT/DS26/AB/R, WT/DS48/AB/R* (1998)

——, *United States - Import Prohibition of Certain Shrimp and Shrimp Products ('US - Shrimp'), WT/DS58/AB/R* (1998)

——, *European Communities - Measures Affecting Asbestos and Products Containing Asbestos ('EC - Asbestos'), WT/DS135/AB/R* (2001)

——, *Korea - Measures Affecting Imports of Fresh, Chilled and Frozen Beef ('Korea - Various Measures on Beef'), WT/DS161/R* (2001)

——, *United States - Import Prohibition of Certain Shrimp and Shrimp Products Recourse to Article 21.5 of the DSU by Malaysia ('US - Shrimp (Article 21.5 - Malaysia)'), WT/DS58/AB/RW* (2001)

——, *European Communities - Trade Descriptions of Sardines ('EC - Sardines'), WT/DS231/AB/R* (2002)

——, *United States - Measures Affecting the Cross-Border Supply of Gambling and Better Services ('US - Gambling'), WT/DS285/AB/R* (2005)

——, *Brazil - Measures Affecting Imports of Retreaded Tyres ('Brazil - Retreaded Tyres'), WT/DS332/AB/R* (2007)

——, *United States - Measures Affecting the Production and Sale of Clove Cigarettes ('US - Clove Cigarettes'), WT/DS406/AB/R* (2012)

——, *United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna*

(Mexico) II'), WT/DS381/AB/R (2012)

International Court of Justice Reports of Judgments, 'Case Concerning the Gabcikovo-Nagymaros Project (Hungry/Slovakia)' (1997)

Panel Report, *European Communities - Protection of Trademarks and Geographical Indications for Agricultural Products and Foodstuffs ('EC - Trademarks and Geographical Indications (Australia)'), WT/DS290/R* (2005)

——, *European Communities - Measures Affeting the Approval and Marketig of Biotech Products ('EC - Approval and Marketing of Biotech Products'), WT/DS291/R* (2006)

——, *European Communities - Measures Prohibiting the Importation and Marketing of Seal Products ('EC - Seals Products'), WT/DS400/R, WT/DS201/R* (2013)

——, *United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna II Article 21.5 of the DSU by Mexico'), WT/DS381/RW* (2015)

GATT Panel Report, United States - Restrictions on Imports of Tuna ('US - Tuna (Mexico) I'), DS21/R-39S/155, 1991

——, *United States - Restrictions on Imports of Tuna ('US - Tuna (EC)'), DS29/R, 1994*

List of Treaties

The General Agreement on Tariffs and Trade

The Agreement on Technical Barriers to Trade

Vienna Convention on the law of treaties

UN Convention on Biological Diversity (CBD)

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

Stockholm Convention on Persistent Organic Pollutants

United Nations Convention on Climate Change (UNFCCC)

UN Convention to Combat Desertification (CCD)

United Nations Convention on the Law of the Sea (UNCLOS)

The United Nations Agreement for the Implementation of the Provisions of the UNCLOS relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks

Chapter 1: The WTO Agreement on Technical Barriers to Trade and Environmental Protection

> "The Preamble attached to the *WTO Agreement* shows that the signatories to that Agreement were, in 1994, fully aware of the importance and legitimacy of environmental protection as a goal of national and international policy. The Preamble of the WTO Agreement -- which informs not only the GATT 1994, but also the other covered agreements – explicitly acknowledges 'the objective of *sustainable development*'."[1]

Within the World Trade Organisation, the balancing between the rights of Members under WTO obligations and the rights to regulate and address concerns of a Member's domestic constituencies is a continual challenge.[2] On the one hand, the Organisation needs to assure fairness to Members who have complied with WTO agreements and promote the economic equity among States, especially those with less commercial and political strength in the international arena. On the other hand, it needs to give room for Members to exercise its sovereignty. Individual Members are also under various environmental obligations of their own. Not only that, the Organisation itself has recognised the importance of other values to override that of trade and commerce.

To do so, the Organisation is bound to prevent "a means of arbitrary or unjustifiable discrimination" and "a disguised restriction on international trade".[3] The non-discrimination policy appears to be a rational approach to address such

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[1] *Appellate Body Report, United States - Import Prohibition of Certain Shrimp and Shrimp Products ('US - Shrimp'), WT/DS58/AB/R, 1998*, at para. 129. [emphasis as original]

[2] See, for example, *Appellate Body Report, United States - Standards for Reformulated and Conventional Gasoline ('US - Gasoline'), WT/DS2/AB/R, 1996*, at p. 22.

[3] The Chapeau of Article XX, The General Agreement on Tariffs and Trade (GATT).

competing interests. Yet, there is no deny that its implementation would affect a whole host of measures including those appearing to address environmental problems.

An example is the problem of by-catch in fishery which is undoubtedly fuelled by trade growth and market liberalisation. Accidental overexploitation from death and injury of any species as by-catch of fishing or hunting processes has been one of the grave environmental concerns. Several species of sea turtles have been specifically acknowledged in World Conservation Strategy since 1980 to have been threatened by such "highly wasteful" practices.[4]

A measure under the US conservation law that addresses the exact concerns of by-caught sea turtles however was contested by several Members of the WTO and subsequently rejected under the General Agreement on Tariffs and Trade (GATT).[5] The measure prohibits shrimp products harvested from unacceptable trawling processes that do not conform to the US specific standards. Such a measure addresses the environmental concerns relating to product life-cycle beyond the physical properties of the product. With its trade-restrictive features, the measure was under the coverage of the WTO Agreement and was at the "interface" between international trade rules and environmental regimes. At first glance, the rejection in this case, like the others involving environmental interests, seems to have represented a clash between the WTO rules and environmental protection.

[4] International Union for Conservation of Nature and Natural Resources (IUCN), 'Section 4', *World Conservation Strategy* (1980), at para. 5.
[5] *Appellate Body Report, US - Shrimp, 1998* (n 1), at para. 188.

The case of US-Shrimp in 1998 has showcased the main questions in trade-environment debates: whether and to which extent that WTO Members could address environmental concerns by a means affecting trade activities, without violating its obligations. The excerpt from the case above clearly expresses the WTO's commitment to the objectives of sustainable development. The decision in the case also spells out how the concept of sustainable development could be materialised in the legalistic term,[6] the approach that echoes with the principle of integration.

Eighteen years on, the scenario of trade-environment conflicts still remain one of the important concerns. Attempts to reduce the tension with environmental regimes have been presented in negotiation and coordinating forums. Disagreements and disputes derived from the interface between trade and environmental regimes are still being dealt with. More of such measures at the interface between the interests of international trade and environmental protection, it is expected that the materialisation of sustainable development similar to the one in US – Shrimp case will continue to be applied in the context of the Agreement on Technical Barriers to Trade (TBT Agreement).[7]

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[6] As will be discussed in Chapter 5.

[7] As seen in the latest dispute settlement case of US-Tuna (Mexico) II decided by the Appellate Body in 2012. See *Appellate Body Report, United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna (Mexico) II'), WT/DS381/AB/R, 2012*. Current status of complaints regarding the compliance with the Appellate Body's recommendations (the recourse to article 21.5 of the Understanding on rules and procedures governing the settlement of disputes (DSU) by Mexico) can be found in: WTO, 'Dispute Settlement: Dispute ds381' (1 June 2015) <https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds381_e.htm,> accessed 1 June 2015. Other discussions and disagreements also appear in coordinating forums, such as the TBT Committee. See more details in Chapter 6.

A growing number of such environmental measures are related to a wide range of environmental objectives, including: soil, air and water pollution reduction, energy efficiency and conservation, waste management and wildlife conservation[8] such as those in the US-Shrimp case above. They are also disparate in institutional structures, strategies and technical backgrounds, many of which are adopting a vast range of innovative features.[9] The conventional government's command-and-control regulations are now accompanied by various types of bodies involved in the making and applying of regulatory schemes, measures that are voluntary by law but significant in business practice, as well as those comprising new and complex concepts such as the life-cycle schemes for energy or water efficiency,[10] low carbon footprint labelling[11] and food miles programmes.[12]

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[8] WTO Secretariat, *Harnessing Trade for Sustainable Development and a Green Economy* (2011) <https://www.wto.org/english/res_e/publications_e/rio20_e.htm> accessed 1 March 2015, at 12.

[9] For a brief review of instruments, mostly those that are related to business sector, see Andrew Jordan, Rudiger Wurzel and Anthony Zito, '"New" Instruments of Environmental Governance: Patterns and Pathways of Change' (2003) 12 Environmental Politics 1. They nevertheless scrutinize in detail the meaning of "new" and argue that the current patterns are only the evolution, as opposed to "new" or unprecedented emergence. This nevertheless does not contradict with the fact that a vast range of measures have obtained new characters and tactics.

[10] Such as the standards for "water footprinting" established by the International Organisation of Standards (ISO). For example, see the overview in: Markus Berger and Matthias Finkbeiner, 'Water Footprinting: How to Address Water Use in Life Cycle Assessment?' (2010) 2 Sustainability Journal 919.

[11] Such as the Carbon Trust Labelling Standards. See Carbon Trust, 'Carbon Footprint Labels from the Carbon Trust' <http://www.carbontrust.com/client-services/footprinting/footprint-certification/carbon-footprint-label> accessed 1 June 2015.

[12] The programme essentially promotes local produces, or produces that had not been transported from long distance, in order to reduce CO2 emission. Discussions about whether food mile information should be reflected on the labels of food products can be found in: House of Commons Library, 'Food Miles' (2012) <http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN04984> accessed 1 June 2015.

Though many measures are new and at the early stage of evolvement for environmental movements, most of them are part of the old concerns for the WTO. Viewed from trade perspectives, they are "barriers" to trade, potentially having been established as a disguised tool to discriminate against imported products in favour of products made by local manufacturers. They are a part of the large body of environmental governance, consisting of both "old" and "new" measures, that has been one of the WTO's long-standing concerns.

Environmentally aware audience is nervous that international trade rules would obstruct such measures perceived to be the new hope for green economy as various environmental measures have been overruled in the past.[13] They tend to create burdens for manufacturers and traders who have yet to change their practices or acquired the newly required technologies.

However, as Thomas Cottier argues, "[t]rade [rules] and liberalisation is frequently depicted as a contrast to environmental concerns. Such juxtaposition does not stand up to detailed scrutiny. It is necessary to look at the relationship [between trade and environmental regimes] area by area, taking into account the overall context and effect of [trade

[13] This attitude about the WTO is widely reflected in public criticisms such as those of the Public Citizen's Global Trade Watch (GTW), a self-proclaimed non-profit organization based in USA. See, for example, 'Public Citizen and Sierra Club Denounce World Trade Organization Attack on Successful Clean Energy Program' (*Eyes on Trade*, 2013) <http://citizen.typepad.com/eyesontrade/2013/05/public-citizen-and-sierra-club-denounce-world-trade-organization-attack-on-successful-clean-energy-p.html> accessed 1 September 2014; and'Public Citizen Condemns WTO Attack on US Dolphin Protection Efforts' (16 May 2012) <http://citizen.typepad.com/eyesontrade/2012/05/public-citizen-condemns-wto-attack-on-us-dolphin-protection-efforts.html> accessed 1 September 2014.

rules]."[14] Needless to say, legal relationship between the TBT Agreement and environmental concerns must be investigated thoroughly and take cautions of the over-generalised perception that may underpin a notion of conflict between the interests of the Agreement and those of environmental protection.

From viewpoint of international trade, the contention against trade-restrictive measures is legitimate. Technical requirements are likely to differ among different importing countries. The problems arise when trading partners do not agree that the requirement is actually making the product and/or its life-cycle, as seen in the US-Shrimp case.[15] The most popular point of contention in relation to product-related measures would be under the principle of non-discrimination: whether they constitute an impermissible non-tariff barrier and are in fact an abuse of multilateral trading system. Many are not only seen as part of an unnecessary, obscure and unpredictable "red tape", but also an attempt to illegitimately favour domestic products at the cost of other Members of the WTO.[16]

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[14] Thomas Cottier, 'The WTO and Environmental Law: Three Points for Discussions' in Agata Fijalkowski and James Cameron (eds), *Trade and the Environment: Bridging the Gap* (Cameron May 1998).

[15] In the case, the application of the US requirement prohibits shrimps imports from countries that have not adopted the same regulatory measure, i.e. requiring the "turtle excluding devices", regardless of whether such countries adopt other comparable schemes and whether the suppliers from the non-conforming countries have voluntarily used such devices. The Appellate Body indeed went so far as to stating that "[the contested] measure, in its application, is more concerned with effectively influencing WTO Members to adopt essentially the same comprehensive regulatory regime as that applied by the United States to its domestic shrimp trawlers, even though many of those Members may be differently situated." *Appellate Body Report, US - Shrimp, 1998* (n 1), at para. 165.

[16] See *WTO Briefing Note for the 9th WTO Ministerial Conference in Bali: Trade Facilitation – Cutting 'Red Tape' at the Border* (2013) <http://wto.org/english/thewto_e/minist_e/mc9_e/brief_tradfa_e.htm, accessed September> accessed 1 September 2014.

Decisions under the TBT Agreement, like the GATT, are made under the framework centred on international trade and the markets. As the WTO repeatedly recited by the organization itself, "the WTO is not an environmental protection agency".[17] Yet, the WTO's determination that a measure violates any of its rules, or the prospect of such determination, could well affect how Members and their technical bodies are to address environmental concerns – much of which are heightened by the growth of commercialism.

The WTO is a part of the global community and cannot operate as a "self-contained regime".[18] Not only that, with the expressed commitment to the concept of sustainable development in the Marrakesh Agreement and in the Appellate Body's decision in US – Shrimp case, the WTO rules cannot be applied in isolation from the global concerns about the environment and the sustainable development agenda.[19]

The "integration" of two competing regimes such as trade and environment is a complex task and must be discussed in due technical depth. In this thesis, only one of the core principles of the TBT Agreement is selected for an elaborate analysis on its implication on environmental protection: the requirement of "treatment no less favourable".

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[17] As repeated in various publications of the WTO as one of the important "parameters" for the operation of the CTE. See for example, WTO, *Trade Topics: Trade and Environment at the WTO* (WTO Publications 2004) <http://www.wto.org/english/res_e/publications_e/trade_env_e.htm> accessed 1 September 2014, at 6; and WTO, *Doha WTO Ministerial 2001: Briefing Notes on The Trade and Environment Committee, and Doha Preparations* <http://www.wto.org/english/thewto_e/minist_e/min01_e/brief_e/brief11_e.htm> accessed 1 September 2014.

[18] Joost Pauwelyn, 'The Role of Public International Law in the WTO: How Far Can We Go?' (2001) 95 American Journal of International Law 535.

[19] Pauwelyn (n 27).

As will be presented in Chapter 6, environmental protection is not only relevant to "the field of environmental law" but is of direct significance to international trade regimes. Fundamental questions arising from any examination of the implementation of the integration principle in the TBT context are still largely underexplored, especially in comparison with the other Agreements that govern similar types of measures, such as the GATT 1994 or the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement).

The comparatively little attention to the TBT Agreement in academic literature has been due to the less disputes under its provisions. However, there has been a fast growing body of case law elaborating TBT rules since 2011. Its case law not only has had a speedy process of development in the past few years but also has interpreted the rules in a way that makes further advances upon the normative foundation developed in the GATT context. Since then, there have been some discussions about the outcome of recent cases. Yet, there should still be the more in-depth and contextualised discussions on the TBT rules.

The TBT's relationships with environmental regimes, both in domestic or international levels, is also increasing, as is evident from the number of Members' notifications to the Secretariat on environment-related measures that may be under the coverage of the TBT Agreement, which has been acknowledged by Members and the Committee of Trade and Environment (CTE),[20] as well as, the rapidly increasing number of dispute settlement cases argued and determined

[20] Note by the Secretariat, Committee on Trade and Environment - Environmental database for 2011, WT/CTE/EDB/11, 21 August 2013.

under the Agreement.[21] So far, not enough discussions have been dedicated to the relationship between the TBT discipline and environmental protection in technical details.

This thesis therefore helps to fill the gap. It explores in thorough details the core components of the TBT Agreement and makes proposals on how the TBT provision, particularly the requirement of treatment no less favourable, should be applied in relation to environmental interests in light of the concept of sustainable development.

Outline of the Thesis

Chapter 2 introduces TBT instruments and the coverage of the Agreement, mainly determined by the definition of the three technical measures from the TBT perspectives: technical regulation; standards and conformity assessment procedures (hereinafter generically referred as technical measures). The applicability of the TBT provisions depends on whether the measure in question constitutes one of the three measures.

An important issue discussed here is the coverage over measures that address the "processes and production methods" (PPM-measures). The issues of PPMs, or the "life-cycle" of products as more popularly called in among environmentalists, are often debated under the trade-environment theme. They therefore will be brought into the discussions from various aspects in this thesis. In Chapter 2, the crucial point, which will be brought into the analysis in

[21] See statistics of dispute consultations during 1995-2012 categorised by concerned Agreements (particularly Figure 4) in: WTO, Dispute Settlement Developments in 2012, http://www.wto.org/english/tratop_e/dispu_e/bashir_13_e.htm, accessed July 2014.

Chapter 7, is the three criteria of "product-relatedness" that are used to determine the TBT coverage over a PPM-measure.

Chapter 3 explains the different types of technical bodies that are directly responsible for the preparation, adoption and/or application of technical measures above: the central government bodies (CGBs), local government bodies (LGBs) and non-governmental bodies (NGBs) (hereinafter generically referred as technical bodies). The characterisation of a technical body is significant as the type of technical measure and body would determine the applicable provision of the TBT Agreement.

The chapter will point out that the key element to distinguish among the three technical bodies is the authoritative relationship, or the lack of it, that the central government may have with them. It will also demonstrate that the determination of the type of technical body may in many occasions contradict with the general perception of respective bodies due to their relationship with the government regarding the measure at issue. In doing so, it shows the ambiguity and potential conflicts in the definition of the three terms, and predicts the WTO's interpretation tendency by comparing the TBT context to the GATT.

Chapter 4 explores the TBT discipline in detail, namely: the requirement of treatment no less favourable (TNLF requirement); the prohibition of unnecessary trade-restrictiveness; and the reference to international standards in the preparation and application of a technical measure. The chapter aims to provide an overall picture of the TBT discipline. It includes technical details that present necessary

nuance of each requirement/principle. The explanation of the discipline, especially the TNLF requirement, provides a foundation for the appraisal of the TBT provisions and the concept of non-discrimination in Chapter 7.

Chapter 4 also explores the GATT concept of necessity to demonstrate that the term necessity has a specific meaning in the WTO parlance due to its complex analysis in the necessity test. In this regard, the chapter argues that the necessity concept does not require "the least trade-restrictiveness" as may have been understood by some commentators. It then suggests that the similar "weighing and balancing" analysis should be applied in an examination under the TBT prohibition of unnecessary trade-restrictiveness, since it is already resonated in the stipulation of the TBT necessity provision Article 2.2.[22] This said, the determination of "necessity" in the TBT context should be less strict or narrow, as it is no longer part of an exception provision like Article XX of the GATT.

Chapter 5 explains the concept of sustainable development and its relevance to this thesis. It demonstrates that the concept calls for mutual supportiveness in the operation of all legal regimes despite their different interests, not one over the other, development over the environment and vice versa. The relationship between international trade rules and environmental protection should be guided by the principle of integration. The chapter then presents the reasons why the WTO/TBT provisions should be applied consistently to the principle.

[22] E.g. Article 2.2, the TBT Agreement

It emphasises that the principle focuses on the procedural aspects of the decision-making, that environmental considerations are sufficiently taken into account. This provides a conceptual framework for the analysis in Chapter 7 which will take the principle of integration and the interpretative approach to implement the concept of sustainable development as guidance. The chapter also provides a reminder that the evaluation of relationship between the WTO/TBT rules and environmental interests should not be dominated by a rejection or permission of an "environmental" measure in a single dispute settlement case. Doing so will create a misinformed notion of conflict and an unconstructive pretext to trade-environment analysis.

Chapter 6 takes a step back and explores "environmental" governance, starting from questioning what it may refer to. This is responsive to the general connotation of the term "environmental" when used to juxtapose trade interests. In fact, environmentalism consists of a great variety of shades and not all "environmental" measures are "environmentally correct/ effective". International trade provides a dynamic for development of environmental measures, and international trade rules could offer a great forum to debate and filter out unconstructive actions purporting to protect the environment.

The chapter presents the complex and diverse mechanisms of environmental protection that tend to intersect with the TBT rules. It does so by exploring (1) multilateral environmental agreements under which trade-related measures, many of which could constitute a technical measure under the TBT coverage, are endorsed; and (2) the UN Environment Program's concept of sustainable consumption and production,

that cover life-cycle measures that are often contentious in the WTO application as PPM-measures explained in Chapter 2. The illustration of environmental governance in this chapter should provide a more balanced perspective for the discussions about the Agreement, which is usually neglected in most trade-environment discussions.

Chapter 7 finally analyses the TBT provisions in relation to environmental protection and in implementation of the principle of integration. Its focus is on the TBT-TNLF requirement and the concept of non-discrimination. The discussions are divided into three sections dedicated to: the TBT coverage over PPM-measure; like-products; and the interpretation of treatment no less favourable in light of the balancing objective expressed in the TBT Preamble.

Section I revisits the issue of "product-relatedness" of a PPM, and argues that, in the case of measures other than the information-related measures included in paragraph 2 of Annex 1.1,[23] the determination should be open for non-physical relatedness, such as the public perception about environmental credentials of a product's life-cycle. This said, it raises attention that the society still needs to develop better understanding and public conscience towards environmental damages caused by any stages of a product's life, before such credentials or the lack of them could be better recognised under the WTO/TBT rules as an integral part of the product itself.

Section II discusses the concept of like-product in thorough detail. It demonstrates the analytical function of the concept

[23] Such as labelling and terminology used with the product.

and argues that it should best remain market-related, and not determined in favour of the regulatory distinction simply to permit a measure citing environmental protection under the WTO/TBT rules. Legitimacy and virtue of a measure is better considered in the second stage of the assessment, whether the regulatory distinction creates "treatment less favourable" in violation of the TBT provisions. This said, it argues that, as a result of EC-Asbestos case, the currently available criteria of likeness, namely the physical properties and consumers' tastes and habits, could cater for more environmental qualities of a product and some of its PPMs than they used to. Again, one cannot expect such a development of the WTO/TBT jurisprudence in this regard without the development of public awareness and environmental conscience towards the life-cycle of products.

Section III then discusses the meaning of treatment no less favourable in the TBT context. It takes the guidance from Chapter 6 to propose how the requirement should be applied in light of the sustainable development concept. In particular, it refers to the balancing objectives in the sixth recital of the TBT Preamble and argues that the GATT jurisprudence in the context of Article III:4 is an inadequate guidance for the interpretation of Article 2.1 of the TBT Agreement in relation to measures citing environmental protection – despite the exact same phrase used in both provisions.

In summary, that the compliance to the national treatment such as that in Article III:4 has consistently been examined rather restrictively and "one-sided". That is, even though the regulatory context is considered, it is to serve the market-centric purpose: to prevent trade protectionism.

This is different to the examination under Article XX of the GATT which embodies a notion of "balance" in its object and purpose. The examination of the regulatory context under the non-discrimination requirement in the Chapeau of Article XX is, in principle, more "open" to the environmental considerations and the rationale of the measures from the environmental perspectives. With the comparison between Article III and the Chapeau of Article XX of the GATT as a background parameter, Section III demonstrates that the current approach of examination under the TBT treatment no less favourable requirement is too market-centric, like Article III of the GATT, and should allow more considerations from environmental perspectives in the determination of "legitimate regulatory distinction" to realise the "balancing" policy as set out in the TBT Preamble.

There are great virtues for Section II and III to discuss the requirement of treatment of no less favourable in elaborate details. Although the requirement is only one among other principal requirements in the TBT discipline, it deserves much attention from the perspectives of environmental protection as well as the evolvement of WTO rules.

The provisions on the requirement of treatment no less favourable (TNLF) form a substantive part of the concept of non-discrimination, which is one of the main pillars of the WTO law and is greatly relevant to the trade-environment discussions since the GATT era. Much of environmental considerations have been dealt with under both National Treatment (NT) requirement in Article III:4 and the broader non-discrimination requirement in Article XX.

While the TNLF requirement in the TBT Agreement is stipulated with the exact same phrase as that in Article III:4 of the GATT, this thesis argues that it should be interpreted differently. Some has even argued that the GATT should follow the TBT guidance in this regard.[24] Such an evolvement is due to the seemingly minor differences between the GATT and the TBT Agreement, such as the lack of general exception provision in the TBT Agreement and the recognition of certain legitimate objectives in its Preamble.

This way, the interpretation of the TBT requirement on treatment no less favourable may be interpreted in the way that better "balances" the WTO's anti-protectionist policy and environmental objectives. If so, it may offer another platform by which the "integration", similar to the one demonstrated in the case of US-Shrimp in 1998, would be promoted.

Methodology

With the main emphasis on the normative principles of the TBT Agreement, this research adopts a doctrinal methodology. It is based on primary and secondary materials. Most primary resources are those produced by the WTO, such as decisions of dispute settlement bodies, meeting reports of the CTE and the Committee on Technical Barriers to Trade (the TBT Committee) and preparatory papers by the WTO Secretariat. Published papers of other relevant organisations, such as the UN Environment Programme, are also included. The secondary literature is taken from the fields of international trade, environmental law, and the interface between the two.

[24] I do not necessarily agree with the rationale of this proposal, as will be explained in Chapter 7.

Chapter 2: Scope of the TBT Agreement

This chapter aims to introduce the instrumental components of the Agreement on Technical Barriers to Trade (TBT Agreement). It also explains the scope of the Agreement which is delineated by the definition of three types of measures expected to observe the TBT discipline: technical regulations, standards and conformity assessment process (CAP). All of them are specified in Annex 1 and are generically referred in this thesis as "technical measures".

The definition is detrimentally significant to the application of the TBT Agreement. The question of whether the actual measure constitutes one of the three types of technical measure determines whether the measure at issue is under the TBT Agreement. Then, identifying the type of bodies that are responsible for the establishment and application of a TBT covered measure would determine which TBT provisions are applicable.

It is useful to note at the outset that the definition in the TBT Agreement does not mention environmental or other regulatory objectives. The classification of objectives would be brought into the debate because of the SPS Agreement. As will be explained in this chapter, measures constituting an SPS measure under the SPS Agreement would be excluded from the scope of the TBT Agreement.

While the two agreements cover measures of the very similar characters, the purported objective of the contested measure is significant in determining whether it falls under the SPS

coverage. Among such objectives can also be those generally deemed under the "environmental" rubric.

1. Structure of the TBT Instrument

The TBT Agreement consists of fifteen articles: eight of these impose obligations and contain principles which contribute to the body of the TBT normative discipline; four directly address development of technical measures such as international standardization processes,[1] information coordination and assistance for Members, with particular regards to the developing ones;[2] and the rest concerning the scope of the Agreement,[3] establishment of administrative mechanisms[4] and dispute settlement.[5]

The Agreement incorporates three annexes. Annex 1 provides definitions of eight key terms used in the Agreement, which deserve as thorough attention as the main text, because their substance determines the whole scope of the Agreement. Annex 2 establishes working procedures of the Technical Expert Groups of the TBT Agreement. Finally, Annex 3 is the Code of Good Practice for the Preparation, Adoption and Application of Standards. Its principles addressing voluntary standards echo the ones addressing other types of technical measures in the main provisions, in the form of commitments of signatories, which thereby contribute to the non-obligatory and non-state dimensions of the TBT discipline.

[1] Article 9, the TBT Agreement
[2] Articles 10-12, the TBT Agreement
[3] Article 1, the TBT Agreement, with the reference to Annex 1
[4] Article 13, the TBT Agreement
[5] Article 14, the TBT Agreement

The terms used in the TBT Agreement are generally defined by the sixth edition of the ISO/IEC Guide 2: 1991, General Terms and Their Definitions Concerning Standardization and Related Activities, as stated in the introductory clause of Annex 1. The meanings of the terms may also be based on definitions used within the United Nations system and by international standardizing bodies, as stated in Article 1.1.[6]

The ISO/IEC Guides are a set of documents jointly published by the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC), providing information on several technical aspects of standardization such as: recommendation for packaging and product instructions; guidelines for producers on product information disclosure; and recommended principles for product conformity assessment. The publications, including the "Guide 2" series, generally seek to be of particular interest for readers who are involved in standard drafting processes, as well as producers.

It is worth noting that these publications, though some of them may be taken as practical disciplines or normative as they have been widely complied with and referred to, do not address "states" as their direct subject. Principles and guidelines may be and have been adopted by all kinds of actors including: governmental authorities; producers and manufacturers; and private standardizing entities.

[6] Michael Koebele, 'Article 1 and Annex 1 TBT' in Rüdiger Wolfrum, Peter-Tobias Stoll and Anja Seibert-Fohr (eds), *WTO-Technical Barriers and SPS Measures* (Martin Nijhoff Publishers 2007), p. 178-209, at p. 186-187.

Direct engagement with non-State agencies is one of the many characters of the TBT Agreement which could open an interesting discussion in regard to the non-State bodies' contribution to "international" norm-making. Their roles have been increasingly significant in the modern governance.

1.1. The Relevance of Guide 2 and the ISO/IEC publications

The Guide 2 series in particular provides information on "Standardization and related activities – General vocabulary", primarily explaining the meanings of terms commonly used in standardization processes. It has been continually updated after the drafting of the TBT Agreement negotiation. The most current issue was published in 2004,[7] but only the 1991 publication is to be deferred to regarding the terms and definitions due to the specific reference to it.

As pinpointed by the Appellate Body in EC-Sardines, the definitions provided in the referenced 1991 publication are used only when the terms have not already been defined in the Annex itself. In other words, when the two provide different meanings for the same term, the latter prevails.[8]

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[7] See list of ISO/IEC guides in International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC), *ISO/IEC Guides in International Organization for Standardization, International Standards for Business, Goverment and Society* <http://www.iso.org/iso/standards_development/processes_and_procedures/supplementary_rules/stand-list-of-guides.htm> accessed 20 March 2012. See also International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC), *How ISO/IEC Guides Add Value to International Standards* (2007) <http://www.iso.org/iso/iso-iec_guides.pdf> accessed 20 March 2012.

[8] The Appellate Body interpreted the introductory clause to suggest that the meanings in the definitions provided in the Annex prevail when they "depart from" the meanings provided in the ISO/IEC Guide. See also *European Communities - Trade Descriptions of Sardines ('EC - Sardines'),*

The ISO and IEC clearly are private entities without legal personality under public international law.[9] On their own, the publications do not have legally binding status in public international law and would not have been recognized as such among states if it was not referred to in the Annex. The Guide 2:1991 is applied in the TBT context as a result of being incorporated by reference in the Agreement.[10]

The reference to the ISO is a convenient and practical approach of the TBT drafters. The role of the organisation as a standardising body has long been prevalent and accepted by manufacturers, regulation-makers and authorities worldwide. This is one of the examples that demonstrate the TBT Agreement's nature that is responsive to the standardising practice. One may hope that, in the interpretation and implementation of the TBT provisions, such reflectivity to the standardising practice would be helpful in allowing the trade-centric stance of the TBT Agreement to embrace environmental principles and approaches that are extrinsic to the WTO – provided that they have been commonly adopted in the standardising practice.

The 1991 publication of the ISO/IEC Guide was already available at the time of negotiation of the TBT Agreement, providing specific information on standardization, which was probably too technical to be included in the Annex itself.

WT/DS231/AB/r, 2002, para. 224. The Appellate Body did not follow the definition of "standards" provided in the Guide when it considered the meaning of international standards because the description provided in Annex 1 suggested a different direction. This part of the case will be further discussed in connection to the definition of standards below.

[9] See Anthony Aust, *Handbook of International Law* (Cambridge University Press 2005), at p. 13-15.

[10] Annex 1, TBT Agreement.

Presumably, it might have appealed to WTO Members because of the "consensus" system within the organisation.

2. The Scope of the Agreement

The coverage of the TBT Agreement is technically drawn around three types of technical measures: technical regulations, standards and conformity assessment procedures, generally involving specifications of traded products as well as the examining processes to prove their conformity, as mentioned above. These measures are very often enacted with the expressed objectives in fields of interests other than trade, including environmental protection. Although the cited objectives are under the "environmental" rubric, trade-restrictive measures may well be classified as "trade-measures".

The definition is essentially the characteristic features of each type of TBT technical measures. As mentioned above, the purported objectives of the measures do not render a measure under the TBT Agreement. Nor do the agencies or organizations who establish them. The definition of the three types of measures mentioned above is stipulated in Annex 1.1 of the Agreement, while the general coverage of the Agreement is in Article 1.

Article 1 provides that the Agreement covers measures addressing industrial and agricultural products, but does not cover product specifications related to governmental procurement under the Agreement on Government Procurement and "sanitary or phytosanitary measures (SPS Measures)" under the SPS Agreement. The definition of the

three technical measures in Annex 1 of the TBT Agreement should therefore take into account the definition of an SPS measure as set out in Annex A of the SPS Agreement.[11] In addition to the explicit exclusion in Article 1 above, the TBT Agreement does not include measures with SPS objectives of protecting the health or life of animals, plants or human in an importing country Member; or preventing the establishment or spread of pests in its territory as provided in the definitions of SPS measures.[12]

This said, the distinction between the TBT and SPS measures are not obvious. The scope of the TBT and SPS Agreements are very close,[13] as they both address product related measures.

The language of the SPS Agreement suggests its interest in measures that address pest and disease control. Yet, the terms "pests", "disease", and "additives" have been interpreted very broadly by the panel in the case of EC-Biotech Products.[14] The SPS Agreement may therefore cover measures that would traditionally be considered as "environmental" measures rather than a pest control in the generic sense.[15]

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[11] See Gabrielle Marceau and Joel P Trachtman, 'The Technical Barriers to Trade Agreement, the Sanitary and Phytosanitary Measures Agreement, and the General Agreement on Tariffs and Trade: A Map of the World Trade Organization Law of Domestic Regulation of Goods' (2002) 36 Journal of World Trade 811, p. 876.
[12] See Paragraph 1 of Annex A, the SPS Agreement; and
[13] Mitsuo Matsushita and others, 'Chapter 13 Technical Barriers to Trade: TBT and SPS', *The World Trade Organization: Law, Practice, and Policy* (Oxford University Press 2006), at p. 481.
[14] *European Communities - Measures Affecting the Approval and Marketing of Biotech Products ('EC - Approval and Marketing of Biotech Products'), WT/DS291/R, 2006*.
[15] The case law on this issue will be discussed in Chapter 7.

In comparison with the SPS Agreement, I think the TBT requirements are currently more favourable to the regulating Members. To say the least, the SPS Agreement imposes more specific requirements (substantive or procedural characters) which allow less room for regulating Members to determine their own regulatory approach in addressing legitimate concerns of their constituencies. The most contentious in this regard is the requirement that "scientific" methodologies are adopted in the establishment and application of a SPS measure.[16] Such a requirement seems rather restrictive towards trade-related measures, especially those that address environment-related concerns with the precautionary approach.[17] Under the SPS Agreement, regulating Members have less freedom to design or justify the approach that is the most suitable to their localities.

3. Definition of the Three Measures

A technical measure not falling under the SPS Agreement shall then be determined whether they constitute one of the three types of covered measure under the TBT Agreement. Such determination can be done upon the characteristic components provided in the definitions of "Technical Regulation", "Standards" and "Conformity Assessment Procedures".

It is worth highlighting that the criteria in the definition are not the disciplinary requirements. The query on the definition

[16] Article 5, the SPS Agreement.
[17] Refer to Chapter 6. For more discussion about the relationship between the SPS Agreement and the precautionary principle, see also e.g. Joakim Zander, 'Chapter 3: The Precautionary Principle in International Law', *The Application of the Precautionary Principle in Practice* (Cambridge University Press 2010).

is a separate issue from the compliance examination under the TBT discipline. The definition query only indicates whether the measure at issue is under the coverage of the Agreement, and if so, which TBT provisions would apply.[18] A technical measure determined to be outside of the scope of the Agreement is therefore not automatically considered legitimate and justified under the WTO rules. Some of them may still be scrutinized under GATT 1994 which is less reflective to the practice of domestic governance and, according to the past dispute settlement decisions, could prove to be more restraining towards domestic measures than the TBT Agreement.

The following explanation in this section will first provide the characteristic features of each type of technical measures. It discusses the technical details from the TBT perspective.[19]

3.1. Technical Regulation

Annex 1.1 states that:

> "Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method."[20] [emphasis added]

EC-Asbestos and EC-Sardines are the main cases that explain and elaborate the definition of a technical regulation. EC-Sardines follows the ruling of EC-Asbestos and recapitulates

[18] As highlighted in comparable context of the SPS Agreement in *Panel Report, EC - Approval and Marketing of Biotech Products, 2006* (n 14).
[19] Chapter 6 will present measures from the "environmental" perspectives, while Chapter 7 will link both perspectives and discusses the definitions in relation to "environmental" measures.
[20] Annex 1.1, the TBT Agreement.

the three descriptive criteria that a measure must meet in order for it to be considered a technical regulation.[21] Two of the criteria were taken directly from the definition provided in Annex 1 and the other one developed by case law. In short, a technical measure constitutes a technical regulation when it (1) concerns identifiable products; (2) lays down product characteristics, or their related processes and production methods; and (3) requires mandatory compliance.

3.1.1. Identifiable products

The first criterion is that a measure must "apply to an identifiable product or group of products". This element was developed by the Appellate Body in EC-Asbestos for simple and practical reasons: The contested technical regulation itself would not be enforceable if the governed products are not identifiable. The identifiability also allows the TBT Agreement to be applicable, including Article 2.9.2, to notify other Members.[22] This said, the Appellate Body in both cases have made clear that a technical regulation does not need to explicitly mention just one specific product.[23] Instead, it may be directed to more than one producer or a group of products. The identifiability only needs to contain enough details so that the regulation may possibly be applied and enforced.[24]

For example, the contested technical measure in the EC-Sardines case, require that only a sardine product made of

[21] *Appellate Body Report, EC - Sardines, 2002* (n 8), at para. 176.
[22] *European Communities - Measures Affecting Asbestos and Products Containing Asbestos ('EC - Asbestos'), WT/DS135/AB/R, 2001*, at para. 70.
[23] *Appellate Body Report, EC - Sardines, 2002* (n 8), at para. 180.
[24] *Appellate Body Report, EC - Asbestos, 2001* (n 22), at para. 224; and, *Appellate Body Report, EC - Sardines, 2002* (n 8), at para. 180-186.

fish of the species Sardina Pilchardus may carry the name "preserved sardines" on its package. The measure was applicable and enforced with respect to a range of identifiable products which included the explicitly mentioned sardine product made of Sardina Pilchardus. It was also applicable to other unspecified fish species [of which the names were not specifically expressed]. The species that were not mentioned could not be called "preserved sardines".[25]

3.1.2. Product characteristics

The first criterion logically relates to the second one,[26] as the product characteristics laid down by a measure would practically make the measure identifiable. The second criterion is directly taken from the definition in Annex 1 that the measure must "lay down product characteristics". The technical measure must regulate characteristics of products,[27] for example, by requiring that such products must or must not possess certain characteristics. The Appellate Body clarifies its decision in the EC-Asbestos case that product characteristics may be (1) the features which are "intrinsic to the product itself" or (2) the ones just "related" to the intrinsic features of the product.[28] The technical measure in the EC-Sardines case itself satisfied this second criterion because, as the Appellate Body pointed out, it regulated a product name and the fish species that the products are made of. The name is an example of a characteristic that is related to an intrinsic feature of the products and the species

[25] *Appellate Body Report, EC - Sardines, 2002* (n 8), at para. 187.
[26] *Appellate Body Report, EC - Sardines, 2002* (n 8), at para. 177.
[27] *Appellate Body Report, EC - Asbestos, 2001* (n 22), at para. 69.
[28] *Appellate Body Report, EC - Asbestos, 2001* (n 22), at. 67; and, *Appellate Body Report, EC - Sardines, 2002* (n 8), para. 190-191.

of fish contained in the product is an intrinsic feature.[29] By the interpretation of the Appellate Body, both features are considered "product characteristics" in the definition of a technical regulation stated in Annex 1.1 above.

The definition in Annex 1 further provides that a technical regulation "...may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method". These are considered by the Appellate Body in the EC-Asbestos case as "examples of product characteristics" and therefore are not an exhaustive list of product characteristics that a technical regulation could concern.[30] The Appellate Body also gave more specific examples of "characteristics" of products to include "'features', 'qualities', 'attributes', or other 'distinguishing mark' of a product", as well as "a product's composition, size, shape, colour, texture, hardness, tensile strength, flammability, conductivity, density, or viscosity".[31] Such examples reflect the broad and flexible nature of what could be deemed as characteristics of a product, either the ones intrinsic to the product or the ones only related to them.

I think the most important point here is that the two cases have only clarified the meaning of "product characteristics" in Annex 1.1. This point could prove significant because, according to Annex 1.1, a technical regulation is also those that "lay down... [the] related processes and production methods" (PPMs). "Related" PPMs is an alternative component

[29] *Appellate Body Report, EC - Sardines, 2002* (n 8), at para. 190-191.
[30] *Appellate Body Report, EC - Asbestos, 2001* (n 22), at para. 67; and *Appellate Body Report, EC - Sardines, 2002* (n 8), at para. 191.
[31] *Appellate Body Report, EC - Asbestos, 2001* (n 22), at para. 67.

of the constitution of a technical regulation to the "product characteristics" elaborated by the Appellate Body above. This could result in an extensive coverage of the TBT Agreement over PPM-measures than it is generally presumed by many commentators, especially the ones whose opinions are informed by the classic product-process doctrine evolved in the context of Article III of the GATT. This issue will be discussed in more details in Chapter 7.

This said, I am not arguing that all PPMs would satisfy this requirement. The limitation, albeit an ambiguous one, still remains in what PPMs would be considered "related" in the meaning of Annex 1.1. The issues of PPMs not only are relevant to the constitution of a technical measure, but are also frequently discussed in relation to the legality of a measure under the non-discrimination requirements. As mentioned earlier, both are separate queries even though they concern similar aspects of PPMs.

In Chapter 7, I revisit this point and link it with environmental interests and the life-cycle approach widely adopted by environmental measures. In doing so, I explain the case of EC - Seals Products[32] which not only involves an "environmental"[33] concern that is of an interest of this thesis, but also demonstrates the extent to which the Appellate Body deemed to be "unrelated" PPMs. The decision raises the

[32] *Appellate Body Report, European Communities - Measures Prohibiting the Importation and Marketing of Seal Products ('EC-Seals Products'), WT/DS400/AB/R, WT/DS401/AB/R, 2014*

[33] It is worth questioning what "environmental" measure could refer to. Chapter 6 deals with this. It points to the common absence of a definition of the term in the trade-environment discussions. It explains the meaning of the term used in this thesis and discusses how the dispute settlement bodies may deem it in the TBT context.

question whether the public conscience on environmental responsibilities actually matches the WTO-sceptics' assumption of "market reality".

In short, Chapter 7 will suggest that the idea of product-relatedness should not be construed exclusively by a traditional market-centric viewpoint. The dispute settlement bodies' analysis should be open to more "contemporary" perceptions of the society of what a product-relatedness may be construed by, including perhaps the product-relatedness of a product life-cycle, such as its recyclability, production methods and so on. Having said this, it would only be fair to point out that the society, with the much needed help of the environmentalists, still have a long way to go to develop public conscience and responsibilities associated with the environmental damages caused by the life-cycle of our consumption.

3.1.3. Mandatory compliance

The third criterion of the definition of a technical regulation is that the compliance with such a technical regulation by respective products and producers must be mandatory.[34] The Appellate Body interpreted the definition and concluded that a technical regulation is a measure that "…regulate[s] the 'characteristics' of products in a binding or compulsory fashion…"[35] The text and its interpretation from the two cases do not require any particular form of the document, maintaining the flexibility of the definition to cover a wide range of regulations of which the legal technicality may be

[34] *Appellate Body Report, EC - Sardines, 2002* (n 8), at para. 176.
[35] *Appellate Body Report, EC - Asbestos, 2001* (n 22), at para. 68.

diverse due to different administrative and political structures of Members.

Another issue which requires exploration concerns Article 3, which addresses "technical regulations" prepared, adopted or applied by local government bodies or non-governmental bodies. By including non-governmental bodies, the provision seems to suggest that technical regulations under the TBT Agreement include a measure of which mandatory characteristics may be different from law, regulation or "administrative provisions"[36] usually imposed by authoritative agencies. The term "mandatory" in Annex 1.1 may therefore be potentially interpreted in a rather unconventional way.

The question arises as to what "mandatory" or "compulsory" means in such an obscure and debatable situation where non-governmental bodies are concerned. If the legal form and governmental authority are not necessary indications of the mandatory character of a "technical regulation", what are the features of the "compulsory fashion"? Also, would a measure with "de facto" compulsory nature be deemed as "mandatory" if it does not have authoritative character but is so influential that consumers and retailers would not buy the non-compliant products? If so, then what would be the distinction between technical regulations and voluntary standards?

This criterion was not much explored in EC-Asbestos or EC-sardines cases but has been discussed in great detail in the more recent dispute between the US and Mexico in US-Tuna

[36] Annex 1.1, the TBT Agreement.

(Mexico) II.[37] To reflect this point clearly, the Panel's decision is briefly explored here.

The Panel pointed out the additional considerations on the last criterion including legal forms and issuing authorities. It also discusses the contextual factors of the measures. It decided on this issue on three bases.

First, the measures are considered legally binding when they are "legally enforceable and binding under […] law (they are issued by the government and include legal sanctions)". Second, the addressed products must comply with the technical regulation in question in order to enter the market. The measure in the case of US-Tuna (Mexico) II, for example, satisfies this criterion because non-compliant tuna but displaying a label suggesting it being "dolphin-safe" would not be allowed in the US market.

The interesting point is that the official dolphin-safe label is indeed not required for the products sold in the US market. The Panel applies a rather complex way of characterising "mandatory". Such characterisation is likely to deliver a result unexpected by the general public in the future, due to the increase of unconventional rule-making such as those in the so-called "private governance". In US-Tuna (Mexico) II, it is only the products carrying such a claim on the packaging that must comply with the contested legislation.

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[37] *Panel Report, United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna (Mexico) II'), WT/DS381/R, 2012* For summary, World Trade Organization, *Summary of US - Tuna III* <http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds381_e.htm> accessed 2 April 2011

However, in fact, the measure does not prohibit tuna that do not carry any dolphin related claims to access the market. This non-labelled tuna can access the market despite the non-observance of the fishing processes to the US measure at issue. It would not be a surprise if such a labelling scheme is classified as voluntary and therefore seems on the surface to constitute a standard,[38] which is subject to laxer requirements than a technical regulation, under the TBT Agreement.

This could suggest the Panel's attempt to stretch the scope of a technical regulation and render as many contested measures as possible under the definition of Annex 1.1, as a technical regulation is subject to a more elaborate requirements than a standard. At the same time, it is also plausible that the Panel's characterisation was influenced by the legislative form of the contested measure. For these reasons, it should be assumable that the legal formality of the authority and the instrument still play a large role in characterising the "mandatory" nature of a measure.

The third basis of the Panel's decision is that there is no alternative means or requirements, to allow the concerned products to have or obtain such characteristics (such as carrying a label suggesting that the fishing methods were not harmful to dolphins surrounding the caught tuna in this case), other than the ones prescribed by the measures at issue. There was no other "competing standards [which] may co-exist in relation to the same issue".[39] Mexican tuna producers

[38] As argued by the Respondent in the case. *Panel Report, US-Tuna (Mexico) II, 2012* (n 37).
[39] See Christopher Tran, 'Just Another Fish in the Sea? The WTO Panel Decision in US—Tuna III' (2012) 29 Environmental and Planning Law

for example did not have other routes to show consumers that their fishing methods did not kill dolphins, and only had to follow the specific requirements prescribed by the regulations to obtain the label.

The Panel has still left aside the question of whether the "de facto" compulsory fashion of a measure could satisfy this criterion.[40] There seems to be low tendency for the need to consider the "de facto" aspects of a technical measure if the technical measures at issue are legally significant and/or applied in conjunction with legal sanctions. However, the third basis of the Panel above could mean that the US measure would still be classed as mandatory even if the measure in question did not contain a sanction or were not part of a governmental legislation.

The Appellate Body has confirmed the Panel's decision on this issue. Even though it has not particularly affirmed the additional criteria to indicate the mandatory nature of technical regulations which were established expressively by the Panel, its analysis seems to be in line with the Panel's. The Appellate Body only establishes that "…a determination of whether a particular measure constitutes a technical regulation must be made in the light of the characteristics of the measure at issue and the circumstances of the case."[41] In addition to the already broad elaboration of the term "mandatory" by the Panel, the statement could be read as

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Journal 45,at p. 49-50; and *Panel Report, US-Tuna (Mexico) II, 2012* (n 37), at paras. 7.142-7.144.

[40] *Appellate Body Report, United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna (Mexico) II'), WT/DS381/AB/R, 2012*, at paras. 178-199.

[41] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 40),at para. 199.

hinting that there could be other possible approaches to examine the mandatory characteristics of the technical regulation at issue.[42]

The discussions on the definition of technical regulation as shown above is also one of the many points in the TBT provisions that may reflect the current ambiguity of the TBT Agreement. More will be discussed later in this thesis.

However, it seems clear that the interpretation of the definition would be broad and flexible. Flexible interpretation and broad application such as these would serve the function of allowing the Agreement to cover a myriad of measures that fall out of the coverage of the SPS Agreement.

For transparency and predictability of the TBT Agreement, further case law elaboration applicable to each particular circumstance is required. In the mean time, the current ambiguity increases the practical significance of the role of the TBT Committee and administrative mechanisms of the Agreement, in providing direction of application before disputes arise.

For instance, there is no definite boundary that the meaning of the term "characteristics", as elaborated in EC-Asbestos and EC-Sardines cases, can stretch. This could be debateable in regards to an environmental measure which are often of a highly technical and scientific character. Would certain scientific components of a product designed responsively to the climate change target, for example, be deemed as

[42] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 40), at para. 178-199.

"product characteristics" in the second criterion? What methodological approaches would the dispute settlement body reach this conclusion on whether they are "intrinsic and/or related features" of the products? These points will be revisited and discussed in Chapter 7.

The above description on the third criterion, i.e. being enforceable and binding under law, may also reflect the difficulty in the attempt to elaborate in such a way that is applicable to all future circumstances. US-Tuna (Mexico) II, for example, was decided by the Panel to be a technical regulation prepared, adopted and applied by central government bodies.[43] The Panel has not only implemented Article 2 (that technical regulations must observe), but its interpretation of the terms will apply wherever they are used in the Agreement. It is then questionable how the components of the third criterion explained above would be applied by the non-governmental bodies in Article 3.

3.2.2. Standards

Annex 1.2 states that:

> "Document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.
>
> Explanatory Note
> The terms as defined in ISO/IEC Guide 2 cover products, processes and services. This Agreement deals only with technical regulations, standards and conformity assessment procedures related to products

[43] *Panel Report, US-Tuna (Mexico) II, 2012* (n 37), at para. 7.141.

> or processes and production methods. Standards as defined by ISO/IEC Guide 2 may be mandatory or voluntary. For the purpose of this Agreement standards are defined as voluntary and technical regulations as mandatory documents. Standards prepared by the international standardization community are based on consensus. This Agreement covers also documents that are not based on consensus."[44]

There is no case law directly on standards.[45] The definition of this term has been discussed to clarify the meaning of international standards in EC-Sardines case, where the Appellate Body has only pointed to the fact that certain definitions in the ISO/IEC Guide are not applicable if they are already indicated differently in this Agreement.[46]

The definition of standards in Annex 1 almost repeats the definition of technical regulations discussed above, with a small addition that a standard must be "approved by a recognized body that provides for common and repeated use, rules, guidelines or characteristics for products…".[47] The only significant difference which is also the key feature of both measures lies in the term "mandatory" in the definition of technical regulations and the phrase "with which compliance is not mandatory" in the definition of standards . The distinction is expressively emphasized in the text of the instrument to

[44] Annex 1.2, the TBT Agreement.
[45] Arthur E Appleton, 'Chapter 8: The Agreement on Technical Barriers to Trade', *The World Trade Organization: Legal, Economic and Political Analysis* (Springer 2005), at p. 379. See also Secretariat of the WTO, *WTO Dispute Settlement - Index of Disputes by Agreement Cited* (2011) <http://www.wto.org/english/tratop_e/dispu_e/dispu_agreements_index_e.htm?id=A22#selected_agreement> accessed 1 December 2011
[46] *Appellate Body Report, EC - Sardines, 2002* (n 8), at paras. 222-223.
[47] Annex 1.2, the TBT Agreement.

reflect the limited capacity in the government's actions in applying standards.[48]

It is therefore to be presumed that a standard would require the same characteristic criteria as technical regulations discussed above, except for the last criterion on mandatory compliance. Unlike technical regulations, standards would not prohibit or restrict non-compliant products from a domestic territory. Nor would they penalise the importers/distributors of the products. This said, the compliance with a standard may be significantly required for successful market competition among similar products. Though not enforced by law, consumers and retailers may choose their products by relying on a well-known certification of certain standards which addresses their priorities and values. Producers would then be practically forced to "voluntarily" meet the requirements imposed by "standards".

Discriminatory and unnecessary standards may therefore hinder international trade in the same way that technical regulations do and be regarded as an illegitimate barrier to trade. And, because of such market significance of a measure that could have conventionally been classed as voluntary, the broad interpretation of the term "mandatory" discussed above could turn the distinction between a technical measure and a standard more obscure.

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[48] *Negotiating History of the Coverage of the Agreement on Technical Barriers to Trade with Regard to Labelling Requirements, Voluntary Standards, and Processes and Production Methods Unrelated to Product Characteristics (hereinafter 'WTO Secretariat's Note on Negotiating History'), WT/CTE/W/10, G/TBT/W/11*, at para. 26. This implies that limitation will become clearer in the discussions on different obligations of Members in regard to different types of measures, discussed in Chapter 3.

3.2.3. Conformity Assessment Procedures (CAP)

> "Any Procedure used, directly or indirectly, to determine that relevant requirements in technical regulations or standards are fulfilled.
>
> Explanatory note
> Conformity assessment procedures include, inter alia, procedures for sampling, testing and inspection; evaluation, verification and assurance of conformity; registration, accreditation and approval as well as their combinations."[49]

Conformity assessment procedures refer to a system which provides a confirmation that a product meets the characteristics and related processes and production methods specified in a technical regulation or standards. As "...'conformity assessment procedures' assess conformity with 'technical regulations' and 'standards', they are therefore always attached with or linked to the other two types of measure .[50] In certain situations, the former may be combined into one single measure with either one of the two latter measures.[51] But despite their close relationship or similarity due to their technicality, they are "not only distinct from one other, but mutually exclusive".[52]

Examples of conformity assessment procedures are provided in the explanatory note in Annex 1, "procedures for sampling, testing and inspection; evaluation, verification and assurance of conformity;

[49] Annex 1.3, the TBT Agreement.
[50] *Panel Report, European Communities - Protection of Trademarks and Geographical Indications for Agricultural Products and Foodstuffs ('EC - Trademarks and Geographical Indications (Australia)'), WT/DS290/R, 2005*, at para. 7.512.
[51] *Panel Report, EC - Trademarks and Geographical Indications (Australia), 2005* (n 50), at para. 7.512.
[52] *Panel Report, EC - Trademarks and Geographical Indications (Australia), 2005* (n 50), at para. 7.512.

registration, accreditation and approval as well as their combinations".[53] The results of such assessments may include: custom clearance for imported products, certain claims or eligibility to carry specific labelling symbols on product packaging, all of which depend on the technical regulations and standard schemes that such conformity assessment procedures are attached to. Similar to technical regulations and standards, procedures of assessment would affect the flow of goods in trade and are seen as potentially another form of technical barriers to trade. Discriminatory, unnecessary and non-transparent ones should therefore be avoided.

4. Conclusion

This chapter has explained the definition of the three types of the measures that are covered by the TBT Agreement, the "technical measures" in this thesis. The definition draws the scope for the application of the TBT Agreement. The discussions in this chapter are therefore useful in the further identification of the areas of environmental governance that would be under the direct influence of the substantive discipline of the TBT Agreement (which is to be explained in Chapter 4) and the procedures that the WTO Members are required to undertake in order to enhance the coordination between the national bodies.

The definition of the technical measures however only portrays the governance from the TBT parlance. Chapter 6 will later

[53] *Panel Report, EC - Trademarks and Geographical Indications (Australia), 2005* (n 50), at para. 7.513.

illustrate environmental measures from the viewpoint of environmental regimes.

Importantly, the discussion in Section 3 of this chapter points out a crucial component of the definition: the reference to "product characteristics" in Annex 1.1 and the Appellate Body's elaboration of the term. On this issue, I have pointed out the plausibility that the elaboration could extend the coverage of the definition in regard to processes and production methods (PPMs).

This point in particular will be picked up on in relation to environmental measures and life-cycle of products in Section I of Chapter 7. This will be one of the three main points of the analysis in this thesis.

In short, Chapter 7 will propose that the idea of product-relatedness should not be construed exclusively by a traditional market-centric viewpoint. The DSBs' analysis should be open to more "contemporary" perceptions of the society of what a product-relatedness may be construed by, including perhaps the product-relatedness of a product life-cycle, such as its recyclability, production methods and so on. Having said this, it would only be fair to point out that the society and environmentalists still have a long way to go to develop public conscience and responsibilities associated with the environmental damages caused by the life-cycle of our consumption.

Not only the type of technical measures determines the coverage of the TBT Agreement, it also determines the provisions that are applicable to the measure at issue. The

different requirement that is imposed to different types of measure will be explained in Chapter 4.

Before doing so, Chapter 3 first turns to entities that are involved in the TBT context, mainly the agencies that actually prepare, adopt and apply the three technical measures. As will be explained in the Chapter, the type of technical measures is not the only determinant of applicable TBT provisions. It is also the type of technical bodies that could invoke different obligations and responsibilities of State Members.

Note, as already explained in this Chapter, that the constitution of a technical measure in accordance with the definition of technical regulations, standards or CAPs in Annex 1.1 does not determine the legality of the measure in question. It only determines the coverage of the Agreement and the applicable provision(s). It is most likely that the measure will fall under the GATT, under which the permissibility of the trade-restrictive measures has been very narrowly allowed. Yet, it depends on other considerations in the case whether or not the exclusion from the TBT Agreement is favourable to the regulating Members.

Chapter 3: Members and Relevant Actors under the TBT Agreement

The TBT Agreement is clearly a State-State treaty under public international law. The actors that are the direct subject of the obligations are Members of the WTO. However, State actors are not the only type of entities addressed by the TBT provisions. In fact, the Agreement recognises the direct roles of several types of non-State bodies in the establishing and applying of the actual technical measures that affect trade of goods.

Such entities are categorised into three types of technical bodies, namely: central government bodies (CGBs), local government bodies (LGBs) and non-governmental bodies (NGBs), all of which are defined in Annex 1 to the Agreement. It also recognises the role of international standard that is already present in the field of product- and PPM-related measures and therefore refers to them to promote the harmonisation of technical measures.

For the purpose of explaining the mechanisms of the Agreement, its TBT requirements may be separated into two types: (1) the procedural requirements concerning the interaction and relationship among State Members (or that between Members and stakeholders); and, (2) the normative requirements on the characteristics of technical measures and their drafting and applying processes. I refer to the latter, the required characteristics and approaches, as "TBT discipline" which will be discussed in Chapter 4 and 7.

The first type of requirements includes, for example, Members' obligation to notify other Members about an enactment of a new measure and the obligations of Members on technical assistance, such as those stipulated in Article 11. The Agreement promotes the engagement between international standardizing bodies and Members. The two actors affect each other's operation. International standards are normatively significant in the TBT discipline as they are to be used as a basis of technical measures.

The second type of obligations requires Members to engage with the entities that are responsible for the actual formulation and application of technical measures, the three types of technical bodies will be explained in this Chapter below. In stipulating such obligations, the provisions requirement Members to "ensure" or "take reasonable measure as may be available to ensure" that respective technical bodies observe the TBT discipline in the formulation and application of the three types of measures explained in Chapter 2. Due to the plausible difference in the requirements regarding different technical bodies, the determination on the type of technical bodies could prove to be tremendously important in disputes, as will be explained in this chapter.

Both types show one of the strengths of the TBT Agreement, in my opinion: Its provisions are reflective of the practice of environmental measures, or the technical regulations, standards and CAPs in the TBT context. They impose requirements in the way that show a good understanding about the processes of standardisation and rule-making, perhaps even with some sympathy for the regulating bodies.

The Agreement also expressly recognises the different constitutional formality of technical bodies and that the central authority of Members' national government to control the operation of certain bodies.

1. Members and Technical Bodies

Members' obligations to ensure TBT-consistency are structured and imposed in the way that reflects an acknowledgement of Members' internal practices in complying with their international obligations, mainly in the way that responds with their constitutional and/or administrative variances. The Agreement reflects explicit distinction in its reference to the entities who "prepare, adopt and apply" technical measures. First, it refers to technical entities whose "preparation, adoption and application" of technical measure(s) is the centre of Members' obligations by categorising them into three types: Central Government Body (CGB); Local Government Body (LGB) and Non-governmental Body (NGB), as defined in Annex 1. Second, it separates the obligations referring to each type of entity, or at least between CGB and the other two. With such separation, Members' obligations are written with a different text. Third, it imposes obligations and requirements on supplementing measures for TBT-consistency, responsibilities, dispute settlement and attribution of conduct regarding LGBs and NGBs in addition to the main obligations.

The TBT discipline is centred on the "preparation, adoption and application" of technical measures. The provisions are structured by (1) the three types of measures; and, (2) the three types of technical bodies. In addressing each type of technical measures, obligations start from addressing

CGBs.[1]They require that Members "shall ensure" the TBT-consistency of technical measures and the operation of the CGBs.

The provisions subsequently set obligations concerning LGBs[2] and NGBs[3] within their territories by deferring to the preceding provisions on CGB regarding the same type of technical measure. Such provisions are formulated with the language that Members shall "take such reasonable measure as may be available to ensure" observance of the same TBT discipline imposed on the CGBs. The two different phrases may reflect different expectations on Members in relation to different types of technical bodies.

1.1. Central/Executive Bodies representing Members

The term "State" in public international law, i.e. "Members" in this context, refers to an abstract figure. From the practical viewpoint, key to public administration of a State is an "executive body" within the central government who makes decisions on international policies, represents the State in an international plane and, in the domestic plane, engages with the technical bodies by means of executive order, bureaucratic coordination or legal mechanisms to pursue their observance of the international obligations and their national policies. This Chapter refers to the agencies with such a role of engaging

[1] Article 2 for technical regulations; Article 4 for standards; and Articles 5 and 6 for CAPs.
[2] Article 3 for technical regulations; Article 4 for standards; and Article 7 for CAPs.
[3] Article 3 for technical regulations; Article 4 for standards; and Article 8 for CAPs.

with technical bodies as "central bodies",[4] or "central government".[5]

It is them who take Members' obligations into action, to "ensure" or to "take reasonable measure as may be available to ensure" the TBT-observance of technical bodies. This is not to be confused with a "central government body" that is one of the three types of technical bodies responsible for the operation of technical measures under the TBT Agreement.

1.2. Obligations to Enforce the Disciplines

As mentioned earlier, the type of technical measure (explained in Chapter 2) and of technical body determine the applicable TBT provision(s). The requirement of the TBT discipline addressing the preparation, operation[6] and characteristics[7] of technical measures may vary among the three types of measures. For example, the requirement of non-discrimination and the prohibition of unnecessary trade-restriction imposed on *technical regulations* are more elaborate than those on *standards*. The requirements addressing *CAPs* contain more specific and concrete details than those addressing the other two.

[4] Such differentiation among internal organs by their executive roles and constitutional autonomy is used in discussions on federal clause in treaties, such as Harry Burmester, 'Federal Clauses: An Australian Perspective' (1985) 34 International and Comparative Law Quarterly 522

[5] The term "central government" is used in paragraph 6 of Annex 1.

[6] For example, the discriminatory impact on products from other Members resulted from technical regulations, as addressed in Article 2.1, the TBT Agreement.

[7] For example, the characteristics basing on international standards relevant to technical regulation in question, as addressed in Article 2.4, the TBT Agreement.

However, the type of technical *measures* is not the only determinant of Member's obligations and potential responsibilities. The type of technical *bodies* is also significant. The obligations imposed on Members in regard with CGBs are formulated with different wordings from the ones addressing LGBs and NGBs. The difference may not appear drastic and there are provisions on the responsibilities and dispute settlement process that in effect could make sure that, in the circumstance that "trade interests are significantly affected", Members would have to give equal attention to the observance of all three bodies.[8]

The difference in the text may be significant as it may allow accommodation for Members' constitutional/authoritative limitation to control technical bodies' establishment and application of technical measures within their territories.[9] Although this point is worth exploring, it is not the immediate interest of this thesis and will not be discussed in elaborate detail. It will be touched upon in the brief overview of the different types of the TBT obligations below.

1.2.1. Obligations to Enforce the Disciplines on CGBs: Obligations to "Ensure"

Members' obligations in respect to their CGB are straightforward. Members' central body is to "ensure" that their "central government, [...] or any body subject to the control of the central government in respect of [the formulation and application of technical measure(s)]" fully

[8] See Article 14.4, the TBT Agreement
[9] See **Error! Reference source not found.** below.

comply with the TBT disciplines.[10] In the context of CGBs, it is only in addressing voluntary standards that the Agreement imposes additional obligation on Members *not* to require or encourage the non-observance of the TBT discipline, as provided in the Code of Good Practice.[11]

1.2.2. Obligations to Enforce the Disciplines on LGBs and NGBs

In respect with technical measures prepared, adopted and applied by the non-CGBs, i.e. the LGB and NGB, the Agreement imposes parallel obligations on Members' executive/central agencies to enforce the disciplines with a small difference in the wording from the ones concerning CGBs. The TBT provisions require Members "to take such reasonable measure" to ensure the observance of the TBT discipline by LGBs and NGBs.

1.2.2.1. Obligations to "Take Such Reasonable Measures to Ensure"

The phrase "reasonable measures as may be available" is broad and could carry a flexible meaning. It might be interpreted to impose a much lower standard of compliance than the obligation to "ensure" observance. Regulating Members may argue that their minimal action fulfils the obligations. This way, the textual differentiation may in effect provide a leeway, or even an exemption to Members'

[10] Article 2 for technical regulation; Article 4 for standard; and Articles 5 and 6 for CAPs.
[11] Article 4, the TBT Agreement.

obligations, if they can successfully establish that the technical bodies in question are LGBs and NGBs.[12]

As explained briefly above, the application of the GATT obligations in relation to LGBs in the case of US – Malt Beverage might help inform the interpretation of the phrase "reasonable as may be available to ensure" in the LGB related provisions. The Panel's decision has been read as indicating that the phrase means "constitutionally available measure".[13] However, as demonstrated in the discussions about the definition of LGB above, the analytical framework narrowly emphasises constitutional capacity of an executive authority in controlling the activities of a local and constitutionally autonomous authority. As the characterisation of LGBs may be based on other considerations than a country's constitution, such explanation may not necessarily be useful in all cases relating to non-CGBs.

The above text of the provisions ("ensure" vs. "take reasonable measure as may be available to ensure") alone may not decisively capture the extent that Members will be examined for their fulfilment of obligations, but, it should at least indicate a difference in the expectations that the WTO has on Members regarding respective technical bodies. The provisions themselves impose different obligations between the ones concerning CGB and the non-CGBs, potentially constituting a laxer threshold in examining compliance of

[12] Santiago M Villalpando, 'Attribution of Conduct to the State: How the Rules of State Responsibility May Be Applied Within the WTO Dispute Settlement System' (2002) 5 Journal of International Economic Law 393, at p. 401.
[13] As interpreted in Steven Bernstein and Erin Hannah, 'Non-State Global Standard Setting and the WTO: Legitimacy and the Need for Regulatory Space' (2008) 11 Journal of International Economic Law 588, at p. 588.

Members, provided that the impact on trade interests of the measure is not significant.

1.2.2.2. Supplementing Obligations

LGB- and NGB- related provisions also impose further requirements on Members to promote the TBT-observance of the technical bodies. The Agreement obligates Members to support non-CGBs' TBT-consistency and their compliance with the information and coordination requirements. It also prohibits encouraging or requiring the non-observance of such entities. These "supplementing" obligations also echo the acknowledgement of Members' central body's limited authority and indirect ability in controlling certain LGBs and NGBs in their country.[14]

There are two approaches of such supplementing obligations imposed on Members.[15] First, Members are obligated to not "require or encourage" these entities within their territories to act inconsistently with the disciplines.[16]Such requirement addresses all types of technical measures. Second, Members are obligated to provide supports by formulating "positive measures or mechanisms": to LGB and NGB, in respect with

[14] Such supplementing obligations are in: Article 3.4 and 3.5 regarding technical regulations of both non-CGBs; second part of Article 4.1, and Article 4.2 regarding their standards; Article 7.4 regarding conformity assessment procedures of LGB; and, the second part of Article 8.1, and Article 8.2 regarding conformity assessment procedures of NGB.
[15] See Tamiotti (n 14), at p. 238.
[16] These obligations address inconsistency with the whole CGB related provisions, which cover not only the disciplines but also the information disclosure and coordinating requirements. However, the latter two are not yet to be discussed here. See Article 3.4 regarding technical regulations of LGB and NGB; 4.1 regarding standards of all technical bodies and regional bodies which Members or their technical bodies are member or participate in; 7.4 regarding conformity assessment procedures of LGB; and 8.1 regarding conformity assessment procedures of NGB.

their technical regulations;[17] and only to LGB in respect with conformity assessment procedures.[18] Similarly in respect with standards by all technical bodies as well as relevant regional bodies, Members are obligated to "acknowledge" the ones who have accepted and complied with the Code of Good Practice.[19] For conformity assessment procedures by NGB, Members are obligated to rely on only the ones operated by NGB who comply with both the disciplines and the information disclosure and coordinating requirements provided in Article 5 and 6, except for the requirement to notify.[20]

1.3. Technical Bodies

The TBT definition of technical bodies (CGBs, LGBs and NGBs) seems to be in line with the general understanding of the terms. Yet, the definition may result in an actual determination that differs from the general perception. The characterisation of the three technical bodies does not depend on how they are defined in other contexts or the legal status under domestic law.[21] The three types of technical bodies are characterised mainly on the basis of the entities' relationship with the "central body", i.e. when they are "subject to the control of the central government".[22] Such relationship may be identified by detailed scrutiny and render technical bodies in question as a type of bodies that is different from the general perception.

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[17] Article 3.5, the TBT Agreement.

[18] Article 7.5, the TBT Agreement.

[19] Article 4.2, the TBT Agreement.

[20] Article 8.2, the TBT Agreement.

[21] Michael Koebele, 'Article 1 and Annex 1 TBT' in Rüdiger Wolfrum, Peter-Tobias Stoll and Anja Seibert-Fohr (eds), *WTO-Technical Barriers and SPS Measures* (Martin Nijhoff Publishers 2007), at p. 207-208.

[22] Definition of central government body, paragraph 6 of Annex 1, the TBT Agreement.

As will be explored below, the complication arises as the definition is broadly written, so that all entities will fall under the definition of at least one technical body. This said, note that Members in respect to the LGBs and NGBs, Members are concerned with only those "within [their'] territories", and only occasionally regional bodies and systems which these entities are member or participate in. The broad coverage of the three is therefore likely to overlap, causing ambiguity for further argument. The definition of the technical bodies is significant because it would determine the TBT provisions applicable in the dispute.

1.3.1. Central Government Body (CGB)

A central government body (CGB) is defined as "[c]entral government, its ministries and departments or any body subject to the control of the central government in respect of the activity in question".[23] It is specifically provided in the explanatory note of the definition that European Communities are regarded in the context of the Agreement as a CGB.[24] It further provides that the "regional bodies or conformity assessment systems" established within the European Communities however are still to be regarded as such and are subject to TBT requirements on regional bodies and conformity assessment systems.

CGB is an entity within the same administrative segmentation as the central body described above. Yet, it is of a more specific description that could include entities that do not undertake executive roles of the government.

[23] Paragraph 6 of Annex 1, the TBT Agreement.
[24] Koebele (n 6), at p. 208.

The crucial point of the definition is the relationship of the entity at issue being "subject to the control" of the central body. The first part of the definition referring to a "[c]entral government, its ministries and departments [...]" suggests the bureaucratic character as a national level of agencies. But as the definition proceeds to include "any body subject to the control of the central government [...]", it covers a vast range of entities. The coverage is also determined on the basis of each specific "activity" relating to the formulation and application of technical measure at issue, and therefore may include an entity whose organizational structure and activities in general are not under the central government. Such wide coverage can technically include local and autonomous state authorities or even private entities, especially those operated upon public/private partnership basis.

Ambiguous room for arguments arises because definition of CGB provides the basis for characterization of the other two types of technical bodies. The term "central government" in this definition is broad and may refer to entities up to the top level of both executive and legislative branches, of which connection may be traced to almost all governmental agencies through their line of administration. In a way, such connection is restricted when the entity in question is constitutionally autonomous. Such interrupted connection is mostly the case between states and federal government, and typically less between the central government in unitary states and its "local" authorities.

1.3.2. Local Government Body (LGB)

The definition of local government bodies (LGB) is provided in close relation to that of the CGB. The definition is based on the exclusion from the elements of CGB's characterizations, as it refers to "[g]overnment *other than* a central government [...], its ministries or departments or any body subject to the control of such a government in respect of the activity in question."[25] Its own element provided in addition to that referring to the CGB is the examples of "e.g. states, provinces, Länder, cantons, municipalities, etc."[26] Room for argument then arises here as these "local" authorities provided in the examples are still in many ways "subject to the control" of the central body, be it the autonomous states to their federal government and other types of local authorities to their central bodies within the unitary administration.

The differentiation of such local bodies from central ones is on the outset a deviation of the general public international law which presumes state's unity despite its domestic organization segmentation.[27] Such differentiation among internal entities may concerns in the future.

First, the differentiation between CGB and LGB is commonly seen by commentators as unfair, as it caters for Members with federal administrative system.[28] I do agree, considering that a physically "local" agency may be characterised as "central

[25] Paragraph 7 of Annex 1, the TBT Agreement.
[26] Paragraph 7 of Annex 1, the TBT Agreement.
[27] As reflected in Article 29 of the Vienna Convention on the Law of Treaties. States may not invoke their internal law (including constitutional separation of authorities or administrative law establishing each governmental entity). Un Doc. UN A/CONF. 39/27, 23 May 1969.
[28] Terence P Stewart, *The GATT Uruguay Round: A Negotiating History, 1986-1992*, vol 1 (Kluwer law international 1993), at p. 1076.

government body" under the definition in Annex 1.6 simply because there is some form of authoritative connection with a CGB, as argued above. If that is the case, the differentiation between CGB and LGB would disadvantage unitary Members. The differentiation may in effect leave more room for federal Members to claim that their obligations are only to "take reasonable measure as may be available to ensure" instead of the obligations to "ensure" which seems to impose more burden on Members' executive government.

The second aspect is related to the example of LGBs provided in Annex 1.7. The inclusion of agencies that are common in a unitary state system in the definition of LGB may seem like an attempt to solve the uneven obligations to be borne by unitary and federal Members regarding local entities. It may seem to allow the unitary Members to benefit from the same ground of argument. However, it is unclear whether the reference to certain entities in the definition would overweigh the authoritative characteristics indicated in both Annex 1.6 and 1.7. As explained above, the geographically local characteristics of their sub-governmental units, such as those named in the examples in the definition, may well be undeterministic of the type of technical body under the TBT Agreement. In many countries, actions of "provinces" may still be intervened or directed by their central bodies into compliance with international obligations. On this basis, to differentiate the LGBs from the CGBs in accordance to the text of Annex 1 would seem to undermine the overall purpose of the Agreement. The approach to address the two concerns

here would be to interpret the term LGB "narrowly"[29] as having been done in the GATT context in the case of US – Malt Beverage.

In the case of US-Malt Beverage, the requirements addressing the differentiated local authorities have been narrowly and strictly construed. Not all conducts of autonomous states are differentiated from those of the central governments' own conducts. The measures that were recognised as belong to "local authorities" and were not taken as a State's conduct were only the ones which the federal government has no constitutional means to intervene or to prevent the WTO-inconsistency. The Panel indeed scrutinizes in detail whether there was constitutional means regarding each particular action of the states in question. Without the demonstration of the unavailability of such constitutional means, the Panel regarded the "local" states in question the same as a CGB, despite the apparent constitutional limitation in administration of the federal Member in the case.[30]

The case suggests the detailed scrutiny in the WTO's differentiation between CGB and LGB in accommodating federal Members. At the same time, it was the attempt to offset the unitary Members and maintain the overall purposes of the obligations. The Panel's approach in the case is rooted from the negotiating history of the GATT provisions at issue which reflects the intention to address constitutional limitation

[29] As taken from the GATT context in US-Malt Beverage and mentioned in the TBT context by Ludivine Tamiotti, 'Article 2 TBT' in Rüdiger Wolfrum, Peter-Tobias Stoll and Anja Seibert-Fohr (eds), *WTO-Technical Barriers and SPS Measures* (Martin Nijhoff Publishers 2007), at p. 239.
[30] *Report of the Panel, United States - Measures Affecting Alcoholic and Malt Beverages ('US - Malt Beverages'), DS23/R-39S/206, 1992*

for federal states. Similar intention is also reflected in the history of the TBT Agreement.[31] In the TBT context therefore, it is likely that authorities with characteristics provided in the definition of LGB, are to be considered as an LGB only when there is the clear constitutional *inability* of the central body in intervening and preventing the TBT-inconsistency of the particular activity in question – even when the entity categorically falls under a type of bodies in the example of LGBs in Annex 1.7.

With this in mind, such analytical precision is an elaboration of the phrase "subject to the control of the central government" in the definition of CGB, in relevance with LGB. As the latter is characterized by the exclusion from the former, the criterion may render an entity as a CGB though they may be "states, provinces, Länder, cantons, municipalities, etc." under their domestic administration.

This said, the formal inability by constitution to intervene may not necessarily eliminate possibility to argue that the entity is subject to control of the central body in the particular formulation and application of the technical measure at issue.

The general guideline from US – Malt Beverage is useful as it narrows down the chance that the coverage of the definition of CGB and LGB would overlap. It should also help accommodating to certain Members, whose constitutional structure has been their pressuring issues, without disadvantaging the unitary Members.

[31] Stewart (n 13)

1.3.3. Non-governmental Body (NGB)

The definition of non-governmental bodies (NGB) is provided in relation to both CGB and LGB. It includes "[b]ody other than" a CGB or LGB.[32] The analysis explained above therefore applies, as a body excluded from the coverage of the two would most likely fall under this type of technical body. The issue facially seems to be on the form of entity, whether they are governmental or non-governmental.

It would have been straightforward if such form is to be identified in accordance with legal registration of the entity in question under its domestic law. Yet, with a vast variances of the non-governmental forms and their increasingly important roles in the field of standardization, it is hard to imagine that the WTO would leave it to domestic registration to determine such type of body and not seek to govern them at the same as a CGB, especially the ones operating on the public/private partnership basis which are increasingly in the practice of technical measures.[33]

In the GATT context, dispute settlement bodies have indeed explored the central body's involvement in the activity at issue in detail. They treat a non-governmental entity with the same regard as a governmental one and expect the observance of

[32] Paragraph 8 of Annex 1, the TBT Agreement.
[33] Koebele (n 6), at p. 208. See also the list of national members of the ISO and their summary via International Organization for Standardization (ISO), 'ISO's Members' <http://www.iso.org/iso/home/about/iso_members/iso_member_body.htm?member_id=1511> accessed 1 December 2012 The list reflects the increasing roles of private bodies in the field of technical measures. Note however that these entities may not necessarily under take activities of formulating and application of technical measure and only undertake representing and coordinating roles of a country.

the GATT requirements, which generally cover mainly governmental actions.[34]

It is unquestionable how NGB's roles may be dominant in practice, despite their non-governmental formality. Even though there is no need in the TBT context to regard an NGB as a governmental entity in order to expand the coverage of the disciplines, it is still less than likely that the WTO would determine the type of entities categorically on the basis of its registration under domestic law. Emphasis then should be taken on the characterisation of NGB which is based on that of CGB and LGB. NGBs are those excluded from the other two. It is hard to imagine that the determination would not require at least a detailed investigation: for example, whether the entity in question is composed of a central body in its organizational structure; is subject to executive control of a central body in its actual operation or in the form of financial support.

As CGB includes "*any body* subject to the control of the central government..."[35], it technically covers entities of which form is non-governmental in the general sense, provided that such organization structure, operation and financial influence constitute a relationship with a central body equivalent to being "subject to control". Such relationship may not be generalized by a single criterion and will likely be determined on the case by case basis.

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[34] See for example, *GATT Panel Report, Japan - Agriculture Restrictions on Imports of Certain Agricultural Products ('Japan - Agricultural Restrictions'), L/6253-35S/163, 1988*; and, *GATT Panel Report, Japan - Trade in Semi-Conductors ('Japan - Trade in Semi-Conductors'), L/6309-35S/116, 1988*

[35] Paragraph 6 of Annex 1, the TBT Agreement.

Note also that NGB includes "a non-governmental body which has legal power to enforce a technical regulation". Such inclusion may be intended to make sure that the widest range of entities, though slipping through the coverage of CGB and LGB, would still be governed by the TBT Agreement. It is also further provided that NGB may have "legal power to enforce a technical regulation".

In practice, several dominant technical entities are of non-governmental forms. The German Institute for Standardization or Deutsches Institut fur Normung (DIN) for example is self-described as a "private organization" and is registered under the German law as a "non-profit association".[36] The entity however has a close "partnership"[37] between the federal government of Germany, in terms of roles and activities relating to technical measures, organizational structure and financial sources.[38] The federal government is to be involved in several aspects of the formulation of DIN's standards in accordance with the Contract between the Federal Republic of Germany and DIN, such as: contribution from official bodies in DIN's standard preparation; the federal government's authority to consider a standardization project as a public interest, its consideration to extend time period for the formulation of such standards, and DIN's commitment to

[36] As provided in International Organization for Standardization (ISO) (n 18); and, Deutsches Institute für Normung e. V., 'DIN's Homepage' <http://www.din.de/cmd?level=tpl-bereich&menuid=47566&cmsareaid=47566&languageid=en> accessed 1 December 2012

[37] As described in the DIN's homepage. Deutsches Institute für Normung e. V., 'DIN' (n 21)

[38] Deutsches Institute für Normung e. V., 'DIN and the Federal Government' <http://www.din.de/cmd?level=tpl-unterrubrik&menuid=47566&cmsareaid=47566&cmsrubid=55284&menurubricid=55284&cmssubrubid=57700&menusubrubid=57700&languageid=en> accessed 1 December 2012

withdraw its standards should there subsequently be conflicted regulation issued by the government.[39] A seat within DIN's management board is reserved upon request for governmental officials.[40]Financial support is also contributed from the public funding.[41]

In my opinion, such involvement may in many aspects imply "control" from central or local government. Such involvement would likely be investigated on all aspects including its "effectiveness" to influence the operation of the entity that would otherwise have clearly been an NGBs. This is comparable to the precedence from the GATT context in Japan - Agricultural Restrictions where the government's financial support was to be explored for its effect as creating the "incentives and dependence".[42] DIN's governmental source of financial funding, for example, requires application for consideration and approval, in accordance with Federal Budget Law (BHO) or Länder Budget Law (LHO), [43] and may be considered as a form of being "subject to the control" with an LGB, provided that the BHO and LHO constitute LGBs under the TBT text. However, the said LGBs have contributed only a

[39] See in particular Article 2.2, 4 and 5 of the Contract between the Federal Republic of Germany and DIN (the Contract), available online via: Deutsches Institute für Normung e. V., 'Contract between the Federal Republic of Germany and DIN (the Contract)' <http://www.din.de/sixcms_upload/media/2896/Vertrag_Bundesrepublik_Deutschland_-_DIN_%28English%29.pdf> accessed 1 December 2012

[40] Article 2.1 of the Contract.

[41] See Article 3 of the Contract.

[42] *GATT Panel Report, Japan - Agricultural Restrictions, 1988* (n 19), at para. 109; and, Rex J Zedalis, 'When Do the Activities of Private Parties Trigger WTO Rules?' (2007) 10 Journal of International Economic Law 335, at p. 343.

[43] Deutsches Institute für Normung e. V., 'Financing Standards Projects' <http://www.din.de/cmd?menuid=47560&menusurubid=93133&level-tpl-unterrubrik&cmsrubid=59362&cmssubrubid=93133&cmsareaid=47560&menurubricid=59362&languageid=en> accessed 1 December 2012

low amount, such as only 12% in 2011.[44] Claimant(s) may not be able to prove in general that the government has the influence over DIN's activities, through such application and approval processes.

In DIN's example, there are several components of governmental involvement. If its measure is contested under the TBT Agreement, it would be likely that each and every one of the involvements would be examined whether any of them could reflect that DIN's decisions in the adoption and application of the measure was "subject to the control of the central government", as provided in Annex 1.6. The ones which at the outset seem to hint a relationship of similar nature as being "subject to control" are such as: its authority to consider and approve the period for the formulation of such standards; and, the fact that DIN would have to withdraw its standards which conflict with any government's technical regulations. If such conditions prove to amount "control" of the central government, unless particular facts suggest otherwise, DIN could potentially be determined as a CGB in the TBT context despite its domestic registration as a "private" body under German law.

2. Conclusion

This chapter has explained the definition of the three types of bodies that are directly involved in the establishment and operation of technical measures. With such definition, the TBT Agreement has put the diverse entities into three basic

[44] Deutsches Institute für Normung e. V., 'Financing Standard Works at DIN' <http://www.din.de/cmd?level=tpl-rubrik&menuid=47566&cmsareaid=47566&cmsrubid=55327&menurubricid=55327&languageid=en> accessed 1 December 2012

categories based on the authoritative relationship between the entities in question and the central bodies of respective Members.

The characterisation of technical bodies on this basis is specifically adopted by the TBT definition. Outside of the TBT context, the constitution and operation of regulatory bodies are complex and diverse. Therefore, the eventual determination on the types of technical bodies that the entity in question should fall under could differ from the typical category that the public may have perceived them based on the generic meaning of CGB, LGB and NGB.

In response to this, Chapter 6 will explore the key patterns of regulatory bodies in environmental regimes from the general viewpoint outside of the TBT specific definition. This should shine some light on the broader picture of environmental governance at the interface with the TBT Agreement.

Another point reflected by Chapter 3 above is the different types of obligations imposed on State Members. This should have justified why the term "TBT discipline" is used in this thesis in referring to the normative requirements to be observed by technical measures. The discipline itself is explained in the next chapter.

Despite the differences in obligations and responsibilities explained above, the normative discipline imposed on measures share the same principle across the different types of technical bodies. Chapter 4 explains the requirements of the TBT discipline.

Chapter 4: TBT Normative Discipline

One of the differences between the TBT Agreement and the GATT is the approach to promote and "liberalise" international trade. The difference is more apparent when the GATT's approach towards non-tariff barriers is seen in its totality, as it embodies a set of provisions that are applied in connection with each other. With the sweeping prohibition of trade restrictive measures in Article XI (as broadly interpreted by the Panel in the case of India – Quantitative Restrictions[1]), the narrow coverage and interpretation of Article III (that could provide room for various product-related restrictions) means that the general obligations of the GATT could be restrictive to a great range of measures under other regimes, especially those adopting trade-related means and green consumerist campaigns to reach their goals.[2] The only chance of permissibility for trade-restrictive measures that are GATT-inconsistent, either because they violate Article III or are outside its scope and fall under a stricter provision, is via the exception provided in Article XX.

Unlike the GATT, the TBT approach does not consist of the general prohibition of technical measures. Expressed at the outset in the Preamble, the TBT Agreement accepts Members' right to exercise their sovereignty by means of the three technical measures imposed on products entering their territory. The recognition is significant as it is to inform the

[1] *Report of the Panel, India-Quantitative Restrictions on Imports of Agricultural, Textile and Industrial Products ('India-Quantitative Restrictions'), WT/DS90/R, April 1999*

[2] These will be explained in Chapter 6 under the UN framework of sustainable consumption and production.

interpretation of all provisions of the Agreement.[3] At the outset, this suggests a "balance" framework of the instrument and, in comparison with the GATT obligations on non-barrier to trade, could be read to indicate a more permissive set of international trade rules.

Without the general prohibition of trade-restriction like the GATT, technical measures are, despite being trade-restrictive in some way, accepted under the TBT Agreement. They are only expected to exhibit or omit certain characteristics. The content of such required, or prohibited, characteristics is referred to in this chapter as "discipline". Such characteristics mainly include: to make distinction from the reference to the actual obligations borne by State Members, to "ensure" or "take reasonable measure available to ensure", as explained in Chapter 3. As will be proposed and discussed in more detail in Chapter 7, the instrument should seek to balance between Members' freedom to protect their non-trade priorities and the WTO's goal to promote and liberalise international trade.

Despite the seemingly permissive outlook of the TBT Agreement from the perspective above, however, it is up to the interpretation of the requirements whether the "balancing" agenda set out in the Preamble would be materialised and that the Members' right to regulate would not be unjustifiably denied.

This chapter will introduce the principles and requirements of the TBT discipline. In doing so, it will includes some of the concepts and principles found in the GATT 1994. For the

[3] The WTO policies will be discussed in more detail in Chapter 7.

convenience of illustrating the discipline, this chapter would provide the text of related provisions which address technical regulations. As explained in Chapter 3, each type of technical measures triggers different details in the requirement under the same disciplinary concepts.

The TBT discipline embodies three requirements: the requirement of "treatment no less favourable", the prohibition of unnecessary trade-restrictions and the requirement to use international standards as a basis for the establishment and application of the three technical measures This Chapter explains all three requirements of the TBT discipline in general. After that, Chapter 7 will discuss the particular relationship between the requirement of treatment no less favourable and environmental protection.

The discipline is embodied in the substantive obligations of the TBT provisions as well as the commitments in the Code of Good Practices. As explained in Chapter 3, such obligations and commitments regarding each of the three measures vary in detail to suit the different natures of each measure and each technical body. Despite some difference, all types of measures of all technical bodies under the TBT coverage are expected to observe three normative principles, namely: the non-discriminatory principle, the prohibition of unnecessary trade-restrictiveness, and the reference to international standards.

Before explaining the three principles, it should be pointed out here that this chapter aims to give an overall picture of the TBT discipline. It includes details that are necessary to present the principles with some nuance. To create a broad view of the

principles and their connection, the chapter tries to abstain from being too focused on each specific principle. Instead, it seeks to provide a balance explanation about all three principles. This should offer a useful foundation for further discussions about the TBT norms in general, as well as for the debates about the non-discrimination principle and environmental measures in Chapter 7. After Chapter 5 and 6 explain the basic elements of environmental governance and the sustainable development concept, Chapter 7 will specifically revisit the non-discrimination principle and discuss the requirement of "treatment no less favourable" in a much more elaborate fashion.

Note also that this chapter pays more attention to Article 2.1, 2.2 and 2.4 even though they are applicable to only one type of measure (technical regulation) and body (central government body). This is because these provisions could well represent the foundation of each respective principle. The explanation of the three provisions should therefore be applicable to other types of technical measures and bodies.

1. The Requirements of "Treatment No Less Favourable"

Article 2 states:

> "Preparation, Adoption and Application of Technical Regulations by Central Government Bodies
> ...
> 2.1 Members shall ensure that in respect of technical regulations, products imported from the territory of any Member shall be accorded *treatment no less favourable* than that accorded to *like products* of national origin and to *like products* originating in any other country." [emphasis added]

The concept of the requirement originates in the GATT context. In particular, the phrase "treatment no less favourable" is found in Article III. The core elements of the principles are reflected in Articles 2.1 and 5.1 of the TBT Agreement, and paragraph D of the Code of Good Practice in addressing technical regulations, conformity assessment procedures and standards, respectively. For conformity assessment procedures (CAPs), the requirement of treatment no less favourable in the TBT Agreement (TBT-TNLF requirement) is elaborated in more detail than Article III: 4 of the GATT.[4] The concept of National Treatment (NT) and Most-Favourable-Nation (MFN), i.e. the concept of non-discrimination in the "narrow sense", also embodies more technical details regarding the participation of conformity assessment bodies[5] and access to documentation.[6]

In principle, the TNLF requirement aims to ensure that the measures will not adversely affect market access of imported products on the basis of their country of origin, or the fact that they are not domestically produced. Accordingly, the products "*imported from the territory of any Members*" shall be affected or treated by technical regulations, standards and conformity assessment procedures of importing Members in "*no less favourable*" manner than what other "*like products*" are treated. In theory, the treatment should not be origin-based.

The concept of the TNLF requirement is in this sense comparative. The concept of "like products" and the

[4] Articles 5.2.1, 5.2.4 and 5.2.5, the TBT Agreement
[5] Article 6.4, the TBT Agreement
[6] Article 10.4, the TBT Agreement

requirement of "treatment no less favourable" are the core elements of the TNLF requirement.

1.1. Like-Products

Even within the GATT context where the concept of like-products originates, determination of products' likeness may require different approaches in different situations. The Appellate Body in both Japan- Alcoholic Beverages II and EC-Asbestos, has ruled that '[n]o one approach [in determining whether the products at issue are like products] … will be appropriate for all cases', and that the determination must be decided on a case by case basis.[7] The TBT Agreement is a different instrument altogether. It is therefore more than likely that there will be circumstances that lead to a different analytical approach in the TBT context than the ones developed in the GATT. Among the various differences between the two agreements, scholars have pointed out that the terms and requirements in the TBT provisions are more specific than the GATT. They have therefore predicted that the concept of like products might be interpreted in a "narrower sense" than it has been in the context of GATT.[8]

It is unclear what "narrower" may translate to. It could perhaps mean that "likeness" would be compared by the detailed specifications, such as the specific species of

[7] *Appellate Body Report, Japan - Alcoholic Beverages ('Japan-Alcoholic Beverages II'), WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, 1996*, at paras. 113-114. *European Communities - Measures Affecting Asbestos and Products Containing Asbestos ('EC - Asbestos'), WT/DS135/AB/R, 2001*, at para. 102.

[8] Ludivine Tamiotti, 'Article 2 TBT' in Rüdiger Wolfrum, Peter-Tobias Stoll and Anja Seibert-Fohr (eds), *WTO-Technical Barriers and SPS Measures* (Martin Nijhoff Publishers 2007), at 217.

cetaceans may be viewed as unlike rather than being viewed as the same "fish" product.

I do not think that one can generalise the tendency in such a way. In addition to the ambiguity of such speculation, it seems rather superficial to assume that the concept will be interpreted "more narrowly" just because of the narrower/ more specific coverage of the Agreement. It is rather the specific circumstance of each individual case that would influence the likeness analysis.

In addition, from viewpoint of sustainable development concept, as will also be further discussed in Chapter 5, *generally* "narrower" interpretation is not necessarily more constructive to the objectives of sustainable development. In Chapter 7, I will revisit this point and analytically discuss in more depth on how to determine like-products in the way that would, in my view, realise the concept of sustainable development in the legalistic sense.

Despite the anticipation for deviation of approach and interpretation in the TBT context,[9] the concept of like products developed in the GATT context is still relevant in implementing the TBT discipline.[10] The Appellate Body has suggested that the case law relating to Articles I and III of the GATT 1994 is "undoubtedly instructive" in interpreting the non-

[9] Peter Van den Bossche, 'Chapter 8: Towards Harmonisation of National Regulation', *The Law and Policy of the World Trade Organization: Text, Cases and Materials* (2nd edn, Cambridge University Press 2008) 8, 740-890, at 818.
[10] *Appellate Body Report, United States - Measures Affecting the Production and Sale of Clove Cigarettes ('US - Clove Cigarettes'), WT/DS406/AB/R, 2012*.

discrimination requirements in the TBT Agreement.[11] In relation to like-products, it was suggested that the provisions concerning the concept of like products in the TBT Agreement constitute a "logical extension" of the non-discrimination obligations in Article III:4 of GATT 1994 and that the GATT non-discrimination disputes should provide guidance for their interpretation.[12] It is likely that any deviation in the future, if there should be one, would be gradual and would require supports from jurisprudence of the GATT.

So far, there has not been a stark change in likeness analysis in the TBT context from the GATT jurisprudence. If there is to be a deviation from the GATT approach, the aim and effect approach would be one of the alternative parameters proposed by commentators, as it has long been suggested but consistently rejected in the GATT context.[13] In essence, the aim and effect approach generally characterises like-products responsively with regulatory context and purported objectives of the measure at issue.[14]

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[11] Van den Bossche, 'Chapter 8: Towards Harmonisation of National Regulation' (n 9) 8, at 818.
[12] Tamiotti (n 8), at p. 216.
[13] Cossy illustratively observes that "an approach involving the regulatory context, especially if it is called "aim and effect", is currently in the Appellate Body's bad books". Mireille Cossy, 'Determining "likeness" under the GATS: Squaring the Circle?' [2006] Staff Working Paper ERSD-2006-08, World Trade Organisation Economic Research and Statistics Division, at p. 23.
[14] In some ways, I think the approach seems rather like a short-cut for regulators and observers who are frustrated by a rejection of measures as WTO-violation. I discuss the flaws of the aim and effect approach and the misinformed perception that supporters of the aim and effect approach may have in Chapter 7. Note also that the considerations of regulatory context in the characterisation of like-product may vary in detail and may not always present themselves under the so-called label of "aim and effect" approach. For more information on the approach, see Cossy (n 13), at 24-25; and Robert Hudec, 'GATT/WTO Constraints on National Regulation:

The Panel in US-Clove Cigarettes, for example, attempted to characterise like-products in line with the aim and effect approach.[15] Yet, right away, the Appellate Body overruled it and specifically expressed the disagreement with the Panel's approach.[16] It recognises the difference between the GATT 1994 and the TBT Agreement, but, still chose to apply the same criteria for likeness.[17] It may therefore be concluded that likeness analysis in the TBT and GATT contexts is yet to differ.

1.2. Determining Like-Products

It would be over-simplistic to provide a list of products that are "like". There can be endless debates on "likeness" of certain products. For example, different kinds of tea leaves may seem similar but are not necessarily like products in all various circumstances. The difficulties in determining "like products" are by nature of the ordinary meanings of the word "like" of which indecisive elements always leave the determination debateable. Arguments may be (1) the selection of compared characteristics of the product; (2) degree of similarities or differences that would mount "likeness"; and (3) the subjective perspectives involved in the comparison.[18] Various similarities and differences may be found among products and could make them seem equally "like" and "unlike" at the same time.

Requirement for an "Aim and Effects" Test' 1998 The International Lawyer 619, 619-649.

[15] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at paras. 104 and 106-107.

[16] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at para. 156.

[17] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at paras. 97-160. Note, nevertheless that, the Appellate Body clearly indicated that its approach is pertinent to the interpretation of Article 2.1.

[18]

The term like products is not defined in the GATT 1994, or the TBT Agreement.[19] So, the criteria have been developed by case law. However, as explained above, like-products from one case may not necessarily be viewed as "like" in another.[20] So far, like products are best determined on the basis of four criteria with which the products are to be compared for "likeness".

As explained in EC-Asbestos and affirmatively applied in detail in the US-Clove Cigarettes, they consist of "(i) the properties, nature and quality of the products; (ii) the end-uses of the products; referred to in US-Clove Cigarettes as "physical characteristics"[21] (iii) consumers' tastes and habits –more comprehensively termed consumers' perceptions and behaviour –in respect of the products; and (iv) the tariff classification of the products".[22] These criteria are however not set rules or requirements; they are interrelated,[23] overlapping[24] and are more like a guiding direction in selecting what features and aspects of surrounding the products are relevant for the analysis.[25]

All of the four criteria have to be examined and taken into account to ultimately demonstrate the "competitive relation"

[19] Arthur E Appleton, 'Chapter 8: The Agreement on Technical Barriers to Trade', *The World Trade Organization: Legal, Economic and Political Analysis* (Springer 2005), 371-409, at 389.
[20] Peter Van den Bossche, 'Chapter 4: Principles of Non-Discrimination', *The Law and Policy of the World Trade Organisation: Text, Cases and Materials* (2nd edn, Cambridge University Press 2008) 4, 320-400, at 330.
[21] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at para. 107.
[22] *Appellate Body Report, EC - Asbestos, 2001* (n 7), at para. 101.
[23] *Appellate Body Report, EC - Asbestos, 2001* (n 7), at para. 102.
[24] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), para. 100.
[25] See *Appellate Body Report, EC - Asbestos, 2001* (n 7), at para. 102; and, Christiane R Conrad, 'Chapter 4: Consistency with GATT Obligations', *Processes and Production Methods (PPMs) in WTO Law: Interfacing Trade and Social Goals* (Cambridge University Press 2011), 147-246, at 171.

between and among the compared products.[26] Such prospect of competitive relation not only narrows down the comparable features and aspects of the products but also well corresponds to the overall concept of the non-discrimination principle. Despite the explicit rejection of the aim and effect approach explained above, the "underlying concern" and the main objective of the measure at issue are still considered in the comparison between the products at issue within each criterion.[27] Such factors would tailor a comparison of "likeness" in each individual context of technical measure, and therefore may lead to incoherent results of the same compared products among different contexts.

For the first criterion, not every aspect of the "properties, nature and quality" of the products in question are compared, but only those "likely to influence the competitive relationship" of the product in a real market place of the importing country.[28] Both the second and third criteria by their very concept are related to a competitive relationship. The "end-uses of products" in the second criterion are considered by reference to the "extent to which products are capable of performing the same or similar function". Similarly, consumers' tastes and habits are relevant only to the extent "to which consumers are willing to use the products to perform these functions".[29] Tariff classification as the fourth criterion may provide a good guidance and supplement to the

[26] *Appellate Body Report, EC - Asbestos, 2001* (n 7), at paras. 99, 103, 114, 117, 118 and 139.
[27] See *Appellate Body Report, EC - Asbestos, 2001* (n 7), at para. 113 as referred to in *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at para. 118.
[28] *Appellate Body Report, EC - Asbestos, 2001* (n 7), at paras. 114 and 121.
[29] *Appellate Body Report, EC - Asbestos, 2001* (n 7), para. 117.

consideration, but, it is unlikely to have more weight than the other three criteria.[30]

A useful example of likeness analysis is available, in EC-Asbestos in which the regulation at issue particularly addressed health risks. The Appellate Body considered the toxic components to be significantly relevant "properties, nature and quality" of the products in question.[31] Such components were selectively relevant as they were the main concern of the regulation at issue and also effected consumers' purchase decisions. The Appellate Body found that "chrysotile asbestos fibres", which contained toxic particles, were not "like" other kinds of fibres, namely "polyvinyl alcohol, cellulose, and glass fibres", since the latter did not contain such toxic particles.[32] Treatment by the EC as an importing country of the former type of fibres was therefore not to be compared with treatment of the latter type, for the purpose of determining compliance with the non-discrimination requirements.

This case also reflects the reliance upon physical characteristics for the purposes of a likeness analysis. Its determination was mainly based on one such property of the products, selected on the basis of consumers' tastes and habits, without explicit indication of how the mentioned fibres differed in regard to their end-uses.[33] On such basis, scholars have observed the superior significance of physical characteristics over the other criteria.[34] The implication,

[30] Conrad (n 25) 4, at p. 172-175.
[31] *Appellate Body Report, EC - Asbestos, 2001* (n 7), at para. 114.
[32] *Appellate Body Report, EC - Asbestos, 2001* (n 7), at paras. 109-126.
[33] *Appellate Body Report, EC - Asbestos, 2001* (n 7), at para. 113.
[34] Conrad (n 25), at 175.

especially in relation to PPM-issues and "environmental" life-cycle measures, will be revisited and discussed in detail in Chapter 7.

1.3. Treatment No Less Favourable

The second element is the actual requirement that treatments accorded to products from a Member are no less favourable than that accorded to like products produced domestically and/or imported from any other country. Neither the GATT 1994 nor the TBT Agreement defines the phrase in its text. However, the judicial bodies have developed the meaning of the phrase "treatment no less favourable" which is not completely the same as the literal meaning of the phrase. In fact, the compliance examination of a contested measure under the TNLF requirement in the GATT and TBT contexts is more nuanced than the generic meaning of the phrase.

1.4. The Meaning of "Treatment No Less Favourable"

At the heart of the assessment is a comparison between the market conditions of a group of products from a Member and the conditions accorded to a group of products from any other countries, or those produced in that importing country, that are identified as "like-products".[35]

The Appellate Body has pointed out that the examination must take into account the entire regulatory context. The "treatments" under scrutiny includes various elements of the measure including "[its] design, architecture, revealing structure, operation, and application of the technical

[35] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at para. 179.

regulation at issue", as well as a practical impact which has occurred before and after the measure formally enters into force.[36] The query investigates whether any of these "modifies the conditions" of competitions among like-products of different countries of origins.[37]

As mentioned above, the generic meaning of the phrase "treatment no less favourable" would suggest that such modification causing market disadvantages exclusively on imports would violate TNLF requirements. Yet, its interpretation must be in light of the aim and purpose of the requirement, rendering a specific meaning of the phrase in each instrument.

Chapter 7 will discuss in more elaborate detail about the aim and purpose of the TBT Agreement and the implication this may have on the interpretation of the TNLF requirement specifically in the TBT context. In the mean time, for the purpose of this chapter, it is sufficient to point out that the examination under the TNLF requirement is ultimately to prevent measures that are in fact designed or applied with the disguised intent of abusing multilateral trading systems, serving a protectionist agenda.

Before rendering a measure inconsistent to Article 2.1, the dispute settlement bodies must determine whether the contested measure is designed and applied with a genuine intent to address legitimate objectives, rather than disguised

[36] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at paras. 206 and 215.
[37] *Appellate Body Report, Korea - Measures Affecting Imports of Fresh, Chilled and Frozen Beef ('Korea - Various Measures on Beef'), WT/DS161/R, 2000*, at para. 137.

protectionist intent. The regulatory context of the measure is considered in this stage. After identifying the detrimental effects on the market competition of imports, the "regulatory distinction", i.e. how the measure effectively distinguishes the products that are deemed as "like" from the perspective of international trade rules.

The analysis investigates whether the disadvantageous impact on competitive conditions "stems exclusively from legitimate regulatory distinction".[38] Such a concept of "legitimate regulatory distinction" is yet to be fully elaborated by the dispute settlement bodies in the TBT context. What does a legitimate regulatory distinction constitute?

So far, a regulatory distinction is legitimate under Article 2.1 when the treatment is "even-handed", in connection with the purported objective.[39] In short, when a technical measure imposes trade-restrictions in order to addresses particular characteristics of a product, it should affect all the products with the same characteristics. For example, the regulatory distinction in US-Clove Cigarettes is not legitimate when clove cigarettes are banned in order to discourage nicotine addiction among young people, while menthol cigarettes which also has the flavouring characteristics and contain nicotine are allowed.

The scrutiny under the TNLF provisions therefore takes into account the considerations on issues other than trade. The question is then: to what extent and how such considerations

[38] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at para. 174.
[39] See *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at paras. 224-225.

should be weighed in the assessment. Chapter 7 will discuss this in more detail and make proposals on the issue.

1.5. Additional Details of "Treatment No Less Favourable" in the TBT Agreement

The treatment no less favourable provisions for technical regulations and standards in the TBT Agreement adopt language similar to the national treatment obligations in Article III: 4 of the GATT 1994. Article 2.1 and paragraph D of the Code of Good Practice requires that the two measures shall accord treatment to imported products from the territory of a Member "no less favourable than that accorded to like products of national origin and to like products originating in any other country". However, there is not yet a foreseeable reason to anticipate a stark difference in the approach towards CAPs.

It is worth noting that, instead of addressing any *treatments* like the above provisions, Article 5.1.1 specifically requires that the "*conditions* …under comparable situations" of the procedures for suppliers of like products from other Members are no less favourable and promulgates the suppliers' "right to an assessment [to obtain market access into the importing territory] under the rules of the procedures". The Agreement explores into details to ensure that the main concerns of exporters would also be included into the non-discriminatory concept, including: the speed and order of assessment, [40]

[40] Article 5.2.1, the TBT Agreement.

confidentiality of information obtained from the procedures[41] and fees.[42]

2. Necessity Requirement

The concept of the TBT necessity is well embraced in the Preamble of the Agreement: (1) recognising Members' need to protect and pursue their non-trade objectives by taking *necessary* technical measures[43]; and (2) reaffirming their obligations by ensuring that their measures do not create *unnecessary obstacles to international trade*.[44] The latter is then repeated in the substantive provisions: the prohibition of unnecessary trade-restriction. Article 2.2, 5.1.2 and Annex 3.E requires that respective measure "are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade."[45] The exact same phrase is used as the first and primary requirement of all the three type of technical measures, before each provision branches out to more details and specific aspects.

Like the other two requirements in the TBT discipline,[46] the prohibition is imposed on each type of measure and each type of responsible bodies in separate obligations or commitment. Article 2.2-2.3 address technical regulations; Article 5.1.2, 5.2.1 – 5.2.3 and 5.2.6-5.2.7 address conformity assessment procedures; and, Annex 3.E and H address standards. Each provision encompasses details that are relatively responsive

[41] Article 5.2.4, the TBT Agreement.
[42] Article 5.2.5, the TBT Agreement.
[43] The sixth and seventh recitals of the Preamble, the TBT Agreement.
[44] The fifth recital of the Preamble, the TBT Agreement.
[45] Article 2.2, 5.1.2, and Annex 3.E, the TBT Agreement
[46] Refer to the introduction of this Chapter where I have explained the different uses of "discipline" and "obligation".

with the practices, and the obligatory/non-obligatory nature of the respective measure.

Technical regulations are mandatory and adopted to primarily serve domestic policy purposes. Their requirements explicitly focus on aspects of policy making including: trade-restrictive impact of the regulation; the non-trade but "legitimate objectives"; and the "risks that non-fulfilment [of such objectives] would create".[47] The provisions concerning the CAPs are more functional and operative than technical regulations or standards. They are therefore addressed with detailed and practice-oriented requirements of necessity: such as those on speed[48]; transparency[49]; and, convenience[50] within the assessment process. Standards are of non-obligatory nature and therefore are addressed with minimal requirements, if compared with the other two types.

In this Section of the chapter, however, the emphasis of discussions is on the requirements of technical regulations, as they have been (and most likely would continue to be) the centre of disputes among Members. The discussions will then explain necessity requirements for the other two types of the measure briefly at the end of the chapter.

2.1. Necessity Test: Weighing and Balancing

Not only the relevance of the GATT 1994 is expressed in the second recital of the Preamble of the TBT Agreement[51], GATT

[47] Article 2.2, the TBT Agreement
[48] Article 5.2.1, the TBT Agreement
[49] Article 5.2.2, the TBT Agreement
[50] Article 5.2.2-5.2.3 and 5.2.6-5.2.7, the TBT Agreement.
[51] "[Members], [] Desiring to further the objectives of GATT 1994". The Preamble of the TBT Agreement.

case law elements have also been discussed in US-Tuna (Mexico) II in regard to necessity requirements and is therefore required for the clearer understanding of the TBT necessity requirement.

The interpretation and characterisation of the GATT necessity started from a definition in a legal dictionary of the term "necessary" used in Article XX, among which the subparagraphs (b) and (d) are the most directly relevant. The two provisions justify Members' contravention of the GATT obligations with the condition that their inconsistent measures are "necessary to protect human, animal or plant life or health"[52]; or, "necessary to secure compliance with laws or regulations"[53]. The key of this ordinary legal definition is on the type of linkage or connection between the measure that is subject to the test and its end goal[54]. The case law recognises from the definition that the term "must be considered in the connection in which it is used, as it is a word susceptible of various meanings" and that the term "is an adjective expressing degrees, and may express mere convenience or that which is indispensable or an absolute physical necessity".[55] In addition to such a conceptual description of

[52] Article XX(b), the GATT 1994.
[53] Article XX(d), the GATT 1994.
[54] See Axel Desmedt, 'Proportionality in WTO Law', *WTO Jurisprudence and Policy: Practitioners' Perspectives* (Cameron May 2004), at p. 810 and 813; Working Party on Domestic Regulation, *'Necessity Tests' in the WTO: Note by the Secretariat, S/WPDR/W/27* (2003), at p. 2; and, Peter Van den Bossche, 'Chapter 7: Trade Liberalisation Versus Other Societal Values and Interests', *The Law and Policy of the World Trade Organization: Text, Cases and Materials* (2nd edn, Cambridge University Press 2008) 7, 615-739, at 624.
[55] Henry Campbell Black, *A Law Dictionary Containing Definitions of the Terms and Phrases of American and English Jurisprudence, Ancient and Modern* (The Law Book Exchange, Ltd 1995), p. 1029., as provided in *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), para. 160.

the term, case law assessments have further added specific elements to the meaning of the GATT necessity.

2.1.1. The Meaning of "Necessity" in the GATT: a Weighing and Balancing Method

Trade-related measures are regularly accused to be "unnecessary" in coordinating forums[56] where the term is used in the generic meaning without the technical considerations embodied in the GATT and TBT contexts, such as risk of non-fulfilment, legitimacy of the purported objectives and so on. The generic meaning of the term may be so vague that any technical measures may be deemed necessary or unnecessary. The term may be read in the generic sense to suggest the supremacy of trade interests, if considering that environmental measures have to justify themselves with absolute necessity. The legal meaning of the term under Article XX of the GATT, however, is different from that of the generic one. The notion of "necessary" trade-restrictiveness under the GATT is more nuanced and specific than the generic meaning.

The first consideration in determining "necessity" in the context of Article XX of the GATT is the degree of contributory relation between the contested measure and the purported objective(s). The Appellate Body has required "a process of weighing and balancing a series of factors" as an examining method in determining whether a measure may be considered as "necessary" in each individual case. Such series is

[56] See e.g. TBT Committee, 'Minutes of the Meeting of 5-6 November 2014, G/TBT/M/64 ("TBT Committee (G/TBT/M/64)")' (2014); and TBT Committee, 'Minutes of the Meeting of 18-19 June 2014, G/TBT/M/63 ("TBT Committee Meeting Report (G/TBT/M/63)")' (2014)

developed upon the above definition and first requires that the measure at issue "contributes to the realisation of the end pursued".[57] In this regard, the Appellate Body recognises that "necessary" is generally within a wide range of degrees. But, particularly in the context of the sub-paragraphs (b) and (d) in Article XX of the GATT, it requires that the causal connection is within the continuum closer to "indispensable" than "making a contribution to".[58]

The process then elaborates further beyond the linkage or causality and requires additional elements corresponding to the object and purpose of Article XX in balancing between a Member's right to justify their GATT-inconsistent measures, and, the other Members' substantive rights under the GATT.[59] The series therefore includes: the "relative importance of the common interests" being pursued;[60] and the "trade restrictive effects [from the measure] on international commerce".[61]

Note that, from this statement, the relative evaluation of the cited objective considers the effects of the trade-restrictiveness on the broader scale of international trade rather than the immediate adverse effects on the market

[57] *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), at para. 164.
[58] *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), at para. 161; see also Desmedt (n 54), at 812-813.
[59] *Appellate Body Report, United States - Import Prohibition of Certain Shrimp and Shrimp Products ('US - Shrimp'), WT/DS58/AB/R, 1998*, at para. 156; Dukgeun Ahn, 'Environmental Disputes in the GATT/WTO: Before and after US-Shrimp Case' (1998) 20 Mich. J. Int'l L. 819, at p. 835; and Peter Van den Bossche, *The Law and Policy of the World Trade Organization: Text, Cases and Materials* (Cambridge University Press 2008), at 641.
[60] *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), at para. 162.
[61] *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), at para. 164.

interest of the given importing or exporting Members. Also note that in Korea-Various Measures on Beef, the main objectives pursued by the measure at issue is "to secure compliance with laws or regulations" in Article XX(d) and not environmental objectives in Article (b). However, these elements of necessity are a part of the weighing and balancing process in both (b) and (d).

The Appellate Body in Korea – Various Measures on Beef also considers further into the objective(s) "that the law or regulation to be enforced is intended to protect", which should not be confused with the main objectives for which the measure at issue is "necessary". The Appellate Body provides that "[t]he more vital or important those common interests or values are, the easier it would be to accept as 'necessary'…" After that, in EC-Asbestos, the Appellate Body repeats this phrase from Korea-Various Measures on Beef and concludes that the objectives of the regulation at issue.[62]

The third component of the "weighing and balancing" analysis is a search for a hypothetical alternative action that is "less trade-restrictive" than the measure contested in the dispute. With the first two components, the concept of necessity is formed by the legitimacy of the trade-restrictive measure, from the virtue of its effectiveness and of the reference to certain objective(s), as well as the considerations on their effects on international trade which is the mandate of the WTO. With just these two elements of "necessity", such a concept would have conformed to the generically perceived notion of necessity. It is the addition of the third component,

[62] *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), at para. 162.

the comparison between the trade-restrictiveness of the contested measure and that of a hypothetical measure that tends to render the implementation of the concept of necessity under Article XX different from the general notion and unexpected by public observers.

While the third component may seem to push the analysis towards trade interests, it may have well been an attempt to uncover the genuine intention of the regulating Member. In other words, why should a compliant Member impose the more trade-restrictive (or the more GATT-inconsistent in the context of Article XX) measure when there is a less restrictive one that is reasonably available and could achieve the same objective – unless the genuine intent of the regulating Member is to abuse the GATT system?

The three components seem to construct a logical formula that serves the function in Article XX to balance between the objectives of the GATT/WTO and legitimate objectives of other regimes. However, the merits of the formula become questionable in practice when the third component overshadows the other two. The "weighing and balancing" analysis has often become a test of the "least-trade-restrictive measure",[63] as may be reflected by the Appellate Body's conclusion in Korea-Various Measures on Beef:

[63] In the context of Article XX(b) such as: *GATT Panel Report, Thailand - Restrictions on the Importation of and Internal Taxes on Cigarettes ('Thai - Cigarettes'), DS10/R-37S/200, 1990*; *Appellate Body Report, United States - Standards for Reformulated and Conventional Gasoline ('US - Gasoline'), WT/DS2/AB/R, 1996*; *Appellate Body Report, Brazil - Measures Affecting Imports of Retreaded Tyres ('Brazil - Retreaded Tyres'), WT/DS332/AB/R, 2007*; and *Appellate Body Report, EC - Asbestos, 2001* (n 7) In the context of Article XX(d), such as: *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37); and *GATT Panel Report, United States - Section 337 of the Tariff Act of 1930 ('US-Section 337'), L/6439-36S/345, 1989*

> "In our view, the weighing and balancing process we have outlined is comprehended in the determination of whether a WTO-consistent alternative measure which the Member concerned could 'reasonably be expected to employ' is available, or whether a less WTO-inconsistent measure is 'reasonably available'.[64]

The Appellate Body has not demonstrated how the second element on "relative importance of the common interests" can actually pull its weight in this analytical process, against the GATT's own interests.[65] Instead, for the application under both Article XX(b) and (d),[66] the Appellate Body seems to have focused on the third component, a hypothetical comparison with an "alternative measure".

The comparison enquires whether there is any other way that (1) can serve the same end goal, with the same achieving level, stated by the regulating Members and (2) at the same time is consistent or less inconsistent to WTO rules or GATT provisions. In effect, the method finds the measure with the "least degree of inconsistency with other GATT provisions"[67] to be justifiable by Article XX(b) and (d).

Because of such emphasis on this third component, the determination of necessity is likely to be centred (if not exclusively dependent) on how to prevent inconsistency with

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[64] *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), at para. 166.
[65] *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), at para. 164.
[66] In this respect, the Panel has provided that the same interpretation of necessity under Article XX(b) is applicable to necessity under Article XX(d). *Panel Report, United States - Standards for Reformulated and Conventional Gasoline ('US - Gasoline'), WT/DS2/R, 1996*, at para. 6.24. Vice versa, the Appellate Body has applied the interpretation in Article XX(d) to Article XX(b). *Appellate Body Report, EC - Asbestos, 2001* (n 7), at para. 171.
[67] *GATT Panel Report, US-Section 337, 1989* (n 63), at para. 5.26.

the general obligations,[68] rather than to realise the idealistic pursuit of balancing as set out in concept.[69] This tendency substantiates the critics' characterisation of GATT necessity as requiring the least trade-restrictiveness, even though the intended function of this third component may in concept have been factored in to assess the genuineness of the regulating Member's intent.

Despite such emphasis on the reduction of GATT-inconsistency, the assumption that the necessity requirement under Article XX equates the requirement of the *least* trade-restrictiveness is not accurate. In theory, it is only one of the three components of the weighing and balancing analysis that the Appellate Body has clearly set out and consistently reaffirmed.

Also bear in mind of the purpose in Article XX to balance between regulating Members' right to regulate and their duty to comply with the obligations. Without the first and second components properly considered in the weighing analysis, Article XX would fail to serve such a balancing policy.

The three components in the weighing and balancing analysis are therefore still valid. The "necessary" trade restriction that

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[68] See e.g. *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), at para. 172.

[69] See Aaditya Mattoo and Petros C Mavroidis, 'Trade, Environment and the WTO: The Dispute Settlement Practice Relating to Article XX of GATT', *(ed.) Ernst-Ulrich Petersmann International Trade Law and the GATT/WTO Dispute Settlement System* (Kluwer law international 1997),at 337. There is an opinion that the jurisprudence in Korea- Various Measures on Beef is moving towards a broader sense of "trade-restrictiveness" and considers the impact on imported products as a "quantifiable criterion". Desmedt (n 54), at 814-815. This does not deny that the key consideration of the case relied mainly on the WTO/GATT consistency that I have suggested here. See in particular, *Appellate Body Report, Korea - Various Measures on Beef, 2000* (n 37), at paras. 178-180.

is justifiable under Article XX(b) and (d) should be determined by the "weighing and balancing" analysis which considers: (1) the contributory linkage between the contested measure and its purported objective(s); (2) the significance of such objectives considering the common interests and the interests of international trade adversely affected by the measure; and (3) the availability of a less trade-restrictive alternative.

The elements of the weighing and balancing concept are consistently reflected in the TBT prohibition of unnecessary trade-restrictiveness, especially Article 2.2 with which the necessity concept from paragraphs (b) and (d) of Article XX of the GATT is most commonly discussed,[70] even though the term "necessary" is also used in the Preamble.[71] There are also some differences between the TBT Agreement and the GATT, particularly Article 2.2 of the former and Article XX of the latter, which should raise question as to whether (and if so, how) the TBT necessity requirement could differ from the necessity requirement under Article XX of the GATT.

2.1.2. The Concept of Necessity in the TBT Requirement

In order to discuss the concept of necessity as a substantive requirement in the TBT provisions, the following discussions focus on Article 2.2. Although the provision specifically addresses technical regulations, the core concept of the requirement should be applicable to the other provisions addressing other types of technical measures. It is very

[70] See *Appellate Body Report, United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna (Mexico) II'), WT/DS381/AB/R, 2012*, at para. 318.
[71] The notion of necessary trade-restrictiveness in the Preamble will be discussed in Chapter 7.

unlikely that the requirement would not be interpreted consistently throughout the whole Agreement. For this reason, the provisions addressing standards and CAPs will be only briefly described at the end of this chapter.

Article 2.2 provides:

> "Article 2: Preparation, Adoption and Application of Technical Regulations [...]
> 2.1 […]
> 2.2 Members shall ensure that technical regulations are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. For this purpose, technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create. Such legitimate objectives are, *inter alia*: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment. In assessing such risks, relevant elements of consideration are, inter alia: available scientific and technical information, related processing technology or intended end-uses of products." [emphasis as original]

The first sentence is used across the necessity provisions that are applicable to all three types of technical measures. In Article 2.2 that addresses technical regulations, the rest of the following text is an elaboration of the first sentence. In particular, it describes that the requirement should be considered on the basis of the relation between the trade-restrictive features of the measure and a "legitimate objective". Such relation is to be weighed and balanced with the consideration of "risks [that] non-fulfilment would create". Examples of such objectives and of the approaches to such risk assessments are also provided in the text, as seen in the excerpt above.

As mention earlier, the three components of the weighing and balancing formula from the GATT context are still traceable in Article 2.2. The first component, the consideration on the contributory linkage between the measure and its cited objective(s), is reflected in the requirement that "technical regulations shall not be more trade-restrictive than *necessary to fulfil* a legitimate objective". Not only that, Article 2.2 also provides examples of the perspectives and methodologies to be undertaken in determining such contributory linkage, such as scientific and technical information as well as the technologies used in production or intended end-usage of the product in question.

The second component, the consideration on relative importance of the purported objective(s), is reflected in the phrase that follows: "technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, *taking account of the risks non-fulfilment would create*". The reference to risks resonates with the considerations on the importance of the purported objective(s) to the common interests. This said, such an importance of the common interest does not seem to have to be a relative one. Unlike the second component conceptualised in the GATT context explained earlier, there is no explicit requirement in Article 2.2 to evaluate the significance of the cited objective(s) against the adverse effects on the broad international trade interests caused by the contested technical regulation. Conceptually speaking, this may allow more freedom for the dispute settlement bodies to give more weight to the common interest pursued by the measure than they were allowed in the context of Article XX of the GATT.

The third component, the interest in finding the less trade-restrictive alternative, may to an extent be reflected in the phrase that measures are not to be "more trade-restrictive than necessary". Nevertheless, the generic meaning of the phrase does not necessarily suggest that it require the "less/least trade-restrictiveness", in the same way as the hypothetical comparison explained above. There is no obvious suggestion in Article 2.2 that the measure would be considered necessary only when there is an absolute absence of other less trade-restrictive alternatives either factual or hypothetical one.

In the sections below, I try to answer that question and explore whether (and how) the concept of necessity in Article 2.2 could evolve and divert from the one that has been strictly implemented in the application of Article XX of the GATT. They discuss the three components of the weighing and balancing analysis that would be applicable to the TBT necessity requirement.

2.1.2.1. Necessity in the TBT Discipline: the Least-Trade Restrictiveness Requirement?

One of the most significant questions in this regard is whether Article 2.2 would be applied in the way that requires the "least trade-restrictiveness". In other word, would the third component outweigh other considerations, stipulated in the provision, which could give weigh to environmental interests?

The interpretation of Article 2.2 seems to take the GATT characterisation of "necessary" in Article XX(b) and (d) as a conceptual guidance. However, due to the difference in

structure of the two provisions in the TBT Agreement and in the GATT, respectively, may result in the deviation in the application of Article 2.2 from that of Article XX.

Unlike Article 2.2 in the TBT Agreement, Article XX(b) and (d) in the GATT provide exceptions to the general obligations. It has long been argued that the latter should be interpreted and applied "strictly" because of its exempting function, in order to ensure that such exception would not be misused and undermine the entire agreement.[72] The attempt to make sure that there is no other less trade-restrictive alternative before permitting a measure that has already been rendered GATT-violation does have merits in a general exception provision such as Article XX of the GATT.[73]

In the TBT context, the comparison of the trade-restrictive degree of the contested measure and a hypothetical alternative has been endorsed by the Panel in the case of US-Tuna (Mexico) II as a "conceptual tool" but is not reaffirmed by the Appellate Body.[74] Even though the Appellate Body did not particularly disagree with this part of the Panel's reasoning, it has reversed the Panel's decision on necessity under Article 2.2.[75] The Panel compared the US regulation with an alternative measure and has found the latter "less-

[72] The argument usually assumes that, as a general rule of international law, an exception must be interpreted "strictly" or "narrowly".
[73] Christopher Tran, 'Just Another Fish in the Sea? The WTO Panel Decision in US—Tuna III' (2012) 29 Environmental and Planning Law Journal 45, at 59.
[74] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 320.
[75] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 331.

trade restrictive" by comparing their effects on "competitive opportunities".[76]

The reasonable availability of an alternative less trade-restrictive measure, which would achieve the same objective(s) at the same level, has been concluded by the Panel to demonstrate that the regulation at issue is "more trade-restrictive than necessary".[77] In other words, the Panel was interpreting the provision in the way that required technical regulations to be "the least trade-restrictive", similarly to the approach that Article XX seeks to filter the misuse of exception provisions.

The Appellate Body's decision may leave the possibility for other analytical formula for the examination of the trade-restrictiveness under Article 2.2, if in the future disputing parties liberate its case on the issue of trade-restrictiveness and present other demonstrating aspects, in addition to the ones on the comparison with an alternative measure. [78] One of such possibilities may include the economic aspects of trade-restrictiveness, such as those described as "quantifiable criterion" in the context of GATT[79] in determining the level of trade-restrictiveness "that *exceed[s] what is necessary* to

[76] *Panel Report, United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna (Mexico) II'), WT/DS381/R, 2012*, at para. 7.568.
[77] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 304; and *Panel Report, US-Tuna (Mexico) II, 2012* (n 76), at paras. 7.568-7.621.
[78] It also state in the following paragraph that the comparison only "should be undertaken" in "most cases", rather than essentially requiring such comparison. *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 322.
[79] Desmedt (n 54), at 817.

achieve the degree of contribution that a technical regulation makes to the achievement of a legitimate objective".[80]

From the Appellate Body's statement above, the "not more trade-restrictive than necessary" shouldn't necessarily result in "the least trade-restrictive" requirement. The disguised protectionism, including in the form of environmental regulations, may not need to be prevented only by the fact that there is absolutely no other alternative measure, even hypothetically, that is less trade-restrictive. And, because there is the plausibility that this component would not play a great role in determining "necessity" of a measure under Article 2.2, it could be said that Article 2.2 is set to be more favourable to technical measures that restrict trade for a legitimate reason. This however does not guarantee that other components of Article 2.2 will not prove to be a greater hurdle for domestic measures to satisfy.

2.1.2.2. Weighing and Balancing Analysis in TBT Terms: Causal Connection

Here we turn to the first consideration in the "weighing and balancing" analysis from the GATT context: the relation between the contested measure and the purported objective(s). This consideration is directly mirrored in the second sentence of Article 2.2: "[...] technical regulations shall not be more trade-restrictive than necessary to *fulfil* the legitimate objective".

[80] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 319. [emphasis added]

The level of "fulfilment" required in Article 2.2 has been interpreted as "the degree of contribution that the technical regulation makes toward the achievement of the legitimate objective [which may be pursued to a greater or lesser degree]".[81] The Appellate Body has not demonstrated how to apply such interpretation, but the description may have indeed broadened the meaning of the term "fulfil". It may have even set a standard of "fulfilment" even lower than the one set out in the GATT's requirement.

On the one hand, the interpretation follows the Appellate Body's description of "necessary" in the first component presented above by not pinpointing the exact degree of effectiveness of the measure that would be deemed as "necessary". On the other hand, it is arguable that the required linkage in the TBT interpretation is even laxer than the one described by the Appellate Body in Korea – Various Measures on Beef, i.e. to be "within the continuum closer to "indispensable" than "making a contribution to".[82]

In US-Tuna (Mexico) II, the Appellate Body took note, without disagreement, of the Panel's finding that the US regulation only "partially fulfils their stated objectives". Although such finding contributes to the Panel's conclusion that the regulation was "unnecessary" and is inconsistent with Article 2.2,[83] the Appellate Body seems to hint that such "partial"

[81] Note that the term is interpreted by reading the whole phrase of "to fulfil a legitimate objective" in the provision, not as an isolated word. *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 315.
[82] Refer to Section 2.1.1 above.
[83] *Panel Report, US-Tuna (Mexico) II, 2012* (n 76), at paras. 7.599-7.600 and 7.620-7.621.

level of addressing the adjectives is satisfactory, as it "did fulfil the United States' objectives to *a certain extent*".[84]

The Appellate Body's decision could suggest that the degree of contribution does not have to mount the completion of achieving the end goal(s). If this is to be the case, regulating Members may be able to more conveniently present their case that the regulation at issue fulfils the objectives, at the aimed level. The "fulfilment" requirement may then be assessed with a lower threshold of efficiency and ease some pressure off the regulators. However, it is possible that the higher standard of the causal connection from the GATT may prevail.[85] In addition, the ordinary meaning of "fulfilment" refers to "provide fully with what is wished for"[86] and suggests a high threshold of effectiveness of the measure, or even the actual completion of the goal which in reality may be unquantifiable, lacks scientific evidence and/or take a long time to manifest. These may create a high threshold.

In regard to environmental regulations, a high and strict threshold of a regulation's contribution toward the "protection of ... the environment" may be a challenging requirement for regulating Members. Considering that environmental problems can be complex, of vast or global nature, and may still entail a level of scientific uncertainty, it is extremely difficult to

[84] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 341. [emphasis added] Nevertheless, there was not a determination on the issue as the Appellate Body rejected Mexico's request to find the measure inconsistent with the Agreement "based on the Panel's finding that the measure did not entirely fulfil its objectives".

[85] In the context of Article XX(b) and (d), it requires a high contribution to the achievement of the objective(s), as "necessary" is to be located within a continuum closer to "indispensable". Refer to Section 2.1.1 above.

[86] It is also mentioned by the Appellate Body in US-Tuna (Mexico) II as "provide fully with what is wished for". *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 315.

imagine a single technical regulation entirely solving such problems, and satisfying such determination in the latter possibility above.

Another crucial element of such connection between a technical regulation and its objectives(s) is how it would be examined by the dispute settlement bodies. In Us-Tuna (Mexico) II, the Appellate Body also provides that such degree of contribution is not only discerned from the "design, structure, and operation of the technical regulation", but must also be assessed from "the contribution to the legitimate objective *actually achieved* by the measure at issue".[87] The application of this examining procedure has not been demonstrated. Yet, from the description, it seems to put a great pressure on importing Members who wish to adopt technical regulations. Considering that the drafting authorities could only try their best to estimate the attainable outcome and thereafter pursue to achieve it. However, they could not have foreseen how it would "actually achieve". Such pressure could discourage the adoption of technical regulations since regulators would only need to make decision with hindsight to ensure that they are not violating Article 2.2. Though the text of the provision is required that "technical regulations are not prepared, adopted or applied with a view to *or with the effect of* creating unnecessary obstacles", such threshold of expectation seems particularly burdensome for regulation drafters and regulators, especially in regard to environmental measures of which technicality may cause even more difficulties to guarantee an anticipated outcome.

[87] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 317. [emphasis added]

2.1.2.3. Weighing and Balancing Analysis: Legitimate Objective(s)

Another element in the prohibition of unnecessary trade-restriction is the reference to "legitimate objective". It is relevant to the first as well as second components of the weighing and balancing considerations from the GATT case law above. The satisfactory "degree" of necessity in the first component is determined by the relationship between the trade-restrictive feature of the measure and the "legitimate objective", i.e. the necessity for the "fulfilment" discussed above.

The considerations on the significant of the objectives, the second component of the weighing and balancing analysis, resonate with the considerations on the "risks non-fulfilment" would create in Article 2.2 as will be discussed further here.

The main emphasis of the concept of necessity since its conception in the GATT 1994 has been on the relation between a measure and its objective(s). The reference to "legitimate objective" has evolved from the ten subparagraphs of Article XX, each of which specifies the category of subject matters that may warrant justification of GATT-inconsistent measures.

Unlike Article XX of the GATT 1994 in which each paragraph specifies the particular objective(s) of a measure wishing to be exempted from general obligations of the agreement, Article 2.2 only provides open-ended examples without defining the term, "*inter alia*: national security requirements; the

prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment".[88]

The issue has so far been of less emphasis than the above elements of the requirements in the TBT jurisprudence. It is nevertheless an important element of the necessity requirement in Article 2.2. Despite the lack of a specific definition in the Agreement, the criteria of "legitimate objectives" provided by the Appellate Body in US-Tuna (Mexico) II: (1) examples in Article 2.2 as a "reference point"; (2) objectives listed in the sixth and seventh recitals of the preamble; and (3) objectives recognised in the provisions of other WTO agreements as "guidance". This grants dispute settlement bodies with an authority to determine the objectives that could be considered as legitimate.

The objective(s) expressed in the draft or in the legislation would be considered only as the claim of the defending Member. Dispute settlement bodies will "independently and objectively assess" various accounts, including the "texts of statues, legislative history, and other evidence regarding the structure and operation of the measure".[89]

Such case law criteria may limit the scope of the legitimate objective even though the text of Article 2.2 leaves the list non-exhaustive. Exporters may argue that concerns on workers' welfare in the production processes of a product are not a "legitimate objective" in the meaning of the TBT discipline. They may try to characterise environment-related

[88] Article 2.2, the TBT Agreement. [emphasis as original]; See *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 313.
[89] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at paras. 313-314.

objectives, as will be discussed in Chapter 6, as "ethical" or "cultural" categories rather than "protection of [...] animal or plant life or health, or the environment" in Article 2.2.

This said, it is still plausible that dispute settlement bodies will give weight to the regulating Member's characterisation of the objective in question. They may also view the reference to objectives listed in Article 2.2 and the sixth recital of the TBT Preamble loosely, which should allow most environment-related objectives as a "legitimate" one for the purpose of necessity requirement. The dolphin protection scheme in US-Tuna (Mexico) II may have affirmed such broad characterisation as it is recognised as an environmental objective, even though the objective of protection of the dolphins in this case may be classed under a "cultural" category by some because most of the protected species of dolphins are not endangered.[90] If viewed as a "cultural" objective, dolphin protection would have been unjustifiable under Article XX of the GATT.

2.1.2.4. Weighing and Balancing Analysis: Significance of the Purported Objectives Taking Account the Risks of Non-fulfilment

Necessity under Article 2.2 does not only involve the above aspects of trade-restrictiveness and fulfilment of the legitimate objectives, but also the "risks non-fulfilment would create". This element resonates with the second considerations of the weighing and balancing analysis. The notion of risk is the

[90] Sanford E Gaines, 'Processes and Production Methods: How to Produce Sound Policy for Environmental PPM-Based Trade Measures' (2002) 27 Columbia Journal of Environmental Law 383.

TBT's means of assessing the "significance" of the objective in the weighing and balancing analysis from the GATT context. Note my earlier reservation that the weighing and balancing analysis tends to be dominated by the hypothetical comparison of trade-restrictiveness. In the context of Article XX (b) and (d), there are concerns that such determination effectively means that the non-trade considerations (e.g. environmental protection) has enough "weight" in the considerations, and that the GATT only allows the least inconsistent or least trade-restrictive measure. [91]

Unlike the GATT, the aspects of the risk of non-fulfilment in Article 2.2 may play a more concrete role in the analytical process. It seems to have replaced the "relative importance of the common [non-trade] interests" in the weighing and balancing analysis with a more tangible methodological concept of risk analysis which is already commonly used in the field of technical regulations, standards and CAPs.

The risk of non-fulfilment is assessed by a comparison between the contested measure and an alternative measure, if there is one. The comparison is "made in the light of the nature of the risks at issue and the gravity of the consequences that would arise".[92] This may resemble the hypothetical comparison on trade-restrictiveness in the GATT context. Yet, bear in mind that this is not expressed in the

[91] See for example the analysis mentioning the importance of the common interest pursued by the measure at issue in *Appellate Body Report, EC - Asbestos, 2001* (n 7), at para. 172; and see Donald H Regan, 'The Meaning of 'Necessary' in GATT Article XX and GATS Article XIV: The Myth of Cost–Benefit Balancing' (2007) 6 World Trade Review 347.
[92] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 321.

text of Article 2.2 to be a deterministic consideration of "necessity".

In addition to that, other "relevant elements of consideration" include: "available scientific and technical information, related processing technology or intended end-uses of products". These relevant elements should provide a more solid ground for environmental considerations to be taken into account. Even though they are merely one of the listed examples in the text of the provision and are not necessarily required, they should reduce the likelihood that the non-trade considerations would be neglected.

2.1.3. Necessity Provisions concerning Standards and CAPs

The necessity requirements in the TBT Agreement on voluntary standards are minimal if compared to the more detailed provisions addressing the other two types of technical measures.[93] In the Code of Good Practice for the Preparation, Adoption and Application of Standards, annexed to the Agreement, paragraph E ("Annex3.E") uses the exact same phrase used in the first sentence of Article 2.2 above. It requires that "[t]he standardising body shall ensure that standards are not prepared, adopted or applied with a view to, or with the effect of, creating unnecessary obstacles to international trade".

The interpretation and application of this primary requirement in Article 2.2 are specifically provided by the subsequent

[93] Annex3.E and H, in comparison with Article 2.2 and Article 5, the TBT Agreement.

sentences in the same provision, not from the first sentence itself. They are therefore not necessarily automatically applicable in the context of voluntary standards. But, the text of Annex 3.E does not provide any further elaborations of its own. It may be interpreted and applied with the similar weighing and balancing process which takes into account trade-restrictiveness, contribution to the legitimate objectives, and risks of non-fulfilment, to ultimately determine whether a standard at issue creates "unnecessary obstacles to international trade". Nevertheless the standards are voluntary. The threshold of the requirements is unlikely as strict or as high as the ones applied in the process for technical regulations.

The only one additional requirement concerning necessity of a standard is in Annex3.H, seeking to reduce the redundancy, which is quite obviously an "unnecessary obstacle to international trade". It requires the avoidance of duplication and overlap among domestic standards in the same country and, between the regional and international ones. The provision further recommends that standardising bodies seek national consensus in establishing a domestic standard.

2.1.4. Conformity Assessment Procedures

Article 5.1.2 too uses the same phrase for the primary requirement for the necessity of conformity assessment procedures that they: "are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade". Unlike Annex 3.E for standards, the provision provides one of the possible meanings of its first sentence. It focuses on the operation of

conformity assessment procedures and requires similarly to Article 2.2 for technical regulations, that they are not "*inter alia*, [...] more strict or be applied more strictly than is necessary to give [...] adequate confidence that products conform with the applicable technical regulations or standards, taking account of the risks non-conformity would create" [emphasis as original].

Considering the similarity between the subsequent explanation in the text of Article 5.1.2 and Article 2.2, it is then logical to expect a similar weighing and balancing approach in determining whether the conformity assessment procedures at issue create "unnecessary obstacles to international trade". It is most likely to include mentioned elements such as strictness of the procedures, how much it would contribute to adequate confidence of product conformity, and risks of non-conformity. But, the factors may vary beyond the ones provided in the provision.

Article 5.2 then establishes further requirements, adding specific elements to the characterisation of necessity in the context of conformity assessment procedures. First, unnecessary inconvenience should be minimised by the requirements that the procedures are undertaken and completed "expeditiously"[94]; that the application for assessment should be proceeded promptly, even when there are deficiencies in the application[95]; that they should not require excessive information not needed for the assessment and determination of fees[96]; that the confidentiality of such

[94] Article 5.2.1, the TBT Agreement.
[95] Article 5.2.2, the TBT Agreement.
[96] Article 5.2.3, the TBT Agreement.

information should be protected[97]; that the location where the procedures take place and the selection of samples do not cause burdensome inconvenience[98]; and that the process for products, which had been modified after having been previously assessed should be limited to what is necessary.

Second, the provision requires several elements which should in effect assist traders[99], particularly the elements for transparency of the procedures. The length of time to be taken for each assessment procedure should be provided either by publication or communication with the applicants upon request. As required by Article 5.2.2, applicants should be informed of any deficiencies in their application, their assessment results and the status of the undertaken procedures. Further, the assessing bodies should also proceed with the assessment as far as practicable when requested, and explain any delay.

2.2. Conclusion

Corresponding with its Preamble, the necessity requirements in the TBT Agreement primarily seek to prevent "unnecessary obstacles to international trade" intended or affected from the three types of technical measures, while at the same time allowing Members to adopt them to address the legitimate

[97] Article 5.2.4, the TBT Agreement.
[98] Article 5.2.6, the TBT Agreement.
[99] Note that the requirements do not distinguish the assessment procedures on domestic products, imported products from a Member, or products from elsewhere. The non-discrimination principles only require that products from a Member are not treated in the less favourable ways. The elements of conformity assessment procedures therefore not only concern traders but perhaps manufacturers alike. Nevertheless, the aspects of the latter are not directly relevant and therefore not brought into this discussion.

objectives which may indeed compromise trade goals.[100] Except for the case of voluntary standards, the necessity requirements include both the elements which would promote trade goals (such as trade-restrictiveness of technical regulations, and strict application of conformity assessment procedures) and the non-trade elements (such as a technical regulation's legitimate objectives and risk of non-fulfilment, and conformity assessment procedures' need to provide adequate confidence).

The concept of the necessity requirements for technical regulations and conformity assessment procedures is then mainly about an analytical process of weighing and balancing between (1) the appropriate degree of connection between the measure at issue and its objective(s); (2) impact on trade (i.e. trade-restrictiveness and strict application); and (3) the non-trade values of the measure (i.e. legitimate objectives, the risk of non-fulfilment and adequate confidence of a product conformity with regulations or standards); all of which are also likely for standards.

As reflected by several GATT cases, though not particularly clear in the TBT jurisprudence, the weighing and balancing process likely results in demanding a measure to have most importantly (1) high contribution to the achievement of stated objective(s); and (2) the least trade-restrictive impact as reasonably possible. Such requirements in effect exert to environment-related technical measures the particular elements which may not have necessarily been included by their environmental purposes alone, without the requirements

[100] From the fifth to the seventh recitals of the Preamble, the TBT Agreement.

from the TBT Agreement. They are therefore to be studied later in this research how these requirements may shape the future development of the trade-related environmental governance, and whether they would at the end create unnecessary obstacles to environmental protection.

3. The Requirement on the Use of International Standards

Like the above two requirements of the TBT discipline, the requirement to use international standards to facilitate international trade transactions.[101] Technical measures in themselves can be a barrier to the internationalisation of trade and supply chain. Measures corresponding to a single objective can diverse among different importing markets. There is certainly more than one concern involved in a single product and its production processes (which includes transportation and disposal after its "life-cycle").

On the same vein, in the modern consumerist society, regulatory bodies will seek to pursue a variety of goals by trade- and product- related approach. The ones that export each of their product to more than one importing Member, of which different localities may impose rules of their own could

[101] The Decision of the Committee on Principles for the Development of International Standards, Guides and Recommendations with Relation to Articles 2, 5 and Annex 3 of the Agreement as always annexed to the TBT Committee's circulated decisions, since its Second Triennial Review in 2000. See TBT Committee, 'Second Triennial Review of the Operation and Implementation of the Agreement on Technical Barriers to Trade, G/TBT/9' (2000); and, for example, TBT Committee, 'Decisions and Recommendations Adopted by the Committee since 1 January 1995: Note by the Secretariat (Revision), G/TBT/1/Rev.7' (2000) G/TBT/1/Rev.7; and TBT Committee, 'Decisions and Recommendations Adopted by the Committee since 1 January 1995: Note by the Secretariat (Revision), G/TBT/1/Rev. 10' (2011) G/TBT/1/Rev. 10.

therefore face a great quantity of technical requirements would therefore have to comply with the variety of such measures.

The diversity of measures addressing a given objective within the trading community increases the hindrance on international trade as it creates more burdens on international traders and overseas manufacturers.[102] While accepting each Member's need to adopt technical measures to address their non-trade objectives,[103] the TBT Agreement seeks to reduce the practical "barriers" by "harmonising" such measures.[104]

Harmonisation of measures means that different autonomous jurisdictions would adopt the same or similar technical measures.[105] The Agreement seeks to do so via "international standards",[106] an approach that counteracts the unilaterally developed measure that could also lead to a form of harmonisation given that the regulating Member is politically strong and economically affluent enough to stand against their trading partners' pressure to lower the "barrier" and/or to motivate them to adopt the same policies and regulations.

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[102] Daniel C Esty and Damien Geradin, 'Market Access, Competitiveness, and Harmonization: Environmental Protection in Regional Trade Agreements' (1997) 21 Harvard Environmental Law Review 265, at 268.; and, Humberto Zúñiga Schroder, 'Harmonisation, Equivalence and Mutual Recognition of Standards: An Analysis from a Trade Law Perspective' (University of Edinburgh 2009), at 737.

[103] The sixth recital of the Preamble, the TBT Agreement

[104] See Humberto Zúñiga Schroder (n 102), at 28; and John S Wilson, Catherine L Mann and Tsunehiro Otsuki, 'Trade Facilitation and Economic Development: A New Approach to Quantifying the Impact' (2003) 17 The World Bank Economic Review 367.

[105] Mayeda, G., Developing Disharmony? The SPS and TBT Agreements and the Impact of Harmonisation on Developing Countries, Journal of International Economic Law, vol. 7 no. 4, 2004, 740.

[106] The third recital of the Preamble, the TBT Agreement; and Appellate Body Report, EC-Sardines, 2002, para. 214.

TBT discipline therefore requires that technical measures are based on such international standards or relevant parts of them, as these are in a way developed multilaterally albeit not necessarily in the State-State sphere.[107] With minor difference in detail in addressing conformity assessment procedures which will be noted at the end of this section, the TBT discipline imposes the same requirements on all three types of technical measures. The discussions below will be about the provision corresponding to technical regulations but should be applicable to the other two types of technical measures.

Note that in this chapter, "international standards" also include to "international guides and recommendations" a different term used in Article 5.4 to address conformity assessment procedures unless the distinction needs to be specified.

Below is the excerpt of Article 2.4 which stipulates the requirement to use international standard as a basis for technical regulations of central government bodies:

> "Article 2: Preparation, Adoption and Application of Technical Regulations by Central Government Bodies
> …
> 2.4 Where technical regulations are required and *relevant* international standards exist or their completion is imminent, Members shall use them, or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an *ineffective or inappropriate* means for the fulfilment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems." [emphasis added]

[107] Article 2.4 (for technical regulations) and 5.4 (for conformity assessment procedures); and, Annex 3.F (for standards), the TBT Agreement.

3.1. Definition of "International Standards"

The TBT Agreement does not provide specific definition of "international standards". The term is composed of two words: "international" and "standard". The Appellate Body has taken the latter quite straightforwardly. It views international standard as a type of "standard" which is one of the three types of technical measures subject to the TBT discipline despite the norm-setting role of international standard. In doing so, it refers to the already existing definition of standard in Annex 2, explained in Chapter 1. For the "international" aspect of the measure, the Appellate Body refers to the definition of "international body or system" in Annex 1.4, complemented by the ISO/IEC Guide 2: 1991 and the TBT Committee's "Principles for the Development of International Standards, Guides and Recommendations with Relation to Articles 2, 5 and Annex 3 of the Agreement ("the TBT committee Decision").

The definition of standards in Annex 1.2 and the Appellate Body's description of "international" are the "formalistic element".[108] The Appellate Body takes the first sentence of Annex 1.2 "[d]ocument approved by a recognised body ..." and specifies that a standard constitutes an international standard when the "recognised body" is an "international standardising body", which is a term defined in ISO/IEC Guide 2: 1991.[109]

[108] Mitsuo Matsushita and others, 'Chapter 13 Technical Barriers to Trade: TBT and SPS', *The World Trade Organization: Law, Practice, and Policy* (Oxford University Press 2006), 433-506.
[109] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 357. In the Guide 2, a standardising body is defined as a "body that has recognised activities in standardisation". ISO/IEC Guide2: 1991 General

It also has to be "a body that has recognised activities in standardisation and whose membership is open to the relevant bodies of at least all Members".[110] Note therefore that the entity constituting an international standardising body in the TBT context may not necessarily be labelled as a standardising body in the conventional sense.

In this way, various types of entities beyond the State-State sphere which may not necessarily be recognised as a subject of public international law[111] will become one of the actors that set some forms of normative measures to which States and regulatory bodies will have to conform in the TBT context.

This may be rather unconventional, as it institutionalises the normative role of a wide range of non-state bodies in a Sate-State forum. It could also create a "back door" by which multilateral environmental agreements (MEAs) may have authoritative significance over bodies that are non-parties to their obligations, provided that (1) their content constitutes a "standard" and their conference of parties would constitute an international body under Annex 1.4; or, (2) their State-State obligations are translated into product- (or PPM-) related standards by an "international body or system".

Examples of international standards of which status as "international bodies" has been reaffirmed by the Appellate

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Terms and Their Definitions concerning Standardisation and Related Activities, 4.3 and 4.4.

[110] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at paras. 356 and 359.

[111] Joyeeta Gupta, 'Chapter 11 Non-State Actors: Undermining or Increasing the Legitimacy and Transparency of International Environmental Law', *(eds.) Ige F Dekker and Wouter G Werner, Non-State Actors: Undermining or Increasing the Legitimacy and Transparency of International Environmental Law* (Springer 2004), 297-320, 297-320.

Body are Codex Alimentarius Commission and Inter-American-Tropical-Tuna-Commission (IATTC). The former is recognised in EC-Sardines for its Codex Stan 94 standards relevant to sardines;[112] and, the latter in US-Tuna (Mexico) II for its Agreement on the International Dolphin Conservation Program (AIDCP) which are standards relevant to tuna fishing practices.[113] Although the two are not necessarily a State-actor in a strict sense, their body of Members consists of State-representatives. Non-governmental bodies that should be likely accepted as international bodies are the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC), as their roles as international standardising bodies are clearly recognised by the TBT's own reference to their publications in Annex 1.[114] Roles of the ISO, its membership system and interests would be discussed in Chapter 6 in more detail. The one thing that can be said now is that international standardising bodies under Article 2.4 does not have to be a State actor, which is a conventional legal personality under public international law.

Despite the unconventional status of a norm-setter (i.e. being a non-State actor under public international law), there are elements that resonate with the concept of State representation in public international law. The above elements of recognition and openness inhabited by an "international body" seem to be an attempt, from perspective of an

[112] *European Communities - Trade Descriptions of Sardines ('EC - Sardines'), WT/DS231/AB/r, 2002*

[113] *Panel Report, US-Tuna (Mexico) II, 2012* (n 76), at paras. 7.663–7.665.

[114] As explained in Chapter 2.

exporter, to promote equity and cooperative atmosphere (as opposed to a unilaterally coercive dynamic) among trading Members. The development and application processes of international standards are expected to allow the input and involvement of a casual form of representative of the countries that will be affected by such international standards.

The definition of standards in Annex 1.2 does not require consensus in the standardisation process.[115] However, the Appellate Body seems to seek State actors' acceptance of, and prevent the resistance against, the requirement for Members to conform to an international standard by focusing on the definition of "international body or system" provided in Annex 1.4.

Annex 1.4 defines "international body or system" as a "[b]ody or system whose membership is open to the relevant bodies of at least all Members". This approach also corresponds with the intent of WTO Members in drafting the requirement of international standard; to "ensure that the development of international standards take place transparently and with wide participation".[116] In view of the Appellate Body, it is sufficient that Members are aware or have reason to expect that these entities are engaged in the standardisation activities, though such activities are not the principal mandate of the international body in question.[117]

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[115] *Appellate Body Report, EC - Sardines, 2002* (n 112), at para. 222.
[116] Such intent of WTO Members is reflected from the provisions of the TBT Agreement and provided by the Appellate Body in US-Tuna (Mexico) II. See *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 379.
[117] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at paras. 361-362.

Appellate Body then provides two main elements of such openness.[118] First, from the "temporal" aspect, it requires that the membership is open to all Members "at every stage of standards development".[119] Second, the membership must be open to "relevant bodies of at least all WTO Members" without de-jure or de-facto discrimination.[120] In the case where there are "formality" requirements for membership, such as an invitation from that standardising body, the non-discriminated openness would be determined on a case-by-case basis, particularly with the evidence that the invitation would be "automatically" issued to the interested Members.[121]

Note that it is also likely that international standards play a part in the assessment of compliance with the prohibition of unnecessary trade-restriction explained in the previous section above.[122] They may be referred as an alternative measure to be compared with the contested technical measure to find the less trade-restrictive measure, as attempted in Mexico's argument in US-Tuna (Mexico) II.[123]

3.1.1. Guidance for International Bodies

The Appellate Body signifies the TBT Committee Decision as a "subsequent agreement between the parties regarding the

[118] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at paras. 343-401.
[119] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at paras. 373-374, 378 and 382; and TBT Committee, 'TBT Committee Decision, 2011' (n 101), at para. 6.
[120] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at paras. 372, 375 and 378.
[121] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at paras. 386 and 398.
[122] See Section 2 above.
[123] See *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 328.

interpretation of the treaty or the application of its provisions". The recognition renders the Decision authoritatively significant.[124]

The Committee Decision provides requirements on the development of standards which "should be observed" by recognised international standardising bodies.[125] The conformity to these requirements is considered as an attribute of an "international standardising bodies". Note that international standards are also a type of standard, as explained above. It is therefore plausible that the international body itself as a standardising body may be a signatory to the Code of Good Practice. They are under the coverage of the TBT discipline themselves and are required to comply with the Code of Good Practice if their standardising bodies commit to it.[126]

Only standards established by non-governmental bodies are relevant in this regard, as the voluntary standards established by government agencies would obviously not constitute an international standard for the lack of international formalistic elements. Current signatories to the Code of Good Practice for Standards in Annex 3 yet to include "international

[124] Article 31(3)(a) of the Vienna Convention on the Law of Treaties; and *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 371; see also *Appellate Body Report, US - Clove Cigarettes, 2012* (n 10), at para. 265.
[125] TBT Committee, 'TBT Committee Decision, 2011' (n 101), at para. 1.
[126] Only standards established by non-governmental bodies are relevant in this regard, as the voluntary standards established by government agencies would obviously not constitute an international standard for the lack of international formalistic elements. Annex 3, the TBT Agreement; Current signatories nevertheless are not "international standardising bodies". See TBT Information Management System, *List of Standardising Bodies That Have Accepted the Code of Good Practice for the Preparation, Adoption and Application of Standards since 1 January 1995* (2012)

standardising bodies".[127]Even if the standardising body in question does not commit to the Code, the Committee Decision is the TBT's means to take some control over its operation.

The requirements in the TBT Committee Decision emphasise on: transparency, openness, impartiality and consensus of their standard development process; coherence, effectiveness and relevance of their established standards; and participating opportunity for developing Members of the WTO.

Corresponding to the intent of WTO Members' to encourage wide participation in the standardisation process, the Committee's requirements on transparency seek to ensure that interested parties of WTO Members are aware of the standard development of "international standardising bodies", and that the ones who are their members get adequate opportunities to comment and participate in the process.[128] Its requirements on openness of such international standardising bodies are not only in regard to their membership. It goes beyond the definition of an international body in Annex 1.4 and also requires such openness in regard to the members' participation in different levels of standardisation process.[129] Its requirements on impartiality seek to ensure an objective process of standard development, avoiding subjective influence from interest groups such as "a particular supplier/s, country/ies or region/s".[130] Finally, its recommendations regarding developing countries seeks to ease practical limitation and inability of such countries to participate in

[127] See TBT Information Management System (n 126).
[128] TBT Committee, 'TBT Committee Decision, 2011' (n 101), at paras. 3-5
[129] TBT Committee, 'TBT Committee Decision, 2011' (n 101), at paras. 6-7
[130] TBT Committee, 'TBT Committee Decision, 2011' (n 101), at paras. 8-9.

standard development process by encouraging facilitation for their participation, capacity building and technical assistance within the standardisation bodies.[131]

In responding to the WTO's ultimate goal in trade liberalisation, the requirements in the Committee Decision on coherence, effectiveness and relevance of established international standards seem to be in line with the principle of non-discrimination and the necessity requirements.[132] The Committee Decision seeks to prevent the distortion of global market, business competition and avoidance of creating unnecessary international standards. At the same time, the requirements also take into account regulatory needs, different levels of scientific and technological developments in various countries, and their other specific needs and interests of producers and exporters.[133]

3.2. Requirement to Use "International Standard" as a Basis

The requirement grants authoritative significance to external instruments, i.e. "relevant international standards" developed outside of the TBT context, and probably by non-State actors without formal State "representatives" that are the conventional practice of international legal instrument. It requires that Members and Signatories to the Code of Good Practice (hereinafter "Signatories") use such international standards as a basis to develop their measures, including

[131] TBT Committee, 'TBT Committee Decision, 2011' (n 101), at para. 13.
[132] Such unnecessary standards include, in the Committee's words, standards that "become obsolete, inappropriate or ineffective for various reasons". See TBT Committee, 'TBT Committee Decision, 2011' (n 101), at para. 11.
[133] TBT Committee, 'TBT Committee Decision, 2011' (n 101), at para. 10.

those that had been adopted or prepared before the TBT Agreement entered into force.[134] In this regard, there are two key questions to be debated by exporting and regulating Members (or Signatories to the Code): How to identify the "relevant" international standard and how to use them as a "basis".

3.2.1. Indentifying the "Relevant" International Standards

International standardising bodies generally do not have legal or authoritative significance on the WTO Members and TBT Signatories who are not their members or contracting parties. Regulating Members and technical bodies would therefore have to find out before their drafting process of technical measures whether "relevant international standards exist or their completion is imminent".[135]

From the approach in dispute settlement, such relevance is product-centred and is therefore determined by whether the products covered by technical measures and potentially relevant international standards overlap. For this purpose, such product coverage may be explicitly expressed, or may only be implied by the effects from the adoption of the measures.

In EC-Sardines, the "relevance" between the international standard in question and the technical regulation at issue is determined by comparing the product coverage of the two instruments. First, the scope of their subject matter overlaps.

[134] *Appellate Body Report, EC - Sardines, 2002* (n 112), at para. 213.
[135] Article 2.4 for technical regulations, Article 5.4 for CAPs and Annex 3.F for standards, the TBT Agreement.

The instruments are of relevance as the one species of sardine fish explicitly mentioned by the technical regulation is also among the several species mentioned by the international standard. Second, the Appellate Body clarifies further that the two instruments also relate in the view that these other species included by the international standard are "legally affected by the exclusion" even though they are not explicitly mentioned by the technical regulation.[136] The relevance of an international standard therefore seems to have been determined on a rather broad basis.[137] In the process of preparing technical measures however, identifying such "relevant" international standards can be an exercise that is less than straightforward.

In respect with environmental measures, it has been observed that the preparation and adoption of environmental measures tend to be motivated by external/transnational institutions other than "international standardising bodies". These institutions are such as business organisations and private interest groups[138]; domestic governance of trading countries or home countries of investing corporations; their regional forums;[139] and multilateral environmental forums[140].

[136] *Appellate Body Report, EC - Sardines, 2002* (n 112), at para. 232.
[137] This broad view may be reflected more clearly in the Appellate Body's illustrative example that "a regulation stipulating 16 years as the age at which one may obtain a driver's licence, does not relate to persons that are under 16 years of age". *Appellate Body Report, EC - Sardines, 2002* (n 112), at para. 254.
[138] Gupta (n 111), at 314-315.
[139] Harmonisation within the regional free trade schemes have been observed, particularly within the North American Free Trade Agreement (NAFTA) and the European Union. See Alberto Bernabe-Riefkohl, 'To Dream the Impossible Dream: Globalization and Harmonization of Environmental Laws' (1994) 20 North Carolina Journal of International Law and Commercial Regulation 205, at 213-217.
[140] See Organisation for Economic Co-operation and Development (OECD), *Trade Measures in Multilateral Environmental Agreements* (OECD

Standardising bodies are therefore likely to be pressured to serve a combination of agendas. The requirement to use international standards then demands regulators/standardising bodies to step further to the broader arena of their field and be aware of how the same subject of interests may have already been tackled differently by an internationally recognised institution. The requirement influences the trend of regulatory/standard development towards the "international harmonisation"[141] where regulations in different countries start to be developed coherently. It can inform the Agreement's recognition of "the important contribution that international standards [...] can make [...] by improving efficiency of production and facilitating the conduct of international trade".[142]

3.2.2. Using International Standards "as a Basis for"

The requirement to use international standards may appear to some as a procedural requirement.[143] However, the compliance with the requirement cannot be simply assessed by the formality in the drafting and applying of the contested measure, e.g. a reference to certain "international standard" in regulation-making processes. As technical bodies are required to use them "as a basis", the content of the adopted technical measure and the relevant international standard

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Publishing 2000) <http://www.oecd-ilibrary.org/trade/trade-measures-in-multilateral-environmental-agreements_9789264180611-en>

[141] Humberto Zúñiga Schroder (n 102), at p. 27; and Graham Mayeda, 'Developing Disharmony? The SPS and TBT Agreements and the Impact of Harmonization on Developing Countries' (2004) 7 Journal of International Economic Law 737.

[142] The third recital of the Preamble of the TBT Agreement, as cited in *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at para. 379.

[143] Michael J Trebilcock and Robert Howse, *Trade Policy and Domestic Health and Safety Regulation and Standards* (Psychology Press 2005), at 230.

must have "a very strong and very close relationship", as seen in the Appellate Body's deliberation in EC - Sardines.[144] It is the substances of the contested measure and the international standard in question that are compared. The threshold is currently broad as the Appellate Body seems to be satisfied if the two are not "contradictory".[145]

3.2.3. Exceptions: "Ineffective" or "Inappropriate" Means

In the context of necessity requirement, it has been clear that Members are entitled to identify the "legitimate objective(s)" they choose to pursue[146] as well as the level they want to achieve.[147] These may allow some independence for regulating Members to exercise their rights within the concept of "necessity", under the requirement to use an international standard, a similar room for independence may be in the form of exemption expressed in the phrase: "when such international standards or relevant parts would be an *ineffective or inappropriate* means for the *fulfilment* of the *legitimate objectives* pursued".[148]For technical regulations, the necessity requirement and requirement to use international standard as a basis are written in a similar language regarding the "fulfilment of the legitimate objectives".[149] The phrase not

[144] *Appellate Body Report, EC - Sardines, 2002* (n 112), at para. 245.
[145] *Appellate Body Report, EC - Sardines, 2002* (n 112), at paras. 248-249.
[146] See *Appellate Body Report, EC - Sardines, 2002* (n 112), at for example, para. 276.
[147] See *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 70), at, for example, para. 316. See also the sixth recital of the Preamble, the TBT Agreement. Refer to discussions on the necessity requirements above, in Section 2.
[148] Article 2.4, the TBT Agreement [emphasis added]
[149] As appeared in Article 2.2 for the necessity requirements on technical regulations and in Article 2.4 for the requirement to use international standards as a basis.

only expresses the Agreement's recognition of the importance of its Members' pursuit of their non-trade goals, it also suggests the same degree of causal connection between the purported objective and the international standard that would be considered effective or appropriate under this requirement.

The key terms of the exception are "ineffective" and "inappropriate", both of which have been distinctively defined by the Appellate Body, as the former is determined on the "capacity" or "*results* of the means employed" and the latter more on "suitability" or "the *nature* of the means employed".[150] Considering the provisions and the interpretation of the terms, the exception seems to retain some space for Members' to address their objectives with the measure they deem "capable" and "suitable", rather than entirely shifting decision making to international standardising bodies who establish the "relevant international standards". In this respect, the exception gives room for non-trade concerns, for example, "fundamental climatic or geographical factors or fundamental technological problems", to pull its weight in the preparation and application of technical measures.[151]

This said, from the viewpoint of dispute settlement, it is the claimant who bears the burden of proof to show that relevant international standards are objectively "effective and appropriate" to pursue the objectives of the technical regulation at issue, and should have been used as a basis of preparing and adopting the technical regulation.[152] In preparation of a technical measure, if Members decide not to

[150] *Appellate Body Report, EC - Sardines, 2002* (n 112), at paras. 285 and 289. [emphasis as original]
[151] Article 2.4, the TBT Agreement.
[152] *Appellate Body Report, EC - Sardines, 2002* (n 112), at paras. 290-291.

use the relevant international standards "as a basis", they must make sure that their consideration on the incapacity and unsuitability of the relevant international standards is objective and could be demonstrated in all possible aspects.

The exception is similarly available for standards and conformity assessment procedures. The case law elaboration from the technical regulation context should be applicable to both standards and conformity assessment procedures. However, it is worth noting here that the necessity provisions addressing standards and conformity assessment procedures do not mention "legitimate objective" or its "fulfilment". The one on standards does not mention "legitimate objectives" at all[153] while the one on conformity assessment procedures seems to replace it with the objective of "to give the importing Member adequate confidence that products conform to the applicable technical regulations or standards".[154]

3.2.4. Conclusion

On the face of the requirement, it does not seem to be set out with the intention to discourage Members and Signatories of the Code of Good Practice from imposing trade-restrictive technical measures. It may even be read as empowering non-State actors in influencing environmental movements and opening back door for multilateral environmental agreements (MEAs) which have not managed to get WTO Members to rectify. It may help technical bodies develop a scientifically informed technical measures developed by a recognised authority in the field. Regulatory harmonisation, with the

[153] Annex 3.E, the TBT Agreement.
[154] Article 5.1.2, the TBT Agreement.

openness in the process of standardisation to all WTO Members, may promote the much needed cooperation among Nations. The requirement offers a logically sensible room for regulating Members and technical bodies to deviate from international standards that are not relevant, effective or appropriate.

However, there are risks by which WTO decision makers could undermine or prevent such conceptual potentials in their application of the requirement. The requirement to "use as a basis" and the exception of "ineffectiveness and inappropriateness" are yet to be further elaborated by the TBT case law, and possibly the TBT Committee's consensus decision. In particular, further clarification on the extent of the "relationship" between relevant international standards and technical measures in satisfying the requirement; and, on the considering criteria of "capacity and suitability" of relevant international standard(s) could tip the "balance" of its Members' right to regulation and the agenda of facilitating trade activities.

The thesis has laid down the foundation of the TBT Agreement, namely: the three types of technical measures and the coverage of the Agreement in Chapter 2; the three types of technical bodies that are directly responsible for the design and application of technical measures in Chapter 3; and the TBT discipline in Chapter 4.

Before discussing the TBT components specifically in relation to environmental measures, there remain the important questions as to why and in what way environmental interests are relevant to such an international trade regime. The WTO is

certainly not an “environmental” organisation. The next chapter therefore addresses these questions and introduces the concept of sustainable development.

Chapter 5: WTO Agreements on International Trade of Goods and Environmental Protection under the Concept of Sustainable Development

The concept of sustainable development provides a conceptual framework for this thesis, as well as the justification and necessity to examine the relationship between one of the WTO Agreements, the Agreement on Technical Barriers to Trade (the TBT Agreement), and environmental governance. The primary objective of this chapter is therefore to discuss the concept, particularly in relevance to the intersection between the regimes of international trade and environmental protection. The relationship between the two objectives is generally regarded with the notion of "trade-environment conflict".

This chapter explains the philosophical foundation of the concept, its pursuit of integrating environmental protection in economic and social development, and the procedural characteristics of the principle of integration. It also raises awareness on certain issues in discussing about the conflict. In particular, it emphasises the interest of the sustainable development concept in "balancing" development and environmental protection, and provides an important reminder on the difference between "material" and "legal" aspects in the confrontation of trade and the environment.

Thorough discussions can focus on only one of the two aspects at a time but would still be clustered under the same generic theme of trade-environment conflict/relationship. This chapter

brings to attention the awareness of the different natures of the two aspects. As the material aspects are better explored in empirical research and require methodologies such as economic and sociological theories, this thesis will focus on the legal aspects of the relationship. This should help setting out a more constructive pretext and expectation for the discussions, like the one about the TBT provisions and their relationship with environmental interests in Chapter 7.

The chapter explains the background and legal function of the sustainable development concept and highlights the importance of the principle of integration. The principle should provide a framework for the analysis on the legal aspects of trade-environment relationship. This chapter, therefore, explores the concept in the broader context of public international law as well as in the GATT context. The notion of balance between the interests of development an environmental protection under the sustainable development concept seems to correspond with the notion of balance between the Members' obligations and their rights to regulate under international trade rules.

In summary, it shows that concerns for the environment are at the foundation of the concept as reflected throughout the history of its evolvement in the UN forums. The philosophy is multi-dimensional embracing environmental protection, economic development and social welfare – in the way that one shall not be pursued in isolation of the others.

The legal function of the sustainable development concept is an "overarching guidance" for different legal regimes that come into intersection. The specialisation of different legal

regimes should no longer allow them to neglect important values that are not their specific objectives.

The Chapter presents that the meaning of balance under the concept is of a procedural nature. It refers to the principle of integration under the concept which promotes coherency and "mutual supportiveness" in the processes of implementing a set of rules that otherwise could have been applied in ignorance of other sets of international rules, e.g. WTO rules and multilateral environmental agreements, and vice versa. The procedural character of the principle is worth noting as it provides an analytical framework in Chapter 7. This chapter argues that the appraisal of the TBT-provision in regards to environmental measures should not focus on the immediate outcome of a given dispute settlement case, whether or not the measure citing environmental objectives are rejected as a WTO-violation.

It also explains that the idea of balance has in fact been an important component of international trade rules since the era of the GATT 1947. Via its exception provision in Article XX, the GATT seeks to strike balance between its Members' obligations under the WTO agreements and their right to regulate. Its approach has happened to resonate with the objectives of sustainable development in that, environmental necessities may offer permissibility for GATT-inconsistent actions.

Such a concept of balance in Article XX however does not seem to be able to fully materialise the principle of integration on its own. Other legal means are needed in the application of the provision. This chapter looks into the legal significance of the sustainable development concept in relation to the

WTO/TBT regimes. As the WTO provisions should be applied with balance in the sense that is beyond the one between the disputing parties' right and obligations, the chapter also explores the legalistic means that have been incorporated in the application of the WTO agreements.

The principle of integration is legally significant to the WTO/TBT regime not only as a form of soft law, as some may argue, but also more clearly by the expressed commitment to the "objectives of sustainable development" in the Marrakesh Agreement Establishing the World Trade Organization. Such an expression provides a context in light of which all WTO provisions are to be interpreted. This is reaffirmed by the Appellate Body in the case of US-Shrimp, where interpretative approaches were adopted to strike the "balance" in the treaty-based sense and in the sense of the sustainable development concept. The chapter explores the Appellate Body's "evolutionary treaty interpretation".[1]

1. The Meaning of Sustainable Development: a Concept of the "New Era"[2] of Development

Introduction of sustainable development in legal terms should start with the basic ideas of what it is as a subject matter. "Sustainable development" is most widely described by referring to a study report of the World Commission on Environment and Development (WCED), or the Brundtland

[1] Sondre Torp Helmersen, 'Evolutive Treaty Interpretation: Legality, Semantics and Distinctions' 6 European Journal of Legal Studies 127, 127-148.

[2] *Environment and Development: Our Common Future ('The Brundtland Report' or 'Report of the WCED'), 4 August 1987*, annexed in Note by the UN Secretary General, 'Development and International Co-Operation: Environment, A/42/427' (1987), at paragraph 27.

Report, initiated by the UN. The report describes it as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs".[3] Though the legally binding definition of the term is yet to be settled, it is clear that the concept is based on the recognition of the interdependent linkage between human needs, or "development", and environmental protection.[4] It is formulated around two dimensions of "equity": the need of the present generation (intra-generational equity), particularly the basic needs of the world's poor, and that of the future generations (inter-generational equity).

Importantly, the concept of sustainable development is underpinned by the clear recognition of the limitation of environmental resources and of "the ability of the biosphere to absorb the effects of human activities".[5] Despite the expansion of the sustainable development agenda towards development and economic growth since the United Nations Conference on Environment and Development (UNCED or Rio Conference), and regardless of the complex explanation between such growth and environmental protection, it should still be remembered that the basic idea of the concept, from its

[3] *The Brundtland Report* (n 2)
[4] As reflected throughout instruments and reports in the UN discourse for sustainable development. See for example: *'World Charter for Nature' in UN General Assembly, Resolution 37/7 of the 48th Plenary Meeting, A/RES/37/7, 28 October 1982*; *Declaration of the UN Conference on the Human Environment ('Stockholm Declaration')*, as contained in, the Report of the UN Conference on the Human Environment, UN Doc. A/CONF.48/14, 1972; and *Rio Declaration on Environment and Development ('Rio Declaration')*, as annexed in UNGA Report of the UN Conference on Environment and Development, UN Doc. A/CONF.151/26 (vol.1), 12 August 1992. See also, Philippe Sands, 'Chapter 6: General Principles and Rules', *Principles of international environmental law* (Cambridge University Press 2003), 231-289, at 265.
[5] *The Brundtland Report* (n 2), at paragraph 27.

history and its philosophical foundation, is that development must be "environmentally sustainable".

As helpfully noted in the Brundtland Report, sustainable development is not a "fixed state" but a "process of change".[6] From the above foundations, the agenda on the discourse of sustainable development is therefore to modify our current patterns of economic activities, the use of natural resources and technological development while assuring that the poor get their "fair share of the resources".[7] The concept therefore calls for development that includes environmental protection as its "integral part",[8] while at the same time acknowledging the needs and limitations in capacity of the developing countries.[9]

2. The Sustainable Development "Agenda": the Risk of a Misled Reading of the Concept

To implement the concept, a large (and expanding) body of material goals, issues of concerns, priorities, values and principles has been read as representing sustainable development, even though most of them tend to be only temporal considering that sustainable development is the discourse of ongoing "process of change". Examples include

[6] *The Brundtland Report* (n 2), para 30.
[7] *The Brundtland Report* (n 2), at paras. 27-30.
[8] As reflected throughout Stockholm and Rio Declarations. *Rio Declaration* (n 4).
[9] The emphasis on developmental needs have gained much more emphasis since Rio Conference, as reflected in the Rio Declaration, UN Framework Convention on Climate Change and Convention on Biological Diversity. This includes the reference to the "right to development" and the need for economic development and poverty eradication as "overriding priorities" for developing countries. See Principle 3 of the Rio Declaration; and Preamble of the two Conventions. *Rio Declaration* (n 4) and Sands (n 4), at 265.

the quota and areas allowed for fishing, logging and extraction of other natural resource. These may be misleading and dilute the true essence of the concept of sustainable development. The relevance, significance and urgencies of each of them change through time, place and circumstantial development. These immediate objectives themselves cannot represent the sustainable development concept. Therefore, they should only be read in the light of the foundation of the concept as mentioned above.

The materialistic agendas consist of what the international community sees, or manages to agree upon at the time of negotiations, to represent the fundamental needs of the present and the requirements of future generations. Especially when agreed in purely political terms, it is subject to change and will be developed in relative connection with the international affairs, the atmosphere within general public and circumstances around the world. The objectives recognised in sustainable development agendas are therefore diverse and often of a conflicting nature. This diversity casts doubts upon whether and how the sustainable development concept formulated in ideological terms could be translated into reality, and whether the concept has changed towards an unsustainable path.[10]

It is clear from the early history of the concept in the international arena that the emphasis of "development" is on

[10]See for example, Gill Seyfang and Andrew Jordan, 'The Johannesburg Summit and Sustainable Development: How Effective Are Environmental Mega-Conferences?' [2002] Yearbook of International Co-operation on Environment and Development, 2002/2003 19, at p. 19-39. The authors acknowledge the criticisms but are of the opinion that UN conferences on sustainable development provide important contribution to environmental governance.

human basic needs with the attention drawn towards poverty eradication. Yet through its evolvement, as may be reflected in the latest outcome instrument of the UN Conference on Sustainable Development in 2012 (Rio +20), such ideological aspiration is spelled out in rhetoric that may arguably suggest a much wider scope for societal and economic interests including international trade objectives.[11] Due to the complexity of our society and economic currents, it is hard to draw precise boundaries between (1) economic objectives that are within the idea of "development" and "basic needs" that particularly correspond to the aspiration of equity, within the concept of sustainable development; and (2) the ones that do not serve such ideological notion of equity.

Among such interests is the liberalization of international trade. Its contribution to address the protection of the world's poor is less than straightforward in capitalist economy. Consider, for example, that immediate stakeholders that benefit directly from either the establishment or removal of technical barriers to trade are usually the large-scale manufacturers and industries.[12] Though most profits tend to go to only the limited few, they provide employment and contribute to the livelihood of the society in various ways, some of which may be immeasurable, and/or indirect.

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[11] See Jagdish Bhagwati, *Rio's Unsustainable Nonsense, Council on Foreign Relations* (2012) <http://www.cfr.org/economic-development/rios-unsustainable-nonsense/p28612#>, accessed July 2014. The author critiques the expansion of social agenda due to lobbies by international organizations and trade unions. See *The Future We Want as adopted in Resolution 66/288 of the 123th UNGA Plenary Meeting, A/RES/66/288*.

[12] This may often be reflected by their roles behind administrative coordination as well as disputes among WTO Members, their lobbying activities in the enactment of technical regulations and their involvement in scientific researches and standardizing processes.

At the same time, the same doubts may be raised about "environmental" interests involved in a given case. To say the least, one should not forget that an achievement of one "environmental" target can mean a neglect or intensification of another environmental concern. Opinions on such determination would most likely differ when discussed in different contexts. Examples of such a scenario in environmental protection, the meaning of "environmental" measure and the complexity of environmental governance will be elaborated in the next chapter.

This therefore increases the difficulty in adequately identifying and weighing losses and gains entailed with any given regulatory measure. How does one "weigh" the competing interests entailed with a dolphin-friendly labelling scheme, for example? It is the weighing between the profit of the owners of tuna factories vs. biodiversity protection, or, is it one between the local fishermen, factory workers and the livelihood of the people in the exporting countries vs. protection of specific few species of animal (most of which are not "officially" considered under threat of extinction per se.)?

With this in mind, immediate interests in a specific context of any single decision-making (e.g. the protection of dolphin vs. tuna fishing and exports) should not necessarily be read as representing the ideological interests and values (e.g. environmental protection vs. economic development). It is too complex to determine whether any individual objective would lead to "sustainability".

The awareness of such complexity is crucial. It would prevent the misinformed notion of conflict between trade rules and

environmental protection that some may have concluded from a rejection of an "environmental" measure in any specific cases. As I would suggest later in this chapter, it is the procedural aspects of the decision-making in the case that would be a better demonstration of whether the dispute settlement body has satisfactorily implemented the integration principle under the concept of sustainable development.

The important point is also that the concept of sustainable development should not be applied in ignorance of the need to maintain the rules of international law for the interest of maintaining non-confrontational relations, including those among trading nations that are Members of the WTO. The evolution of international law is a slow process but, as this research will demonstrate in the context of the TBT Agreement and its non-discrimination concept, the development of law and governance is in a constructive direction aligning with the concept of sustainable development – towards "integration" among competing values.

3. Legal Functions of the Concept: Protection of Environment or Promotion of Growth?

Some environmentalists may have referred to the sustainable development concept as an "environmental principle" without recognising the importance of social and economic development, or prioritise (overtly or implicitly) environmental protection over social and economic interests. Some of such generalisation may often be an unintended subtext and be misread by inexperienced students/audience of environmental law. Such a tone of rhetoric and impression is often seen in, for example, arguments between developed and developing

countries, the so-called "North-South divide", throughout the negotiating discourse of the concept.[13]

In this regard, it might be useful to note that environmental approaches and schools of thoughts are not one homogeneous body. They vary and indeed may be described as having the different "shades" of green. Much of the literature regards differences among the schools of thoughts in environmentalism as differing in the "shade of green", basing on broad criteria including: the proposed changes in our current society as the required solution to environmental crisis; the approaches in addressing environmental problems; the kind of values that provide the basis of their philosophy; as well as the adopted perspectives and "worldview".[14]

Each therefore spells out "environmental sustainability" and "equity" for all generations very differently. On the basis of available international instruments, the concept of sustainable development is founded within the "lighter" range of environmental spectrum. It might not even be seen as

[13] See Gaetan Verhoosel, 'Beyond the Unsustainable Rhetoric of Sustainable Development: Transferring Environmentally Sound Technologies' (1998) 11 Georgetown Environmental Law Review 49. The polarisation has much characterised the process of negotiations and decision-makings on sustainable development in international community particularly since the 1992 Rio Conference. Peter Malanczuk, 'Chapter 16: Environment', *Akehurst's Modern Introduction to International Law* (1997), 241-253, at 247.

[14] See for example: Frank Fischer and Michael Black, 'Introduction', *Greening Environmental Policy: the Politics of a Sustainable Future* (Paul Chapman Publishing Ltd 1995), at xi-xvii; and, Bryan G Norton, *Toward Unity among Environmentalists* (Oxford University Press 1991) Frank Fischer and Michael Black, for example, describe different groups of environmentalists as being in an "environmental spectrum", in which the "dark greens" are at one end and the "corporate environmentalists" are at the other. While the former call for "radical transformation" in our societies, the latter formulate their arguments on "the parameters of established western institutions, free-market capitalism and liberal democracy in particular".

"environmental" by some "darker" environmentalists. In this sense, the sustainable development concept in its current stage of development in UN forums is hardly an environmentally radical or eco-centric philosophy.

Having said this, it would be equally incorrect to portray the concept of sustainable development as a concept of development centring on and primarily prioritising social and economic growths. Clearly, the concept has evolved from environmental concerns and with strong acknowledgement of the importance of environmental conservation, for the survival of the present and future generations.[15] As illustrated above in Section 1 and 2, the ultimate goal of the concept is neither environmental protection nor economic growth exclusively. – The goal is the "balance" of both, the meaning of which will be discussed later in this chapter.

4. Integration in Procedure of Development: for the Cause of "Environmental" Sustainability

From the legal perspective, one of the functions of the sustainable development concept is particularly to address the situation that has been academically characterised as "fragmentation" in international law.[16] The specialisation of

[15] As reflected throughout the international instruments on sustainable development. In particular, the early stage of its evolution under the UN was under the agenda of human and the environment before the term sustainable development subsequently emerged in Rio Declarations. See for example: *Stockholm Declaration* (n 4); *Rio Declaration* (n 4).

[16] For general discussions about the "fragmentation" and "intersection" among international regimes, see Eyal Benvenisti and George W Downs, 'The Empire's New Clothes: Political Economy and the Fragmentation of International Law' (2007) 60 Stanford law review 595. See the overview and reports of the International Law Commission on "fragmentation of international law: difficulties arising from the diversification and expansion of international law" in: International Law Commission, 'Analytical Guide'

each international institution creates the risk of being effectively a self-contained regime, when such institutions and regimes intersect or interface with one another.

In essence, the conflict arises (both in theory and in practice) in the following scenarios of: (1) a "direct conflict" of obligations governing the same subject matter by which compliance with the obligations of one institution may at the same time violate that of the other(s);[17] and (2) "intersections" between regimes in which the implementation or pursuit of certain values of one regime may be limited or required to observe certain practices imposed by existing obligations of the other(s).[18] Both scenarios could arise when more than one regime have different interests in the same subject matter. Conflicts arise when different regimes adopt different approaches and impose different requirements in dealing with that subject matter.

First, the direct conflicts are the case of State actors being under international legal obligations that may differ or clash with each other. The scenarios include, for example, WTO Members' domestic regulations incorporating trade-restrictive features, as obliged by multilateral environmental agreements to which they are parties. Such direct conflicts may be addressed by the doctrines of *lex specialis derogat priori*[19] and

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(*Overview and Reports of the International Law Commission: Analytical Guide*, July 2014) <http://legal.un.org/lic/guide/1_9.htm>

[17]Marie-Claire Cordonier Segger, 'Chapter 5: Integrating Social and Economic Development and Environmental Protection in World Trade Law' in Markus W Gehring and Marie-Claire Cordonier Segger (eds), *Sustainable Development in World Trade Law* (Kluwer Law International 2005), 129-185, at 140-142.

[18]Segger (n 17), at 145-148.

[19] See the application of the interpretative technique in accordance to the principle lex specialis in, for example: Case concerning the Right of

lex posterior derogat priori[20] by which one of the two conflicting obligations are to be deemed invalid – the "trumping" application of one over the other rather than reconciliation between the two.[21]

Second, the intersection of regimes is a scenario where their legal obligation may not "clash" per se. Differing obligations may not even exist or come into force yet. There may be requirements already imposed by one regime that could limit or constrain the movement of the others that hold different interests, principles and values on the same subject matter(s).

The main cause of the plausible or potential limitation or constraints is ultimately due to the competition or conflict in their interests. Conflicts then could rise due to the non-coherency between norms and operational rules of different regimes; insufficiency of meaningful coordination; and over-specialisation in values, principles and the logics endorsed by each regime individually.[22] Frustration among advocates from each of the confronting regimes, commonly concern: (1) the negotiation of new multilateral environmental requirements, which may be limited by the prospects of potential conflict

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Passage over Indian Territory (Merits) (Judgment) [1960] ICJ Rep 6, 44. See detailed explanation of the concept in, for example: Anastasio Gourgourinis, 'Lex Specialis in WTO and Investment Protection Law, Working Paper No. 2010/37', *Second Biennial Global Conference 2010, the Society of International Economic Law* (2010); William A Schabas, 'Lex Specialis? Belt and Suspenders? The Parallel Operation of Human Rights Law and the Law of Armed Conflict, and the Conundrum of Jus Ad Bellum.' (2007) 40 Israel Law Review 592; and, the ILC's conclusions of the work of the study group on the fragmentation of international law in: International Law Commission (n 15).

[20] See Article 30 of the Vienna Convention on the Law of Treaties.

[21] See elaborated illustrations in Joost Pauwelyn, *Conflict of Norms in Public International Law: How WTO Law Relates to Other Rules of International Law*, vol 29 (Cambridge University Press 2003).

[22] Segger (n 17), at 149.

with existing trade obligations;[23] and (2) national measures to address domestic concerns regarding the environment (without necessarily being required by an international obligation) – as both tend to have trade-restrictive features.

Various aspects of "balance" in the legal sense have been called for in the WTO context, for example, balance and coherence in the "architecture of rules" or "institutional arrangements" in regards to relationships among rules of different levels of governance,[24] between trade liberalizing actions and the government's need to regulate,[25] between the WTO's oversight and appropriate deference to domestic measures (especially those under the conditions of scientific uncertainty in which regulating parties may not be able to fulfil methodological or procedural requirements), and between trade disciplines and environmental norms on which domestic measures may be based.[26]

While the concept of sustainable development does not undermine the primary mandate and values of developmental institutions (including the WTO), it demands that their operation take into account environmental considerations. The concept seeks "integration" and promotes "coherency" in international law, for the cause of environmental

[23] Andrea Bianchi, 'Chapter 5: The Impact of International Trade Law on Environmental Law and Process' in Francesco Francioni (ed), *Environment, Human Rights and International Trade* (Hart Publishing 2001), 105-134, at 106.
[24] Between supra-national and national or sub-national rules (or "horizontal linkages" between rules and policies) as well as those from the same level of governance (or "vertical linkages" between rules and policies). see Matthew Stilwell, 'Chapter 2: Trade and Environment in the Context of Sustainable Development' in Markus W Gehring and Marie-Claire Cordonier Segger (eds), *Sustainable Development in World Trade Law*, vol 9 (Kluwer Law International 2005), 27-72, at 42.
[25] Stilwell (n 24), at 42.
[26] Stilwell (n 24), at 50.

sustainability. It fills the gap in rules and operation of developmental institutions, the gap that may restrict such a regime to hold its own specific interests (such as international trade and economic development) as an absolute primacy and, in effect, neglect environmental considerations or obstruct the pursuit of environmental sustainability.

More generally, the ICJ's application of the concept in the Gabcikovo case is usually referred to in suggesting the role as an "interstitial norm"[27] or a "meta-principle"[28], in providing overarching guidance that "facilitates the reconciliation and integration of other norms" and "push[es] and pull[s] the boundaries of true primary norms when they threaten to overlap or conflict with each other".[29]

Literature in the field of environmental law identifies at least five "legal elements" of sustainable development.[30] The legal elements or principles that have been favourably acknowledged in the international community to form part of the concept are: (1) the principle of sustainable use of natural resources; (2) the principle of inter-generational equity; (3) the principle of intra-generational equity; (4) the principle of common but differentiated responsibility; and (5) the principle of integration.[31] Other commentators also refer to "sustainable development law" and describe it as the "body of legal

[27] Stilwell (n 24), at 135.
[28] Vaughan Lowe, 'Chapter 2: Sustainable Development and Unsustainable Arguments' in Alan Boyle and David Freestone (eds), *International Law and Sustainable Development: Past Achievements and Future Challenges* (Oxford University Press 1999), 19-38 , at 31.
[29] See the discussions and summary of the points from Gabcikovo case above. – The ICJ's decision in this case has also been acknowledged and referred to by the Appellate Body in EC-Hormones.
[30] Sands (n 4).
[31] Sands (n 4), at 253.

principles and instruments at the intersection of environmental, social and economic law [...] which aim to ensure development that can last".[32]

The five elements may be discussed individually or referred to together as the overall principle of sustainable development or sustainable development law.[33] There is not yet a clear agreement on their precise legal status.[34] Each of them may also be referred to interchangeably or in combination with the other.[35] Each may have varying significance in their own right, depending on the context in question.[36] They are all part of the concept as they spell out its foundational philosophy of sustainable development abovementioned[37] from different aspects and emphasis.

Despite the relevance of all other elements of the concept of sustainable development to this research, the principle of integration will be the main emphasis in this thesis as it is directly concerned with the intersection of international regimes, which is currently the main concerns regarding the

[32]Marie-Claire Cordonier Segger and Ashfaq Khalfan, 'Sustainable Development Law: Principles, Practices, and Prospects' [2004] OUP Catalogue, at 368; cited in Marie-Claire Cordonier Segger and Markus W Gehring, 'Chapter 1: Introduction' in Markus W Gehring and Marie-Claire Cordonier Segger (eds), *Sustainable Development in World Trade Law*, vol 9 (Kluwer Law International 2005), 1-24, at 5.
[33] Sands (n 4), at 254.
[34] Sands (n 4), at 254.
[35] Sands (n 4), at 254.
[36] Alan Boyle and David Freestone explained in regard to the Rio Declaration that these elements are not new and are only "[brought] together in the more systematic form than hitherto". The concept of sustainable utilisation, for example, is an "independent concept" of which applicability is clearest in the context of international law on the conservation of natural resources. Alan E Boyle and David Freestone, 'Chapter 1: Introduction' in Alan E Boyle and David Freestone (eds), *International Law and Sustainable Development* (Oxford University Press on Demand 1999), 1-18, at 9.
[37] Section 1-3 above.

WTO and its commitment to the objective of sustainable development.

Note that sustainable development is often a term of reference when the integration principle is discussed. Such reference may unnecessarily engage the diverse implications and aspects embodied by the concept of sustainable development as a whole. The reference in this thesis to the principle specifically is to avoid confusion and to retain the focus of the research on integration in the process of decision-making and interpretation of TBT rules. It is not meant to single it out from the whole concept of sustainable development.

5. Principle of Integration: the Legal Means for "Balance"

The principle of integration stems from, and is applied in accordance with the idea of "balancing".[38] The meaning of balance in the legal sense is nevertheless different from the materialistic or ecological one. Identifying balance in the materialistic sense is a discussion in other fields of scholarships and methodologies, such as scientific or economic theories, rather than the legal one in this research.[39] The studies on the idea of balance in the legal sense involve a

[38] As reflected throughout the international discourse of sustainable development as well as academic literature. See for example: *The Future We Want, 2012* (n 11).

[39] For example: how many seals could be killed in certain seasons and areas before the killing "tips the balance" and exceeds the ecological yield? What is the optimal number of fishing boats to be permitted in different time of the year or the number of timbers to be cut down in certain areas? How much of each type of toxic chemicals may be discharged from factories to watercourses? The need to distinguish between material and legal types of questions is widely acknowledged. For example: Paolo F Ricci and Lawrence S Molton, 'Risk and Benefit in Environmental Law' (1981) 214 Science 1096; and, Mary O'brien, *Making Better Environmental Decisions: An Alternative to Risk Assessment* (MIT Press 2000).

different set of questions. It focuses more on the *procedures* of decision-making and development-planning than the substantive detail of the outcome decision. Legal studies tend to be more interested in, for example, the openness of the process to adequate environmental consideration, the involvement of experts and/or the public (when relevant), transparency, accountability of decision-makers and so on.

The materialistic outcome, such as the target of CO2 emission reduction for the objective of mitigating climate change may inform legal appraisal on the procedures but will not be the primary determinant. This is not to say that legal discussants can be ignorant of the materialistic aspects. The legal perspective also considers the ecological and scientific matters that are, or should be, included in the decision-making process. As will be further explored below, such considerations in the classic sustainable development cases include the potential environmental impact that may be entailed by a development project, international norms concerning relevant environmental protection to be applied, and, the satisfactory "solution" for that impact to be provided.

These cases do not go so far as to assess the outcome of the contested decision whether it delivers the "balanced" in an ecological, economic or social sense. They leave room for such determination to be done by the respective decision-makers of the developmental project themselves. "Balance" in the legal sense is often referred in close relation, if not interchangeably, with the "coherence" and/or "integration" of rules, which is also part of its objective.[40]

[40] Stilwell (n 24).

The ICJ's decision concerning the Gabcikovo-Nagymaros Project is such sustainable development case and is the most widely referred to demonstrate the procedural character of the principle of integration.[41] The dispute was centred on a dam construction project in the Danube as earlier agreed by the riparian States, Hungary and Slovakia (Czechoslovak Socialist Republic at the time of agreement). One of the issues in dispute was whether Hungary had a legitimate ground to terminate their agreed project due to environmental damage that might be caused by the dam.[42] The Court held that it did not, but limited its own roles to not determine how the development project at issue was to be conducted, demanding only that the disputing parties re-open negotiations on the matter on the general basis of good faith.[43]

6. Sustainable Development and the Integration Principle

Despite the broad and flexible nature of its requirements, the principle is by no means a free pass for environmentally damaging decisions. In the case of Gabcikovo-Nagymaros, the Court required that sufficient weight should be given to the environmental impact of the development project and specifically that "in particular [the disputing parties] must find a satisfactory solution" for the particular environmental problem that has been identified as having a potential impact

[41] *Gabcikovo-Nagymaros Project (Hungary/Slovakia), Judgement, ICJ Reports*.
[42] For contextual development of the conflict, summary of environmental effects and proposed plans after the ruling, see: Fürst Heiko, *The Hungarian-Slovakian Conflict over the Gabcikovo-Nagymaros Dams: An Analysis* (2006) <http://www.columbia.edu/cu/ece/research/intermarium/vol6no2/furst.pdf >, accessed: July 2014.
[43] See *Gabcikovo-Nagymaros* (n 41), at paras. 140-142.

on the project.[44] It also provided that the eventual outcome of the decision-making must take into account the "norms of international environmental law and the principles of the law of international watercourses".[45] Therefore, under the principle of integration, decision-makers not only the needs to identify potential environmental effects but also the requirement to provide a solution for them.

In this sense, the principle does not specify the content of "environmentally sustainable" decision, such as the solution and compromise that would guarantee the concept of "sustainability" which is long-term and ongoing by nature. Rather, it requires only that the "outcome of a process [...] promotes sustainable development"[46] and "mutual supportive[ness]"[47] of the competing objectives of trade and environment. The principle has also been translated into various formulations of technical and formal procedures to be included in any given decision-making for development projects and environmental management, including the requirement for an Environmental Impact Assessment and the notion of public participation and engagement.

By virtue of these broad criteria for implementation, it is left to the decision-makers themselves to implement the aspiration of balance and to determine whether the ultimate solutions that would be "satisfactory" from viewpoint of the environmental concerns. The two riparian Parties in the

[44] *Gabcikovo-Nagymaros* (n 41), at para. 140.
[45] *Gabcikovo-Nagymaros* (n 41), at para. 141.
[46] Boyle and Freestone (n 36), at 17.
[47] See U.N. GAOR, 46th Sess., Agenda Item 21, UN Doc A/Conf.151/26 (1992) as cited in Segger and Gehring (n 32) Relevant "Programme Areas" include, for example, "Making Trade and Environment Mutually Supportive Basis for Action".

Gabcikovo-Nagymaros case, for example, are to discuss and negotiate the construction and operation of the dam with "good faith" and with environmental considerations explained above. Without the predetermined outcome from the ICJ, the two could settle by economic incentives, even with insufficient considerations given to the long-term eco-centric[48] solution.

The Gabcikovo-Nagymaros case highlights the procedural significance of the sustainable development concept and applies it as a broad framework to integrate considerations for the environment into decision-making of a development project. The procedural focus demonstrated by the case provides a useful perspective for the appraisals on the legal issues in trade-environment cases in the WTO context. The ICJ, as well as WTO dispute settlement bodies, are unlikely environmental scientists or conservationist experts. Their mandates are centred on the implementation on applicable rules, not the environmental content in the case even though they have to be informed of such environment/factual considerations. Both institutions' primary mandate and expertise are also not directly on the subject matter of environmental protection per se.

From a more treaty-based view, the balance that has been highlighted in practice is between a Members' right to regulate

[48] "Eco-centrism" is, in short, a philosophy or approach centred on the intrinsic values of the environment (rather than the benefits that human may gain from them) and addresses environmental problems from the ecological standpoint. Though they are both part of the "environmentalism" and there may be certain "environmental" measures and arguments that are agreed by both eco-centric and Unitarian environmentalists, the core values and ultimate goals of the two groups are different. See in general, Luke Martell, *Ecology and Society: An Introduction* (Polity Press in association with Blackwell Publisher Ltd, UK 1994); and Norton (n 14).

and other Members' rights under the WTO Agreements.[49] The need for it has been made explicit and emphasized by several dispute settlement cases, particularly in the TBT and SPS contexts.[50] The conceptual meaning of such balance is embodied within the depth of the WTO disciplines, most explicitly in the context of necessity – notably under Article XX of the GATT and Article 2.2 of the TBT Agreement.

As reflected in discussions in application of Article XX of the GATT[51] and the sixth recital of the TBT Preamble,[52] the implementation of respective provisions are founded on the recognition of Members' autonomy and right to regulate, to be balanced with other Members' rights under the GATT/TBT obligations.

The recognition of the two counteracting sides of Members, both of whom have grounds for legitimacy under the WTO Agreements, is, however, only the starting point. Not only should the Agreements be applied in view of Members' rights, the broader idea of balance and integration, emphasized by the sustainable development concept presented above, is also to be embraced.

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[49] See for example, *European Communities - Measures Affecting Asbestos and Products Containing Asbestos ('EC - Asbestos'), WT/DS135/AB/R, 2001*; and *European Communities - Measures Concerning Meat and Meat Products (Hormones) ('EC - Hormones'), WT/DS26/AB/R, WT/DS48/AB/R, 1998* See Paragraph 6 of the Preamble, TBT Agreement. See also Marceau Gabrielle, 'TBT, SPS and GATT: A Map of the WTO Law of Domestic Regulation' in Joel P Trachtman (ed), *The international economic law revolution and the right to regulate* (Cameron May 2006), 73-161.

[50] As acknowledged in, for example, Working Party on Domestic Regulation, *'Necessity Tests' in the WTO: Note by the Secretariat, S/WPDR/W/27* (2003).

[51] E.g. in the case of *Appellate Body Report, United States - Import Prohibition of Certain Shrimp and Shrimp Products ('US - Shrimp'), WT/DS58/AB/R, 1998*

[52] This will be discussed in detail in Chapter 7.

With such a treaty-based view alone, the WTO's interests on environmental protection may seem restricted within the frame of right vs. obligations. Yet, there is also another element in the WTO context that is more directly and explicitly relating to environmental interests. The addition to such balance of right vs. duty is also the kind of balance that may be conceived on the basis of the WTO's commitment with the "objectives of sustainable development" expressed in its establishing agreement and affirmed by the dispute settlement bodies.

7. Sustainable Development Objectives in the WTO

The relevance of sustainable development to the WTO is made explicit in the Marrakesh Agreement establishing the World Trade Organization (hereinafter the Marrakesh Agreement). Despite the expanding interests under the social and economic pillars of the international instruments on sustainable development (under which the WTO's primary mandate on trade liberalisation arguably falls), it is clear that the sustainable development concept, including that as recognized in WTO context, is not only about them in exclusion of the environmental pillar. The concept is not about any one single pillar in exclusion of the other two.

As reflected in the discussions above, the objectives of sustainable development are those arising from the *linkages* between development and environmental protection – hence "sustainability". This is resonated in the Marrakesh Agreement – to "allow[...] for the optimal use of the world's resources" and "seek[...] to protect and preserve the environment", while

also giving consideration to the difference in needs and the limitation among nations due to their stage of development.[53]

These two elements (i.e. the recognition of Members' right to regulate within the WTO rules and the WTO's recognition of sustainable development as part of its object and purpose) have provided the foundation for the WTO's approach to "balance" its own values. They are the seed that could grow into the realisation of the integration principle.

The discussions above touch upon the philosophy of the sustainable development concept and the meaning of "balance" in the general context of international law. The following discussions now turn to the notion of balance in the WTO context. In Section 5 above, I have already touched upon the general distinction between "balance" in the material sense and in the legal sense. In Section 7.1 below, I look into the issues in the context of WTO rules on non-tariff barriers.

7.1. Trade, Its Liberalisation and Environmental Protection: Material Linkages

Trade liberalisation is the WTO's goal in this context. Its impact varies among different contexts, sectors and nations.[54] Its effects on environmental protection are part of a complex equation of various factors including: the way liberalisation is pursued; economic, social and environmental systems within each country; as well as natural resources. In addition, in most situations, there will be stakeholders, sectors and

[53] Paragraph 1, the Preamble of the Marrakesh Agreement establishing the World Trade Organization.
[54] Stilwell (n 24).

aspects of environment that suffer loss, as well as those who gain from the liberalisation of international trade. Such losses and gains do occur in the domestic level of both exporting and importing countries as well as at the global level. [55]

As I have emphasised above, there is a limitation to which legal discussions can answer about such material issues. The more directly relevant question is rather on how the WTO rules are pursuing such trade liberalisation, whether and how they could be "mutually supportive" of environmental protection.

Here, my message on the material linkages between trade and environmental protection is that: the concept of trade liberalisation is not inherently "good" or "bad" for the environment. Such a preconception of it being either environmentally good or bad, which can often be the generic pretext to the discussions, would be inaccurate and is likely unconstructive to both economic and environmental interests.

Though sometimes seen by environmentalists as an excuse to neglect environmental priorities and norms, it is logical to accept that the WTO itself has a limited role, and rarely a direct one, in the environmental protection agenda.[56] Indeed, the enforcement of trade rules may provide a good structure for cooperation in development of environmental governance.[57] As mentioned in Section 2 above, it would be misleading to read and discuss the intersection of the regimes

[55] Stilwell (n 24) at p. 39.
[56] Håkan Nordström and Scott Vaughan, *Special Studies 4: Trade and Environment* (WTO Publications 1999), at 59. The studies also argue that, indeed, the enforcement of trade rules would provide a good structure for cooperation in development of environmental governance.
[57] Nordström and Vaughan (n 56).

as a straightforward representation of ideological conflicts between trade and environment. Nor should such ideological conflicts be represented by the gain and loss of certain material interests presented in each specific context of dispute settlement.

7.2. Roles of WTO/TBT Rules in the Intersection with Environmental Regime

The direct subject matter of the WTO/TBT rules is not the trading activities, most of which are undertaken by commercial entities. They are more interested in its Members' actions and measures with restrictive effects on such trading activities and commercial enterprises. This is regardless of the objectives the regulating Members claim to be addressing, or the "field of law" or "regime" that the measure in question fall under. It provides the "rules of the game",[58] for the regulators.

Nor does it address environmental problems as such. It does not simply prohibit environmental actions and is only interested in the means and measures by which environmental concerns are addressed, insofar as they restrict trade.[59] This said, it does impose requirements on the measures that fall under the coverage of the WTO Agreements, including a vast number of environmental measures. Hence, it may constrain attempts and motivations for environmental protection. The issues have gained great attention as an increasing number of

[58] Stilwell (n 24).
[59] Refer also to the explanation about the measures at the interface between the TBT Agreement and environmental regimes in the next chapter. They explain the area of "environmental" law and policies that are in direct interaction with the WTO/TBT rules.

rules and policies in the environmental field, established at the domestic and international levels as well as governmental and non-governmental, have adopted product-related strategies.

8. Explicit Relevance of Environmental Concerns, Principles and Instruments to the WTO Rules: as Concluded in US – Shrimp

US – Import Prohibition of Certain Shrimp and Shrimp Products (US-Shrimp) marks the most tangible and legalistic application of sustainable development concept in the WTO context and is notable for its interpretative significance.[60] The contested measure in the original case of US-Shrimp was permitted under the GATT as it did not meet the requirement of the Chapeau of Article XX.[61] However, the case was the only one that has explicated the legal significance of the concept of sustainable development and demonstrated how it may be applied in legal terms. In doing so, it refers to the Preamble of the Marrakesh Agreement, the rules of interpretation of public international law and several international instruments established in the environmental regime.

The important issue in this regard is the Appellate Body's interpretation of what may be considered a justifiable objective under Article XX(g). As will be explained below, the

[60] The development is shown clearly when viewing with historical background from decisions in US - Tuna (Mexico) I and US - Tuna (EC) in 1991 and 1994. See for brief description: Segger and Gehring (n 32).
[61] Note however that the US only had to remove the requirement of the use of a specific devise and allow other equivalent tols or approaches that are suitable to the local fishery and environmental context. See *United States - Import Prohibition of Certain Shrimp and Shrimp Products Recourse to Article 215 of the DSU by Malaysia ('US - Shrimp (Article 215 - Malaysia)'), WT/DS58/AB/RW, 2001*.

Appellate Body reversed the Panel's decision on the scope of the provisional justification in Article XX (g) of the GATT. It adopted the "evolutionary treaty interpretation" and considered the term "exhaustible natural resources" more broadly to include not only those that are "non-living" as argued by the plaintiffs but also those that are "living", and particularly the endangered species of sea turtles which are addressed by the US measure at issue.

The implications indeed vary in different circumstances within the WTO itself. Various norms and principles may be applicable to varying extents in each specific case, depending on the complex factors that may be involved.[62] The case of US-Shrimp refers to "customary rules of interpretation of public international law", required by Article 3.2 of the DSU,[63] as a basis for the interpretation of Article XX (g) of GATT 1994. The rules of interpretation, reflected in Article 31 of the Vienna Convention on the Law of Treaties, 1969, require that interpretation is "in accordance with the *ordinary meaning* to be given to the terms of the treaty in their context and in the light of its *object and purpose*".[64]

The Appellate Body has reaffirmed the WTO's commitment to "the objective of sustainable development" as stated in the Preamble of the Marrakesh Agreement.[65] It has also established that interpretation should be "in the light of contemporary concerns of the community of nations about the protection and conservation of the environment", and did not

[62] See Segger (n 17),at 187.
[63] *Appellate Body Report, US - Shrimp, 1998* (n 51), at para. 114.
[64] Article 31, Vienna Convention on the Law of Treaties, 1969. Emphasis added.
[65] See section 7 above.

search for the initial intention of drafters of GATT itself for which preparatory records are a recognized evidence in international law.[66]

With sustainable development as part of the WTO's "object and purpose", the Appellate Body determined that the ordinary meaning of "natural resources" could be understood by reference to "modern international conventions and declarations" from the field of environment as well as sustainable development including the 1982 UN Conventions on the Law of the Sea, Agenda 21 and the Resolution on Assistance to Developing Countries (adopted in conjunction with the Convention on the Conservation of Migratory Species of Wild Animals).[67]

Another concern raised by some is that the WTO applies its rules in vacuum, disregarding international rules outside of its own legal regime. This concern is dealt with by the Appellate Body in US – Shrimp. As a result of the interpretation of Article XX explained above, the Appellate Body has in effect prohibited itself from acting as a "self-contained" regime, requiring the reading of its provisions in the light of "contemporary concerns" by taking into account environmental concerns and international environmental instruments, and has explicated the inclusion of sustainable development as part of its objective and purpose.

This interpretive approach in this case is the direct implementation of the general principle of treaty interpretation in the Vienna Convention on the Law of Treaties, also known

[66] See Article 32, Vienna Convention on the Law of Treaties, 1969.
[67] *Appellate Body Report, US - Shrimp, 1998* (n 51), at para. 130.

as the principle of systemic integration.[68] Such an approach is very similar to the principle of integration under the concept of sustainable development explained above. However, the principle of systematic integration alone does not specifically necessitate the inclusion of environmental considerations in the interpretation of the TBT/WTO rules. Because of this, the deference to the general rule of interpretation alone may not necessarily be "environmentally favourable" or fulfil the sustainable development aspirations, especially when there is no other "international conventions" specially addressing the environmental problem at issue, or the existing "ordinary meaning" of the term being interpreted is not up to date or scientifically informed.

Therefore, it should be pointed out that, the Appellate Body in the US-Shrimp was not only implementing the general principle of systemic integration but also the principle of integration under the concept of sustainable development, even though the latter has not been explicitly deferred to. As reflected also in the language throughout its course of interpretation, dismissing the plaintiffs' arguments basing on the negotiating records of Article XX in the previous GATT 1947, such as that in paragraph 131, stating:

> "Given the recent acknowledgement by the international community of the importance of concerted bilateral or multilateral action to protect living natural resources, and recalling the explicit recognition by WTO Members of the objective of sustainable development in the preamble of the WTO Agreement, we believe it is too late in the day

[68]Campbell McLauchlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention' (2005) 54 International and Comparative Law Quarterly 279, 279-320.

> to suppose that Article XX(g) of the GATT 1994 may be read as referring only to the conservation of exhaustible mineral or other non-living natural resources."[69]

The US – Shrimp therefore has shown the interpretative significance of the concept of sustainable development. It has shown the use of the general rules of treaty interpretation and the inclusion of environmental considerations (e.g. the awareness about environmental concerns in this case) which render the process of the decision-making consistent with the principle of integration under the concept of sustainable development – despite the rejection of the US measure in question in the eventual decision of the dispute.

9. Analytical Perspective Adopted in the Thesis

As explained in Chapter 1, this thesis focuses on the TBT requirement of "treatment no less favourable" and its relationship with technical measures citing environment-related objective. From the legal viewpoint, it would be most constructive and relevant that such a relationship is appraised in light of the integration principle under the concept of sustainable development. The analytic perspective of this thesis in Chapter 7 is therefore framed by the principle of integration.

The procedural focus of the principle, as explained above, means that the discussions in Chapter 7, would raise questions on the "openness" within the TBT process of decision-making. This means that, in the analysis of chapter 7, the success or failure in implementing the principle or the

[69] *Appellate Body Report, US - Shrimp, 1998* (n 51), at 131.

"environmental friendliness" under the concept of sustainable development will not be represented *solely* by the outcome permissibility or impermissibility of a measure under WTO rules. This aspect has not been as apparent in trade and environment debates as the issue of permissibility of an environmental measure in WTO dispute settlements has taken centre stage. This analytical perspective should also prevent the risk of falling into the typical trap of "notional conflict" which has been the pretext of some WTO critics.[70]

In other words, a dispute settlement bodies' rejection of an "environmental" measure could be deemed consistent with the principle of integration under the concept of sustainable development, provided that the considerations are included adequately. In this respect, such a decision is not "environmentally unfavourable". As explained above, the principle addresses the procedural aspects of the decision-making: that it is open for environmental considerations and less about the rejection or permission of the contested measure. This analytical framework makes sense considering the following issues.

9.1. Specificity of the Mechanisms Concerned by the WTO Rules

One of the reminders, which will be further explained in the next chapter, is the specificity of the area of "environmental" measures that are directly impacted by the TBT discipline.

[70] See the criticisms on some WTO critics and the meaning of "notional conflict" in Joanna Gomula, 'Chapter 19: Environmental Disputes in the WTO' in Malgosia Fitzmaurice, David M Ong and Panos Merkouris (eds), *Research Handbook in International Environmental Law* (Edward Elgar Publishing 2010), 401-425. This will also be touched upon in the next chapter.

Many environmental schemes incorporate product-related technical measures as supplementary mechanisms. WTO rules affect only those that are trade-restrictive, and not the whole scheme. Its impact on the trade-restriction is also to a limited extent, i.e. its illegitimate distinction among "like-products" and treating one less favourably than another.

First, the application of trade rules is restricted to the specific mechanisms within a broad environmental scheme that are: trade-restrictive, "discriminatory" and "unnecessary" as collectively stipulated by the WTO provisions. Trade decisions concern themselves only the specific mechanisms under the broader measure that exhibit trade-related features.[71]

An example is the US measure in US-Shrimp. The mechanisms that are scrutinised under Article XI of the GATT and would be directly affected by the decision are the prohibition of shrimp from exporting countries not adopting an identical regulation to the US' Turtle Excluding Device (TED) requirements in the US-Shrimp case, which is under the broader conservation scheme of Marine Mammal Protection Act.[72] Essentially, its eventual impermissibility did not derive from its trade-restrictiveness in general but more specifically from the "unjustifiable" and "arbitrary" discrimination of the restriction.[73]

[71] Robert Howse, 'The Appellate Body Rulings in the Shrimp/Turtle Case: A New Legal Baseline for the Trade and Environment Debate' (2002) 27 Columbia Journal of Environmental Law 491.
[72] *Appellate Body Report, US - Shrimp, 1998* (n 51).
[73] As it failed to satisfy the Chapeau of Article XX of the GATT. *Appellate Body Report, US - Shrimp, 1998* (n 51), at paras. 161-192.

The follow-up case questioning the US' compliance with the decision, the case of US-Shrimp (Article 21.5 – Malaysia),[74] also affirmed that modifications of the contested measure to conform dispute settlement decisions are not necessarily a drastic one. The US' modification of its regulation, by accepting prevention measures other than the specific TED requirements, is considered satisfactory for the WTO.[75] The locus of the trade-restrictive regulation was left untouched, despite its remaining PPM-characteristics.

9.2. Positive Impetus in the Relationship and Interaction between Trade and Environmental Regimes in the Broader Context

A single rejection of an environmental measure as WTO-inconsistent is not necessarily a disruption of its overall environmental scheme. Some has indeed proven to be a positive impetus for development of environmental governance. The impermissibility of the TED measure in US-Shrimps above, for example, led to the negotiations in pursuance of a wider cooperation among Nations to address global environmental problem such as biodiversity protection. Despite commentators' argument for justification of "unilateral" action for environmental protection,[76] it is not to say that the move towards cooperation is welcome and needed for environmental movement to effectively address the problem in the broader scheme. The relationship and impact

[74] *Appellate Body Report, US - Shrimp (Article 21.5 - Malaysia), 2001* (n 61).
[75] *Appellate Body Report, US - Shrimp (Article 21.5 - Malaysia), 2001* (n 61).
[76] E.g. Robert Howse and Donald Regan, 'The Product/Process Distinction - An Illusory Basis for Disciplining "Unilateralism" in Trade Policy' (2000) 11 European Journal of International Law 249.

of such a rejection therefore needs to be judged in context and viewed in the broader term than the impermissibility of a contested measure in a given dispute.

The EC-Seals Product is another case to demonstrate this point. Rejection of an environmental measure due to particular discriminatory features may indeed lead to a "higher" environmental standard. The objective of the import prohibition in tackling inhumane killing of seals (the PPMs in this case) is accepted under the TBT Agreement by the Panel[77] and under Article XX(a) of the GATT by the Appellate Body.[78] It is nevertheless the exception in the regulatory scheme that is considered as WTO-violation and led to the rejection of the import prohibition by the Appellate Body. The exception for seals products derived from Inuit hunters is seen as effectively a potential leeway for cruel practices and at the same time a disguised commercial favour for certain domestic producers within the EU's own territory.[79]

It has therefore been observed that without the exception and without its inconsistent application in favour of Inuit communities from Greenland over those from Canada and Norway, the regulation may have satisfied the Chapeau of Article XX and have been permissible.[80] If this modification is

[77] Note however that all TBT-related decisions of the Panel became of no legal effects as the measure is later on declared outside of the TBT coverage by the Appellate Body.
[78] *Panel Report, European Communities - Measures Prohibiting the Importation and Marketing of Seal Products ('EC - Seals Products'), WT/DS400/R, WT/DS201/R, 2013*, at para. 5.16.
[79] *Panel Report, EC - Seals Products, 2013* (n 78), at para. 5.337.
[80] Rob Howse, Joanna Langille and Katie Sykes, 'Sealing the Deal: The WTO's Appellate Body Report in EC–Seal Products' (2014) 18 American Society of International Law <http://www.asil.org/insights/volume/18/issue/12/sealing-deal-wto%E2%80%99s-appellate-body-report-ec-%E2%80%93-seal-

considered compliant with the Appellate Body's recommendation, the current rejection would be the direct drive for the more stringent and effective seals protection scheme.

10. Conclusion: the Concept of Sustainable Development

In the context of this research, the agenda of sustainable development in relation to the environment is to have environmental considerations as the integral part of economic development. The legal function of the sustainable development concept, particularly in the situation where different "regimes" intersect, is to be an interstitial norm that directs other norms and rules of each regime to "integrate", and to become "mutually supportive" of and "coherent" with each other.[81]

As the environmental aspiration of the concept is not only short-term or "piecemeal" in character, interest in the concept is not necessarily about having environmental objectives prevailing over others in each specific case. From a legal perspective, the "balance" pursued by the principle of sustainable development should be appraised from the perspective of the procedure of decision-making, whether it has taken into account environmental considerations and given sufficient weight to them as well as the norms that have been established for environmental protection.[82]

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products#_edn7>. See also *Panel Report, EC - Seals Products, 2013* (n 78), at para. 5.95.

[81] See Section 1-3 above.

[82] See Section 4-6 above.

The notion of balancing the conflicting interests in the WTO context is currently concentrated on the view of a Member' right to regulate and the other Members' right under the WTO Agreements. As demonstrated in the case of US – Shrimp, the WTO must nevertheless look deeper into how it interprets and applies its rules to Members, in order to appropriately implement its commitment to sustainable development objectives and to adapt to the demand for environmental sustainability from the international community and its Members' own citizens.[83]

The WTO case law has tangibly prohibited itself from acting as a "self-contained" regime, requiring the reading of its provisions in the light of "contemporary concerns" by taking into account environmental concerns and international environmental instruments, and has explicated the inclusion of sustainable development as part of its objective and purpose. This has established interpretative significance and roles for the concept of sustainable development.[84] The implementation of sustainable development within the WTO context is yet to mature. The task of exploring and examining the application of its rules in the implementation of the Principle of Integration still has a long way to go.

WTO case law has reflected the significance and role of the sustainable development concept in the interpretation of WTO/TBT rules. In addition to the coordinative mechanisms that the WTO seeks to achieve with the secretariats of major multilateral environmental agreements, international standardising bodies and technical bodies, as well as among

[83] See Section 7 above.
[84] See Section 7-8 above.

its Members, the interpretative approach is the legalistic means to materialise the notion of "balance" in the meaning under the concept of sustainable development discussed above.

Such an approach is also another reflection of the procedural focus of the principle of integration. This is to be adopted as the main analytical perspective in the appraisal of the requirement of "treatment no less favourable" as will be elaborately analysed in Chapter 7 of this thesis.[85]

The Chapter 5 has established the relevance of environmental interests, on the basis of the sustainable development concept, to the application of the TBT Agreement. Chapter 6 explores the various aspects of environmental governance. This is a step further than most other trade-environment discussions as the appraisal of the TBT provisions in Chapter 7 would be against a more balance backdrop of detailed discussions about both the trade, i.e. the TBT Agreement in Chapter 2 – 4, and the environmental regimes.

[85] See Section 9 above.

Chapter 6: Environmental Objectives, Regimes and the Interface with the TBT Agreement

Introduction

At the core of the notion of conflict between international trade and environmental *regimes of governance* is what is often perceived as conflicting *interests*: "free trade" and "protection of the environment". Institutions pursuing one of the two interests are often seen as being in conflict with those pursuing the other. However, many discussions underlain by such perception are at risk of being trapped in an unconstructive circle of analysis.

The relationships between different areas of law and policies are a different issue from the one on the relationships between their respective goals. The relationship between the WTO and other legal and political regimes involves a myriad of issues that are complexly interconnected yet are of very different nature. The relationship has at least three dimensions "material, legal and policy, and institutional". Economic interests (including trade liberalisation), societies and the environment have various "material linkages" and relationships in the "physical world". "[T]he pattern of activity in one area thereby impact on another." These linkages and relationships are then governed by different fields of law and policy.[1] The implication of trade rules on environmental regimes, for example, cannot be simply assumed from the

[1] Matthew Stilwell, 'Chapter 2: Trade and Environment in the Context of Sustainable Development' in Markus W Gehring and Marie-Claire Cordonier Segger (eds), *Sustainable Development in World Trade Law*, vol 9 (Kluwer Law International 2005), 24-72, at 34.

"material linkages" of their primary interests, i.e. trade liberalisation and environmental protection.[2]

In addition to the complexity of the issues, it has been observed that a large part of the notion of conflicts between trade and environmental regimes has been deduced on the basis of an over-simplified and ill-informed assumption about international trade obligations, "environmental" measures, and an ideal relationship between the two. The complexity on the one hand and the deduction from the clash in ideological interests on the other may have formed the so-called "notional conflicts", the generalising impression that trade rules are presumed to obstruct environmental protection.[3]

This said, surely not all criticisms against trade regimes are based on the misled perception. One cannot deny that WTO obligations like any other international obligations certainly affect law and policies of state parties. Obligations on non-tariff barriers would particularly affect many measures that are put in place to address environmental concerns due to the material and economic linkages between commercialism, consumerism and the degradation, as well as the protection of the environment.

However, the discussions about conflicts between trade and environmental regimes commonly leave the term "environmental" broad and unspecified as the analysis focuses on certain trade rules. The discussions on what the term may

[2]Stilwell (n 1), at 34.

[3] See more elaborated explanation of a common notion about trade-environment conflicts arisen from mis- or uninformed perceptions about the issues, i.e. the "notional conflicts" as referred to in Joanna Gomula, 'Chapter 19: Environmental Disputes in the WTO' in Malgosia Fitzmaurice, David M Ong and Panos Merkouris (eds), *Research Handbook in International Environmental Law* (Edward Elgar Publishing 2010), 401-425.

refer to would create the more even ground for the discussions about the relationships between trade rules and measures citing environmental protection among their objectives. The meaning of "environmental", as a categorical term of reference, affects the framing and scope of discussions as well as the ideological attitudes that can be associated with it.

In short, a rejection of a measure seeming to be under the "environmental" rubric should not be seen as a rejection and outright hindrance of environmental protection. The discussions on the relationships between trade obligations and environmental regimes should move away from the ideological and over simplified equation.

This chapter therefore discusses two main issues. What do environmental measures generally refer to? And, particularly relevant to this thesis: what are the "environmental" measures with which the TBT Agreement is in "conflict", or in "congruence"?[4]

It explains the term as reflected in sustainable development forums. It seeks to depict the current agenda of environmental governance, the interface between respective regulatory measures and the TBT Agreement, as well as some of their features and tendencies that may lead to conflicts between regulating and exporting Members of the WTO. Accordingly, it is separated into two parts. The first part (comprising Section 1 and 2) provides the general background of environmental protection in general, while the second part

[4] E.g. as illustratively encapsulated by the title of John H Jackson, 'World Trade Rules and Environmental Policies: Congruence or Conflict' (1992) 49 Wash. & Lee Law Review 1227

(comprising all other sections) narrows down to focus on the part of environmental governance that would be directly impacted by the TBT discipline. The content in this chapter will be presented mainly in narratives centring in environmental governance. Analysis in trade parlance will be incorporated to describe or discuss the relationship between some environmental issues and the TBT Agreement.

In Part 1, Section 1 discusses the terms "environmental" and the meaning used in this thesis, to narrow down the broad and diverse ideas that may be associated with the word. This section explores the subject matters and mechanisms of environmental governance systems in order to effectively provide the scope of "environmental governance" as perceived in the general sense.

Section 2 explores the key aspects of environmental governance in the State-centric international arena. The international community is not the sole authority for environmental protection, but is a legitimate source of reference. This section therefore summarizes the environmental agenda and approaches that have been commonly acknowledged and adopted in international law and policy. This includes three main principles in public international law, which are also commonly present in domestic and private governance. It also touches upon the question of legitimacy, under the TBT Agreement, of other concerns about the environment that have not been internationally endorsed. It then explores the interface between trade and environmental regimes in the international arena, the attempt to coordinate them and potential confrontation.

In Part 2, Section 3 introduces the concept of sustainable pattern of consumption and production (SCP) that has been used by the UN Environment Programme (UNEP) to frame their compilation of regulatory measures in correspondence with principle 8 of the 1992 Declaration of United Nations Conference on Environment and Development (Rio Declaration), pointing to the need for sustainable pattern of consumption and production.[5]

Recapitulated as an area of policy, SCP provides a useful perspective to cover the aspects of environmental governance that are relevant to the TBT Agreement, especially regulations and policies beyond the intergovernmental arena. As a framework, the concept covers most, if not all, technical measures that could be under the TBT coverage and mechanisms relating to them. The UNEP's characterisation of SCP governance therefore reflects several features and patterns that are applicable to them.

Section 4 then provides brief examples of measures under multilateral environmental agreements (MEAs) that resonate with the SCP concept. As the interface between MEAs and TBT Agreement has already been discussed in Part 1, Section 5 then explores environmental governance beyond the inter-State plane, i.e. the SCP measures that would be in direct contact with the TBT discipline and are established by governments and non-governmental agencies.

[5] Principle 8 of the Rio Declaration states: "To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies."

In doing so, it presents the various kinds of measures that have been brought into attention of the TBT Committee under the Agreement. It also captures some key trends of environmental governance that are likely under the TBT coverage, from viewpoints of environmental regimes.

The section then explores environmental governance by discussing four types of actors in regulating and standardizing processes: national and local governments; and, business entities and civil society organizations. First, it presents (1) the importance of local governance on global environmental agenda, (2) the possible regulatory chill that may be caused by the WTO Members' pressure to "take reasonable as may be available" to ensure local authorities' observance of the TBT disciplines,[6] and (3) a means that may be useful for constructive coordination between central and local entities.

Second, the section explores business actors and their common tendencies in processes of standardization. Though acknowledging their growing roles and capacities in environmental governance, it raises some concerns that may cast doubts in the accountability of their measures due to the unbalanced presentations in the standardizing and policy-making processes, which may allow industries and trade associations to take the stage to pursue their self-interests. In this respect, are these "environmental" or industrial standards?

It then provides a brief picture of the civil society organizations' involvement in promoting sustainable patterns of consumption and production. This group covers the most

[6] as required by Article 3, 4, 7 and 8, the TBT Agreement.

diverse types of bodies, which contribute to environmental governance in various ways, from advocacy and raising public awareness, to standard-setting.

- **Terms of Reference**

In this chapter, "technical measure" is a generic term to refer to "technical regulations", "standards" and "conformity assessment procedures" that would be subject to the TBT discipline. Their legal definitions as provided by the TBT Agreement have been explained in Chapter 2. For the purpose of this chapter, it is useful to note that they are essentially requirements relating to traded goods, generically referred to in the WTO context as non-tariff barriers to trade. Those under the TBT coverage are such as product standards and labelling requirements.[7] Part 2 of this chapter will discuss the broader governance as may be related to them, providing the background from narratives that are centred on environmental and standardisation governance.

"Technical bodies" refer to entities which establish and apply technical measures. These are categorized into three groups under the TBT Agreement: central government bodies, local government bodies and non-governmental bodies. Their legal definitions used in the TBT context are explained in Chapter 3.

The term "environmental regime" sometime refers to a set of rules and institutions formally established by multilateral environmental agreements (MEAs). In this chapter, the term is used in a broader sense and refers to certain systems of

[7] As explained in Chapter 2, these are in exclusion of measures under the Agreement on Government Procurement and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). Article 1.4-1.5, the TBT Agreement.

governance which cite environmental protection or any particular aspect of it as their primary objectives. It therefore includes rules and policies beyond the inter-state context, such as domestic regulations and private standards.

PART 1: Background Issues Surrounding "Environmental" Governance

1. Characterization of "Environmental Governance"

Defining "environmental governance" is far from straightforward, as will be most overt when one attempts to catalogue relevant instruments under this broad rubric. First, the term "environmental" suggests the concerned subject: the environment, which can include surrounding objects and conditions.[8] The general perception of environmental measures is associated with at least some elements of protection and/or conservation of nature and the environment,[9] though they technically cover a much wider scope than that and may include, for example, the issue of neighbouring nuisance.[10]

Such general notion suggests a subject matter. Yet, the scope of environmental governance is not any clearer since "the environment" has such a broad meaning and would cover vast arrays of interests. An important question still remains: What aspects of or about the environment are "protected" by an

[8] *Merriam-Webster Dictionary* <http://www.merriam-webster.com/dictionary/environment> accessed 1 April 2015.
[9] See, for example, *American Heritage Dictionary of the English Language* (Houghton Mifflin Harcourt Publishing Company 2011).
[10] See, for example, the definition of statutory nuisance in Section 79 which includes neighbouring nuisance as part of the Environmental Protection Act 1990. The National Archives, *National Archives, Environmental Protection Act* <http://www.legislation.gov.uk/ukpga/1990/43/section/79> accessed 1 August 2015.

environmental measure? And, what interests does environmental governance pursue in such protection?

1.1. "Environmental"

To answer that question and construct the view about the meaning and scope of "environmental" measures, it is useful to take a look at international instruments and the different approaches in identifying the aspects of the environment being dealt with. Many do so by defining their scope strictly and pinpoint at a specific subject matter, such as whales[11] and oil pollution damages.[12] Some cover a broader scope of interest by establishing a specific legal definition which articulates the more all-embracing concepts, such as "biological resources" and "ecosystems" used under the Convention on Biological Diversity (CBD).[13]

The latter approach has started in the international arena since the Convention of the UN Conference on the *Human Environment* (Stockholm Convention)[14] and been elaborated

[11] Addressed by the 1946 International Whaling Convention. As mentioned in Philippe Sands, 'Chapter 1: The Environment and International Society: Issues, Concepts and Definitions', *Principles of International Environmental Law* (Manchester University Press 2009), 3-24, at 16. Note that, "whales" are not defined in the Convention. See Article II, the 1946 International Whaling Convention.

[12] Addressed by, e.g. The 1954 International Convention for the Prevention of Pollution of the Sea by Oil; 1969 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties; and the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage. See Peter Malanczuk, 'Chapter 16: Environment', *Akehurst's Modern Introduction to International Law* (1997), at 241-253, at 243.

[13] Article 2, the Convention on Biological Diversity.

[14] See explanation about the drafting and negotiating processes in Louis B Sohn, 'Stockholm Declaration on the Human Environment, The' (1973) 14 Harvard International Law Journal 423. At p. 426, the author notes the intention to create the "broad goals and objectives" with the language that is "readily understandable by the general public", leading to the undefined term of "human environment" used in Stockholm Declaration.

throughout the UN discourse of sustainable development.[15] A wider and all-embracing scope of "environmental" interests is constructed under sustainable development agendas. In doing so, relevant instruments emphasize (1) the importance of the environment and the ecosystems in the well-being and survival of mankind; (2) harms and deterioration of natural resources and the earth's biosphere caused by human civilization, particularly after industrialization; and (3) the need and urgency to address such environmental problems.[16] Such emphasis is also in the light of the acknowledged distinction between natural and man-made environment (such as "the living and working environment").[17] Though the living and working environment is not excluded from the interest of sustainable development, they are more closely associated with the dimensions of economic needs and/or social equity under the concept of sustainable development.

In addition, there are various environmental values embraced by the sustainable development concept: from the anthropocentric values centred on human needs from nature; to the eco-centric values which recognizes the intrinsic value of the environment and calls for respect for Mother Earth. In addition to that, there are also competing values and interests from the social and economic dimensions which have been internationally recognised as priorities.

In this thesis, the term "environmental" is used in the similar sense to that of the concept of sustainable development:

[15] Malanczuk (n 12).
[16] As appeared in the early stage of the UN discourse on sustainable development. See Preamble of the Declaration of the the UN Conference on the Human Environment (Stockholm Declaration).
[17] Preamble, especially at para 3, Stockholm Declaration. More thorough explanation can be found in Sands (n 11), at 15-18.

encompassing a broad aspect of the environment, including any component of the biosphere, and with at least some extent of intention to protect and sustain its ecological state, to prevent harms to human health and the ecosystems – all of which correspond with the general perception mentioned above. Many environmental agendas may focus principally on conservation and prevention of harms to the environment, while others may concern sustainable usage and management of resources. The term includes not only those that are legally and/or politically identified as a priority in international forums, but also those that are recognized only by an individual group or country.

The above discussions have identified the *aspect* of the environment referred to by the terms "environmental" governance. The following three sub-sections raise awareness about the general reading of the term.

1.1.1. "Environmental" Measures and the "Environmental Correctness"

When environmental measures are identified from their primary purposes, the term does not at the same time imply the qualities and effectiveness of the measure in contributing to environmental sustainability. Environmental measures are not necessarily "environmentally correct" when judged in the light of their potential to prevent or mitigate environmental harm, without neglecting or causing environmental damage elsewhere. Many are also required to encompass more than one goal, or have compromised environmental qualities to accommodate other needs. It is therefore important that measures citing "environmental" objectives but contested

under the WTO rules are not read with the latter representing an ideological idea of environmental protection.

1.1.1.1. Environmental Measure as a Disguise of "Green Protectionism"

A measure presented as "environmental" by the regulating Members may indeed be a disguise of protectionist agendas. To begin with, measures citing environmental protection as their objectives do not always have environmental protection as their only incentive, even though they are established by environmental agencies. Some may have been motivated by an interest to protect domestic industries, or those of any other countries (referred in WTO terms as "the most favoured nations"), over those exported from WTO Members.

In essence, protectionist measures refer to those intended to interfere with market competitiveness for the benefit of domestic products, rather than optimal efficiency in solving and mitigating environmental problems. In concept, protectionistic and discriminatory characters of a measure do not seem inherently contributory to environmental protection. While at the same time, as there are some "widely accepted" suggestions that the liberalisation of trade in goods can contribute to environmental protection in some contexts,[18] it

[18] See Stilwell (n 1), at 37. This statement nevertheless cannot be read as a general conclusion about the "material linkages" between trade liberalisation and environmental protection. It refers to the environmental effects of "introducing new products, disseminating new technologies, affecting the structure of economic activity, or by increasing the scale of activity and impacts". The effects may differ in "nature" and may be "positive, or negative (or neutral)". The benefits, as well as burdens, to environmental protection are spatial and temporal. Different communities in one country, for example, will not get the same effects from one activity or event. They also "vary among different industry sectors and areas of policy."

could be argued that, to an extent, protectionism could weaken the potential efficiency of environmental protection. Protectionist measures disguised as environmental protection are condemned not only by trade advocates but also by environmentalists who agree in principle that they should be filtered out from environmental governance.[19]

However, such seemingly agreeable conclusion does not prevent conflicts between regulating and exporting Members. Disagreements and confrontation still arise. The problem is the fact that protectionist intention is not always clear or explicit in the practice of modern governance. Environmental governance is developed with increasing complexity, in its advanced technicality and interaction of involving actors. Most measures that could be viewed as discriminatory are likely in the gray area, and may have been the compromised result of lengthy multi-stakeholder processes, constraint by financial, technological or human resources, or entail unanticipated effects of practical application – without necessarily having the intention to give advantages to particular countries or create disadvantages to other WTO Members. It goes without saying that such protectionist purposes will never be admittedly disclosed by the regulating Member.

At the heart of the WTO disciplines and the examination to evaluate the WTO-compliance of a trade-restrictive measure is indeed the attempt to identify protectionism. The distinction between "genuine" environmental measures and the disguised ones depends on how the non-discrimination principle is interpreted and examined. This is done with complex legal

[19] E.g. Andrew Green, 'Climate Change, Regulatory Policy and the WTO How Constraining Are Trade Rules?' (2005) 8 Journal of International Economic Law 143.

technicalities that may lead to the result that contradicts with general expectations. Protectionist intention is bound to be interpreted and examined differently, particularly from perspective of an exporter to whom environmental measures would create burdens and from that of a regulator. Conflicts therefore arise when the different views of what account protectionist measure that creates conflicts between regulating and exporting Members of the WTO, and the conflicts between trade and environmental regimes.

Accordingly, though the attitude against disguised protectionism in the form of environmental measure is held by both environmentalists and advocates of free trade, potential conflicts between regulating and exporting Members, which is also often taken as a representation of conflicts between trade rules and environmental protection. Discussions by such environmentalists abovementioned would go in circle with the conclusion that proposes "permissibility" for environmental measures so long as they are not protectionist.

1.1.1.2. Environmental Measures as Identified by the Effects on the Environment

It is also useful to note that some scholars suggest that "environmental" should be identified by the *effects* of a given measure on environmental protection, without it being stated as a primary purpose. Idealistically, this approach may lead to the more constructive view of the trade-environment confrontation. However, there are two main reasons why it is not adopted in this thesis.

First, it is not the general understanding of the term "environmental". This approach includes an even vaster range of subject matters addressed by an "environmental" instrument, including those that are not generally perceived under the environmental rubric, e.g. legal instruments addressing protection of workers' health, arms control and economic cooperation.[20] Such inclusion could contradict with the general understanding of the term, although the instruments at issue may be of relevance to environmental protection.

Second, it would over-complicate the discussions and prevent constructive criticisms about environmental measures. The approach requires an elaborate debate about the environmental qualities and effectiveness of every measure in prior to referring to one as environmental. Effectively, they cannot be referred as an "environmental" measure despite having certain aspects of the environment as their direct subject matter and may be deemed "non-environmental" due to the failure to achieve meaningful results in environmental protection. In other words, the approach excludes unsuccessful, or "environmentally incorrect", measures from the category.[21]

The non-application of this approach brings home a reminder that "environmental" governance and measures are an umbrella term of reference by which the environmental

[20] As presented in, for example, Wolfgang E Burhenne's collection of MEAs, in Wolfgang E Burhenne, *International Environmental Law: Multilateral Treaties* (Kluwer Law International 1997). Also mentioned in Ronald B Mitchell, 'International Environmental Agreements Database Project (Version 2014.4), 2002-2015' <http://iea.uoregon.edu/page.php?query=static&file=definitions.htm> accessed 1 April 2015.
[21] Mitchell (n 20).

qualities and effectiveness of the actual measures are yet to be identified. To question about environmental qualities and effects of an "environmental" measure is also particularly relevant in the discussions about the legal relationship between trade and rules and environmental regimes, as it is the one of the next crucial steps to be taken after the measure is suspected or challenged to be WTO-inconsistent.

1.1.1.3. Environmental Qualities and Effects in Relation to Trade and Environment Conflict

Considerations about environmental effects are directly related to the legitimacy of a measure when it adversely affects international trade and could constitute a breach of WTO obligations. However, in regards to conflicts with trade rules, the important point on environmental qualities and effects of a measure is not about its any/the overall qualities or effects. An important question before looking into the eventual permissibility of an environmental measure is how and to what extent its environmental content should be evaluated in considering the legitimacy of its effects on trade. Are the current mechanisms within the TBT governance capable of making such judgement on environmental content?

In trade parlance, these issues are mostly discussed in relation to the necessity requirements. It should be pointed out here that these are evaluated only to the extent that is relevant to the interests of the WTO. As will be shown more fully in Part II of the thesis, the concept of necessity is concerned with the *trade-restrictiveness* of the measure as to whether is necessary for the cited environmental objective. The WTO does not determine the environmental content

beyond that.[22] It only looks at the trade-restrictive mechanisms of the contested measure and evaluate their environmental content, as opposed to the effects of the whole scheme. Concurrently, when the contested measure is deemed WTO-inconsistent, it is only such specific mechanisms that would be subject to modification.

For example, a technical regulation that is examined under Article 2.2 whether it is "not more trade restrictive than necessary". It is the trade-restrictive mechanisms (as opposed to the overall scheme of the measure at issue) that are evaluated in terms of: (1) its effectiveness in fulfilling the legitimate objective; and (2) the risks that "non-fulfilment would create".[23] Such considerations should take into account "available scientific and technical information, related processing technology or intended end-uses of products" in relation to such risks.[24]

In addition to the "positive requirement" on necessity of trade-restrictiveness, such as the one stipulated by Article 2.2, environmental effects and qualities of the contested measures would also be relevant to the idea of "legitimate regulatory distinction" which has been applied in relation to non-discrimination requirements under Article 2.1 in the Appellate Body's decision of US-Tuna II.[25] The concept was applied in the same vein as the exemption under Article XX of GATT and is

[22] See similar suggestion under GATT context in, for example, Robert Howse, 'The Appellate Body Rulings in the Shrimp/Turtle Case: A New Legal Baseline for the Trade and Environment Debate' (2002) 27 Columbia Journal of Environmental Law 491.
[23] Article 2.2, the TBT Agreement.
[24] Article 2.2, the TBT Agreement.
[25] *Panel Report, United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna (Mexico) II Article 21.5 of the DSU '), WT/DS381/RW, 2015*.

likely to be applied as an exemption to article 2.1 of the TBT Agreement.

An example to demonstrate this specific interest of the WTO in an environmental measure under the concept of necessity is the cause of US-Shrimp. It is the prohibition of shrimp imports that is of the WTO concern, specifically the requirement for the use of the same Turtle Exclusion Device (TED) as adopted in American shrimp trawlers,[26] and not the broader scheme of the US legislation on sea turtle protection or the overarching Marine Mammal Protection Act.

1.1.1.4. Conclusion

These issues of legitimate objectives have been discussed in more details in Chapter 4 and will be revisited briefly again in Chapter 7. This Section 1.1.1 concludes with three main points. Firstly, an environmental measure could not be presumed to be environmentally correct or effective. Secondly, when they are contested for WTO-inconsistency, their qualities and effects are to be evaluated when considering their legitimacy and permissibility. And thirdly, the scope of WTO's interests on an environmental measure only covers its specific parts, narrowing also the scope of which trade and environmental regimes may actually conflict.

[26] As explained in the previous Chapter.

1.1.2. Environmental Protection Is Only One, among Three, Components of Sustainable Development Agenda.

The concept of sustainable development encompasses three different dimensions which do not always operate together and are often responded to by separate regimes: i.e. social equity, economic development and environmental protection. The Declaration of the UN Conference on the Human Environment (Stockholm Declaration) succinctly states that:

> "To defend and improve the human environment for present and future generations has become an imperative goal for mankind-a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of worldwide *economic and social development*."[27]

As discussed in chapter 5, the sustainable development concept emerged and is realized on the basis of the recognition of environmental problems caused by human activities and the aim to prevent and mitigate such problems. Pursuit of sustainability therefore depends on adequate protection of the environment. So much so, the term sustainable development and environmental objectives have often been used interchangeably.

As concluded in chapter 5, the two are not entirely the same. Protection of the environment is also to be realized in balance with other (albeit occasionally conflicting) priorities. Though it will not be repeated in this chapter, reference to environmental issues should be read with such nuance.

[27] Para. 6 of the Preamble, Stockholm Convention. [Emphasis added]

2. International Environmental Regimes: Inter-State Relations

Environmental problems of all areas have been brought to the attention in international forums and addressed in various international environmental instruments. The current concerns have been reported to be in the area of: atmosphere, land, water, biodiversity, chemicals and waste.[28] There may have been over 1,100 multilateral and 1,500 bilateral instruments between States, and 250 between State(s) and international organizations or non-State actors stating their primary purposes on various "environmental" subjects: ranging from energy, freshwater resources, habitat, ocean, pollution and species.[29] While all such issues are detrimental to the wellbeing of human, many are still declining and international targets set to address them are yet to be met, or have already been missed.[30]

First, this section explores environmental concerns and objectives that have been recognized by the inter-state context. It then explains three environmental legal principles,

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[28] As grouped in United Nations Environmental Programme (UNEP), *Global Environment Outlook 5 (GEO-5): Environment for the Future We Want* (2010).

[29] Ronald B Mitchell, *International Environmental Agreements (IEA) Database Project (Version 2014.3): 'Environmental Agreements by Subject', 2002-2015* (2002) <http://iea.uoregon.edu/page.php?query=list_subject.php> accessed 1 March 2015.

[30] For detailed review, see Mitchell (n 29). For brief summary of highlighted areas, see United Nations Environmental Programme (UNEP), *UNEP Year Book: Emerging Issues in Our Global Environment 2013* (2013).
For example, the 2010 biodiversity target committed worldwide as committed to by CBD parties, and, endorsed in the World Summit on Sustainable Development (the "Rio + 10") and as one of the UNGA's Millennium Development Goals – Ensure Environmental Sustainability. See Table 1 in: Convention on Biological Diversity, 'Global Biodiversity Outlook 3: Biodiversity in 2010 Overview' (2010) <http://www.cbd.int/gbo3/?pub=6667&section=6690> accessed 1 March 2015.

as reflected in public international law. These are also commonly adopted, or claimed to be adopted, in other forums beyond the inter-state context. The purpose here is to present a brief but comprehensive picture of the subject matter of mainstream environmental governance and the principal approaches adopted to address them.

Second, it discusses whether an objective cited by a technical measure would have to be recognized by international environmental instruments to be considered as "legitimate objectives" under the necessity requirement, as stipulated by Article 2.2 for example. Then, it describes how the rules in MEAs and the TBT Agreement interface, with some examples of MEAs that endorse technical measures under the TBT coverage. This provides a brief picture about the part of inter-state environmental governance that would be directly impacted by the TBT disciplines.

2.1. International Environmental Agenda: Recognized Objectives

There are certain areas of concerns that "environmental" objectives fall under or are associated with. Section 2.1 depicts them by summarising the major environmental themes raised under the UN sustainable development agenda and the key MEAs associated with them, including their primary objectives. This is presented in a comprehensive table and explained in the narratives below.

Table 1: Environmental Themes Raised in UN Sustainable Development Agenda and Key MEAs[31]

Environmental themes	Key MEAs	Concerned environmental problems	Key objectives
Biodiversity and ecosystems[32]	- UN Convention on Biological Diversity (CBD) - Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)[33]	Biodiversity loss due to human action[34]	"conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources"[35]

[31] Mainly from: UN Sustainable Development Knowledge Forum, *Topics* <https://sustainabledevelopment.un.org/topics> accessed 1 April 2015.
[32] As reiterated in e.g., UN Conference on Sustainable Development, *Agenda Item 10 - Outcome of the Conference: The Future We Want ('The Future We Want'), A/CONF.216/L.1* (2012), at 197-204.
[33] Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), *What Is CITES?* <http://www.cites.org/eng/disc/what.php> accessed 1 April 2015
[34] UN Sustainable Development Knowledge Forum, *Biodiversity and Ecosystems* <https://sustainabledevelopment.un.org/topics/biodiversityandecosystems> accessed 1 April 2015.
[35] Article 1, CBD

Environmental themes	Key MEAs	Concerned environmental problems	Key objectives
Chemicals and waste (hazardous, solid and radioactive)[36]	- Basel Convention[37] - Rotterdam Convention[38] - Stockholm Convention[39]	- Chemical pollution and contamination with adverse effects on human health and nature systems - Unsustainable use of resources (such as those sought to be improved by recycling and reuse)[40]	"to protect, by strict control, human health and the environment against the adverse effects which may result from the generation and management of hazardous wastes and other wastes"[41]

[36] As reiterated in e.g., *The Future We Want as adopted in Resolution 66/288 of the 123th UNGA Plenary Meeting, A/RES/66/288*, at paras. 213-223.
[37] The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal ('Basel Convention'), 'Overview' <http://www.basel.int/TheConvention/Overview/tabid/1271/Default.aspx> accessed 1 April 2015
[38] 'Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade ("Rotterdam Convention"): Overview' <http://www.pic.int/TheConvention/Overview/tabid/1044/language/en-US/Default.aspx> accessed 1 April 2015
[39] Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention)
[40] UN Sustainable Development Knowledge Forum, *Chemicals and Waste* <https://sustainabledevelopment.un.org/topics/chemicalsandwaste> accessed 1 April 2015
[41] Preamble, Basel Convention

Environmental themes	Key MEAs	Concerned environmental problems	Key objectives
Climate Change[42]	- United Nations Convention on Climate Change (UNFCCC) - Kyoto Protocol	"[…] a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."[43]	"to achieve […] stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system"[44]
Desertification, land	- UN Convention	Land degradation	"to combat desertification

[42] As reiterated in e.g., *The Future We Want, 2012* (n 36), at paras. 190-192.
[43] The definition of "climate change" stated in Article 1 para. 2, 1992 UN Framework Convention on Climate Change (UNFCCC).
[44] Article 2, UNFCCC.

Environmental themes	Key MEAs	Concerned environmental problems	Key objectives
degradation and drought[45]	to Combat Desertification (CCD) (Also relevant to CBD and UNFCCC)[46]	and climatic variations due to human actions[47]	and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa […] [with focus on] improved productivity of land, and the rehabilitation, conservation and sustainable management of land and water

[45] As reiterated in e.g., *The Future We Want, 2012* (n 36), at paras. 205-209.
[46] See UN Sustainable Development Knowledge Forum, *Desertification, Land Degradation and Drought* <https://sustainabledevelopment.un.org/topics/desertificationlanddegradationanddrought> accessed 1 April 2015.
[47] UN Sustainable Development Knowledge Forum, *Desertification, Land Degradation and Drought* (n 46).

Environmental themes	Key MEAs	Concerned environmental problems	Key objectives
			resources, leading to improved living conditions"[48]
Forestry[49]	- There is yet an MEA with specific theme on forestry. It is nevertheless covered by other (broader) regimes above, some of which have mechanisms specifically contributing to	- deforestation and forest degradation[51]	- "sustainable management of forests, reforestation, restoration and afforestation"[52] - "[to] slow, halt and reverse deforestation and forest degradation, including, inter alia, promoting trade in legally harvested forest products"[53]

[48] Article 2, CCD.
[49] As reiterated in e.g., Chapter 11 of the UN GAOR, '46th Sess. Agenda 21 ("Agenda 21"), UN Doc A/Conf.151/26' (1992); and *The Future We Want, 2012* (n 36), at paras. 193-196.
[51] *The Future We Want, 2012* (n 36), at para. 193.
[52] *The Future We Want, 2012* (n 36), at para. 193.
[53] Id., at para. 193.

Environmental themes	Key MEAs	Concerned environmental problems	Key objectives
	deforestation and forest degradation, such as UN REDD+ under the UNFCCC.[50]		- "[to] strengthen[…] cooperation arrangements in the areas of […] trade […] and governance"[54] - "enhancement of forest carbon stocks in developing countries"[55]
Mountains[56]	- There is yet an MEA with specific theme on mountains. It is nevertheless	- "fragile mountain ecosystems [which are] particularly vulnerable to the adverse	- conservation of mountain biodiversity and ecosystems[59]

[50] See FAO, UNDP and UNEP, *Framework Document: UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries ('UN-REDD')* (2008) <http://www.un-redd.org/Portals/15/documents/publications/UN-REDD_FrameworkDocument.pdf> accessed 1 April 2015.
[54] *The Future We Want, 2012* (n 36), at para. 193.
[55] Id., at para. 193.
[56] As reiterated in e.g., the Future We Want, 2012, Id., at paras. 210-212.
[59] The Future We Want, 2012, supra note 52, at para. 212.

Environmental themes	Key MEAs	Concerned environmental problems	Key objectives
	covered by other (broader) regimes above, particularly biodiversity and ecosystems.	impacts of climate change, deforestation and forest degradation, land use change land degradation and natural disasters"[57] - retreating and thinning mountain glaciers[58]	

[57] The Future We Want, 2012, supra note 52, at para. 210.
[58] Id., at para. 210.

Environmental themes	Key MEAs	Concerned environmental problems	Key objectives
Oceans and seas[60]	- United Nations Convention on the Law of the Sea (UNCLOS) (Also relevant to CBD and UNFCCC) - The United Nations Agreement for the Implementation of the Provisions of the UNCLOS relating to the Conservation and	- Pollution from activities in land and at sea[61] - Sea level rise and coastal erosion[62] - Ocean acidification and impacts of climate change[63] - Depletion of fish stocks and marine eco-systems[64] - Illegal, unreported and unregulated	- To protect the marine environment and its biodiversity,[66] including: "to prevent, reduce and control pollution of marine environment";[67] and, conservation and management of the living resources[68] - To use marine resources sustainably[69] - To create and improve "transparency and

[60] As reiterated in e.g. *The Future We Want, 2012* (n 36), at paras 158-180.
[61] *The Future We Want, 2012* (n 36), at para. 163
[62] *The Future We Want, 2012* (n 36), at para. 165.
[63] *The Future We Want, 2012* (n 36), at para. 166.
[64] *The Future We Want, 2012* (n 36), at para. 168.

Environmental themes	Key MEAs	Concerned environmental problems	Key objectives
	Management of Straddling Fish Stocks and Highly Migratory Fish Stocks	fishing (IUU fishing)[65]	accountability in fisheries management"[70]

2.1.1. International Environmental Objectives as a General Background of Environmental Governance

The table provides the general background about environmental issues that have been acknowledged as current concerns of the inter-State international community. It lists the main themes of environmental problems recognised within the UN forums on sustainable development, the latest of which was the 2012 UN Conference on Sustainable Development (RIO +20). Most of them are a subject matter already addressed by an issue-specific legal regime,

[66] E.g. article 145, UNCLOS.
[67] E.g. article 194 and 207-212, UNCLOS.
[68] E.g. article 61 and 116-120, UNCLOS. See also *The Future We Want, 2012* (n 36), at para. 158 for summarised description.
[69] *The Future We Want, 2012* (n 36), at paras. 158, 160 and 162.
[65] *The Future We Want, 2012* (n 36), at paras. 170-173.
[70] *The Future We Want, 2012* (n 36), at para. 172.

institutionalized by major multilateral environmental agreements (MEAs).

The environmental themes provide a broad frame of reference for different areas of concerns. Some are framed by an environmental medium, or an aspect of the environment, including: biodiversity and ecosystem, forestry, mountains, as well as, seas and oceans. Others are identified by "products and by-products of human technological and industrial innovation which are considered to be particularly harmful to the environment" (such as chemicals and waste),[71] or by the environmental phenomena that are of concern. These include climate change, desertification, land degradation and drought.[72]

The main concerns under each theme also provide the general idea about the major environmental problems that the world is confronting. Most are related to human actions, such as the warming of climatic systems "attributed directly or indirectly to human activity",[73] chemical pollutions and unsustainable use of resources,[74] marine pollution from activities in land and at sea such as ocean fertilization,[75] over-fishing, and illegal unreported and unregulated fishing (IUU fishing)[76].

In fact, environmental objectives cited by most international environmental instruments are primarily concerned with

[71] Sands (n 11), at 5.
[72] See a similar categorisation of issues addressed by international environmental instruments, in: Sands (n 11), at 3-5.
[73] See the definition of "climate change" stated in Article 1 para. 2, 1992 UN Framework Convention on Climate Change (UNFCCC).
[74] UN Sustainable Development Knowledge Forum, *Chemicals and Waste* (n 40).
[75] *The Future We Want, 2012* (n 36), at para. 167.
[76] *The Future We Want, 2012* (n 36), at paras. 170 and 176.

"preventing or managing human impacts" on an environmental medium at issue.[77] The UN discussions on sustainable development continuously pinpoint several aspects of human activities with environmental impacts including: the explicitly exploitative and harmful activities (e.g. agriculture, mining, and excessive fishing beyond the allowed quota) which are already a typical subject of environmental law and regulations; the currently unsustainable patterns of consumption and production which covers most breadth of human activities and behaviours of all walks of life; as well as, the cross-cutting issues that are less direct and are not generally identified as an environmental agenda but indeed are closely interconnected to environmental sustainability (e.g. under-development and poverty, growth of population and urbanization).[78]

Key objectives acknowledged by the MEAs and/or the political forums also add to the general background of the direction and the focus that the international community pursues in addressing the concerns. Though articulated and acknowledged into different thematic areas, they are interrelated. Conservation of biodiversity and eco-systems is included as a key objective of almost all environmental areas.[79] Climate change may not always be expressed as one of the immediate objectives of other issue-specific regimes but is more often than not acknowledged for its linkage with them. This includes an objective in the area of forestry to

[77] Mitchell (n 20).
[78] See e.g. UN GAOR (n 49) 21; *The Future We Want, 2012* (n 36).
[79] See Table 1 in relation to: biodiversity and eco-systems; desertification, land degradation and drought; forestry; mountains; and oceans and seas, above.

"enhance[...] forest carbon stocks in developing countries",[80] which would contribute to the key objective of climate change regime in "stabiliz[ing] [...] greenhouse gas concentrations in the atmosphere" in addressing climate change[81] Climate change is also stressed as the potential cause of problems in areas such as mountains;[82] and, desertification, land degradation and drought.[83]

2.1.2. The Relationship to Other Parts of the Chapter

This section has provided the general background about environmental objectives as recognized and pursued by the international community, in the inter-state context. There are also two interesting points that are related to the later discussions of this chapter: (1) specialized nature of technical measure and its linkage with international environmental objectives; and (2) the relationship between environmental agendas and trade, to be addressed by "life-cycle concept".

2.1.2.1. The specialized nature of technical measure and its linkage with international environmental objectives

Measures citing the major environmental themes and objectives mentioned above are still being contested under the TBT Agreement. An example includes France's draft decree on labelling requirements ("TRIMAN logo") of which objectives would fall under the area of chemicals and waste management mentioned above. This particular measure is only a specific

[80] *The Future We Want, 2012* (n 36), at para. 193.
[81] Article 2, UNFCCC.
[82] *The Future We Want, 2012* (n 36), at para. 210.
[83] *The Future We Want, 2012* (n 36).

part of a broader "system of extended producer responsibility" and will be used in complementary to other requirements.[84] It is only concerned with the symbols required on the label of certain products. Products affected by this include papers, electric and electronic equipments, and batteries for the purpose of recycling.[85]

The measure was challenged in the TBT Committee three times. Certain Members complaint about France's non-uniform approaches in waste sorting, as its requirements vary across its different regions and municipalities. Concerned Members also questioned the effectiveness of this particular draft regulation and argued that it is disproportional due to the high costs involved in compliance.[86] Does this then reflect the ignorance of the contesting WTO Members on the importance of environmental protection and the concerns expressed by the international community?

It is important to bear in mind that the ultimate aim of environmental protection under the concept of sustainable development is an ongoing one. It is also abstract in character. The fundamental aspiration is "to defend and

[84] TBT Committee, 'Notification, G/TBT/N/FRA/153' (2013)
[85] TBT Committee, 'Notification, G/TBT/N/FRA/153' (n 84).
[86] TBT Committee, 'Minutes of the Meeting of 18-19 June 2014, G/TBT/M/63 ("TBT Committee Meeting Report (G/TBT/M/63)")' (2014), at paras. 3.161; TBT Committee, 'Minutes of the Meeting of 5-6 November 2014, G/TBT/M/64 ("TBT Committee (G/TBT/M/64)")' (2014), at paras. 2.187 - 2.189; and TBT Committee, 'Minutes of the Meeting of 18-19 March 2015, G/TBT/M/65 ("TBT Committee Meeting Report (G/TBT/M/65)")' (2015), at paras. 2.156-2.157. France nevertheless adopted the regulation in 2014 (after the first challenge in the TBT Committee). TBT Committee, 'TBT Committee Meeting Report (G/TBT/M/65)', at para. 2.157. There is yet to be further challenge or formal dispute arising under the TBT Agreement.*TBT Information Management System* <http://tbtims.wto.org/web/pages/edition/stc/SpecificTradeConcern.aspx?ID=637691> accessed 1 August 2015.

improve the human environment for present and future generations".[87] Objectives identified by legal regimes under each theme of environmental problem are of a temporal nature and will evolve in corresponding with many factors beyond environmental considerations, including the social and economic needs of affected stakeholders.

Key objectives of major MEAs tend to be broad and will need to be translated into the more immediate and materialistically tangible ones to be achieved by the hands-on operational measures beyond the inter-state context. The decision-making processes of such measures are also bound include various considerations beyond achieving intrinsic environmental goals. Considerations include the cultural and societal contexts, capability of available resources, knowledge and regulatory mechanisms, and other competing interests that would be affected, including disadvantages or advantages to the local business.

Even more so in the context of technical measures, and as will also be pointed out in section 5.2, operational mechanisms in modern governance tend to have very specialized nature. Therefore, it is not a surprise when broad aspirations in MEAs are materialised into achievable objectives that are so specific that their linkage with them would seem unclear and debateable. This leaves the gap that could prevent regulating and exporting Members, as well as trade lawyers (whose agenda is not necessarily "pro-trade") and environmentalists, to agree about the legitimacy of such operational measures. It is also not surprising that measures citing the universally acknowledged environmental themes mentioned above as

[87] Para. 6 of the Preamble, Stockholm Convention.

their objectives are still contested under trade rules, amidst the global consensus on the urgency and importance of addressing them in the international arena.

2.1.2.2. The Relationship between Environmental Agendas and Trade to Be Addressed by Life-Cycle Concept

Some of the key objectives abovementioned also hint the importance of life-cycle concept to be adopted by environmental measures. The importance of other sectors, such as trade and finance, are also recognized in environmental objectives. Forest protection agendas, for example, aim to "slow, halt and reverse deforestation and forest degradation" by "inter alia promoting trade in legally harvested forest products".[88] Though trade-restrictive measures are not mentioned, it is assumable that they would be needed in the pursuit of such objectives. For example, technical measures prescribing characters of products and certification and labelling that explain about the harvesting and production processes would be needed, in the similar vein as France's TRIMAN logo requirement above.

2.2. Must Objectives Be Recognized in an International "Environmental" Instrument to Be Considered "Environmental"?

An "international" agenda is a common reference, which provides a sense of legitimacy and "environmental correctness" to an objective of a domestic measure. Several trade-environment commentators try to methodologically

[88] *The Future We Want, 2012* (n 36), at para. 193.

differentiate between "environmental" and other environment-related agenda, many of which they suggest are more appropriate to be clustered as "value-based" or "culturally preferred".[89]

The idea of such differentiation is useful in raising awareness in relation to the notion of conflicts between trade and environmental regimes.[90] It is a reminder that diverse interests of measures that are generally identified as an environmental one may include those that lack a substantive connection to the ecological state of the biosphere. The "value-based" or "cultural preference" cluster is usually directed at "green" activists' campaigns that lack the "supportable claim (or at best only a partial or tenuous claim) that the offending PPM causes risk to human health or the natural environment" such as those on animal welfare.[91]

Such a reminder is useful considering that public perception on environmental risks may often be misled for certain political agendas. Many campaigning strategies are designed to trigger the public's conscience on environmental protection and their reaction to issues associated with environmental risks. The limitation of laypeople in involving in science-based environmental decision-making has been observed in extensive studies in the areas of risk perception and risk

[89] Sanford E Gaines, 'Processes and Production Methods: How to Produce Sound Policy for Environmental PPM-Based Trade Measures' (2002) 27 Columbia Journal of Environmental Law 383, at 402. The author refers to the OECD's publication which divides PPM-based measures into three clusters in respect with their motivation: "environment", "competitiveness"; and "value-based". See Organisation for Economic Co-operation and Development, 'Processes and Production Methods ("PPMs"): Conceptual Framework and Considerations on Use of PPM-Based Trade Measures, OCDE/GD (97) 137' (1997).
[90] Refer also to the introduction of this chapter.
[91] Gaines (n 89), at p. 402.

management. "Moral panics" are an example of the manifestation of such limitation, especially when they are created by misleading or false information in media campaign and online social networks.[92]

However, the differentiation may not stand as a competent methodology to evaluate environmental legitimacy of a measure for several reasons. First, "environmental objectives" are not inherently separable from cultural preference or ethical values. The culture and ethics are most likely embraced by environmental measures. The latter is also apparent in international environmental law[93] and is one of the fundamental components of environmental governance at large.

Seals protection agenda is an example to demonstrate this. Some commentators stress in relation to the EU seal legislation: "Animal Welfare Is Not Environmental Protection".[94] Though seal protection is clustered under "animal welfare" law

[92] See Tom Horlick-Jones, Jonathan Sime and Nick Pidgeon, 'Chapter 11: The Social Dynamics of Environmental Risk Perception: Implications for Risk Communication Research and Practice' in Nick Pidgeon, Roger Kasperson and Slovic (eds), *The social amplification of risk* (Cambridge University Press 2003), 262-285. See also, e.g. Nick Pidgeon, 'Risk Assessment, Risk Values and the Social Science Programme: Why We Do Need Risk Perception Research' (1998) 59 Reliability Engineering & System Safety 5; and Luiza Toma and Erik Mathijs, 'Environmental Risk Perception, Environmental Concern and Propensity to Participate in Organic Farming Programmes' (2007) 83 Journal of Environmental Management 145.

[93] See introduction of ethics in selected fields of international environmental law in Alexander Gillespie, 'An Introduction to Ethical Considerations in International Environmental Law' in Malgosia Fitzmaurice, David M Ong and Panos Merkouris (eds), *Research Handbook on International Environmental Law* (Edward Elgar Publishing Limited 2010), 117-137.

[94] Laura Nielsen, 'Emotional and Legal Stakes Are High in the Seals Dispute' (2010) 14 Bridges <http://www.ictsd.org/bridges-news/bridges/news/emotional-and-legal-stakes-are-high-in-the-seals-dispute> accessed 1 August 2015.

in the EC[95] and is presented as a measure addressing "public moral concerns" (instead of "protection of the environment") in the case of EC-Seals products,[96] it is generally perceived by the public and is often campaigned under the category of environmental protection.[97] The campaign sometimes raises concerns on seals protection in association with the "local eco-systems",[98] with the logic resonating with the spirit of the CBD.

The separation between "environmental" and "cultural" or "value-based" becomes even more difficult when it comes to issues that scientific knowledge may still be unclear, without consensus agreement or simply unavailable – as is the case for an increasing number of environmental issues.[99] For example, in regards to genetically modified foods, the public is concerned about the negative environmental effects and harm to human health from the production processes and the products, as well as the "value-based" or "culturally preferred" issues that "a particular technology is in some way 'tampering with nature', or that unintended effects are unpredictable and thus unknown to science".[100]

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[95] As "animal welfare protection" is cited as "an objective pursued" in Regulation (EC) No 1007/2009 of the European Parliament and of the Council of 16 September 2009 on Trade in Seal Products, available online via: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV:cx0001; last updated: February 2011; accessed: August 2015.

[96] *Panel Report, European Communities - Measures Prohibiting the Importation and Marketing of Seal Products ('EC - Seals Products'), WT/DS400/R, WT/DS201/R, 2013*, at para. 7.3.

[97] See e.g. Richard Black, 'Scotland's "Bizarre" Seal Plans under Fire' *BBC News* (June 2011) <http://www.bbc.co.uk/news/science-environment-13780738> accessed 1 August 2015.

[98] Black (n 97).

[99] See also precautionary principle in section 2.3.1. below.

[100] Lynn Frewer and others, 'Societal Aspects of Genetically Modified Foods' (2004) 42 Food and Chemical Toxicology 1181, at 1182-1183.

As precautionary principle encompasses environmental and moral values, policy-makers may find it necessary to highlight ethical reasons to justify their precautionary actions, as scientific uncertainty may restrain the justification on environmental grounds.[101] With the increasing acceptance of precautionary principle as international environmental principle, it would be difficult to argue that precautionary measures are not environmentally legitimate or that they are not important for environmental protection.

Moreover, the idea does not seem likely to stand when the measure at issue claims a broader and more flexible connection with international environmental agendas. Sandford Gaines, for example, seems to adopt a rather narrow view of what may be classified as an implementation of such agendas. He describes the dolphin-protection standards on tuna fishing as "mixed environmental-value motivation" since only few species benefiting from the measure have populations "small enough" to suggest "environmental motivation". In this vein, the abundance of many other species also protected by the scheme suggests a "values-only motivation for their protection".[102]

Such view focuses on only a small part of biodiversity conservation agendas and restricts "environmental motivation" to prevention of extinction of a species. It seems to neglect that the CBD contains such all-embracing objectives, including sustainable use of the components of biological diversity.[103]

[101] See e.g. Karsten Klint Jensen, 'The Moral Foundation of the Precautionary Principle' (2002) 15 Journal of Agricultural and Environmental Ethics 39.
[102] Gaines (n 89), at footnote 64.
[103] Please refer to Section 2.1 and Table 1. See also the Preamble of the CBD.

The eco-systems are also complex and biodiversity conservation is not merely to prevent extinction.[104]

As science still cannot fully explain various elements of the ecological system,[105] the usefulness of the proposed differentiation remains limited only to raise awareness about the diversity of interests that are associated as "environmental", many of which may have been heavily politicized, misled public perception and influenced by emotions that come with it, as explained above. It is unlikely to be adopted as methodology in evaluation of environmental legitimacy.

2.2.1. "Legitimate Objectives" under the TBT Agreement

The point above touches upon the general categorisation of subject matters, since the ones that are referred to under the rubric of "environmental" interests tend to cat the light of legitimacy on the regulatory measures and policies that cite it as their own regulatory objectives. Outside of the context of the debates on trade and environment conflicts/relationship, it is common that any given regulatory objectives and respective measures are questioned on their environmental merits. Yet, the trade-environment discussions tend to leave these points aside and make the broad categorical reference to contested measures in accordance with the cited objectives.

[104] For example, though still not sufficiently recognized, "extinction debt" (the idea that species may be bound to extinction due to habitat loss even though their specimens may not be low in number) is significant in the agenda of biodiversity conservation. See Mikko Kuussaari and others, 'Extinction Debt: A Challenge for Biodiversity Conservation' (2009) 24 Trends in Ecology and Evolution Journal 564.

[105] E.g. the exact factors to maintain certain ecosystems or the relationship between dolphins and schools of tuna. Fred Pearce, 'Earth's Nine Lives' (2010) 205 New Scientist 30.

The following section now turns to touch upon how the TBT Agreement recognises an objective as "environmental". The reference to "environmental" objectives is found in (1) the requirement of necessary trade-restriction in the TBT discipline, such as Article 2.2, as explained in Chapter 4; and, (2) the sixth Recital of the TBT Preamble. Although the latter point has not been argued specifically in the WTO's formal dispute settlement, I believe that both provisions could provide grounds on which the "category" of the purported regulatory objectives may be of legal significance.

Note that the purpose here is to provide a complete, albeit brief, picture of environmental governance that would come into direct contact with the TBT Agreement. The actual legal implication of the sixth Recital will be discussed in relation to the requirement of "treatment no less favourable", which is the analytical focus of this thesis, in the next chapter. The content of the necessity requirement in the TBT discipline, especially the one under Article 2.2, has already been dealt with in Chapter 4.

2.2.1.1. Under Art. 2.2. of the Agreement

The provisions that contain the idea of "legitimate objectives" are: (1) the sixth recital of the preamble and (2) the necessity concept. However, the differentiation between "welfare" vs. "environmental" subject matters is not likely to be legally significant under these provisions, especially for the interest of argumentation in dispute settlement cases.

First, the list of legitimate objectives under Art. 2.2 covers the protection of "animal or plant life or health"[106] and is non-exhaustive, potentially allowing room to argue for the term's coverage over ethical concerns.[107] Second, the Appellate Body in Tuna II did not differentiate between the "environmental" or "welfare" purposes.[108] It accepted the objective of the contested measures to protect dolphins as a "legitimate objective" which is "intended to protect animal life or health or the environment", under Article 2.2.[109] This was without any examination of the linkage between the immediate objectives of the measure and an internationally recognised environmental framework, such as biodiversity conservation.

Third, discussions about trade-restrictive measures in dispute settlements tend to focus more on the issue of the balance between a Member's right to regulate and other Members' rights under WTO Agreements, and less about the non-trade issues (such as prioritization of environmental objectives and the approaches to address them).[110] Members therefore have room to determine its own domestic agenda, including "the

[106] so long as it is not warrant the measure at issue as an SPS measure under the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). See Article 1.5, the TBT Agreement and definitions of SPS measures in Annex A, SPS Agreement.
[107] Article 2.2, the TBT Agreement.
[108] *Appellate Body Report, United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna (Mexico) II'), WT/DS381/AB/R, 2012*, at paras. 301-333.
[109] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 108), at para. 303.
[110] Indeed, it tends to avoid or limit itself in making decisions about issues outside of trade rules, as seen in regards to the legal status of precautionary principle in the EC-Hormones and the "environmental[...] correct[ness]". See *European Communities - Measures Concerning Meat and Meat Products (Hormones) ('EC - Hormones'), WT/DS26/AB/R, WT/DS48/AB/R, 1998*, at para. 123; and, United States — Restrictions on Imports of Tuna in 1991 (Panel Report not adopted). See WTO, 'Dispute 4: Mexico Etc versus US: "Tuna-Dolphin"' <https://www.wto.org/english/tratop_e/envir_e/edis04_e.htm>, accessed: April 2015.

levels [of protection] it considers appropriate", which may be higher than those recognized in MEAs or cover broader range of protected species.[111]

2.2.1.2. Under the Sixth Recital

As will be explained and argued in Chapter 7, the sixth recital may offer a foundation for an analytical route equivalent to Art. XX of the GATT, i.e. offering permission for legitimate measures that would otherwise be considered as illegally "less favourable" and violate the TBT non-disclosure standards. The recital states:

> "[...] 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, and are otherwise in accordance with the provisions of this Agreement [...]"

There is no doubt that, if the phrase will offer such exempt effects to a priori discriminatory measure, the debate on whether the purported objective is considered [environmental protection] could be crucial in the similar way to the subparagraph B or D of Art. XX. The list is unlike the examples in Art. 2.2. It is now exhaustive and would later on be furiously debated, if the sixth recital is to provide such a favourable ground for the regulating parties in disputes. This point will form part of the proposal in the next chapter and will be elaborated there.

[111] As reflected in the Recital of the TBT Agreement and cited in *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 108), at para. 316.

2.2.2. Conclusion

It is to be concluded that, an objective does not need to have been recognized by international instruments, to be recognized as a legitimate objective on the ground of environmental protection in TBT context and the broader context of environmental governance. The international instruments are crucial, as they offer legally or politically authoritative endorsement to their recognized objectives, measures and approaches, by which non-parties as well as non-governmental actors may refer to as an authoritative source to support their claims as well as an affirmation of the importance of the issue.

However, objectives that have not been internationally recognized are not necessarily deprived of environmental value (though it is hard to imagine an environmental objective that cannot be linked in some way to at least one of the current environmental themes or resonate with one of their conceptual objectives explained in Section 2.1 above). If that is the case, it will be upon the regulating Members themselves to demonstrate how the objectives of the contested measure would fall under the idea of "legitimate objectives", such as environmental protection, under the necessity requirement.[112] When such international affirmation is not sufficiently available, it is down to responsible regulators and scientific institutions to demonstrate the environmental merits of the problems and the measure at issue.

[112] As part of the required considerations of the necessity requirements. See for example Article 2.2, the TBT Agreement, already explained in Chapter 4.

In addition to such intergovernmental instruments, a growing number of institutions and standardizing bodies are also widely regarded with scientific and academic authority, and have established various rules and standards to which governments and private bodies voluntarily adhere to. These would also play a great role as a source of information to justify the claimed objectives, as well as the environmental qualities of the measures.

It should also be mentioned that, in the context of the TBT Agreement, international forums not only are a source of reference to reaffirm the environmental relevance of the objectives, but also are significant to the design and application of the technical measure under the requirement to use international standards.[113] They have gained authoritative significance in the formation and development of technical governance as a result of this requirement, even though they may not legally bind regulating Members under public international law. This becomes an even more interesting feature of the TBT requirements, since "international bodies" which may establish "international standards" are not limited to the intergovernmental institutions established by an MEA.[114] International bodies may include standardizing bodies beyond the inter-state context, regardless of their legal status under public international law.[115] Indeed, MEAs are not mentioned in any of the relevant provisions. Standardizing bodies beyond the inter-state context will be explored below in Section5.3 and 5.4 of this chapter. The requirements to use international

[113] Article 2.4 and 5.4, the TBT Agreement, and para. F of the Code of Good Practice for the Preparation, Adoption and Application of Standards, Annex 3 of the Agreement.
[114] As defined in para. 4, Annex 1, the TBT Agreement.
[115] The requirement to use international standards, in e.g. Article 2.4, the TBT Agreement.

standards have been discussed in detail in Chapter 4 of this thesis.

2.3. Environmental Approaches as Reflected in Public International Law

There are several principles which have emerged as customary international law and/or are commonly adopted in MEAs, governing States' actions and relations among them in relation to environmental media and harmful activities undertaken by those who are subject to their jurisdiction. This section briefly presents: (1) the principle of preventive action; (2) the precautionary principle; (3) the polluter-pays principle; and (4) the concept of sustainable utilization of resources.[116]

The concepts and approaches through which these principles pursue a given objective are also commonly adopted or cited by environmental measures beyond the inter-state arena, in which the actual activities affecting the environment are directly governed. Some of their elements may vary and commonly exhibit numerous variations of regulatory formulation, some of which will also be included in this section.[117]

[116] For more elaborate exploration, such as the historical development, detailed variations of how they are translated, and issues of debates, see Philippe Sands, 'Chapter 6: General Principles and Rules', *Principles of international environmental law* (Cambridge University Press 2003), 231-290.
[117] See varying examples of preventive actions in Sands (n 116), at 247 in regards to the principle of preventive actions.

2.3.1. The Principle of Preventive Action and Precautionary Principle

The underlying idea of the principle of preventive action is to require measures to be taken before the environmental harms that have been determined by MEAs or other legal instruments (such as extinction of species, air pollution and so on) are allowed to materialise.[118]

The precautionary principle similarly requires action before harms occur. However it is used in a situation in which full scientific evidence of harm is not available or has not been agreed upon by the scientific mainstream. It aims to prevent States' or regulatory bodies' using scientific uncertainty as an excuse for their lack of actions to prevent irreversible harm.[119] The principle is particularly important in tackling with issues that are heavily politicized. As Andrew Jordan and Timothy O'Riordan sum up, "[it] seeks to curtail the ability of politicians to invoke scientific uncertainty as a justification for avoiding or delaying the opposition of more stringent protection measures."[120]

International treaties adopt the precautionary principle without uniform details.[121] The Appellate Body in fact expresses its reluctance to recognise the legal status of the principle. In EC-Hormones, the unclear status is apparent when the EC argued

[118] Sands (n 116), at 246-249.
[119] Sands (n 116), at 266-279.
[120] Andrew Jordan and Timothy O'Riordan, *The Precautionary Principle in U.K. Environmental Law and Policy, CSERGE Working Paper GEC 94-11* <http://www.cserge.ac.uk/sites/default/files/gec_1994_11.pdf> accessed 1 August 2015.
[121] Andrew Jordan and Timothy O'Riordan (n 120), at 268.

that it was a customary international law while the US took the stance that it did not have legal status.[122]

The precautionary notion is commonly mentioned in domestic policies of various countries but not all of them are equally committed to precautionary principle.[123] They also tend to have different approaches and methodologies in their precautionary regulations and policies, particularly the cost-benefit analysis under which the emphasis on costs and monetary evaluations tend to restrain the intended aspiration of the principle.[124]

Such differences in domestic policies create different perception and valuation of a given risk (including whether there is a valid risk to begin with) as well as the level of protection and appropriate/proportionate mechanisms to address it. This is particularly relevant to the notion of trade and environment conflicts, as frictions are bound to take place between trading partners with different acceptance of and approaches to the precautionary principle, especially between the regulating and the exporting Members whose trade in goods would be restricted.[125]

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[122] *Appellate Body Report, EC-Hormones, 1998* (n 110)

[123] The EU is known for its commitment to the principle, as reflected in 1992 Maastricht Treaty requiring that environmental actions "shall be based on the precautionary principle". Andrew Jordan and Timothy O'Riordan (n 120), at 271.

[124] See for example, Mary O'brien, *Making Better Environmental Decisions: An Alternative to Risk Assessment* (MIT Press 2000) The author reprimands the cost-benefit analysis and suggesting that it caters for high-risk tolerance in the US environmental policies.

[125] See for detailed discussions: Mary E Footer, 'Post-Normal Science in the Multilateral Trading System: Social Science Expertise and the EC-Biotech Panel' (2007) 6 World Trade Review 281.

The international regime on the protection of the ozone layer[126] is an example of precautionary measures and the importance of precautionary actions despite scientific uncertainty. The 1985 Vienna Convention and Montreal Protocol were negotiated and concluded in the face of scientific uncertainty in many respects. At the time of their negotiation and conclusion, the knowledge about ozone depletion due to the emission of certain man-made chemicals (starting with chlorofluorocarbon gases (CFCs) when the first scientific hypothesis was introduced in 1974)[127] was relatively new to the scientific community and was still being debated. The idea itself that a substance that was widely used and deemed harmless could harm the ozone was new.[128] The ozone destruction had been demonstrated only with limited laboratory-based scientific experiments but has not been observed in nature. Environmental damages resulting from the destruction were only to manifest themselves in a decade later.[129] And, possible solutions, such as the substitute chemicals, their effectiveness in preventing and mitigating the problems, and the costs required for manufacturer's transition, were still unclear and lacked conclusive scientific evidence.[130]

[126] Under the 1985 Vienna Convention for the Protection of the Ozone Layer (1985 Vienna Convention), 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol) and subsequent amendments. The collection of instruments can be found in: UNEP Ozone Secretariat, *Treaties and Decisions* <http://ozone.unep.org/en/treaties.php> accessed 1 August 2015.
[127] Edith Brown Weiss, *Introductory Note* <http://legal.un.org/avl/ha/vcpol/vcpol.html> accessed 1 August 2015.
[128] Edith Brown Weiss (n 127).
[129] Edith Brown Weiss (n 127); and Elizabeth R DeSombre, 'The Experience of the Montreal Protocol: Particularly Remarkable, and Remarkably Particular' (2000) 19 UCLA Journal of Environmental Law and Policy 49, at 50.
[130] DeSombre (n 129).

The regime is also an example of a precautionary action that would have been relevant to the TBT Agreement if it was in force in 1985. Ozone depleting substances (ODS) were widely used in a great range of industrial activities, services and products: from production of pharmaceuticals, cancer therapy, and aerosol products.[131] Montreal Protocol also addresses both production and consumption of the substances.[132] State parties have largely adopted trade-restrictive and product-related measures in order to meet the phrase-out targets set by the Protocol.[133] Measures likely to constitute a technical measure under the TBT Agreement include: labelling and warning statements for users; classification of ODS as "hazardous substances";[134] and prohibition of sales of halons (another substance listed in Montreal Protocol) unless authorized as needed for "critical uses" such as those in certain fire protection systems and fire extinguishers.[135]

In 2003, the Montreal Protocol termed by the then UN Secretary General Kofi Annan as "[p]erhaps the single most successful international agreement to date has been the

[131] UN, *Some Ozone Depleting Substances in Different Industry Sectors* <http://www.un.org/en/events/ozoneday/substances> accessed 1 August 2015.
[132] Edith Brown Weiss (n 127).
[133] This does not deny the fact that some (such as the US) whose domestic manufacturers would gain advantage from such import restrictions might have also been incentivized by market competition. DeSombre (n 129), at 58. Edit Brown Weiss similarly observed the different stances in the negotiation of Montreal Protocol between the US and the European Community, both of whom were main manufacturers who use Chlorofluorocarbons (CFCs – one of the chemicals that was aimed to be phrased out in the Protocol) but only the latter who exported more than domestic consumption. Edith Brown Weiss (n 127).
[134] Regulation (EC) No 1272/2008 and Regulation (EC) No 1494/2007 Directorate-General, *EU Regulatory Approach to the Management of Banks of Ozone Depleting Substances and Fluorinated Greenhouse Gases* <http://ozone.unep.org/Data_Reporting/EU-Decision-XX-7-submission.pdf> accessed 1 August 2015, at para. 2.1.
[135] ODS Regulation (EC) No 1005/2009. Directorate-General (n 134), at para. 2.1., at para. 2.4.

Montreal Protocol". The importance of scientific discovery about ozone depletion due to man-made chemicals has also been reiterated by Nobel Prize awards for scientists who pioneered the research in 1995,[136] 21 years after the first publication of its hypothesis. In hindsight, the importance of a "precautionary" measure (at the time that it was concluded, though strictly speaking it would now be considered a "preventive" one) to environmental protection is clear.

The history of scientific discovery of ozone depletion and its acceptance by legal regimes is also an example that shows the scientifically complex nature of environmental problems that the governance has to deal with in the modern society, particularly with our currently complicated patterns of production and consumption. Thus, regulatory measures are also to be increasingly advanced and complex, and will continue to involve various aspects of scientific uncertainty, as exemplified by the early history of ozone protection regime. This is even more plausible in the case of technical measures under the TBT Agreement, as they tend to involve advanced technologies and complex application, such as those applying life-cycle management methods.[137]

Precautionary principle has been a well established topic of discussions in the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), of which content and the covered measures are very similar to those of the TBT Agreement. The debates have been initiated

[136] UNEP, *Key Achievements of the Montreal Protocol to Date* <http://ozone.unep.org/Publications/MP_Key_Achievements-E.pdf> accessed 1 August 2015.
[137] See e.g. Harald Neitzel, 'Application of Life Cycle Assessment in Environmental Labelling: German Experiences' (1997) 2 The International Journal of Life Cycle Assessment 241.

in the case of EC-Hormones which question the legal recognition and significance of the principle. The Appellate Body did not directly answer that particular question but examined the contested measure under Article 5.1 of the SPS Agreement of which several elements resonate with the concept of the principle.[138]

The TBT Agreement does not have such specific requirements for the situation in which there is scientific uncertainty. Yet, the locus of disagreements around precautionary actions as shown in the history of ozone protection regime – i.e. the fact that scientific evidence may be unavailable, limited, or debatable, and that environmental risks and effectiveness of a regulation are not always easily demonstrated or quantified – still remains a great barrier for regulators to argue for their more stringent and trade-restrictive requirements.

2.3.2. The Polluter-Pay Principle

The polluter-pay principle imposes responsibility on States in which environmentally harmful activities take place to bear the costs of prevention and mitigation of environmental damages.[139] In the domestic sphere, the principle shifts, or at least reduces, the burden of such costs from public agents responsible for the clean-ups to those that undertake activities with environmentally adverse effects, as well as those whose operations contain environmental risks.[140]

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[138] See *Appellate Body Report, EC-Hormones, 1998* (n 110), at para. 123.
[139] Sands (n 116), at 280.
[140] For reference of the principle in the international arena, see Principle 7, the Rio Declaration. For that in domestic regulations, see Robert V Percival and others, 'Chapter 1: Environmental Values and Policies - an Introduction', *Environmental Regulation: Law, Science, and Policy* (Aspen Publishers 2006), 1-58, at 26-37.

The principle is also applied in imposing charges upon such actors even before the actual damage manifest itself by internalization of environmental externalities, essentially adding costs to "polluting" activities in accordance with the monetary evaluation of their environmental impacts upon the adversely affected environmental medium.[141] Attempts to do so have been in, for example, the economic or monetary evaluation of the ecosystems or environmental services.[142] Such costs may be added in production processes, transports, disposal managements and other activities in different stages of product life-cycle through to ultimate consumption.

In relation to trade in goods, the principle not only imposes costs on producers but could engage other entities throughout the supply chain including the end-consumers, if the costs are reflected in the final market price.[143] Such costs would not have been included within the conventional costing of such activities,[144] without the application of the principle. Regulatory measures, by governments and/or various forms of private initiatives, are therefore needed to correct such market failure. They could in turn create incentives for more environmentally sound products and processes throughout the

[141] For more discussions and criticisms on internalization of environmental externalities in public policies, see Kostas Bithas, 'Sustainability and Externalities: Is the Internalization of Externalities a Sufficient Condition for Sustainability?' (2011) 70 Ecological Economics 1703.
[142] See e.g. Ecosystem Valuation, *Hedonic Pricing Method* <http://www.ecosystemvaluation.org/hedonic_pricing.htm> accessed 1 April 2015.
[143] This of course may be distorted by market mechanisms and trade-related means including subsidies.
[144] As may be referred as "market failure". See Frank Biermann and others, 'Research Report 201 19 107 for Environmental Research of the Federal Minsitry of the Environment, Nature Conservation and Nuclear Safety: The Polluter Pays Principle under WTO Law: The Case of National Energy Policy Instruments' (Federal Environmental Agency 2003), at 2.

product life-cycle as a result from manufacturers' own initiatives to reduce costs and from consumers' demand.[145]

Due to the interconnectedness of activities throughout the complex supply chain, as will be explained in Section 3 and 5 in relation to the concept of life-cycle and governance beyond the inter-State context, technical measures centring on consumption and products play a direct and crucial role in realising the polluter-pay principle. Such measures can be in the form of technical requirements on product characteristics, on process and production methods (PPM) and labelling,[146] which may constitute measures subject to the TBT Agreement, or are related to them (in the case of PPM-measure that eventually may not fall under the TBT coverage).

A straightforward example includes the UK's waste management regulations which impose requirements and charges on those who are involved in the sales, distribution, purchase and disposal in electrical and electronic equipments (EEE) in the UK market, including foreign producers and exporters/importers into the UK – the direct "polluters" in this case. The charges are for the costs of "collection, treatment, recovery and environmentally sound disposal of household [Waste from EEEs (WEEE)]", which are one of many processes during a product's life-cycle which produces significant amount of pollution.[147]

[145] Biermann and others (n 144), at 3.
[146] Biermann and others (n 144), at 1.
[147] UK Environmental Agency, *Electrical and Electronic Equipment (EEE): Producer Responsibilities* (2015) <https://www.gov.uk/guidance/electrical-and-electronic-equipment-eee-producer-responsibility> accessed 1 August 2015.

Commercial entities subject to the fees are charged before the actual costs for disposal of their traded items are incurred. In tandem, the labelling obligations seek to make certain EEEs distinguishable from the others, and become attributable by their environmental hazards during disposal. They also seek to ensure that each product item is traceable back to the registered producers, and that consumers would be informed of its recyclability (by the wheeled bin symbol) and components relating to the use of resources and production processes (such as "materials, dangerous substances and preparations").[148]

Other well-known examples that adopt the Polluter-Pays Principle include legislations on the End-of-Life vehicles. To reduce pollution derived from disposed cars, manufacturers must produce new cars with their recyclability in mind. The car industries also have to take responsibilities for the collection and recycling costs of discarded cars, not leaving them as a burden to public agencies.[149]

2.3.3. The Concept of Sustainable Utilisation

The concept of sustainable utilization of natural resources is one of the approaches used to realise sustainable development aspirations. It seeks to confirm their use and exploitation in the course of human activities within the "carrying capacity" of the ecosystems.[150] Its focus is therefore

[148] UK Environmental Agency (n 147).
[149] European Commission Press Release Database, "Commission proposes Directive on environmentally friendly handling of End of Life Vehicles", 9 July 1997, available via: http://europa.eu/rapid/press-release_IP-97-625_en.htm, updated: 2 February 2017, accessed: 30 May 2017.
[150] E.g. the Preamble of the 1968 African Nature Convention.

on the "optimum level"[151] in which environmental media may be used or adversely affected by human activities.[152]

The concept promotes the restricted rate of use and environmentally sound approaches to permissible human exploitation and polluting activities, as it recognizes the finite availability of resources and ecological yield. Philippe Sands observes that "no generally accepted definitions of the principle exist, and it is unlikely that distinguishable legal definitions could be agreed".[153] It is still an abstract notion and is commonly referred to in a broad and all-embracing sense. Additionally, it is rather implausible to specify the "optimal" point at which the various aspects of the environment could be exhausted by human activities. What would be the exact barometers of the current utilization that would assure the continuing availability of resources to meet future needs of the population?

Some guidance may be found by viewing the environmental concerns and objectives endorsed by the MEA regimes as mentioned above. In this regard, the principle seeks to prevent and minimise the concerns, such as the loss of biological diversity and its components in the context of eco-systems,[154] and the global average temperature to increase beyond 2° C, or 1.5° C above pre-industrial levels in the context of climate change.[155] The following discussions are some limitation that can be observed in realising the

[151] E.g. Preamble and Article V(2) of the 1946 International Whaling Convention.
[152] Sands (n 116), at 257-258.
[153] Sands (n 116), at 260.
[154] Article 1, CBD.
[155] *The Future We Want, 2012* (n 36), at para. 191.

aspiration of the concept of sustainable utilization via technical measures.

First, operational measures often translate the idea of sustainability as an optimization in certain processes of productions and their primary focus may easily be drifted and become an optimization of manufacturing benefits (such as cost-saving for optimal profits) and less on the inherent environmental considerations alone. Such practices by themselves may not necessarily deliver much contribution to the aspiration of the principle in overall, especially when the application of the principle is not carried out consistently throughout the life-cycle of products.

In addition to this, viewing in economic and cultural terms, demands for production and consumption in the current economic system are largely driven by commercial strategies, some of which have made the unsustainable demands of consumption a prerequisite and integral part of business growth. The "planned obsolescence" by which products are designed to be usable for a limited period of time[156] and "fast fashion" strategies[157] are clear examples. Energy efficiency in a single manufacturing process, for example, could not make a difference in the sustainable use of resources in the face of

[156] Giles Slade, *Made to Break: Technology and Obsolescence in America* (Harvard University Press 2009); and 'Planned Obsolescene' [2009] *The Economist* <http://www.economist.com/node/13354332> accessed 1 August 2015.

[157] The term refers to a cultural trend, which is indeed a business strategy. Low-cost fashion products are made to follow short-term trends. As long as consumers follow such trends, which are created and constantly changed by retailers themselves, the strategy spins consumers' demand and provides quick turnover for retailers. On top of such unsustainable demand for consumption, the processes of such low-cost products are often in the expense of the environment. See Annamma Joy and others, 'Fast Fashion, Sustainability, and the Ethical Appeal of Luxury Brands' (2012) 16 Fashion Theory 273, available online via: https://www3.nd.edu/~jsherry/pdf/2012/FastFashionSustainability.pdf.

wasteful patterns in the consumer-ends, and effectively would only save costs borne by producers.

An example of technical measures to demonstrate this point is the dolphin-friendly labelling, contested in the case of US-Tuna II, seeking to protect dolphin death and injuries during tuna fishing processes.[158] The measure may be deemed as an implementation of the concept of sustainable utilization, as it seeks to prevent and reduce some environmental concerns that are affected by some fishery practices, i.e. by-catch of certain species of dolphins during tuna fishing. It has been regarded as a success in terms of public involvement for environmental protection due to its emergence from consumer's boycott and boycott.[159] It has also demonstrated an achievement to reduce the incidents of injuries and death of dolphins due to tuna trawling in certain areas of the ocean.[160]

Yet, the measure has also become a market strategy for tuna products that poses concerns to many environmentalists. Some see it inadequate to address the underlying problem of unsustainable patterns of food consumption and of fishing industries. The approach and its received attention may indeed prolong and worsen such problems.

Jennifer Jacquet et al., for example, observe that consumer campaigns such as this do not "seem effective in reducing demand or fishing pressure", which is the greater underlying cause of marine biodiversity depletion and exploitative by-

[158] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 108).
[159] European Cetacean Bycatch Campaign, *The Tuna Boycott Which Led to the 'Dolphin Safe' Tuna Label* <http://www.eurocbc.org/page322.html> accessed 1 August 2015.
[160] *Appellate Body Report, US - Tuna (Mexico) II, 2012* (n 108).

catching.[161] This sort of measures may be deemed as "weak sustainable consumption", the consumers' movement driven by "personal concerns over health and guilty conscience rather than on a vision for the common goods",[162] such as the welfare of dolphins during the fishing process in this case.

Doris Fuchs and Sylvia Lorek argue that "strong sustainable consumption" would require "changes in consumption *patterns* and reductions in consumption *levels* in industrialized countries".[163] With this logic, the shortfall of such dolphin protection measure would be because the sustainability of the demand for tuna itself is not questioned, and the consumption indeed may be even more accelerated. Even though it may be effective in reducing the number of death and injuries of specimens of certain species of dolphins in certain areas of the oceans by promoting particular methods for tuna fishing, the fishing processes themselves are indeed undertaken by a large trawling vessels that can uptake hundreds of tonnes of tuna and other unprotected marine lives in a single operation.[164]

Second, operational measures are often fragmented. Without collectiveness and consistency of measures throughout the

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[161] Jennifer Jacquet and others, 'Conserving Wild Fish in a Sea of Market-Based Efforts' (2010) 44 Oryx 45 As cited in Kristin Wintersteen, 'Sustainable Gastronomy: A Market-Based Strategy for Improving Environmental Sustainability in the Peruvian Anchoveta Fishery' in Deborah Rigling Gallagher (ed), *Environmental Leadership: A Reference Handbook* (Sage Publications 2012), 626-634, at 628.

[162] As described in Kristin Wintersteen (n 161), at 628.

[163] Emphasis as original. Doris A Fuchs and Sylvia Lorek, 'Sustainable Consumption Governance: A History of Promises and Failures' (2005) 28 Journal of Consumer Policy 261, at 262.

[164] The fishing method, "purse seine nets" are an operation of industrial level. They can be up to 1.5 km in length and more than 150 m in depth. The trawling vessels are up to 30 to 115 meters in length. They can be equipped to "pack on board" up to 4,000 tons of fish. FAO Corporate Document Repository, *The Tuna Fishing Vessels of the World* <http://www.fao.org/docrep/005/y4499e/y4499e07.htm> accessed 1 August 2015.

life-cycle of service and products, a single measure alone may be very distant from the ultimate aspiration of the concept or the ultimate objectives of the environmental area it seeks to address. An example that demonstrates this point can be found in the TBT Committee's discussions about Mexico's requirements on energy efficiency performance of electrical products, corresponding test methods and labelling. The measure cites "energy efficiency" and "energy saving". It "sets out the maximum electrical power limits for equipment and appliances requiring standby power [and] […] the information to be included on the energy-efficiency labels required on products marketed in Mexico". Mexico's intention is to "respond[...] to the need for such products to be conducive to energy efficiency and energy saving".[165]

The reduction of energy utilization would be a requisite to sustainable utilization of resources. It is also characteristically related to the problem of climate change, as the major part of CO2 emissions come from energy generation.[166] However, as a single measure without Mexico's demonstration of it being part of a more holistic energy sustainability scheme, it is difficult to see "how the measures would achieve Mexico's goal of energy conservation [in general]", as raised by the US in the TBT Committee.[167] Korea also points out that the measures are concerned merely with the use of energy during "standby" mode and not even the hourly energy consumption of the

[165] *Notification, G/TBT/N/MEX/263, circulated on 27 May 2013*
[166] Duncan Brack, Michael Grubb and Craig Windram, 'Chapter 1: Introduction and Background', *International Trade and Climate Change Policies* (Earthscan 2000), at 10.
[167] TBT Committee Note by the Secretariat, 'Minutes of the Meeting of 30-31 October 2013, G/TBT/M/61' (2014), at para. 2.34.

products.[168] Both Members seem to acknowledge that sustainable use of energy is a legitimate objective, but are not convinced that the measures and their design to address only a small fraction of energy usage would meaningfully contribute to sustainability.

The two points reflect some shortfalls of regulatory mechanisms in realizing the concept of sustainable utilization. It is not to deny the importance of measures that address at least some problems. It would have been worse if, on top of unsustainable consumption demand, by-catch deaths and injuries are not prevented. Yet, it is also important to acknowledge that the idea of "sustainability" is a long-term aspiration that requires a great combination of measures that would create continual movements and changes in various aspects of our consumption activities.

2.4. Multilateral Environmental Regimes and the WTO Rules: Interface, Confrontation and Attempts for Coherence

The connection between WTO rules and MEAs is one of the main concerns, not only in trade and environment debates but also in the general context of public international law.[169] There are at least 16 multilateral environmental agreements (MEAs) that have been brought to the attention of the Committee of Trade and Environment (CTE) in regards to their relationship

[168] *Minutes of the Meeting of 19-20 March 2014, G/TBT/M/62*, at para. 2.224.

[169] For general analysis on the issue of fragmentation of international law, see International Law Commission, 'Conclusions of the Work of the Study Group on the Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law' (2006) 2 Yearbook of the International Law Commission, Part Two.

with the WTO rules, [170] because they contain trade-related requirements and/or because they are likely to be implemented by their parties through means of trade-related measures.[171] Such features create the "interface" between trade and environmental regimes, as the WTO rules oversee Members' measures (including those addressing environmental protection) that may restrict imports from other Members, including those implementing the MEAs' obligations or advancing their objectives.

An example of such MEA obligations can be found in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Article 3, for example, requires a permit and certification for imports and "introduction from sea" of specimens listed in its Appendix I which "include[s] all species threatened with extinction which are or may be affected by trade".[172] By character, these would likely constitute a technical regulation and/or conformity assessment procedures (depending on their actual details and application) and would be subject to the TBT discipline.

2.4.1. WTO's Attempts to Create Coherence between Trade and MEAs

One of the main attempts by the WTO to prevent conflicts arising from a Member's compliance with its multilateral environmental obligations lies in coordination, both amongst Members themselves and with environmental organizations. The CTE actively promotes dialogue and collaboration with

[170] Note by the Secretairat CTE in Special Session, 'Matrix on Trade-Related Pursuant to Selected Multilateral Environmental Agreements, WT/CTE/W/160/Rev.6, TN/TE/S/5/Rev' (2013).
[171] Such as the UNFCCC. CTE in Special Session (n 170), at 108.
[172] Article 2.3 and 2.5, CITES.

MEA Secretariats such as those in the forms of information sharing, technical assistance and observership,[173] corresponding with the Plan of Implementation of the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg.[174] Article 10.7 of the TBT Agreement itself requires Members to notify other Members about their bilateral and multilateral agreements on matters that are related to technical measures covered by the TBT Agreement with potential "significant effect on trade".

Formal procedures of such cooperation are also to be negotiated as part of negotiations in the Doha Development Agenda (Doha Round).[175] Proposals from Members for more coherence between the rules of the two regimes include "national coordination between trade and environment experts, particularly in the context of the negotiation and implementation of MEAs".[176]

2.4.2. WTO and Environmental Regimes: Coherence or Dominance?

Coherence in international law is vital and development of environmental obligations and trade rules towards it should be applauded. Yet, there is a risk that such "coherence" may have resulted from negotiators' resistance to agree to any

[173] Note by the Secretairat CTE in Special Session, 'Existing Forms of Cooperation and Information Exchange between UNEP/MEAs and the WTO, TN/TE/S/2/Rev.2' (2007).
[174] United Nations, *Report of the World Summit on Sustainable Development, A/CONF.199/20* (2002) <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N02/636/93/PDF/N0263693.pdf?OpenElement> accessed 1 March 2015.
[175] Paragraph 31(ii) of the 'Doha Ministerial Declaration, WT/MIN(01)/DEC/1' (2001).
[176] WTO, *Briefing Notes: Trade and Environment* <https://wto.org/english/tratop_e/dda_e/status_e/envir_e.htm> accessed 1 March 2015.

commitments that would affect trade, due to potential conflicts with WTO obligations.[177] This may be a form of "regulatory chill", which refers to the potential reluctance to negotiate and stalemates in international negotiations.[178] It is believed that WTO Members would be more cautious, if not reluctant, in negotiating and agreeing to environmental requirements.[179] The "chill" also refers to plausible discouragement for establishments and application of measures in domestic context, due to the fear that these may constitute a breach of trade rules.

There are still doubts about their existence and impact in general, due to the lack of empirical evidence.[180] Yet, they are one of the main concerns for WTO sceptics, as the administration, requirements and dispute settlement systems under the WTO are generally stronger and are often more advanced in comparison to most international environmental institutions.[181]

The input of "trade expert" in international environmental governance is also rather apparent in the broader context of international governance, as may be exemplified by the WTO Secretariat's publication: "proposed key pronouncements to

[177] See Andrea Bianchi, 'Chapter 5: The Impact of International Trade Law on Environmental Law and Process' in Francesco Francioni (ed), *Environment, Human Rights and International Trade* (Hart Publishing 2001), 105-134.
[178] Bianchi (n 177).
[179] Bianchi (n 177).
[180] See Eric Neumayer, 'Do Countries Fail to Raise Environmental Standards? An Evaluation of Policy Options Addressing" regulatory Chill"' (2001) 4 International Journal of Sustainable Development 231; and Gregory C Shaffer, *Defending Interests: Public-Private Partnerships in WTO Litigation* (Brookings Institution Press 2003).
[181] Neumayer (n 180); and Shaffer (n 180), and, Robyn Eckersley, 'The Big Chill: The WTO and Multilateral Environmental Agreements' (2004) 4 Global Environmental Politics 24.

be made by the Rio+20 Conference" in regards to environmental measures,[182] which is then accordingly incorporated in the outcome document of the Rio+20 Conference: the Future We Want. This includes the reaffirmation: (1) "of the critical role [of] […] a universal, rules-based, open, non-discriminatory and equitable multilateral trading system, as well as meaningful trade liberalization";[183] and (2) that green economy policies should "[n]ot constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade, avoid unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country, and ensure that environmental measures addressing transboundary or global environmental problems, as far as possible, are based on an international consensus"[184]

Though such representation of the trade regime in the environment-related forum is not necessarily disruptive to environmental movements, their presence and the agenda are clearly to assert the values of WTO rules and principles. Less of the similar influence from the environmental communities concretely appears in international trade forums. Discussions about "environmental products" within the Doha round could have offered appreciate forums for involvements of environmentalists. Yet, such involvement is still unforeseeable

[182] WTO Secretariat, *Harnessing Trade for Sustainable Development and a Green Economy* (2011) <https://www.wto.org/english/res_e/publications_e/rio20_e.htm> accessed 1 March 2015.
[183] *The Future We Want, 2012* (n 36), at para. 281.
[184] *The Future We Want, 2012* (n 36), at para. 58 (h).

considering there has been little progress in negotiations among representatives of Members themselves.[185]

More coherence of global governance as a whole, and "integration" of trade rules and environmental governance may increase by engagement of and coordination in administrative level that is currently promoted between both regimes. However, such integration also needs to be pursued in forums that could impact decision-making or materialize into a meaningful mechanism of the WTO, beyond information sharing functions. Despite the WTO's claim of its currently "harmonious coexistence" with MEAs,[186] more can be done to promote the "mutually supportive relationship" in the political and coordinative levels. While the roles of environmental agencies in the WTO's forums are largely limited, the dominance of the WTO rules and agendas in environmental governance is more than conceivable.

PART 2: Environmental Measures Directly Relevant to the TBT Agreement

3. The Concept of Sustainable Pattern of Consumption and Production (SCP Concept)

Production and consumption are the areas in which environmental interests directly interface with those of trade. All kinds of environmental problems, which have been identified as critical and urgent in the international agenda,

[185] See WTO, *Activities of the WTO and the Challenge of Climate Change* <https://www.wto.org/english/tratop_e/envir_e/climate_challenge_e.htm > accessed 1 August 2015.
[186] WTO, *An Introduction to Trade and Environment in the WTO* <https://www.wto.org/english/tratop_e/envir_e/envt_intro_e.htm> accessed 1 August 2015.

are linked to different processes of production, the modern way of life and volume of consumption and the disposal of waste. The rapid global warming caused by emissions of greenhouse gases since the industrial revolution is a clear example.[187]

The "most common and diverse" part of environmental regulation is concerned with production activities, as they "seek to mitigate the environmental effects of private activities by specifying the conditions under which those activities must be carried out".[188] Regulated activities range from the extraction and harvest of resources, to pollution, waste management and so on. Each is conventionally subject to regulations imposed within its country of location. Not all such regulations are designed or applied in connection with one another, with end-products/services, or with trade activities.[189]

Though such activities are physically segregated, they are increasingly connected in the global chain that supplies various sectors of consumption including tourism, human settlements, transportation and trade of goods: as part of the "life-cycle" of products and services. A rising number of regulatory mechanisms acknowledge this connectedness and take advantage of the globalized trade and the growing significance of consumer economies. The SCP concept also emerges on this basis. It adopts the "holistic approach" by which it addresses: "the total use [and management] of

[187] US National Research Council, *Advancing the Science of Climate Change* (National Academies Press, Washington DC 2010).
[188] Gaines (n 89), at 394.
[189] See Gaines (n 89), 394. Indeed he states that "almost none of these [conventional] PPM measures have anything to do with the regulation of trade".

resources as well as the resulting emissions, effluents and waste; aiming to minimize negative environmental impacts; and [...] inclusive well-being [...] at all stages of value chains of goods and services".[190]

In the context of environmental regulations and standards, life-cycle of products refer to activities throughout the harvest and extraction of raw material, manufacturing processes, transportation, distribution, consumers' consumption, disposal, recycling, as well as re-entering the circle as material of another product. At the heart of SCP governance is the logic of life-cycle management.[191]

More and more regulatory mechanisms adopt such life-cycle perspectives to address environmental matters, as well as labour rights and social welfare of workers, via the imposition of regulatory standards on end-products and restriction upon trade activities. They therefore contribute to the change of consumption and production towards the more sustainable patterns, and have been usefully grouped together in the UNEP's framework of sustainable consumption and production (SCP) agenda.[192] Note that, though the SCP concept promotes the ideal situation of "holistic" management, measures addressing environmental and welfare concerns that involve with more than one stage of a product's "life" is already regarded as an SCP measure and is collected in the UNEP Global Outlook on Sustainable Consumption and Production Policies ("SCP Report").

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[190] *UNEP Global Outlook on Sustainable Consumption and Production Policies: Taking Action Together ('Global Outlook on SCP Policies'), 2012* 19, at 19.
[191] *Global Outlook on SCP Policies, 2012* (n 190), at 19.
[192] To be further discussed in Section 5.

The product- and trade- related characters of technical measures designed to address environmental concerns therefore resonate with the SCP concept. Explanation and observation about SCP measures in the SCP report should therefore be applicable to most, if not all, TBT-covered technical measures citing environmental as objectives. The SCP concept and report are therefore used as a framework to illustrate aspects of environmental governance that are relevant to this research below.

4. Effects of International Environmental Regimes on Consumption and Production Patterns

A few multilateral environmental regimes explicitly cite "sustainable consumption and production" as part of their agenda, including the CBD in its Conference of Parties' decision.[193] Some, such as the Montreal Protocol on Substances that Deplete the Ozone Layer and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), do not mention the term but deal directly with production and consumption activities, e.g. by prohibiting production methods that use ozone depleting substances and banning trade of certain species.

Other international regimes may not deal directly with the activities per se, but many set up objectives and benchmarks which may be implemented in the form of measures regulating products, production and consumption, imposed by obligated

[193] COP 10 Decision X/44, *X/44 Incentive Measures* <http://www.cbd.int/decision/cop/?id=12310> accessed 1 April 2015 See also Table 1: Conventions and MEAs, in *Global Outlook on SCP Policies, 2012* (n 190).

State Parties, public entities of non-Parties[194] and private actors. Indeed, all areas of environmental concerns recognized by the international community, introduced in Section 2.1, cannot be prevented or mitigated without sufficient changes in world's consumption and production patterns.

5. Governance Beyond the Inter-State Arena

This Section turns to regulatory mechanisms that are likely to be considered as technical measures under the TBT Agreement, as well as presenting a broader picture of how governance in general may promote more environmentally sustainable patterns of consumption and production. It may not be able to depict such governance in its entirety due to the diversity and technical details of relevant technical measures and technical bodies, but will provide a relevant background from the viewpoint of environmental policies that is responsive to the discussions in all previous chapters. It seeks to contextualise the analysis in Chapter 7 of the thesis from the viewpoint of "environmental" governance in the broader scheme than usually presented in trade-centric discussions and specific WTO disputes.

Governance systems beyond "international" regimes of inter-State relations are composed of those established by government bodies (at national and sub-national levels) and those by non-governmental institutions such as business actors and civil society organizations (CSOs). They are the vital part of environmental governance as they directly deal with actual consumption and production activities undertaken

[194] As observed in Barry Rabe, 'Beyond Kyoto: Climate Change Policy in Multilevel Governance Systems' (2007) 20 Governance: An International Journal of Policy, Administration, and Institutions 423.

by individuals and other entities not recognized by international law.

Regulatory mechanisms in this arena include: regulations, policies, regulation-like mechanisms (e.g. voluntary standards established by non-governmental bodies), awareness raising and educative campaigns, social movements (e.g. consumers' boycotts and buycotts), and self-regulating practices – as well as the three types of technical measures under the TBT coverage.

Production- and consumption-related measures have been adopted to address a wide range of environmental problems. This section will borrow the term from the UNEP's framework of sustainable consumption and production and therefore generally refer to them as SCP measures, instead of using trade terms such as PPM or non-product-related PPM, production-related measures, trade measures or trade-restrictive measures and so on, unless specification is needed.

5.1. SCP Governance under the TBT Coverage

Regulatory mechanisms that could constitute a technical measure under the TBT coverage are a large part of SCP governance that deal with consumption and production of products. There are a growing number of technical measures adopted by Members to address environmental protection. Also are of a growing number are the "specific trade concerns" raised in the Committee on Technical Barriers to Trade (TBT Committee forums) by other Members against technical measures.

The TBT Agreement requires that Members notify other Members through the Secretariat of the drafting and establishing of certain types of measures (technical regulations of central government bodies, local government or non-governmental bodies; and conformity assessment procedures of central and local government bodies) that have not been based on an international standard (or, such relevant international standard does not exist) but may have significant effects on international trade.[195] There have been a regular and large number of such notifications citing environmental protection or other interests as pursued objectives: more than 1,000 notifications each year during 2007-2012, and more than 1,500 annually since then.[196]

In 2014 alone, there have been 1,535 notifications.[197] The continual increase indicates the ongoing rise of the regulatory trend oriented towards trade, consumption and production.[198] Since 1995, notifications have cited "protection of human health or safety" at the highest rate of frequency (5,961 times), as the objective (or one among multiple objectives) of the measure at issue – following by "prevention of deceptive practices" (1,807 times) and "protection of the environment" (1,441 times).[199] Others include: "consumer Information" (517

[195] See Article 2.9.2 and 2.10.1 in regards to technical regulations of central government bodies; Article 3.2 in regards to those of local government and non-governmental bodies; Article 5.6.2 and 5.7.1 in regards to conformity assessment procedures of central government bodies; and Article 7.2 in regards to those of local government bodies.
[196] *Twentieth Annual Review of the Implementation and Operation of the TBT Agreement, G/TBT/36, 2015*, at para. 2.1.
[197] Not including the addenda and 56 corrigenda, the follow up notifications related to other previously notified measures.
[198] *TBT Committee Background Note by the Secretariat (G/TBT/36), 2015* (n 196), at para. 2.1.
[199] *TBT Committee Background Note by the Secretariat (G/TBT/36), 2015* (n 196), at Chart 15: Notifications by objective, 1995-2014. Note however that measures citing protection of the environment as their objectives may

times) and "protection of animal or plant life or health" (215 times).[200]

An example of such notifications citing "protection of the environment" as an objective (or one among multiple) or having been catalogued in relation to environmental protection is the proposal for a regulation of the European Parliament and of the Council on substances that deplete the ozone layer.[201] The notification defers to an MEA as it provides that the proposed draft of the measure at issue will update Regulation (EC) No 2037/2000 to ensure its compliance with the 2007 adjustment of the Montreal Protocol on substances

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be those under the coverage of the SPS Agreement rather than the TBT Agreement, as they target the environment within the domestic territory of the regulating Members. The issue of coverage however is contentious in its own right as the two Agreements cover very similar measures, and is to be ultimately decided by the Dispute Settlement Bodies. It is sensible that they are notified in relation to the TBT Agreement. For this reason, the inclusive statistics cited in the report are considered in relation to the TBT Agreement in this chapter without subtracting those that may be under the SPS coverage. See for example: Draft Commission Decision concerning the Non-inclusion of Paraffin Oil CAS 64742-54-7 in Annex I to 'Council Directive 91/414/EEC of 15 July 1991' <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31991L0414> accessed 1 August 2015; and, the withdrawal of authorisations for plant protection products containing that substance, as notified via TBT Committee, 'Notification, G/TBT/N/EEC/269' (2009) The measure is part of a regulation that primarily seeks to prevent the "toxicological and ecotoxicological properties" that could be harmful to domestic environment and agriculture. See 'Council Directive 91/414/EEC of 15 July 1991', available online via: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31991L0414; accessed: August 2015.

Also, the definition of SPS measures include:

> "(a) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;
> (b) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs
> [...]" Para 1(a) and (b), Annex A, the SPS Agreement.

[200] 'Council Directive 91/414/EEC of 15 July 1991' (n 199).

[201] TBT Committee, 'Notification, G/TBT/N/EEC/232, Circulated on 12 November 2008' 232. Note that other notified measures can be found in examples used in explanations throughout this chapter.

that deplete the ozone layer.[202] The regulation is under the TBT coverage as it addresses "products and equipment containing [ozone depleting] substances" which are to be imported, used, recovery, recycled, reclaimed and/or destroyed within the EU.[203] Some of the substances are prohibited.[204] Some are only restricted to a "calculated level" in accordance to the phrase-out schedule.[205]

It also contains prohibition of circulation within the Community of ozone depleting substances and products containing them from States that are not a party to the Protocol,[206] and requires further rules on importation from the non-parties of products that have been "produced using the controlled substances" even though the products themselves do not contain such substances.[207]

The Directive not only is a clear example of a technical regulation under the TBT Agreement, but also displays a classic issue of trade and environment conflicts. The last part of this prohibition is an important issue under the WTO regime. It treats products differently (one being less

[202] It seems however that the proposed amendment in the notification has not been adopted, as it has not been listed under Regulation 2031/2000. The actual amendment is currently unavailable to the public. Description about key features of the regulation is therefore based on the original regulation as they are still in applicable. See EUR-Lex, 'Substances Which Damage the Ozone Layer' (April 2009) <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV:I28064> accessed 1 August 2015. Summarised details of the amendments are provided in: Select Committee on European Scrutiny, *Control of Ozone Depleting Substances* (2008) <http://www.publications.parliament.uk/pa/cm200708/cmselect/cmeuleg/16-xxxiv/16xxxi06.htm> accessed 1 August 2015.
[203] Article 1, *Regulation (EC) No 2037/2000* <http://eur-lex.europa.eu/LexUriServ.do?uri=OJ:L:2000:244:0001:0024:EN:PD> accessed 1 August 2015.
[204] Article 4, para. 1, *Regulation (EC) No 2037/2000* (n 203).
[205] Article 4, para. 2, *Regulation (EC) No 2037/2000* (n 203).
[206] Article 8 and 9, *Regulation (EC) No 2037/2000* (n 203).
[207] Article 10, *Regulation (EC) No 2037/2000* (n 203).

favourable than the other by means of import prohibition) on the basis of its country of origin (i.e. from State-parties and non-parties to the Montreal Protocol).

By character, such differentiation may constitute a breach of the non-discrimination principle. However, this is currently not the concern for this particular ozone protection regulation, since all WTO State-Members are also signatories to the Montreal Protocol and would not be adversely affected by the differentiation basing on their participation in the Protocol.[208] So far, the proposal as notified by the EU has not been challenged in the TBT forum.[209]

The increasing trend of regulatory mechanisms oriented towards products, production and trade of goods may also be suggested by statistics of concerns officially raised among Members about potential violation of the TBT provisions or barriers to trade stemming from regulatory measures drafted or adopted in a Member's territory, i.e. "specific trade concerns".[210] Though most concerns were related to measures

[208] China has also communicated with the UN Secretary-General on the applicability of the Montreal Protocol on Hong Kong and Macau, both of which have their own membership to the WTO. This however still leaves Chinese Taipei (or Taiwan) as an only Member of the WTO that has not signed or ratified the Montreal Protocol. The issue of applicability of the Protocol on Chinese Taipei (or whether it will be considered by the EU as a party to the Protocol) due to China's ratification to it will not be included in this thesis. The list of participants of the Protocol is provided in: United Nations, 'UN Treaty Collection, Databases' (August 2015) <https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-2-a&chapter=27&lang=en#4> accessed 1 August 2015. The list of WTO Members is provided in: WTO, 'Members and Observers' (April 2015) <https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm> accessed 1 August 2015.

[209] 'TBT Information Management System, Notification under Article 10.6' <http://tbtims.wto.org/web/pages/edition/notification/Regular.aspx?ID=65570> accessed 1 August 2015.

[210] Four concerns raised in 1995 increased to 94 in 2012 and 85 in 2014. Chart 16: STCs raised during 1995-2014. *TBT Committee Background Note by the Secretariat (G/TBT/36), 2015* (n 196) Note that the number does

citing "the protection of human and safety" as objectives,[211] second to them are specific concerns about measures explicitly claiming to address "protection of the environment".[212]

Note also that, at this stage, it is the notifying Members' own determination of which specific type of technical measure the measure in question would be classified in the notification. There may be those which are deemed by regulating Member as not constituting the types of measures that would incur their obligation to notify (i.e. technical regulations imposed by the three technical bodies and conformity assessment procedures imposed by central and local government bodies), or fall within the coverage of the TBT Agreement at all. This does not prevent other Members from raising concerns, such as in the TBT Committee forums, though regulating Members are likely to insist upon their characterization of the contested measure. An example can be seen in discussions about the Specific Trade Concerns arising from "the Directive 2009/28 IEC of the European Parliament and of the council on the promotion of the use of energy from renewable sources", in which the representatives of the EU has insisted that the Directive is outside of the TBT coverage since it was raised for the first time in 2013 until it was withdrawn in 2014.[213]

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not represent the amount of time that the same concerns are raised within the given year.

[211] 183 concerns since 1995 and 30 in 2014.

[212] This is however less frequent in 2014 (raised in 97 concerns since 1995 and only 10 in 2014). *TBT Committee Background Note by the Secretariat (G/TBT/36), 2015* (n 196), at para. 2.23; and in Chart 27: Stated Objectives for the measures raised as STCs during 1995-2013, and in 2014. Note also that contested measures may have been notified as having multiple objectives.

[213] See, e.g., *Minutes of the Meeting of 17, 19 and 20 June 2013, G/TBT/M/60 ('TBT Committee Meeting Report (G/TBT/M/60'), 2013*, at para. 3.104; *TBT Committee Meeting Report (G/TBT/M/62)* (n 168), at

The environmental content of a contested measure is certainly important in the TBT administrative channels, such as the notification and the TBT Committee forums. When an STC is raised in relation to environmental measures, their legitimacy is essentially questioned. It is conceivable that a "chilling impact" on technical measures of less affluent countries (similarly to that discussed in the inter-State context in Section 2.4.2) may be created from these forums.[214] The question therefore remains whether (and if so, to what extent) the TBT Committee forum is "open" or able to discuss the environmental content of the measure.

5.2. Some Key Trends of SCP Measures beyond the State-State Regime

This section presents four tendencies of environmental governance in this area. Sections 5.2.1-5.2.2 suggest the broadening interface between TBT rules and environmental governance. Sections 5.2.3-5.2.4 discuss features that could be pose difficulties in implementing the principle of integration.

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para. 2.119; and TBT Committee, 'TBT Committee Meeting Report (G/TBT/M/63)' (n 86).

[214] The EU for example has demonstrated its resistance against the chilling effects from the TBT Committee. There have been draft measures of the EU which still came into force amidst challenges by other Members. See e.g. the TRIMAN logo requirement discussed in Section 2.1.2.1. above. However, Mexico's response by postponing and revising the enactment of its requirement on energy efficiency of electrical products after was contested by concerned Members might suggest a synergy between developing countries and the WTO forums which may result in the chilling effects. See Section 2.3.3. above.

5.2.1. Increasing Mechanisms Directing at Consumption and Production to Pursue Environmental Sustainability

Though the SCP concept encompasses not only environmental goals but also those of social and economic dimensions, the majority of production- and consumption-related measures have been observed to focus more on environmental problems than social ones, such as labour rights and social justice.[215]

Operational measures do not tend to embrace too many competing values at the same time, unlike the more all-embracing nature of the sustainable development concept. This said, most of them (if not all) are orientated towards economic activities and almost always include an emphasis on business values (such as profitable cost-saving and market opportunities) along with the social or environmental one(s).

5.2.2. Increasing Adoption of Life-Cycle Strategies

The UNEP has observed environmental policies to have shifted in strategic approach and focus in their objectives. Among the main trends is the shift from "production orientation" to "product-life cycle orientation".[216] This means that, increasingly, activities separated from the selling of products are to be included as considerations at the consumer-end of the supply chains: to be presented and disclosed for consumers' informed decision-making; and/or for regulators to

[215] *Global Outlook on SCP Policies, 2012* (n 190). Note however that the UNEP observation also recognizes various occurrences of "green washes", in which environmental claims are used as branding and advertising strategies without meaningful contribution to environmental protection.
[216] *Global Outlook on SCP Policies, 2012* (n 190), at 19.

intervene and restrict them.[217] Production activities, which are already the main subjects of environmental law and governance, are now also governed in association with their end-products. In concept, no actor along the supply chain that has been environmentally harmful, in whichever part of the chain or stages of the product life-cycle, would be excluded from the governance. Theoretically, all "walks of life" are in effect engaged and contribute to "shape the world environment of the future."[218]

5.2.3. Complexity and Technicality

Many measures adopt the "life-cycle thinking" in concept to add improvements to their conventional approach. Many translate it into scientifically advanced methods in assessing and managing the various environmental impacts and many other values of a product and its "life", such as cost- and resource-efficiency, logistics and marketing, as well as various unpredictable variables such as users' behaviour and public perceptions.[219]

In any case, regulatory mechanisms, especially those embracing the life-cycle concept, will continue to be sophisticated and technical. The objectives and claims of achievement will have to be specific and narrow, especially when there is a demand of environmental regulators to be transparent and for the measures themselves to be subject to scrutiny of adversarial systems, including that of the TBT forums and WTO dispute settlement system.

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[217] See examples of the actual measures below.

[218] As recognized in paragraph 7 of the preamble of Stockholm Declaration

[219] See brief yet detailed example of life-cycle assessment and management methods for paper products, hand dryers, television, and packages of fresh milk. Neitzel (n 137), at 241-249.

The technical character may also lead to disagreements about their efficiency and to what extent they may "fulfil" the objective (albeit specific) they claim to address. This is exemplified by Specific Trade Concerns discussions in regard to the EU's proposed requirements[220] on the "aerodynamic characteristics" of certain vehicles, in comparison to American standards,[221] aiming to increase energy performance and safety of vehicles used in the EU.[222]

In addition to the complication of environmental problems and our current limitation in understanding and predicting nature systems, it is difficult to grasp the "environmental correctness and merits" of the actual technical measure (even if they are genuine without protectionist or illegitimate political agendas). This suggests the even more challenging and complex task of evaluating environmental regulators and campaigners to argue that their measure(s) should prevail against other legitimate values, such as non-discrimination in international trade, which may be affected. This is not to mention that such evaluation is to be done in the forum in which the interests that could be affected by environmental protection are their primary interests and expertise.[223]

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[220] The European union – Proposal for a Directive of the European Parliament and of the Council amending Directive 96/53/EC of 25 July 1996 laying down for certain road vehicles circulating within the Community the maximum authorised dimensions in national and international traffic and the maximum authorised weights in international traffic, first raised in the TBT Committee Meeting in 2014. TBT Committee, 'TBT Committee Meeting Report (G/TBT/M/63)' (n 86), at para 3.30.

[221] TBT Committee, 'TBT Committee Meeting Report (G/TBT/M/63)' (n 86), at para 3.31.

[222] For details of the proposal, see European Parliament, 'Procedure: 2013/0105(COD)' (April 2014) <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A7-2014-0256+0+DOC+XML+V0//EN#title1> accessed 1 April 2015.

[223] In the WTO parlance, such evaluation takes place in the "weighing and balancing" test under the concept of necessity. Example in this regard

An example that demonstrates this point can be found in the TBT Committee's discussions about Mexico's requirements on energy efficiency performance of electrical products, corresponding test methods and labelling.[224] Mexico cites energy efficiency and energy saving as the regulatory objectives at issue.[225]

The reduction of energy utilization is characteristically related to the problem of climate change, as the major part of CO2 emissions come from energy generation.[226] The US raised its concerns about the measures and questioned "how the measures would achieve Mexico's goal of energy conservation [in general]".[227] Korea also points out that the measures are concerned merely with the use of energy during "standby" mode and not even the hourly energy consumption of the products.[228] Both Members seem to acknowledge that sustainable use of energy is a legitimate objective, but are not convinced that the measures are designed to merely create barriers to imported TVs or are genuinely intended to tackle the broadly cited objective of energy conservation, because the rationale of the measure seems to point to a tiny fraction of energy usage would meaningfully contribute to sustainability.

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includes an evaluation of how each technical mechanism fits under the broader and/or the overall schemes of environmental protection, the demonstration of effectiveness of the contested measures, as well as the anticipation of the "risk non-fulfilment would create" (as established under Article 2.2, the TBT Agreement). See Chapter 4 of this thesis.

[224] As already introduced in 2.3.3 of this Chapter.

[225] *TBT Committee, Notification G/TBT/N/MEX/263, 2013* (n 165).

[226] Farhana Yamin and Joanna Depledge, 'Chapter 2: Overview', *The International Climate Change Regime: A Guide to Rules, Institutions and Procedures* (Cambridge University Press 2004).

[227] TBT Committee Note by the Secretariat (n 167), at para. 2.34.

[228] *TBT Committee Meeting Report (G/TBT/M/62)* (n 168), at para. 2.224.

5.2.4. Combination of more than one modalities

Educative campaigns and voluntary standards are often suggested loosely as a less trade-restrictive alternative than a product-regulation. Often raised in coordinative forums such as the TBT Committee, the term necessity seems to be used in the meaning of "the *least* restrictive alternative".[229] However, as I have argued in the discussions about the necessity concept in the TBT discipline in Chapter 4, this is not entirely accurate. The least trade restrictiveness is not the requirement of the TBT discipline. There are more aspects in the examination under the requirement than the mere simplistic comparison of trade-restrictiveness.

As I have suggested in Chapter 4, the examination should be in line with the "weighing and balancing" analysis adopted in the context of Article XX. In summary, the examining formula compares the adverse effects on trade of the contested measure and that of a hypothetical measure which is a reasonably available alternative to the regulating Member and could address the same objective as equally effectively.

The comparison is a complex task as, in practice, a combination of more than one mechanism is needed. Governmental regulations and educative campaign should both be used, with the supports from various actor groups in the community.[230] Neither can the non-governmental

[229] As frequently apparent in meetings of the TBT Committee regarding Specific Trade Concerns. See for example: TBT Committee, 'TBT Committee Meeting Report (G/TBT/M/63)' (n 86), at paras. 3.20, 3.41 and 3.73; and TBT Committee, 'TBT Committee (G/TBT/M/64)' (n 86), at paras. 2.178 and 2.236.

[230] As exemplified in the evolvement of US regulations on tuna products seeking to reduce by-catch of dolphins. See European Cetacean Bycatch Campaign (n 159).

standards (or other instruments of "private governance" to be explained below) can succeed without supportive actions and/or complementary regulations by the government, even though they are regarded as increasingly significant and obtaining the authoritative roles that conventionally belong to governmental authorities.[231] Such interactive tendency and connectedness among environmental measures would make it more difficult to demonstrate an alternative with equivalent (or higher) capacity and to compare its trade-restrictiveness with the contested measure.

5.3. Governmental Measures

The TBT Agreement categorizes governmental bodies that impose technical measures as either central government or local government bodies, both of which are specifically defined in Annex 1 of the Agreement.[232] Obligations addressing each type of measure established by each type of such technical bodies contain different procedural requirements, such as those on information sharing, and certain phrases in the provisions, namely: the requirement to "take such reasonable measures as may be available" to ensure observance of the TBT disciplines by local government and non-governmental bodies.

[231] See, e.g. Oran R Young, *International Governance: Protecting the Environment in a Stateless Society* (Cornell University Press 1994); Chukwumerije Okereke, Harriet Bulkeley and Heike Schroeder, 'Conceptualizing Climate Governance beyond the International Regime' (2009) 9 Global environmental politics 58, at footnote 3; and Magnus Bostrom and Mikael Klintman, 'Chapter 7: Policy Contexts and Labelling' in Magnus Boström, Mikael Klintman and Michele Micheletti (eds), *Eco-Standards, Product Labelling and Green Consumerism* (Springer 2008), 83-111.

[232] Para 6 and 7, Annex 1, the TBT Agreement.

This section presents examples of SCP measures, many of which adopt varying degrees of life-cycle logic. Some could be construed as technical measures under the TBT coverage, such as the performance labelling of electrical products. Others, such as standards in manufacturing practices that are not applied in connection with the end-products and/or their import, are outside of the TBT coverage. This Sub-Section particularly corresponds with the different types of technical bodies that are involved in the making and applying of technical regulations, standards and CAPs, as described in Chapter 3.

5.3.1. Central vs. Local Government Bodies: TBT Definitions and Environmental Governance

There may be some implication arising from the different wording between obligations relating to central governments and the others. In this regard, as discussed in Chapter 3, several provisions point to two key concerns of the WTO: (1) the relationship between the central government and the technical body, especially the former's involvement in the development and application of the technical measure at issue;[233] and (2) the impact of the measures on trade interests.[234] Worth discussing here is with regard to the relationship between the two levels of authorities: In which

[233] As reflected by: (1) the definition of central government bodies, characterising them on "any body subject to the control of the central government in respect of the activity in question"; and (2) the different wording between provisions addressing central government technical bodies and those addressing local government bodies. Para. 6, Annex 1, the TBT Agreement; and e.g. comparison between Article 2 and 3, the TBT Agreement.

[234] As reflected by dispute settlement and State responsibilities provisions. Article 14.4, the TBT Agreement.

way are local government bodies significant to environmental governance?

5.3.1.1. Roles of Local Authorities in Environmental Governance

From the environmental viewpoint, national and sub-national authorities are crucial to the implementation of environmental agendas. The specificity of each locality is one of the fundamental factors that effectively determine how an environmental concern should be addressed. Variables such as cultural background, demography, economic and technological developments, and the physical environment in the community all play a large role in the effectiveness of environmental governance.[235] In other words, it is likely that the same environmental issue recognized worldwide would require different combinations of regulatory mechanisms and policy approaches to be applied in different communities. Appropriate modalities, in many cases, are best identified by regulators with a hands-on relationship with the problem and the community subject to their authorities.[236] An example of such scenario is measures for waste management, as each community has its own consumption habits and local facilities. Though such objective is largely community-based, relevant regulations and standards may include technical measures

[235] David A Sonnenfeld and Arthur PJ Mol, 'Globalization and the Transformation of Environmental Governance An Introduction' (2002) 45 American Behavioral Scientist 1318, at 1331. See also Rabe (n 194), at 429-437; Jose Antonio Puppim de Oliveira, 'The Implementation of Climate Change Related Policies at the Subnational Level: An Analysis of Three Countries' (2009) 33 Habitat international 253.

[236] See Elizabeth Fisher, 'Drowning by Numbers: Standard Setting in Risk Regulation and the Pursuit of Accountable Public Administration' (2000) 20 Oxford Journal of Legal Studies 109.

under the TBT coverage which would affect imported products and their supply chains.[237]

The importance of local authorities may also be suggested by the achievement of many local measures in meeting, or at least aiming for, higher environmental targets than those of the central government. This is possible when environmental policies in question are not centralized, leaving enough room for local authorities to deviate from the central policies or create new examples in other localities.[238]

There are good reasons for local entities to initiate their own environmental measures and policies. An example of state-level policies and regulatory mechanisms in the US addressing climate change illustrates various strengths of local governance. New Jersey and Wisconsin, in particular, have been pioneers in establishing ambitious policies and pursuing targets even higher than the one stipulated by international instruments, despite the less enthusiastic foreign policy of the US federal government in the UN climate change forums. Several other states have followed suit. [239] Empirical observations and comparison of regulatory strategies and campaigning ideas to address climate change, as adopted in countries with different environmental conditions, cultural tendencies, political chronologies and economic circumstances

[237] Such as France's labelling requirements for recycling practices, as notified in: TBT Committee, 'Notification, G/TBT/N/FRA/153' (n 84). The measure was raised twice as Specific Trade Concerns, as other Members complain about its various approaches to waste sorting imposed by different regions and municipalities, some of which are "more advanced than others". TBT Committee, 'TBT Committee Meeting Report (G/TBT/M/63)' (n 86), at para. 3.161. See also TBT Committee, 'TBT Committee (G/TBT/M/64)' (n 86), at paras. 2.187 - 2.189.

[238] Example includes state policies endorsed by California, which will be mentioned below. Rabe (n 194), at 429 and 436-437.

[239] Rabe (n 194), at 437.

also echo the need for regulatory variations that respond to a particular context.[240]

5.3.1.2. Potential Impacts from TBT Discipline: the "Regulatory Chill" in Sub-National Context?

The TBT Agreement does not characterize a local government body on the basis of geographical or cultural attributes. It is the authoritative independence and/or administrative separation (such as that of local states from the federal governments and of "provinces, Länder, cantons, municipalities, etc" from their central authorities) that differentiate between the two types of governmental bodies.[241] Despite such independence and separation, Members are still obligated to pay close attention to their regulatory mechanisms to promote observance of the local authority. – This may impose a negative implication on local environmental governance, i.e. the regulatory chill effects, in which local authorities are effectively reluctant or discouraged to endorse environmental measures that may affect trade in any way, due to the fear of breaching trade obligations.[242]

Consistent with the principle of integration, the UNEP recognizes the need for more coherence of regulation- and policy-making, particularly by better coordination, cooperation and agreements among different agencies.[243] Yet, would the

[240] de Oliveira (n 235).
[241] Para 7, Annex 1, the TBT Agreement.
[242] See Neumayer (n 180). See also Eckersley (n 181). Note also that, in contrast to the anticipation of regulatory chill phenomena, the UNEP has observed that impact on trade interests are usually not taken into consideration in decision-making processes by environmental regulators, at national or local levels.
[243] The UNEP, for example, calls for "coordination, cooperation and agreements [...] across all areas of policymaking [...] and ensuring that policies in non-environmental areas are nonetheless aligned with countries'

attempts for coherence turn out to be obstructive to environmental protection? How may the likelihood of regulatory chill in sub-national level be reduced?

5.3.1.2.1. Educative assistance for officials

Members, especially those with export-reliant economy, tend to be sensitive to criticisms from a strong international organization such as the WTO and politically influential Members within the forum, and would therefore be inclined to increase involvement and influence of trade agencies in environmental decision-makings of their governmental bodies in order to prevent confrontation in the intensely active forum of the TBT Committee, and to avoid the costly WTO disputes. It is plausible that a less powerful sub-national governmental entity would be discouraged, or even constrained in power, to take actions that would affect imports, especially if it is viewed as an issue of international relations and is therefore restricted to the central governments' decision-making.[244] Potentially, due to the globalized supply chain that would render most production- and consumption-oriented measures affecting international trade interests, there could be less room for localized decision-making even though the locally made policies can be more efficient in some circumstances than the top-down centralised measures.

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environmental priorities." *Global Outlook on SCP Policies, 2012* (n 190), at 28.

[244] As may be exemplified by the tension between "the right of US states and localities to set their own environmental standards" and "the power of the federal government to regulate inter-state commerce", which "offer[s] a valuable starting point for analyzing how environmental considerations might be woven into the fabric of the [WTO rules]". Daniel Esty, 'Chapter 5: New Rules for Trade an Environment Disputes', *Greening the GATT: Trade, Environment and the Future* (Institute for International Economics, Washington DC 1994), 99-136, at 112.

The difficulty for trade departments is therefore to keep the right balance, ensuring that trade disciplines are not unduly violated and that trade interests have been included in environmental decision-making processes, while at the same time not overshadowing environmental priorities. One of the ways to pursue such balance is to empower these trade officials (as well as regulating bodies) to understand the TBT requirements: not only to ensure their observance but also to encourage common understanding about Members' right to regulate.

Such trade officials would then be more capable to advice other agencies about the extent to which domestic measures, such as discriminatory practices against imports, may be rendered as violation to TBT provisions or incurring State responsibilities – as well as the extent to which domestic regulations can indeed be a WTO-consistent "barrier" to trade, despite being challenged in coordinative forums among Members.

Not only that, it is also important that they would be able to represent their State in the WTO forums and to confront challenges from officials of other Members (who in this situation have to represent the interests of their own exporters affected by the contested measure), without being unnecessarily intimidated.

The attempt to educate officials about standardizing practices and the TBT requirements themselves has already appeared to be the main task in the technical assistance agenda. It is also fair to acknowledge the Secretariat's effort to facilitate

Members' coordination with background notes to prepare Members' delegates before meetings.

5.3.1.2.2. More Clarification and Elaboration of Trade-Environment Concerns within the WTO

However, the WTO's recognition of the justifiability of environmental objectives addressed by measures that may have trade-restrictive, i.e. the WTO-consistent barrier, seems to be limited to the CTE's research-based publications and the WTO's broad political statement, outside of operational forums.[245] The more concrete details of such justifiability, would provide a constructive signal to the debates in the TBT forums.[246]

This said, due to the WTO's own politics and the Secretariat (and Members)'s understandable reluctance to provide such conclusive suggestion on interpretation of the TBT disciplines, educative campaign and accessible publications from third parties, such as interest-groups and academia, in this regard might be particularly helpful in filling this gap.

[245] Such as those in relation to the Doha Round, in which negotiations relating to environmental issues are yet to accomplish a meaningful outcome.

[246] Such concrete details are particularly needed in regard to the concept of necessity by which delegates in the TBT forums most often refer to when challenging that the technical measure at issue is not "the least trade-restrictive", though the necessity requirement is indeed applied with much more nuance than that. Examples of such discussions are clear under Specific Trade Concerns agenda in various TBT meetings. See TBT Committee, 'TBT Committee Meeting Report (G/TBT/M/63)' (n 86); and, TBT Committee, 'TBT Committee (G/TBT/M/64)' (n 86).

5.4. Measures and Involvement of Other Actors: Examples

Another type of actor, in TBT terms, is "non-governmental bodies", as defined specifically in Annex 1 of the Agreement.[247] Its definition includes a great range of entities among which, in broader terms outside of TBT coverage, business actors and civil society entities are most commonly brought into discussions about governance systems.[248]

Similar to that of a local government body, the definition of a non-governmental body under the TBT Agreement is primarily associated with "control" of governmental bodies. As mentioned above, private governance cannot succeed in the absence of governmental support, involvement or endorsement in some way. Many private organizations also operate on the basis of "partnerships" with government,[249] are a "hybrid" body or at least are composed of governmental officials in their decision-making bodies, or are financed by public budgeting.[250] Such close relationship in practice may render a regulatory body, which is generally considered a non-

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[247] Para 8, Annex 1, the TBT Agreement defines non-governmental bodies as:

> "Body other than a central government body or a local government body, including a non-governmental body which has legal power to enforce a technical regulation."

[248] Such discussions may use different term of differences or look at a more specific group of actors, such as multinational corporate, trade associations, NGOs (generally in the meaning of an interest-group or activists) and so on. All would most likely fall under either business actors or civil society entities (or both, due to their overlapping meaning or the fluid nature of social phenomena). Note that the TBT Agreement does not differentiate among non-governmental bodies, whether they are a profit- or interest-driven entity.

[249] As also encouraged by instruments within sustainable development forums, such as UN GAOR (n 49), at paras. 30.1-30.30.

[250] Refer also to the discussions about the authoritative relationship between the central bodies and non-governmental bodies in Chapter 3.

governmental entity, a governmental one and incur State responsibility for non-observance of the TBT disciplines.[251]

The introduction of non-governmental bodies in this chapter divides them into two broad groups: business actors and civil society entities. The aim is to reflect a basic picture of different technical bodies that are recognized under the same term ("non-governmental body") in the TBT Agreement and some key trends within their operation. This is however not to provide formal theories about governance actors. The section will not discuss the definition of each category, their dichotomy, or the different degrees that a technical body would be business-oriented or interest-driven. Many entities could indeed be considered as belonging to both groups or changing between the two depending on a given situation.

5.4.1. Business Actors

Many business actors take direct roles of rule-making in the governance, though their significance is generally not in absence of governmental support and/or associated regulations.[252] Business-oriented mechanisms that may be considered "regulatory" in a broad sense include: self reporting and assessing about their operation processes; setting benchmarks for practices and performances, as well as information disclosure about their products and services; setting product-related standards; and providing conformity assessments and certifications.[253]

[251] Refer also to the different wording of the TBT obligations in relation to different types of measures in Chapter 3.
[252] Indeed, they do need much support and/or influences from governmental entities to gain significance and normative status.
[253] *Global Outlook on SCP Policies, 2012* (n 190), at 44-46.

Environmental concerns are addressed with a view to also reduce costs and business advantages arising from consumers' differentiation of "green" or "ethical" products from goods without such credentials.[254] The life-cycle logic is applied in their production processes, supply chain, and/or their end-products, to varying extents.[255] Environmental concerns commonly connected with by production-related standards include "carbon- and water- foot-printing",[256] which may be communicated in the labelling of their respective products and/or reflected in the corporate social responsibility credentials.

- ***Key Trend: Multi-Stakeholder Processes***

A common pattern in the processes of business-oriented standardization is the "multi-stakeholder processes".[257] The International Organization for Standardization (ISO) is the most widely recognized organization of this category of actors. It is participated by a wide range of entities around the world: governmental and non-governmental bodies, as well as business actors and interest groups. The significance of the ISO in the TBT Committee's discussions has been explored in Chapter 2 from viewpoint of the TBT Agreement. In this chapter, the organisation is discussed from viewpoint of environmental policy- and rule-making. Due to the high acceptance of the Organization in the TBT context and in the broad governance, the discussions below take the ISO as an example of commercial standardizing entities under the business actor category.

[254] *Global Outlook on SCP Policies, 2012* (n 190), at 40.
[255] *Global Outlook on SCP Policies, 2012* (n 190), at 44-46.
[256] *Global Outlook on SCP Policies, 2012* (n 190), at 46.
[257] *Global Outlook on SCP Policies, 2012* (n 190), at 44.

The ISO is "the world's largest developer and publisher of management systems and guidance standards".[258] Its role therefore is not limited to technical measures under the TBT coverage. Its environmental standards address issues including firms' performance, auditing, public communications and labelling.[259] The Organization also emphasises involvement of various stakeholders[260] in its standardizing processes and relevance to market needs as requested by industries and consumer groups.[261]

Note however that such processes incur costs, which are to be separately "borne by member bodies and business organizations that allow their experts to participate and pay their travel costs". At the same time, it has been observed that many civil society entities, which may play a great role in counterbalancing business interests in decision-making, lack sufficient knowledge about the international processes and funding to participate.[262] One should therefore be aware that the term "multi-stakeholders" might not necessarily indicate a "balanced" representation of interests that could be involved and affected by an outcome standard. This may even be viewed more sceptically as the Organisation's profit-making

[258] *Global Outlook on SCP Policies, 2012* (n 190), at 47. See also International Organization for Standardization (ISO), 'About ISO' <http://www.iso.org/iso/home/about.htm> accessed 1 April 2014

[259] For information on labelling issues, see the ISO 14020 series and 14040 series for life-cycle assessment. International Organization for Standardization (ISO), 'ISO 14000 - Environmental Management' <http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/environmental_management.htm>, cited in *Global Outlook on SCP Policies, 2012* (n 190).

[260] such as "consumer associations, academia, NGOs and government [as well as experts from the relevant industry]". International Organization for Standardization (ISO), *How Does ISO Develop Standards?* <http://www.iso.org/iso/home/standards_development.htm> accessed 1 April 2015.

[261] International Organization for Standardization (ISO), *How Does ISO Develop Standards?* (n 260).

[262] *Global Outlook on SCP Policies, 2012* (n 190), at 174.

method: Its main income is from industries and business groups. Its standards will have to at least have taken their needs and priorities into considerations, if not altogether evolve around them.

Needless to say, regulatory mechanisms will always be contestable in some way, even if they are to be assumed to have genuine motivation and non-biased to a particular interest. Improvements for private mechanisms and standardizing bodies are still needed with regards to accountability and responsibilities, among others.[263] The accountability issue of private measures is widely acknowledged and organizations are seeking to address it. Yet, it is this tendency of their standardizing processes that raises cautions about the genuineness and the "balancing and weighing" of competing interests in the context of private standards and international standards.

This caution is about the priority of a business actor, or a commercial standardizing body, is directed to the ideological tone associated with the term "environmental", especially in trade and environment debates. It also gives considerations about what constitutes an "international body" under the TBT Agreement, as their standards gain an authoritative significance as an "international standards" to which Members' technical measures are required to conform. The discussion on the requirement to use international standards has been provided in Chapter 4. The caution explained in this section

[263] Kees van Kersbergen and Frans van Waarden, ''Governance'as a Bridge between Disciplines: Cross-Disciplinary Inspiration Regarding Shifts in Governance and Problems of Governability, Accountability and Legitimacy' (2004) 43 European journal of political research 143.

will be brought into attention again in the analysis in Chapter 7 of this thesis.

5.4.2. Civil society organization

Civil society organisation (CSOs), as referred to in the UNEP Global Outlook on SCP Policies in a broad sense, is an all-encompassing reference as it includes:

> "the wide array of non-governmental and not for-profit organizations that have a presence in public life, expressing the interests and values of their members or others, based on ethical, cultural, political, scientific, religious or philanthropic considerations. Civil Society Organizations (CSOs) therefore refer to a wide array of organizations: community groups, non-governmental organizations (NGOs), labour unions, indigenous groups, charitable organizations, faith based organizations, professional associations, and foundations."[264]

Environmental CSOs therefore include: academic entities, research groups, public-interest organizations, academic researchers, individual citizens and neighbourhood groups.[265] Their involvements in environmental governance are diverse[266] but may be grouped into at least four types: (1) "advocacy"; (2) "research and partnership"; and (3) "standard setting";[267] and (4) other operational activities and implementation of regulatory programmes.[268]

Their advocate roles are diverse. In decision-making processes, CSOs serve an important function of representing viewpoints and needs of communities and citizens into decision-making processes, and providing feedback about the

[264] The World Bank, 'Defining Civil Society' (22 July 2013) <http://go.worldbank.org/4CE7W046K0> accessed 1 April 2015.
[265] *Global Outlook on SCP Policies, 2012* (n 190), at 175.
[266] E.g. *Global Outlook on SCP Policies, 2012* (n 190), at 67.
[267] *Global Outlook on SCP Policies, 2012* (n 190), at 61-66.
[268] *Global Outlook on SCP Policies, 2012* (n 190), at 66.

progress.[269] They communicate with the public to raise awareness about environmental harms from certain activities, mobilize public demands and pressures (such as the "consumer-focused campaign" in the form of boycotting and buycotting) for improvements,[270] and promoting certain environmental agendas, procedural changes in policy and business practices (such as transparency) or preferred choices of life-style, as well as supporting best practices and conformity to existing standards.[271]

Their roles in research, analysis and developing innovation have also been noted.[272] Their partnerships and network formations with other CSOs, academic institutes and governmental organizations have been observed as the key to stronger and better informed movements of CSOs.[273]

The standard setting roles however may be undertaken by the minority of CSOs, in comparison to the ones that are active in advocacy and campaigning roles at the global, national and local levels. Examples of widely recognized CSOs which have established technical measures under the TBT coverage include: the Forest Stewardship Council (FSC), dealing with forest management; Marine Stewardship Council (MSC), promoting sustainable fishing practices and sustainable market of seafood; and Rainforest Alliance, addressing sustainable pattern in agriculture, tourism and forestry sectors.[274] Though their measures are primarily non-mandatory, certain standards are normatively significant due

[269] *Global Outlook on SCP Policies, 2012* (n 190), at 68 and 174.
[270] *Global Outlook on SCP Policies, 2012* (n 190), at 174.
[271] *Global Outlook on SCP Policies, 2012* (n 190), at 125.
[272] *Global Outlook on SCP Policies, 2012* (n 190), at 174.
[273] *Global Outlook on SCP Policies, 2012* (n 190), at 175.
[274] *Global Outlook on SCP Policies, 2012* (n 190), at 65-66.

to consumers' recognition and preference for products that have complied with them.[275] Such voluntary standards are mostly implemented with a labelling and certification scheme, as their effectiveness relies on their ability to communicate with consumers about the environmental credentials of conforming products, their supply chain and production activities. These standards are also complemented with assistance provided for stakeholders whose observance is expected, including capacity building, connection to source of financial funding that would enable them to improve their practices, and technical assistance.[276]

6. Conclusion

This chapter covers several aspects of environmental governance. Though there are still many others, the components discussed here are important to depict the main environmental agenda, the approaches by which they are addressed, and regulatory mechanisms that implement them. The chapter also demonstrates the practical side of the interface between the TBT Agreement and environmental measures, and points out some issues that may pose challenges in the application of integration principle, in the pursuit towards the more coherent global governance.

The next chapter will take all the preceding chapters as a backdrop to its analysis of how the requirement of "treatment no less favourable" could be applied in light of the principle of integration under the sustainable development concept.

[275] *Global Outlook on SCP Policies, 2012* (n 190), at 66.
[276] *Global Outlook on SCP Policies, 2012* (n 190), at 66.

Chapter 7: The Relationship between the TBT Requirement of "Treatment No Less Favourable" and Environmental Measures

Introduction

So far, the thesis has explained the scope of the TBT Agreement,[1] its administrative and coordination mechanisms,[2] and the basic requirements in the four normative requirements in the TBT discipline[3]. It has presented the principle of integration under the concept of sustainable development as a constructive framework for the discussions on the relationship between the WTO/TBT rules and environmental protection.[4] It also has contextualised the discussions in this thesis from the environmental perspective by presenting the various aspects of environmental governance.[5] This chapter now corresponds to the preceding chapters (Chapter 2, 4, 5 and 6 in particular) and discusses the relationship between environmental protection and the TBT requirement of "treatment no less favourable" which materialises one of the core pillars of the WTO rules on non-tariff barriers: the concept of non-discrimination.

This chapter ultimately asks whether and how the principle of integration under the concept of sustainable development could be applied in the TBT requirement of treatment no less

[1] Chapter 2
[2] Chapter 3
[3] Chapter 4
[4] Chapter 5
[5] Chapter 6

favourable. In doing so, there are three main issues to be addressed in this chapter. The first one is the issue of the scope of the TBT Agreement, which will be discussed in Section I. In Section I, the particular interest lies in the extent to which the Agreement would cover technical measures addressing processes and production methods (PPM-measures), such as those presented in the previous chapter under the framework of sustainable consumption and production (SCP-measures) which adopt the "life-cycle" approach in addressing environmental concerns.

Although not the question of "legality" of a measure under the requirement, the question on the characters of PPM-measures covered by the definition of the TBT Agreement is significant as it would determine the relevance of the TBT discipline altogether. Not only that, the issues also mirror the discussions about the coverage of Article III of the GATT, which are regularly raised in classic trade-environment discussions. The discussions would therefore provide useful addition to academic discussions in the field of trade-environment relationship, especially because of the coverage of Article III and the TBT Agreement differs: being excluded from the TBT Agreement is not necessarily unfavourable for regulating Members.

Such a nuanced difference is not always recognised in trade-environment debates. This section would show that the definition could be interpreted more consistently to the principle of integration. In the case of PPM- or life-cycle measures, the term "related" would be pivotal to the inclusion of the measure in question. The eventual inclusion however

would also depend on the public understanding and conscience about the environmental concern relating to the life-cycle of the product.

The issues on PPM-measures are also related to the concept of like-products which is discussed in Section II. Again, the determination of product likeness is technically not the question of legality of a contested measure. It is however critical as it is the first prong of the requirement of treatment no less favourable and could overturn the argument of the Claimant(s) in legal disputes. Not only that, the issues of PPM-measures are of the increasing relevance to trade-environment discussions due to the rising interests in addressing environmental concerns throughout a product's life-cycle via trade-related measures, as demonstrated in the previous chapter. The general sense of the idea of "likeness" can also lead to an impression of incoherence, and sometime contradiction, between environmental regimes and WTO's interest in trade liberalisation. This section should help clarify the underlying causes of such perceived incoherence and/or conflict.

Section II concludes that the better "balance" will not be struck by simply reading the term "like-product" in its generic meaning in attempt to determine like-product in favour of a regulation at issue. Doing so would instead be unconstructive and distort the rationality of like-analysis. Such distortion not only would affect the transparency and accountability of the WTO dispute settlement system, it would also be unhelpful to the wider scheme of environmental protection which could

have otherwise got a positive impetus from the decision as explained in Chapter 5.

The originality of this section lies in discussions of likeness analysis. It raises awareness about the importance of the analytical function served by the like-concept and the merits of such comparator element. It also makes a thorough proposal via which similar products with different credentials in their PPMs/life-cycle may be deemed as "unlike" with the criteria that are readily available in the WTO jurisprudence: the physical properties and consumers' tastes and habits. At the same time, it suggests that the society still needs to have better understanding about the connectedness between their product and its life-cycles, and to develop more conscience towards environmental implications that such life-cycles may have.

Finally, Section III discusses the second prong of the requirement: an examination and meaning of "treatment no less favourable" in the TBT context. This is the component that actually determines the compliance and permissibility of a technical measure under the requirement. In doing so, Section III draws attention to the sixth recital of the TBT Preamble, before proposing how the requirement could be interpreted in light of the principle of integration under the concept of sustainable development.

Ultimately, Section III will argue that, in a case concerning environmental protection, the "treatment no less favourable" requirement in the TBT context should be applied differently from the National Treatment (NT) obligation in Article III: 4 of the GATT – despite the same phrase used in the two

provisions. Instead, in light of the sixth recital, the TBT requirement of treatment no less favourable should follow the GATT case law in the context of the Chapeau of Article XX, which completes the concept of non-discrimination in the broad sense in the GATT context.

The particularly interesting point under the TBT Context is due to its absence of an exception provision, which is the one explicitly dealing with non-trade objectives and the legitimacy associated with them. Via the proposed route of interpretation, the WTO would fill the gap caused by the lack of an exception provision that has been the main framework in the GATT context in striking the "balance" between the objective of trade liberalisation and other legitimate objectives such as the protection of the environment. This would prevent the TBT Agreement from taking a backward step in the WTO's commitment to the objectives of sustainable development[6] and from becoming even more restrictive towards regulating Members than the GATT.

In other words, it should allow the Organisation to strike the more constructive "balance" both between the rights of regulating and exporting Members, as well as the balance between environmental protection and commercial interests of market liberalisation in accordance with the sustainable development concept.

[6] As expressed in the Marrakesh Agreement Establishing the World Trade Organization. Refer to Chapter 5.

Section I: The TBT-Coverage over the Measures addressing PPMs/Life-Cycle of Products

Chapter 2 has explained the coverage of the TBT Agreement, which is primarily drawn by the definition of three types of technical measures: technical regulations, standards and conformity assessment procedures (CAPs).[7] In corresponding to this, this section picks out one of the issues at the heart of the notion of trade and environment conflict in the GATT context: the distinction between product- and production-measure.

In particular, this section emphasizes on measures addressing process and production methods (PPM-measures). It looks into the criteria by which they would be considered a technical measure under the TBT Agreement. It questions whether the characterisation of PPM-measures under the definition of a technical measure is coherent with environmental concepts and regulatory approaches in environmental governance, such as the life-cycle methods explained in Chapter 6. Specifically, Section I asks how to interpret the phrase "product-related [PPMs]" in the definition of a technical regulation in the way that is consistent with the principle of integration.

In doing so, it focuses on the definition of a technical regulation and not the other two types of measures, due to the much more elaborate development in case law and discussions during the negotiations concerning a technical

[7] In addition to the definitions, but not to be emphasised in this chapter, the TBT coverage is also demarcated by the exclusion of measures already covered by the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the Agreement on Government Procurement, as provided in Article 1.

regulation than those in relation to the latter two.[8] Also, it is logical to assume that the meaning of a standard would mirror that of a technical regulation, except for the voluntary nature of a standard (instead of the mandatory one of a technical regulation), for the effective and coherent application throughout the whole instrument.

It is to be noted that trade-related PPM-measures excluded from the TBT-coverage due to the lack of "product-relatedness",[9] in the definition of technical regulations in Annex 1.1, are not free from WTO scrutiny but most likely will be examined under the GATT.[10] I believe that the inclusion under the TBT Agreement would be generally better off for "environmental" interest from the viewpoint framed by the integration principle, for the TBT's "openness" to environmental considerations that are extrinsic to the TBT obligations. Such "openness" would be consistent to the decision of the International Court of Justice in the case of Gabčíkovo-Nagymaros Project discussed in Chapter 5. Being covered under the TBT Agreement should also be more favourable to regulating Members, considering that there has consistently been a rejection of PPM-measures in the past GATT cases on the ground that were related to the issues of "product-production distinction".

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[8] See, for example, *Negotiating History of the Coverage of the Agreement on Technical Barriers to Trade with Regard to Labelling Requirements, Voluntary Standards, and Processes and Production Methods Unrelated to Product Characteristics (hereinafter 'WTO Secretariat's Note on Negotiating History'), WT/CTE/W/10, G/TBT/W/11*, 29 August 1995 (hereinafter "WTO Secretariat's Note on Negotiating History").

[9] To be explained further in the discussions

[10] As exemplified by the latest case of *Appellate Body Report, European Communities - Measures Prohibiting the Importation and Marketing of Seal Products ('EC-Seals Products'), WT/DS400/AB/R, WT/DS401/AB/R, 2014*.

- The Merits of Discussing TBT-Coverage over PPM-Measures

There are several points of merits in discussing TBT-coverage over PPM-measures. First, PPM-measures have always been one of the main interests of trade and environment debates.[11] The WTO's view of what are related to products is yet to entirely match the view of environmentalists. The issue is therefore directly responsive to the thematic question.

Second, discussing it offers an in-depth view of the definition. The discussions picked out one of the elements that constitute a technical regulation by the definition stipulated in Annex 1.1. Third, the TBT-coverage over the PPM-measures has long been an unresolved debate since the negotiation of the Agreement. The issue of TBT-coverage over PPM-measures will turn out to be closely related to the discussions on "like-product" in Section II.

1. Background Information to the Analysis:

Referring to Chapter 2, the definition of a technical regulation is provided and attention is drawn to the phrase "product characteristics or their related [PPMs]". As explained in Chapter 4, the text of Annex 1.1 prescribes a technical regulation as:

> "Document which lays down *product characteristics or their related processes and production methods*, including the applicable administrative provisions, with which compliance is mandatory. It may also include or

[11] Robert Howse and Donald Regan, 'The Product/Process Distinction - An Illusory Basis for Disciplining "Unilateralism" in Trade Policy' (2000) 11 European Journal of International Law 249.

> deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a *product, process or production method*."[12] [emphasis as added]

The phrase "product characteristics or their related processes and production methods" is crucial to determine the extent of the TBT-coverage over PPM-measures (other than those that are implemented with terminology, symbols, packaging, marking or labelling of the products). The criteria laid down by the Appellate Body in the case of EC-Asbestos elaborates the term "product characteristics" to include "any objectively definable 'features', 'qualities', [or] 'attributes' [...] of a product". Importantly, it also adds that the term "product characteristics" refers to "not only [...] intrinsic to the product itself, but also related 'characteristics' [...]" of a product.[13]

The second sentence of Annex 1.1 provides examples of technical regulations: the ones that "include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements" (hereinafter referred as information-related measures). It has been read to assist the interpretation of the term "product characteristics" in the case of EC-Asbestos Products, which consequentially was determined to include features "related" to the intrinsic qualities of a product.[14]

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[12] Annex 1.1, the TBT Agreement

[13] *European Communities - Measures Affecting Asbestos and Products Containing Asbestos ('EC - Asbestos'), WT/DS135/AB/R, 2001*, at para 67. [emphasis added] Following the precedence of this interpretation and referring to EC-Asbestos as authoritative case is EC-Sardines. See *European Communities - Trade Descriptions of Sardines ('EC - Sardines'), WT/DS231/AB/r, 2002*, at para. 189.

[14] *Appellate Body Report, EC - Sardines, 2002* (n 13).

This differs from the unclear stance on the coverage in the text of Article III of GATT and its Ad Note.[15] The TBT text makes clear that PPM-measures are covered, provided that they are "related" product characteristics as stated in Annex 1.1, or to "intrinsic" features of products as further translated in above case law.[16] The text also touches upon the question concerning the "non-product-related" or "unincorporated" PPM-measures in the part concerning "terminology, symbols, packaging, marking or labelling requirements", as the coverage is spelt out in the second sentence.[17]

With the reference to "symbols, packaging, marking or labelling" in the second sentence of the definition of a technical regulation, one may argue that Annex 1.1 hints the relevance of the physical considerations. Yet, the examples also include requirements on "terminology", which suggests that physical product-relatedness should not be an exclusive determinant on the issue of TBT-coverage. The intrinsic features of a product or PPMs related to them may be construed by other considerations.

This may reflect the potential of a rather open attitude in relation to measures of production-related characters. It is also likely that the WTO and its trading Members will be less

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[15] To be explained further in this Section.

[16] Refer to discussions in Chapter 3.

[17] In the 1991 case of US-Tuna (Mexico) I, the voluntary "dolphin-friendly" labelling scheme in the Dolphin Protection Consumer Information Act (DPCIA) was therefore outside of Article III, the same way as the embargo of tuna imports (against exporting countries without the same national policies as the US) in the Marine Mammal Protection Act. Note that the DPCIA was considered GATT-consistent, while the embargo under the MMPA was GATT-inconsistent. See *GATT Panel Report, United States - Restrictions on Imports of Tuna ('US - Tuna (Mexico) I'), DS21/R-39S/155, 1991*, at paras. 7.1 and 7.3.

suspicious against such measures than they used to be under the GATT, that environmental" PPM-measures are categorically a disguised protectionist measure. Such categorical presumption would be more and more difficult to justify,[18] as life-cycle logic and the concept of sustainable consumption (SCP concept, to be explained in Chapter 6) have become a popular regulatory approach adopted by various regulatory bodies and by multilateral environmental agreements.[19] Though the coverage does not necessarily mean permissibility, this "open" attitude may suggest willingness to open for more environmental considerations in the examination of compliance under the normative discipline as well.

With the explicit inclusion of the information-related measures in the text and case law elaboration of the term, the definition of technical regulations as stipulated by the text of the TBT Agreement and as elaborated in EC – Sardines and EC - Asbestos[20] offers a rather broad frame to determine which technical regulations are subject to the TBT rules. Although broad, it is not to say that the coverage over PPM-measures is limitless.

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[18] As shown in early reports of the GATT Secretariat, observed in Christiane R Conrad, 'Chapter 1: Setting the Stage for Legal Analysis', *Processes and Production Methods (PPMs) in WTO Law: Interfacing Trade and Social Goals* (Cambridge University Press 2011), at 21.

[19] Such as those explained in Chapter 6. Members' reaction is also anticipated in The Center for International Environmental Law, *Eco-Labeling Standards, Green Procurement and the WTO: Significance for World Bank Borrowers (Reviewed in Cooperation with the World Bank LEGEN and OPCPR Units)* (2005).

[20] Both of which have been explained in Chapter 2.

In line with these decisions on the coverage of Article III, the delineation of the TBT coverage is clearly centred on traded products. In the GATT context, PPM-measures that are considered as not "product-related" would not be covered by Article III – which allows some room for non-protectionist trade-restriction. Such measures would most likely fall under the more restraining provision like Article XI that prohibits quantitative restrictions. Unlike the generic prohibition for trade restriction in the GATT (such as in Article XI), the TBT Agreement does not cover all PPM-measures just because they are restrictive or a "barrier" to international trade in the generic sense. Neither is the TBT coverage determined by the "technical" character of a measure.

There is still room for arguing for various types of PPMs to be considered as part of the "intrinsic features" of a product or as a quality "related" to them as clarified by EC-Sardines and EC-Asbestos Products. What, then, are the criteria for such PPMs? After I have explained the basic details relating to the TBT coverage over PPM-measures in Chapter 3, the question in this Chapter is no longer *whether* PPM-measures are covered. It is rather on the *process* of identifying it.

2. General Understanding about "Product-Production Distinction" and Current Postulation in the TBT Context

Originating from the GATT application, PPM-measures addressing the "production", or other life-cycle aspects of a product beyond their use by consumers in the regulating nation, are generally categorised as (1) a product-related PPM-measure ("PR-PPMs"); or, (2) a "non-product-related" or

"unincorporated" PPM-measure (NPR-PPM-measures).[21] The general notion is that the two are distinguished by the *physical* aspects of the relation between the PPMs and the products in question, i.e. that the former are those regulating PPMs that affect the physical properties of a product (such as the use of chemicals in agricultural produces that leave residues on the end-products), and the latter covering all other PPM-measures (such as those addressing environmental policies of an exporting country and those requiring certain qualities of producers). It is also generally perceived that PR-PPM- and NPR-PPM- measures will be treated differently under WTO rules, due to their product-relatedness, i.e. that NPR-PPM-measures are categorically non-permissible/unjustifiable under the GATT/WTO rules.

The TBT discussions largely inherit similar notions about the relationship between product and production (hereinafter "product-relatedness") from the GATT context, as rather an automatic assumption that lacks specific investigations in the TBT's own context. Conrad, for example, effectively postulates that the term "related [PPMs]" in Annex 1.1 is defined by the physical aspects of the relation between PPMs and their end-products.

However, when considering the more detailed explanation of the doctrine in the context of the GATT itself,[22] the

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[21] E.g. Peter Van den Bossche, 'Chapter 8: Towards Harmonisation of National Regulation', *The Law and Policy of the World Trade Organization: Text, Cases and Materials* (2nd edn, Cambridge University Press 2008) 8, 740-891, at 808-809; and The Center for International Environmental Law (n 18).

[22] Robert Hudec, 'Chapter 12: The Product-Process Doctrine in GATT/WTO Jurisprudence' in Marco Bronckers (ed), *New Directions in International*

characterisation of PPM-measures based on product-production distinction is by no means to categorise PPM-measures into two rigid types as it is generally perceived. The nuanced distinction indeed is characterised as a spectrum of various PPM-measures: Measures addressing PPMs that affect the "physical" properties of a product[23] *are at one end*, while the ones addressing PPMs that have "no impact" on a product (physical or others)[24] is *at the opposite end*.[25]

Rather than a sharp line drawn by the rigid criterion of physical product-relatedness to separate between the PR-PPM- and NPR-PPM-measures, the spectrum is composited of PPM-measures with varying extents and aspects of the product-relatedness. This line of PPM-characterisation seems more sensible than the "bright-line" distinction in the general and non-nuanced notion, considering the diversity and complexity of PPM-measures applied in relation to trade and of the market systems.[26] Robert Hudec's explanation also takes into consideration more cases beyond the unadopted cases of US-Tuna (Mexico) I in 1991 and US-Tuna (EC) in 1994;[27] and the US-Shrimp case.[28] Not only that, as will be discussed in

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Economic Law: Essays in Honour of John H. Jackson (Kluwer Law International 2000), as the notion of "product-production doctrine" is coined by the author (observed in Conrad, 'Chapter 1: Setting the Stage for Legal Analysis' (n 17), at 25.

[23] Such as the use of chemicals in agricultural produces that would remain a residue in the products

[24] Such as the national policy of an exporting country or qualification of producers

[25] Hudec (n 20), at 191.

[26] As already illustrated in Chapter 6. Refer to, for example, its explanation of the SCP-measures and the life-cycle methods.

[27] WTO, 'Dispute 4: Mexico Etc versus US: "Tuna-Dolphin"' <https://www.wto.org/english/tratop_e/envir_e/edis04_e.htm>

[28] As acknowledged in Hudec (n 20), 187-217.; and Christiane R Conrad, 'Chapter 6: The Status of PPM Measures under the TBT Agreement and the

Section II below, the non-rigid characterisation of product-relatedness would allow a characterisation that is reflective to common traits in environmental concepts and governance.

On this basis, my opinion is that it is not entirely accurate to assume that the physical aspects are an exclusive criterion of the term "related [PPMs]" in Annex 1.1, based on the product-production distinction from the GATT context.

2.1. Product-Production Doctrine from the GATT Context: Tendency to focus on physical product-relatedness

Despite the above nuanced concept of the product-process distinction, there is a reason to the inaccurate assumption. The relevance of a physical quality is based on the approaches towards PPM-measures in certain GATT cases that have become a "landmark" for the trade and environment debates, particularly the cases of US-Tuna (Mexico) I in 1991 and US-Tuna (EC) in 1994 and the US-Shrimp all of which have highly drawn attention of environmentalists[29] – although these particular cases do not necessarily represent the general practices on the issue.

Before diving into the detailed discussions about product-relatedness of a PPM-measure covered by the TBT Agreement, it is worth pointing to the GATT context behind the product-centred characterisation of PPM-measures as it would help to

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SPS Agreement', *Processes and Production Methods (PPMs) in WTO Law: Interfacing Trade and Social Goals* (Cambridge University Press 2011).

[29] As reflected in Conrad, 'Chapter 1: Setting the Stage for Legal Analysis' (n 17), 11-63, at 13-20.

clarify the legal components, as well as the contextual concerns in relation to PPM-measures in the WTO's history, that have informed the general assumption in relation to the TBT context. After all, the Members' experiences under the GATT 1947 have provided the blue print for the establishment of the TBT Agreement. The following issues within the GATT context should therefore give a useful perspective for the discussions about the TBT application.

In the GATT context, the legal questions concerning the PPM-measures are about: (1) the coverage of Article III (to claim the "Ad Note defence"); and, (2) the violation of the non-discrimination principle, either under an obligation in the context of Article III (in the cases that they are considered under its coverage) or under a condition for exemption of general obligations (Article III or others) under the Chapeau of Article XX.[30]

The production-based features have been raised in relation to either one of these two issues above in order to reject the production- (or PPM-) measure. The permissibility of the measure would depend on whether they are covered and legal under Article III, or satisfy the conditions for exception under Article XX. A non-product-related PPM-measure that is not covered by Article III would fall under the prohibition on

[30] Note that the former issue is directly relevant to the issue of TBT-coverage, as Article III:4 of the GATT and Article 2.1 of the TBT Agreement share a similar coverage by centring on product-relatedness of the regulated PPMs, while the latter concerns with the normative discipline, such as the issue of "like-products". The issues of Article III Ad Note Defence and of a violation to non-discrimination principle are to be dealt with separately in Section II and III below. They are mentioned together here only because they have collectively formed the body of product-production doctrine.

quantitative restriction in Article XI, which is generally known to be more burdensome for regulating Members. Without a physical product-relatedness, NPR-PPM-measures do not tend to be permitted in the GATT context.[31] The approach against PPM-measure, either by attacking on the coverage or the legality issues, forms the so-called "product-production doctrine".[32]

Such GATT decisions on these issues have largely informed the general assumption of the physical constitution of product-relatedness in the TBT definitions. Particularly relevant to this section, the coverage of Article III was raised in the three landmark cases (i.e. the cases of US-Tuna (Mexico) I,[33] US-Tuna (EC)[34] and US-Shrimp[35]) as the critical issue of analysis to which the doctrine was applied. In all the three cases, the import embargoes based on PPMs of tuna and shrimp products were unable to qualify the Ad Note defence and therefore were considered an NPR-PPM-measures not covered by Article III due to the lack of physical product-relatedness of the PPMs in question, i.e. public policies of the exporting Members preventing dolphin and turtle by-catch. The 1991

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[31] See Christiane R Conrad, 'Chapter 4: Consistency with GATT Obligations', *Processes and Production Methods (PPMs) in WTO Law: Interfacing Trade and Social Goals* (Cambridge University Press 2011), 147-246.
[32] See Hudec (n 20), especially at 193.
[33] GATT Panel Report, US - Tuna (Mexico) I, 1991 (n 17).
[34] United States - Restrictions on Imports of Tuna ('US - Tuna (EC)'), DS29/R, 1994.
[35] *United States - Import Prohibition of Certain Shrimp and Shrimp Products Recourse to Article 215 of the DSU by Malaysia ('US - Shrimp (Article 215 - Malaysia)'), WT/DS58/AB/RW, 2001*.

Dolphin/Tuna Panel in particular interpreted the Ad Note[36] to imply that Article III only covers measures that affect the products "as a product".[37]

Such wide attention to the three cases and case law application of product-production doctrine (both in regards to the coverage issue and to the issue of legality) explains the emphasis on physical relatedness as a criterion of distinction between product- and PPM-measures. Yet, the legal significance of the decisions on the issue of coverage in these three cases is challengeable. The cases of US-Tuna (Mexico) I and US-Tuna (EC) were in fact unadopted and the Panel's decision on the issue of Article III coverage was never appealed or confirmed by the Appellate Body. Robert Hudec himself has acknowledged that the legal status of the doctrine and some of its content is still unclear.[38]

In particular, the notion of NPR-PPM-measures categorically being outside of Article III is not entirely accurate, as they have been determined GATT-illegal under Article III in other adopted decisions both before and after the 1991 case of US-Tuna (Mexico) I.[39] Neither should that be the case. The Panel's interpretation in the 1991 dolphin/tuna case determining the product-centred coverage of Article III above is also largely

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[36] As the Ad Note provides that Article III applies to "internal laws, regulations and requirements affecting the internal sale […] of products". Howse and Regan (n 11), at 254.
[37] *GATT Panel Report, US - Tuna (Mexico) I, 1991* (n 17)., at para 5.14; and Howse and Regan (n 11), at 254.
[38] As acknowledged in Hudec (n 20); and Conrad, 'Chapter 6: The Status of PPM Measures under the TBT Agreement and the SPS Agreement' (n 26), 374-411.
[39] Conrad, 'Chapter 4: Consistency with GATT Obligations' (n 29), particularly at 153-154.

criticised by scholars. Many do not agree with the product/production distinction altogether, and suggest that they should be viewed "neutrally" regardless of the production-related character.[40]

They also argue that the coverage of Article III should not be centred on product-relatedness of PPMs, but instead should look at the relations between the measure and traded products rather than the relation between the PPMs and the end-products.[41] However, this point is not problematic in the TBT context by the text of Annex 1.1. Based on the definition of a technical regulation, the TBT-coverage is determined by the product-relatedness of the PPMs and not the relatedness of the measure. The question about the relation between the product and the contested measure is therefore not to be discussed here.

Still, the TBT text has not provided the exact criteria that prescribe the required degree of product-relatedness of PPMs that would be deterministic of the inclusion of the contested PPM-measure under the TBT Agreement. For the reasons explained so far, it cannot be concluded that the GATT precedence has provided the basis for the determination to be based exclusively on a physical constitution.

[40] E.g. Howse and Regan (n 11).
[41] See e.g. Howse and Regan (n 11), at 254-256.

2.2. Contextual Considerations: Why should a physical product-relatedness not be categorically treated favourably?

A multitude of measures addressing environmental concerns in PPMs are applied with information-measures (such as labelling and packaging requirements in the second sentence of Annex 1.2) and are clearly under the TBT-coverage. However, should a similar PPM-measure without such information-mechanisms be treated entirely differently by excluding them out of the TBT-coverage? Say, for example, a requirement on products made from sustainably sourced timber would clearly be under the TBT Agreement if it involves labels and packaging. Should the requirement then become outside the TBT-coverage if, for example: it goes further and prohibits products from unsustainable source altogether;[42] or the importing Member indeed requires manufacturers to pay fees to climate change fund[43] instead of just regulating the information disclosure and the like?

It seems sensible that these PPM-measures with or without information-related requirement are examined under the same set of international trade rules. The distinction between them from the trade perspective is the generalising belief that a labelling scheme is inherently less trade-restrictive than

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[42] This would be similar to the EC prohibition of seals products that are not hunted by Inuit. Refer to a brief introduction to the case of EC-Seals Products in 3.1.2 in Chapter 2, and in 3.2 – 3.3 of this chapter where the case will be discussed in more detail in relation to "intrinsic properties".

[43] This would be in the same vein as the UK's requirement on wastes of electronic products (the WEEE requirement), imposing fees for manufacturers and importers of electronic goods to contribute to the disposal costs. See more detail in Chapter 6.

import prohibition.[44] Yet, it is not necessarily an accurate fact that such information-schemes would inherently have less affect on market competition or be less trade-restrictive than other regulatory approaches (so long as that they are not an outright prohibition from the market).[45]

The PPM-based prohibition in the history of the GATT and WTO disputes has also been seen with much suspicion by trading Members as a new form of "green protectionism" with the disguise of "environmental" regulation,[46] as a coercive tool in international relations and in intruding other countries' public policies,[47] and/or as a restriction beyond the agreed allowance of trade-restrictions that is believed to be only those imposed on products[48].

The suspicion may have been understandable in the past, considering the political character of the rejected trade embargos in the three landmark cases. Yet, Members are now forced to be more accepting to the production-related character of domestic measures as the approach has been adopted by an increasing number of MEAs, governments of

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[44] The The Center for International Environmental Law (n 17).

[45] The dolphin friendly labelling in the latest 2014 case of US-Tuna II is an example of the significance in the market of certain labelling schemes. From Mexico's viewpoint, tuna products without such labels would not be able to compete with the others in the market. American consumers have also notoriously boycotted and buy-cotted tuna products in relation to their dolphin-friendly credentials, demonstrating the scheme's great impact on market completion and the "power" of consumerism towards policy making.

[46] Conrad, 'Chapter 1: Setting the Stage for Legal Analysis' (n 17).

[47] Conrad, 'Chapter 1: Setting the Stage for Legal Analysis' (n 17).

[48] As articulated by Hudec (n 20). Note that this may not necessarily be included as a supplementary means of treaty interpretation according to Article 32 of the Vienna Contention on the Law of Treaties, as there is no clear evidence demonstrating that these opinions are shared by the majority of negotiators.

various levels (including those with exporting interests who used to be most suspicious against the PPM-character) and private entities. They have also much evolved into such great variation of regulatory measures with more sophistication than narrow-mindedly depending entirely on a national policy of the exporting countries which have appeared in the past as a coercion in international relations.[49]

On this basis, there does not seem to be an obvious reason that all PPM-measures, so long as the PPMs in question are "product-related" in some way as stipulated by the text of the Agreement, should not be examined by the same set of trade rules under the TBT Agreement. I do not think that they should fall under an entirely different agreement only because the product-related on the PPMs is no visually apparent. My opinion is elaborated below.

3. Proposition of Section I

On the basis of the above considerations, the proposition of this section would differ from the above speculation of some commentators such as that of Christiane Conrad's above. The physical criterion for the product-production distinction is not an exclusive one. The product-production distinction has nuanced meaning. The whole product-production doctrine that has informed the misled notion is not only of uncertain legal status, but also may not serve the contextual interests of international community in general.

[49] Refer to the life-cycle approach and SCP measures in Chapter 6.

The TBT text and current case law is also open. The phrase "product characteristics or their related [PPMs]" in the first sentence should be viewed in the way that is as reflective to the environmental practice as the text of Annex 1.1 and the current case law interpretation would allow. The rigid basis of physical product-relatedness would not serve such a purpose of integration between trade rules and environmental protection.

As explained above, the TBT application should allow the better openness for "environmental considerations" into the decision-making process. In effect, this would allow an "integration" in the same way as that in the Appellate Body's interpretation of the term "exhaustible natural resources" in Article XX of the GATT in US-Shrimp case[50] by considering the general concerns of the international community about environmental depletion and taking into considerations the terms used in the multilateral environmental agreement.[51]

To "open" for integration is by no means a straightforward task. The question of how far the TBT-coverage, in regards to PPM-measures, within the product-production spectrum explained above involves two crucial considerations: (1) the extent and aspects of the relation between the PPMs and products that would constitute being "related [PPMs]" in Annex 1.1; and (2) the criteria for the intrinsicity of a product.

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[50] Explained in Chapter 6.

[51] *Appellate Body Report, United States - Import Prohibition of Certain Shrimp and Shrimp Products ('US - Shrimp'), WT/DS58/AB/R, 1998*., at paras. 127-134.

First, the physical aspects may be the most obvious manifestation of the existing relation between the PPMs and products in question. For example, colouring methods would affect physical properties, such as the colour brightness and its longevity, to the garment product – hence the physical product-relatedness. The requirement for organic or natural method could therefore be easily identified as a PPM-measure that are under the TBT-coverage (provided that it qualifies other criteria of a technical measure). The ethical issues in regards to workers in the garment factory, however, do not affect the end-product, when there is no claim in association to this on its packaging. The requirements in regards to workers in the production processes, such as safe working conditions and "fair" distribution of profits,[52] do not affect the "physical" properties of the end-product. If the physical product-relatedness is to be an exclusive criterion, the latter requirements will not be under the TBT-coverage.

Second, viewing more closely to the legal component of "product characteristics and their related [PPMs]" as elaborated in EC-Sardines and EC-Asbestos, the second question is what may be considered as "intrinsic" properties of a given product. The constitution of "intrinsic" elements of a product would most likely include those beyond the physical aspects.

For example, the use of nonylphenol ethoxylates (NP), an environmentally hazardous chemical, used in various processes of clothing production may be deemed as a PPM

[52] Such as the "Fairtrade" label scheme. See Fairtrade Foundation, *The Power Is in Your Hands* <http://www.fairtrade.org.uk/products.htm> accessed 1 November 2015.

that affects the physical aspects of the end-product, as NP still physically remains in the garment and could be released to water sources when washed and drained.[53] Yet, with or without NP, the garment, its aesthetic presentation and its functionality remain the same. If the "intrinsic" characteristics of a garment are restricted to only its physical aesthetic quality or functionality and not the impact of its washing on the environment, the use of NP would not be considered "related" and the prohibition on its use in imported products[54] would not be covered by the TBT Agreement.

3.1. Product-relatedness from Perspectives of Environmental Concepts and Principles

The emphasis on physical constitution of "related [PPMs]", without sufficient acknowledge of the others or the potentially open-ended possibility, may mislead the trade and environment discussions. This assumption would create the impression of an unnecessary gap between trade and environmental parlances. The exclusion of adequate considerations and criteria could portray the resistance of the trade regime to integrate with environmental regimes in the sense explained in Chapter 5: The TBT/WTO would be criticised as adopting an unnecessarily narrow view, centring on its own trade/product interests and refusing the environmental legitimacy of a life-cycle character.

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[53] Yixiu Wu, *You Did It! EU Bans on Toxic Imports* (Green Peace International 2015) <http://www.greenpeace.org/international/en/news/Blogs/makingwaves/NPE-toxic-chemical-banned-EU-textile/blog/53582/> accessed 1 October 2015..

[54] As campaigned by Green Peace, see Yixiu Wu (n 52)..

Restricting the characterisation of covered PPM-measures exclusively to the physical criterion could prevent a coherent characterisation with various concepts in environmental protection, and, in some situation, the reality of environmental governance. The relatedness between PPMs and end-products are as follow.

To begin with, from perspective of the SCP concept explained above, the whole life-cycle of products is connected despite their physical segregation. The relationship between products and processes are on causal ground. As demand creates supply, unsustainable demands for cheap products fuel unsustainable extraction of resources and irresponsible pollution discharge.

Production and consumption sectors are also connected for the need to collaborate, to address the whole "life" of a product in order to pursue environmental sustainability and truly address environmental concerns. Consumers are in fact one of the "polluters" when their consumption product is produced by environmentally harmful processes.[55] By rationale, processes and products are therefore inherently "related" on moral grounds.

The moral grounds for "product-relatedness" is also reflected in the Stockholm Declaration, that environmental responsibilities shared by "all walks of life"[56] From the environmental point of view, trade-related measures are needed in addressing environmental concerns in the

[55] See the concept of "polluter-pays" in Chapter 6.
[56] As referred to in para. 7 of the Preamble of the Declaration United Nations Conference on the Human Environment, explained in Chapter 6.

production processes, especially in addressing the transboundary or global concerns such as climate change, deterioration of migratory species and ozone depletion. Environmental regulators need to prevent "regulatory leakage" in addition to their domestic environmental regulation and "level the playing field" for those directly within their jurisdiction, in order to effectively address the problems.[57]

Otherwise environmentally harmful but cheaper production activities would only be shifted to another location in a country willing to allow lower environmental standards for the sake of economic income and ship back products from such PPMs to the country of higher environmental standards. This would create the so-called "race to the bottom" scenario, and at the same time upset the regulating Members' own domestic industries as they would be out-competed by foreign rivals due to the lower costs of production.

From these perspectives, the relation between environmentally harmful PPMs and end-products is not constituted by physical properties of a product. But can these two points provide grounds to argue that environmental PPMs are "intrinsic" feature of product and therefore constitute the required "product-relatedness"? This depends on the constitution of "intrinsic" features of products.

3.2. Current Constitution of Intrinsic Properties

The question on the TBT-coverage over PPM-measures without information-related characteristics, as stipulated in the second

[57] See Howse and Regan (n 11).

sentence of Annex 1.1, is discussed in the case of EC-Seals Products. The Appellate Body's decision discusses the meaning of "intrinsic" properties of the products prescribed by the Seals measure as one of the crucial points in their determination that the measure in question is not a technical regulation, and hence outside of the TBT-coverage.

Note that, in the case, the question did not arise whether the PPMs in question are "related" to product characteristics.[58] Norway, the Claimant, indeed argued that they are "an 'intrinsic' features of the subject product" and "emphasizes that the legal situation [...] is very similar to the one confronted by the Appellate Body in EC-Asbestos".[59]

The PPM-measure in question was a prohibition of seals products in the EU market, based on some PPM aspects of the seals products. The PPMs in question include qualification of hunters (to belong to certain indigenous groups) or on the ground of conservation management.[60] The ethnicity and the official type of the hunting location were not considered by the Appellate Body as an "intrinsic" feature of a seal product.[61]

Even though such PPM related features were not considered as "product-related" to warrant the TBT coverage, the decision in this case shines light on the question of: what the requirement

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[58] *Appellate Body Report, EC-Seals Products, 2014* (n 10), at paras. 5.1-5.7.
[59] *Appellate Body Report, EC-Seals Products, 2014* (n 10), at para. 5.6.
[60] *Appellate Body Report, EC-Seals Products, 2014* (n 10).
[61] *Appellate Body Report, EC-Seals Products, 2014* (n 10), at paras. 5.43-5.45. Also be reminded that this is not the point of the legality of the measure yet. Being considered as a technical measure only means that the measure in question is expected to observe the normative disciplines and that the regulating Member has to follow administrative requirements for public participation and transparency.

for "physical" constitution of product-relatedness of the PPMs in question are. This therefore still leaves room for argument in future cases for criteria other than the physical properties of the end-product, such as the public expectation for "green" or environmentally ethical supply chain and their perception on environmental responsibilities for harms caused during production of their products.

3.3. Possible Criteria for "Intrinsic" Characters

One would wish that the dispute settlement bodies would recognise the environmental concepts and need for consistent protection between PPMs and a product throughout the product life-cycle as the basis to rationalise the "product-relatedness" or "intrinsicity" of product features. In some respects, this recognition and rationalisation would certainly reduce the gap between trade and environmental parlances.

Yet, though the merits of environmental concepts and ideologies may seem clearly legitimate from environment-centred narratives, the shared responsibility throughout supply chain are not necessarily recognised in reality as the common values in the society, as will be explored below. The linkages between trade and certain environmental concerns (such as conservation of endangered species) have been reflected in some multilateral environmental agreements. [62] Yet, in most circumstances, it would likely be difficult for the WTO as a legal regime to find grounds for the recognition of environmental virtues and rationalisation on the basis of environmental protection under the WTO's own parlance or

[62] As mentioned in Chapter 6.

legal framework. Examples include consumers' responsibilities in relation to the environmental harms caused by the production/hunting methods. The concept of "green" supply chain and consumerism are yet to be universally materialised.[63]

There is however available grounds and considerations recognised in the WTO's own parlance that could be developed to help bridge the gap and allow the recognition of environmental values in the identification of the intrinsic features of a product and the product-relatedness of the PPMs addressed by the contested measure. My proposition is drawn from the concept of "like products" by which various aspects and characteristics of products are analysed to determine the "likeness" among products affected by the contested measure and those that are not. The application of the concept of like-product may be explained by the product-production doctrine.[64] It is also closely linked with the ordinary meaning of "intrinsic" features. The proposition takes some useful ideas from the concept of "like-product" to be further discussed in Section II. Below, I briefly recapitulate the components of like-products[65] before providing my proposition in detail.

Note that the main aspect of likeness comparison is the "competitive relationship in the marketplace" of the like-

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[63] Refer to Chapter 6.
[64] Refer however to the more nuanced explanation of the doctrine by Robert Hudec and the current postulation for the TBT context as explained in sub-section 2: General Understanding about "Product-Production Distinction" above.
[65] Already explained in Chapter 4.

products.[66] However, like the idea of intrinsic feature of a product, the likeness analysis is built upon the "characteristics" of products.[67] In determining likeness, the Appellate Body in EC-Asbestos refers to "four categories of *characteristics* [of] the product" which provide the criteria for an analysis of "likeness". These criteria include: "(i) the properties, nature and quality of the products [which the Appellate Body later re-encapsulated as "physical properties of the product"]; (ii) the end-uses of the products; (iii) consumers' tastes and habits [...] [or] consumers' perception and behaviour [...] and (iv) the tariff classification of the products".[68] In addition to that, it has been clearly established that the determining analysis is to be on a case-by-case basis: not only by the context of the WTO provision at issue; but also "by the context and the circumstances that prevail in any given case".[69]

These considerations from likeness analysis should give some ideas in interpreting of "product characteristics" and "intrinsic" features, even though the analysis of like-product concerns the legality of the non-discrimination obligations and not the query about the coverage of an obligation. After all, the idea of product-centred coverage of a provision was originally developed from the interpretation of the substance of the

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[66] *Appellate Body Report, Japan - Taxes on Alchoholic Beverages ('Japan - Alchoholic Beverages II'), WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, 1996*., at paras. 112 and 113; and as cited and considered in *Appellate Body Report, EC - Asbestos, 2001* (n 13), at paras. 95 and 99.
[67] See, e.g., analysis on likeness in *Appellate Body Report, EC - Asbestos, 2001* (n 13), at paras. 102
[68] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 101. [emphasis added]
[69] *Appellate Body Report, Japan - Alchoholic Beverages II, 1996* (n 62)., at para. 114.

requirement in Article III of the GATT.[70] The relevance between the analysis on the coverage and on the substance of the requirement has been demonstrated.

I am not suggesting that the likeness considerations are to be used as the criteria constituting product characteristics or intrinsic features, as likeness is a substantive element for determining the legality of a contested measure, and doing so would confuse the legal functions of Annex 1.1 and non-discrimination provisions in the TBT Agreement. However, they may arguably suggest the more opened notion of product characteristics and their intrinsic features, as well as the "related" PPMs. In other words, it should be arguable that the subject of a technical regulation can be those of the non-physical aspects of a product – including the environmental footprints throughout its life-cycle.

One of the possible aspects, that should be used in characterising an "intrinsic features" of a product, or the product-relatedness of the PPM in question, includes consumers' perception, which has also been of high interest for environmental regulators seeking to argue for the legality of their environmental measures: that their PPM-measures treat certain products differently because they are not perceived as "like" by consumers, despite their identical physical appearance.[71]

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[70] The Panel in the US-Tuna (Mexico) I refers to the need to compare the treatment from the trade-restrictive measure accorded to like-products. See explanation in Section 2.1 above.

[71] William J Snape III and Naomi B Lefkovitz, 'Searching for GATT's Environmental Miranda: Are Process Standards Getting Due Process' (1994) 27 Cornell International Law Journal 777., at 788-92.

In this vein, the "intrinsic" features of a product or "their related [PPMs]" in the first sentence of Annex 1.1 (that is one of the crucial components of a measure under the TBT coverage) should similarly take into account the public perception, as an additional or alternative criterion to the physical properties in the product-relatedness of PPMs subject to measures (without information-based mechanisms such as labelling). This may be manifested in, for example, the public demand for environmentally safe PPMs of products for their consumption.

An example is a restriction of certain ozone-damaging chemicals in the refrigerating methods during production and transportation of a product. If the notion of "intrinsic features", the "features that are related to them" and the "related [PPMs] are applied narrowly to refer to "physical properties" of a product, such ozone protection measure would not be covered by the TBT Agreement.

Yet, as I have proposed above, the intrinsic features include those that are based on the public perception – whether the ozone damaging life-cycle of a product is indeed intrinsically related to the product, such a measure would be under the TBT coverage, provided that it exhibits all other components of of a technical measure according to the definition in Annex 1. Such a way of identifying product-relatedness of a PPM would also reflect openness of the trade-centric rationale, to integrate environmental concepts and values, that are extrinsic to the WTO regime, into their system.

3.3.1. Limitation of the Proposition

Beyond the mere theoretical conception, it is still difficult for most PPMs as the perceived intrinsic features of a product, or ones that are integrally related to them. Such public demand is reported to be growing but is still largely limited. A large amount of purchasers also report their confusion about environmental credentials and suspicion of "green claims" of manufacturers and retailers to increase product prices.[72] In addition, the general public's awareness about environmental linkages between their consumption and the life-cycle of their products is limited, if not the case of "bliss ignorance" altogether.[73] Regulatory concepts and agendas like the UNEP's Sustainable Consumption Production explained in Chapter 6 are also still in their infancy.

This first limitation of the proposition points to the need for further evolution in environmental movements in order to realise the aspiration of environmental sustainability in consumption and production. There are not only the gaps between WTO rules and environmental regimes, but also those between the environmental ideology and its realisation in the society.

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[72] Lucy Yates, *Green Expectations: Consumers' Understanding of Green Claims in Advertising* (Consumer Focus 2009) <http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/218594/Green-expectations-single-page.pdf> accessed 1 November 2015..

[73] Lucie Sirieix, Gilles Grolleau and B Schaer, 'Consumers and Food Miles, Working Paper No. 3/2007' (AIEA2 and SOBER International Conference, Londrina Parana, Brasil 2007) <http://www1.montpellier.inra.fr/bartoli/moisa/bartoli/download/moisa2007_pdf/WP_3-2007.pdf> accessed 1 November 2015..

The second obstacle lies in the legal technicality if the environmental values are to be argued in dispute settlement as intrinsic features of a product: the closeness between this issue and legality issue under non-discrimination requirement. The more distinction may be established between products from PPMs with environmental credentials and those without, the more likely the PPM-measure in question would be considered non-discriminatory. Presenting "green" PPMs as an intrinsic property of a product could affect the considerations about "like-products" under the principle of non-discrimination. It could mean that the product produced by such PPMs is not "like" other similar products of which production lacks environmental credentials. This would mean that the claimant will never adopt such an argumentation, even if it would be better responsive with the "environmental" logic applied by the regulating agencies.

In EU-Seals Products above, for example, it was the exporting Members, i.e. Norway and Canada, who argued for the TBT-coverage in this case (as the Panel had rendered it TBT-inconsistent in prior to the appeal). They clearly had to be careful in touching upon the elements that could be used in favour of the regulating Member, the EC. If they had been able to demonstrate that the qualifications of hunters or conservation basis of the hunts were intrinsic to seals products, e.g. according to the European public perception, the demonstration could have been picked upon to support the regulating Member that the compliant seals products are "unlike" those from Canada and Norway.

3.4. Contextual Considerations: Intents of Negotiators and Disputing Parties

It should be briefly mentioned that the TBT coverage over PPM-measures in general have long been debated, and largely unresolved, since its negotiation. Attitudes of negotiators towards the issue swung back and forth, whether any PPM-measures (including labelling and other information-measures mentioned in the second sentence of Annex 1.1) are to be covered at all.[74] Not all concerns and proposals were addressed or concluded among drafters.

Recorded opinions of a number of negotiating delegations suggest the concern on Members' circumvention of the TBT obligations by imposing PPM-measures, instead of a product-measure, as a disguised barrier to trade, if the Agreement excludes PPM-measures.[75] The concern was generally shared by Members, as can be reflected in the changes in the drafting process.[76] The less rigid constitution of a PPM-technical measures would therefore serve the TBT interest of preventing Members' circumvention to the normative and administrative obligations.

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[74] See *WTO Secretariat's Note on Negotiating History* (n 8).

[75] The earlier draft of the Agreement even contained a provision addressing PPM-measures assumed to have been such circumvention. See Draft Article 14.25 in, *WTO Secretariat's Note on Negotiating History* (n 8), at 44.

[76] i.e. the removal of draft Article 14.25 and addition of the phrase "related PPMs" in Annex 1.1, the TBT Agreement. *WTO Secretariat's Note on Negotiating History* (n 8).

In a rather contrasting spirit, it was frequently expressed by certain negotiating delegations[77] that the TBT-coverage over PPM-measures should be kept "narrow".[78] The narrow scope was also mentioned by both disputing parties in the case of EC-Seals Product.[79] This said, the number of those who have expressed this opinion is limited and may not necessarily represent the general intent of the majority of negotiators. In addition to that, though the addition of criteria reflecting environmental practices other than the physical aspects of products would extend the TBT coverage further from that postulated by some commentators, it may not necessarily be overly broad.

4. Preliminary Conclusion of Section I

In my opinion, the TBT Agreement would have been a great arena for environmental measures with technical characters, no matter if they address products or their production methods. It should be able to serve the interests of both international trade regime and environmental governance – which are from the broader view than the adversarial interests of either the regulating or exporting Members.

The coverage over environmental PPM-measures is however limited as the definitions in the text of Annex 1 to the TBT Agreement are product-centred. The Appellate Body has also expressed in the EC-Asbestos that the Agreement is not to

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[77] Read in relation to Article 32 of the Vienna Convention on the Law of Treaties.
[78] *WTO Secretariat's Note on Negotiating History* (n 8).
[79] *Appellate Body Report, EC-Seals Products, 2014* (n 53).

replace Article III of the GATT.[80] The TBT coverage therefore should not include to broad of a range of measures and leave some to fall under Article III.

Section I suggests that the characterisation of PPM-measures under the TBT-coverage nevertheless should not be restricted to only the physical criterion, for the interests of both the TBT Agreement and environmental protection (in the name of the integration principle under the concept of sustainable development). This interpretation of the definitions of technical measures is supported by the text of Annex 1 and TBT case law. It would also be more reflective to environmental governance and more coherent to environmental principles.

This broader line of analysis on the TBT-coverage is the first step towards the more opened attitude of the WTO towards production-character of domestic measures in general. It seems sensible that they are to be treated "neutrally", without presumption based on their production-related character, so that they would be objectively scrutinised on the merits of TBT-disciplines.[81]

This said, in practice, more needs to evolve in terms of consumers' perception towards their environmental responsibilities during PPMs. Otherwise, only a few (if at all) PPM-measure without physical relation (including labelling and terminology) between the environmentally harmful PPMs and products would be under the TBT-coverage.

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[80] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 77.
[81] See Howse and Regan (n 11).

In other words, there is the gap in reality by which trade parlance still largely do not open to or allow the considerations of environmental ideologies and concepts, even when the latter is widely recognized in environmental legal principles and international agendas. To do so would increase the difficulty in the WTO's mandates, to maintain the economic stability and an accountable legal regime, as well as to be opened to other sustainable development objectives.

This said, it is by no means a hopeless situation in the case of public perception of the product-relatedness of PPMs discussed in Section I here. Environmental movements in the field of "green consumerism" have been increasingly active. Their campaigns have led to growing public awareness about the connectedness among different stages of a product supply chains, as well as the recognition in consumers' power and their responsibility – not only for their products but also for the PPMs throughout the product life-cycle. In response to this, there has been development of regulations addressing PPMs that take place and cause pollution outside the importing countries' territory.[82]

[82] For example: The EU prohibitions of the pollution discharge during manufacturing and subsequent ban of imported products derived from such manufacturing methods. Yixiu Wu (n 52)..

Section II: Like Products, Non-Discrimination and the Principle of Integration

As provided in the introduction of the chapter, Section II and III focus on the requirement of "treatment no less favourable". The general details of the requirement have already been explained in Chapter 4. After Chapter 5 has discussed the legalistic perspective of how the "objectives of sustainable development" could be realised in the application of the TBT/WTO Agreement, and Chapter 6 has provided some contextual picture of what "environmental" regimes look like, these following two sections revisit the requirement of treatment no less favourable again to explore how the principle of integration could be adopted in the pursuance towards the "balance" between the liberalisation of international trade and environmental protection.

The requirement is applied in two analytical phases. Section II analyses the first one, the identification of like-products, with the interests more specifically on environmental protection than the discussions in Chapter 4 could address.

One of the perceived "conflicts" between environmental regimes and the WTO's rules is the incoherent views of different agencies about "like-" and "unlike-" products. The concept has been highly contentious within the trade-environment discussions particularly in relation to measures addressing environmental protection that adopt the PPM- or life-cycle approaches. There is the general impression about the concept, that environmental reasons on their own could not warrant the WTO's determination of unlikeness, especially

when they concern the PPMs and the life-cycle of a product rather than the visual appearances of the actual product itself.

On the surface, such incoherent views could seem to represent the WTO's ignorance, an illegitimate refusal to recognise "environmentally different" qualities of products, their producers and/or life-cycle. However, the concept of like-product is more than the generic meaning of the term "like". There are also considerations that deserve attention.

First, the analytical function of the concept of like-product should be noted. Theoretically, the concept itself does not determine the TBT/WTO compliance of a measure. It is designed to provide a framework to examine such compliance. Likeness determination is therefore significant mostly from the standpoint of argumentation in dispute settlement cases, but it is not an adequate platform for the debate on the legitimacy of a given measure.

Second, it is not an accurate pretext to assume that visually identical products are necessarily "like". The Appellate Body's determination in the case of EC-Asbestos has proven that. In particular, the decision has further developed the criteria of physical characteristics and of consumers' tastes and habits. The development may potentially have removed barriers that have made it impossible to argue for PPM-based "unlikeness" between visually identical products.

The emphasis of this section is therefore on the criterion of consumers' tastes and habits, which among the currently available criteria of like-products is the most directly corresponsive with the rise of consumers' interests in

environmental impact of their consumption, or the "green consumerism" movement, presented in Chapter 6.

This section discusses whether the current interpretation of consumers' tastes and habits could allow the inclusion of environmental considerations in the light of the principle of integration. It also proposes how the criterion could be applied in the way that is favourable to a regulating Member whose contested measure addresses an environmental concern arisen in the processes and production methods (PPMs) or the life-cycle of products.

The following discussions seek to clarify the function of the comparator element of the concept of like-products. They will also point out the merits of such analytical function.

1. Like-Products: the Currently Available Criteria

In principle, Members are not prohibited, by the treatment no less favourable obligation in the TBT Agreement, from imposing trade-restrictive measures in their genuine pursuit of environmental protection. The condition is that such measures are not a disguised protectionistic policy, and the approach to identify such hidden agenda is to compare between the treatments accorded to products that are "like".

Differentiation between like-products (or the "regulatory distinction" in the trade parlance) that results in market disadvantage exclusively accorded to the imported products of the same qualities (or "like") could suggest the protectionist intent. The logic is that similar products are likely to be treated similarly despite their country of origin, and if they are

not, the rationale in "discriminating" needs to be further scrutinised. The pairing of like-products seeks to reflect whether the product classification under the contested measure is effectively country-based and hence is of a protectionistic intent.[83]

Article 2.1 simply requires that:

> "Members shall ensure that in respect of technical regulations, products imported from the territory of any Member shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country."[84]

The requirement adopts the comparative approach and minimum treatments to be accorded to other WTO Members depend on how like-products of other origin are treated. The concept of like-product is essentially an analytical formula which serves a specific function of defining the scope of comparison in examining the treatments accorded to imported products.[85] Identifying the right pair of products, or the

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[83] As may be illustrated in the Appellate Body's analysis in US-Clove Cigarettes. The regulation claiming to be based on the rationale of health protection differentiating between the clove cigarettes, which were imported almost exclusively from Indonesia, and menthol cigarettes, most of which were domestically produced. In the subsequent enquiry on "legitimate regulatory distinction", the Appellate Body points to the similarities shared by both products viewing from their health related concerns, i.e. both being flavoured cigarettes which attract young smokers. See *Appellate Body Report, United States - Measures Affecting the Production and Sale of Clove Cigarettes ('US - Clove Cigarettes'), WT/DS406/AB/R, 2012*., , at paras. 104-160; and paras. 193-200.

[84] Article 2.1, the TBT Agreement. This part re-encapsulates some elements already discussed in Chapter 4, that would be further explored in the discussions of this chapter. Unlike Chapter 4, however, this section pinpoints only the components that are directly relevant to the implementation of the principle of integration and not the overall picture of the non-discrimination requirements.

[85] The Appellate Body clarifies this in the case of US-Clove. It states: "the concept of 'like products' serves t define the scope of products that should be compared to establish whether less favourable treatment is being

"group" of products,[86] to be compared is an important strategic argumentation in dispute settlements. In favour of the regulating Member, there would then be no need for further examination under the requirements of treatment no less favourable after the identified products are rendered "unlike".

Much attention is drawn to the issues of like-products in trade and environment discussions. Likeness characterisation in the trade context is framed by a market-centric analysis which often results in determination that the identified products are like, despite their different environmental impacts and credentials. Not only does this mean that most environmental measures, which distinguish products by various criteria that may not always mirror the ones of like-product concept, could not benefit from this route of argumentation under the treatment no less favourable requirements. It may also suggest an inherent conflict between legal regimes – Or so it seems, on the surface. Yet, the question remains if it really can represent such inherent categorical conflict.

As Chapter 4 has already explained, likeness analysis comprises of the considerations on four criteria,[87] none of which explicitly encompasses environmental values. Some environmental concerns, such as recyclability of product materials, may be related to the physical properties of a

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accorded to imported products." *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)., at para. 116.

[86] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)., at paras. 193-200.

[87] Including: "(i) the properties, nature and quality of the products [which the Appellate Body later re-encapsulated as "physical properties of the product"]; (ii) the end-uses of the products; (iii) consumers' tastes and habits [...] [or] consumers' perception and behaviour [...] and (iv) the tariff classification of the products". *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 101.

product, but the increasing number of trade-restrictive measures addresses concerns during the PPMs and life-cycle of products which will not be identifiable from the product physical appearance without information disclosure by means of labelling and the likes.

1.1. Criteria of Like-Product Identification

The list of criteria is not a "closed list".[88] They are to be considered on a "case by case basis",[89] and theoretically a new criterion more favourable to regulators could emerge and be added to the list.[90] "Environmental" attributes of the product are yet to be recognised in their own right as a determinant of like- or unlikeness in the WTO's parlance.

Considerations under all criteria are framed by the ultimate question of whether the identified products have "competitive relationship" in the market of the regulating Member. I refer to this as the market-based/ market-centric frame of analysis. For example, even if the recyclability of a product is to be considered under the physical criterion mentioned above, recyclable and non-recyclable products will be considered "unlike" only if the feature affects market competition of the products.

Many are frustrated by this "incoherency", as likeness is consequently determined through market-centric and commercial values which can be too limiting in recognising the

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[88] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 102.
[89] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at paras. 101-102.
[90] Even if this is the case, it would not be an exclusive determinant of likeness as all criteria are to be included in the analysis. *Appellate Body Report, EC - Asbestos, 2001* (n 13), at paras. 102.

differences, or similarities of products on the basis of other non-commercial values.[91] The concern on this issue is most commonly attributed to environmental credentials relating to the life-cycle or PPMs of a product. Without appropriate measures imposed on the imports and sales of the products, such as labelling, certification, custom requirements and conformity assessment procedures, the different environmental credentials of the products will not be identifiable by consumers. An example includes animals of protected species sold as exotic pets. Without relevant measures, it is almost impossible for non-expert consumers to distinguish between those that had been bred in captivity and those captured from the wild (let alone the methods of hunting and transporting).

Despite such visual similarities of the animals as "products" (i.e. wild hunting vs. captive breeding), the two "processes and production methods" are significantly different in their impact on the environment considering that hunting of wildlife for sale and exportation is one of the main causes of biodiversity depletion. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is one of the prominent multilateral instruments that views "products" which are specimens of protected species on the

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[91] For example, in EC-Asbestos, like-products were analysed in the way that catered for considerations on health impact of and moral values associated with cancer inducing substances used in Asbestos fibre. Yet, one Member disagrees that likeness analysis is to be concluded on the basis of "a 'fundamentally' and 'exclusively' economic view of 'like products'", instead of being recognised on their own rights, i.e. on the health protection and/or moral views. *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 154. This seems to be in a similar direction as the "aim and effect" approach, both of which characterising like-products from the standpoint of the regulatory objectives. See e.g. Howse and Regan (n 11).

ecological (rather than economic) basis and distinguishes between the ones hunted from the wild and those bred in captivity via the systems of licensing and certification.[92]

Based on the surface meaning of "physical properties", "functionality", or "end-use", the products from the two ecologically different PPMs are likely classed as the same product, as they would generally look the same, and tend to have the same function and end-use (such as being kept as pets).[93]

In sub-sections 3-5 below, I explore one of the plausible routes by which the readily available likeness criteria may be used to render products of environmentally different PPMs and life-cycle as "unlike" under the treatment no less favourable requirements. It will be narrowly applicable and useful to only specific circumstances, which I believe is appropriate considering the analytic function of the like-product concept.

Before discussing such plausibility, therefore, I first discuss the analytic function and the implication of determining a product "unlike". Some of the issues have led to the frustration of the public audience and environmental campaigners.[94] For example, the determination of environmentally different products as "like" can be read as suggesting that they should be treated the same way and that

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[92] See brief summary of CITES in: UNEP, 'How CITES Works' <https://cites.org/eng/disc/how.php> accessed 1 March 2016.

[93] To be further discussed in a hypothetical case in Sub-Section 5.1.

[94] See the issues on "notional conflict" explained in Chapter 6. Discussions may also be found in Joanna Gomula, 'Chapter 19: Environmental Disputes in the WTO' in Malgosia Fitzmaurice, David M Ong and Panos Merkouris (eds), *Research Handbook in International Environmental Law* (Edward Elgar Publishing 2010).

Members are not allowed to differentiate between them. Such an impression forms a notion of inherent conflict between international trade rules and environmental regimes.

Such a clear-cut notion of "conflict" is largely misled because, as will be discussed in the final section of this chapter, the treatment no less favourable requirements do not prohibit all different treatments that are different but applied to commercially similar or "like" products as such, so long as the market disadvantage are not accorded only to the imported ones and not the domestic or certain MFN's products. Sub-section 2 below brings to attention that the eventual determination whether the environmentally different products are "like" may not necessarily represent a refusal of environmental values recognised by the regulatory distinction. Nor it is necessarily a failure to fulfil the commitment to the sustainable development objectives of the WTO.

2. Environmentally "Unlike" Products and "Like-Products" under the Non-Discrimination Rules

To determine environmentally different products as "like" can invoke moral reaction from environmentalists' and members of the public.[95] The term "like" has a generic meaning of "resembling" or "similar".[96] However, two items may be viewed

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[95] As observed in relation to the determination in the case of EC-Asbestos that Asbestos is "unlike" other types of fibre due to its cancer inducing substances. Emily Lydgate, 'Consumer Preferences and the National Treatment Principle: Emerging Environmental Regulations Prompt a New Look at an Old Problem' (2011) 10 World Trade Review 165..

[96] See Collins English Dictionary – Complete and Unabridged, 12th Edition 2014 © HarperCollins Publishers 1991, 1994, 1998, 2000, 2003, 2006, 2007, 2009, 2011, 2014, cited online via: http://www.thefreedictionary.com/like.

as “like” when viewed from one perspective and “unlike” from another. Different ways of thinking and different considerations that inform the characterisation of likeness result in different determination.

As explained above, the term like-product under trade-rules is more nuanced than the generic meaning and is framed by a specifically market-related enquiry. It is therefore not a surprise that the characterisation of “like” and “unlike” under international trade rules would differ from those of the environmentalists. There is an inevitable difficulty to translate environmental credentials to warrant the “unlikeness”, in accordance with the regulatory distinction, in trade terms.

This said, it is important to note that rendering a pair of products as “like” is not an exclusive determinant of a violation to the requirement of treatment no less favourable. Likeness analysis should not be taken to represent the recognition, or refusal, of the legitimacy of the cited environmental objectives and of the rationale of regulatory distinction. Considering the analytical function of the like-product concept described above, it is rather logical that like-products under the requirement of treatment no less favourable are determined by the market-based analysis.

I think the legitimacy of the contested measure and its declared objectives is more appropriately recognised and weighed in the second phase of the assessment under the requirements, particularly in considering the “legitimate regulatory distinction” and “even-handedness” of the

measure.[97] Determining the products in question as "unlike" could be a short-cut for regulating Members' success in dispute settlement under the WTO, as the details of their regulations no longer need to be scrutinised. Yet, the two components of the treatment no less favourable requirement would become unnecessarily confused if the concept of like-product is to adopt the task of recognising legitimacy, in addition to its analytical function. On this basis, the market-based framework of likeness analysis seems to serve a legitimate purpose.

Determining the products as "unlike" would facilitate importing Members in an allegation of TBT-violation, but to pressure the determination to echo the regulatory distinction of the contested measure is not necessarily constructive to environmental governance and international community in the long run. Consistent characterisation may reflect a "coherent" characterisation of products and their likeness. It would be a means for the "reconciliation" of trade rules and environmental rationale. Yet, I believe that the different meanings and analytical formula of like-products do not categorically represent conflict between the non-discrimination rules and environmental protection either.

Below, I discuss the plausible interpretation of the currently available criteria above that could result in the determination of "environmentally different" products as "unlike products". The discussion first focuses on the criterion that could prevent the consistent characterisation of trade and environmental "likeness" in the WTO parlance, especially in the case of

[97] To be discussed more fully in Section III.

measures addressing PPMs and life-cycle: the physical criterion. It then explores the last criterion of consumers' tastes and behaviours.

3. Can the Current Likeness Criteria Support the Rationale of Environmental Regulatory Distinction?

The general understanding that likeness analysis is focused on the physical criterion has long projected the contradiction between PPM-based approach in addressing environmental problems and the concept of like-product under trade rules.[98] Not only that, the more crucial point in my opinion is that, before the Appellate Body's decision in the case of EC-Asbestos Products, the criterion of consumers' tastes and habits has been implemented in the way that could not realistically integrate environmental values into the considerations.

The Appellate Body's decision in EC-Asbestos has established development in applying these two criteria: the physical aspects of product-likeness and the consumers' tastes and habits. It reaffirms that, in contrast of the general impression of some observers, the physical criterion is not an exclusive determinant. It also changes the approach in the query of consumers' tastes and habits. In this sub-section, therefore, I summarise the elements from the decision by which environmentally different products may be rendered "unlike" under the treatment no less favourable requirements, even

[98] Generally in reference to the "product/process doctrine" explained in Section I above.

though they have similar physical appearance, functions, end-use and commercial values.

First, the Appellate Body clarifies that all four criteria have to be considered in determining product likeness, and not only the physical criterion.[99] It has also elaborated the criterion beyond physical visibility of the product that could be distinguishable by the general consumers, as it considers the "molecular structure, chemical composition and fibrillation capacity of Asbestos which are distinguishable only with scientific tests, their "toxicity" and health risks under the criterion of physical properties.[100]

Second, it has established an approach that has arguably eliminated the hurdles that have made the argumentation for unlikeness and its consideration by the criterion of consumers' tastes and habits unrealistic and unconstructive to the development of environmental governance.[101] The comparison with elements from previous cases, such as Japan – Alcoholic Beverage II,[102] reflects case law development and significance of the Appellate Body's decision in the case of EC-Asbestos.[103] Before such development, the query of consumers' tastes and habits was treated as the task of "fact finding" that was burdensome to demonstrate, due to the requirements on economic methodology, empirical or "quantitative" evidence, and the concept of "non-crystallised" perception of

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[99] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 109.
[100] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at paras. 113-114.
[101] It has been observed that, because of such evidence requirements, the criterion of consumers' tastes and habits has often been left unutilized by regulating Members. Lydgate (n 91)..
[102] *Appellate Body Report, Japan - Alchoholic Beverages II, 1996* (n 62)..
[103] See Lydgate (n 91)., at p. 168.

consumers.[104] Ironically, such quantitative methods do not seem to be able to deliver a demonstration of "fact" any more accurately than other methods. As I will discuss below, there could never have been an absolute fact about the consumers' tastes and habits, as before the decision of EC-Asbestos Products, this criterion was only a hypothetical notion as to what could have happened had the contested measure not been put in place.

3.1. Criterion of Consumers' Tastes and Habits before EC-Asbestos: Burdensome and Unconstructive

Environmentally different products may be considered unlike by the criterion of consumers' tastes and habits, if they are perceived as different products by consumers or lacking the market competitive relationship. This includes the scenario where consumers would outright refuse to buy particular products.

Before EC-Asbestos, regulating Members would have had to prove that notion with quantitative evidence and economic methodology. In Japan – Alcoholic Beverage, for example, the traditional alcohol "shochu" is considered "like" the imported beverages such as vodka. The regulating Member Japan failed to convince by its survey of actual alcohol consumers, nor could it support the survey with economic theories, to argue that shochu would still be preferred had it been sold in a different price range.[105] The dispute settlement bodies'

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[104] Lydgate (n 91)., at p. 171-176.

[105] *Appellate Body Report, Japan - Alchoholic Beverages II, 1996* (n 62)., at p. 32, affirming the Panel's likeness determination on the basis of its fact finding, with some "modifications to the Panel's legal findings and

determination also applied an "econometric methods" that suggested the existence of market competition between the domestic and imported products in question.[106]

Both quantitative evidence and econometric methods have been deemed to provide "objectivity" in implementing the consumer's perception criterion.[107] Yet, in reality, consumers' perception is unlikely measurable, nor can it be simplistically demonstrated in such quantifiable approaches. Neither quantitative/empirical demonstration nor economic methodologies necessarily conclusively represent the true perception and market competition between products.

On top of that, consumer' perception that can be considered under this criterion has to be "non-crystallised", i.e. not being created by the measure at issue.[108] With such requirement, regulating Members would have to present what the consumers' perception would have been if the contested measure had not been imposed and distorted their perception.

This can often be unrealistic to demonstrate as a factual phenomenon and consequently prevent claims on the ground of consumers' tastes and behaviours. To create the "right" perception within their respective constituency is one of the most necessary tasks of regulators,[109] and an appropriate

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conclusions". See also: *Panel Report, Japan – Taxes on Alcoholic Beverages ('Japan-Alcoholic Beverages II'), WT/DS8/R, WT/DS10/R, WT/DS11/R, July 1996*, at paras. 6.31 and 6.32.

[106] Lydgate (n 91)., at p. 168.

[107] Lydgate (n 91)., at p. 172-175.

[108] Lydgate (n 91)., at p. 173.

[109] Douglas Kysar, 'Preferences for Processes: The Process/Product Distinction and the Regulation of Consumer Choice' (2004) 118 Harvard Law Review 525., at 632.

regulatory measure should not have had to wait until the public have already formed their own environmentally constructive perception about their products. In such contexts, the "non-crystallised" tastes and habits to be demonstrated in a dispute settlement would therefore have to be a retrospective speculation, which is even more difficult and unrealistic to be demonstrated in such factual and quantified approach.

The requirement of non-crystallisation would convey a message that regulating Members are discouraged to alter consumers' perception which could result in disruptive regulatory "chill" in development of environmental governance. The tendency to consider the criterion as evidence-based fact finding and to exclusively adopt economic theory also creates an unnecessarily strict and narrow formula in considering the criterion.

3.2. Development by the Appellate Body in EC-Asbestos in Considering the Criterion of Consumers' Tastes and Habits

With this respect, the Appellate Body's approach in EC-Asbestos is significant, particularly to measures that deal with non-commercial values such as environmental protection. In short, the Appellate Body has turned the query of this criterion into an "interpretative task", by which the consumers' tastes and habits were determined by the Appellate Body's own rationalisation, if not "speculation". It was concluded by the Appellate Body's own common sense that the public would outright reject asbestos due to its attribution to cancer hence the lack of market competition. Due to such assumed

rejection, there was no market competition between asbestos and other types of fibre products.

Consumers' perception in EC-Asbestos and market competitiveness was concluded without evidence-based demonstration of behaviours of actual consumers. The query was approached analytically as it was the Appellate Body's analytical deduction from what should be the public response to the knowledge of the carcinogen chemicals, to conclude that the alternative fibres were preferred to asbestos to the extent that they lack competitive relationship in the market.[110]

The deductive character of the Appellate Body's analysis may in fact be illustrated by its very attempt to appear non-subjective, as it proclaims to not "speculate on what the evidence regarding these consumers would have indicated", but proceeds to conclude that "consumers' tastes and habits regarding fibres [...] are *very likely* to be shaped by the health risks associated with a product which is known to be highly carcinogenic."[111]

Not only that, in EC-Asbestos, the actual "consumers" that directly purchase such fibre products[112] were a limited number of manufacturers, and not the general public.[113] The analysis no longer discusses whether the asbestos products at issue

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[110] Lydgate (n 91)..
[111] [emphasis added] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 122. The language in this statement has even been seen as self-contradictory in itself. Lydgate (n 91)., at p. 168 and 178.
[112] Under the approach adopted in Japan-Alcoholic Beverages II, these specific groups of consumers would have been the subject in the consideration of consumers' tastes and habits.
[113] As observed in *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 122.

pose health risks,[114] nor does it refer to the specific group of people to whom the carcinogenic substances in the product at issue may be exposed to, such as the workers in such manufacturers. The Appellate Body's rationalisation has become about the idea of association between carcinogen and its moral impact on the public's perception about the products.[115]

This observation supports the above points: the Appellate Body has turned the query into an "interpretative exercise", as opposed to "fact finding".[116] Consumers' differentiation between the products in question was determined by the Appellate Body's own conclusion based on the "value judgement" and its own "common sense".[117] The decision could have also been influenced by the potential public reaction to the morally invoking message of determining that products attributable to cancer can be in anyway seen as equivalent to other products,[118] despite the nuanced conception of the term like-product explained above.

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[114] As it was claimed by Canada before the Panel that its current products do not impose risks due to their encapsulating method (an inert matrix). *Panel Report, European Communities – Measures Affecting Asbestos and Asbestos – Containing Products ('EC-Asbestos Products'), WT/DS135/R, September 2000*, at para. 3.9. In other words, Canada did not object that the exposure to asbestos is hazardous, but argues that its products do not cause such exposure.

[115] Note that I am not using the term moral here in the same meaning as "ethical". The term moral is used to here to point out that the perception is not based on the causal relationship between health risks at issue (which are caused by inhalation of the chrysotile fibres and may be prevented by certain encapsulating methods in the manufacturing process of asbestos products) but *the perceived risks* due to association between cancer and asbestos products that may have been caused by asbestos products produced without the safety standards on encapsulating methods.

[116] See Lydgate (n 91)., at p. 168-169.

[117] Referred to as "common sense approach" in Lydgate (n 91)., at p. 178.

[118] Lydgate (n 91)., at p. 169.

Even though the Appellate Body provides that all criteria of like-products are to be considered, it was primarily down to the considerations on the criteria of physical properties and consumers' tastes and habits that asbestos fibres were considered "unlike" other types of fibres non associated with risks to cancer.[119] The role of moral values applied in the consideration of consumers' tastes and habits above is particularly interesting and could be significant for an argument in the case of environmental concerns, as will be discussed below.[120]

3.2.1. A Generalised Guidance for Future Dispute Settlements: Circumstantial Considerations for the Use of Value Judgment

It has been observed that a possible guidance that may have come out from EC-Asbestos in regards to consumers' perception is that certain situations in the case may allow Appellate Body to adopt a discretional "value judgement" in considering the consumers' tastes and habits, and effectively turning what usually is a fact finding issue into the issue of interpretation.[121] Such circumstance includes "when [the situation is] dealing with normative regulations that limit, or eliminate, the ability of consumers to choose, and thus have their preferences measured".[122]

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[119] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 116 and paras. 133-148.
[120] Note that the discussions about the appropriateness of the approach and its potential shortfalls can be found in Lydgate (n 91)..
[121] See Lydgate (n 91)., at p. 168-169.
[122] Lydgate (n 91)..

Such specific circumstantial requirements would have been quite limiting in the case concerning environmental problems. The health concern in the case of EC-Asbestos is different from most environmental concerns. The idea of allowing "cancer inducing" substances to be sold in the market directly invokes moral sense. It is questionable what environmental concern would be perceived with such morally provoking connotation.

The analytical approach relying on common sense such as this can also be unpredictable. The Appellate Body's analysis could have gone in either direction. The moral involvement of the public in environmental problems may also be less strong than health risks of carcinogen, and the likelihood of value judgement in favour of the environmental regulatory distinction may decrease.

Note, however, that the "unlikeness" due to the morally provoking attribution to cancer in the case of EC-Asbestos may seem obvious in hindsight. Yet, without the conclusion of the Appellate Body, unlikeness between the two types of fibre may have well been unexpected. The Respondent did not seek to argue on this criterion.[123] The European Communities sought to rely on the "aim and effect" approach in arguing for "unlikeness" by the "ordinary meaning of Article III: 4, read in context and in light of its object and purpose".[124]

Bear in mind that asbestos fibre was accepted in the domestic market of the exporting Member Canada, the Claimant in the

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[123] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at paras. 30-35.
[124] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 31.

case. The same products seemed to have been accepted by the Canadian public. Generally, the Canadian public standard in health and safety, economic status, the technological development, and the society's awareness and attitude towards cancer do not seem to vastly differ from the ones in France. Without particular empirical evidence of the French consumers' perception, and with the Canadian public's acceptance of the products containing asbestos in question, it would not have seemed obvious that the product's attribution to cancer would trigger the public's rejection to the extent that it lacks the market competitive relationship with other types of fibres.

In this light, it may be argued by the exporting Members that the circumstances in any given case of environmental measure are not equivalent to that in the case of EC-Asbestos Products. Yet, there are elements from the analysis above that could plausibly be useful for regulating Members in arguing for "unlikeness" on the basis of the criterion of consumers' tastes and habits.

The usefulness of the contextual "guidance" observed from the case of EC-Asbestos Products above does not seem to be significant in most environmental cases. However, I think there are some other elements of the Appellate Body's analysis explained above that are crucial and should be useful to an environmental case, even without such circumstantial considerations equivalent to cancer-inducing products. After all, there are no obvious indication that such public connotation is a requisite for the application of these crucial components, which are to be pointed out as follows.

3.2.2. A Generalised Guidance for Future Dispute Settlements: Deductive Approach in Interpretation and Consideration of the Criterion

In my opinion, two aspects of the Appellate Body's consideration on consumers' tastes and habits are significantly crucial: (1) the possibility to approach the criterion as an "interpretative task" instead of fact-finding; and (2) the logic applied in articulating the notional consumers' tastes and habits about the product and its market competition.

First, the Appellate Body's approach of interpreting the consumers' perception would reduce the hurdles of demonstrating and arguing for the consumers' perception on the products' market competitive relationship (or the lack of it) as described above. As it is not an evidence-based fact finding, the empirical evidence and quantitative demonstration are no longer required for consumers' tastes and habits. Evidence of purchasing tendencies which could be reflected by consumers' movements (e.g. in the form of boycotting or buycotting) was not used in the Appellate Body's conclusion about consumers' perception of asbestos.

Not only that, the consumers' tastes and habits in this case seem to be read to refer to an abstract notion rather than a factual phenomenon. It did not even seem to matter that, as the Appellate Body itself observes, the "public" in this case does not refer to the actual consumers of the products in question.

It is interpreted and considered by a deductive articulation of what a society would perceive of a product, in relation to the

others being compared. Consumers' perception in EC-Asbestos Products was assumed by deduction, rather than reflected by hard evidence or quantitative/econometric methodologies, based on the Appellate Body's value judgement and common sense to determine whether an average person would purchase a product with carcinogen chemicals. In this case, the logic is centred on the perceived health risks and moral sentiments when asbestos is referred to.

The moral sentiment of the French public was assumed with little, if at all, consideration on the causal relationship between the actual product in question, which actually contains safety encapsulation designed to prevent consumers' exposure to the carcinogen substances, and the actual risk of cancer. Different aspects of the risks, e.g. the fact that the level of risks differs among different groups of people,[125] were in fact not explored.

3.2.2.1. Implication of the Appellate Body's Characterisation of Consumers' Tastes and Habits

If the criterion is turned to a notional concept and not treated as factual information, it could open doors to a route of integration and openness for inclusion of environmental considerations, as tested and tried in the WTO jurisprudence: the principle of systematic integration. In particular, the customary rules on treaty interpretation, as reflected in Article 31 of the Vienna Convention on the Law of Treaties and as applied in the case of US-Shrimp explained in Chapter 5, could

[125] Consider, for example, the level of risks for workers in the industries that use the fibres vs. the general public who would have less risk to be exposed to and to inhale the carcinogen substances of the product.

provide a useful lesson for the inclusion of environmental considerations in considering the criterion of consumers' tastes and habits in relation to environmental credentials or concerns associated with the product. This is particularly relevant as Chapter 5 has already established that the implementation of the principle of integration, under the concept of sustainable development, should be the focus in the reconciliation between WTO rules and environmental protection.

Below I explore how the likeness analysis could follow the lead of US-Shrimp in the interpretation of the criterion of consumers' tastes and habits. Before that, I first summarise the legal routes outlined by the Panel in the case of EC-Biotech Products, subsequent to the Appellate Body's decision of US-Shrimp. In sub-section 5.1 below, a hypothetical case of a regulatory distinction based on PPMs and life-cycle in protecting the endangered species via prohibition of sales of hunted wildlife as mentioned above will be discussed as an example of possible implementation.

4. The Interpretative Rules as Laid Out in EC-Biotech Products

After the Appellate Body's decision in the case of US-Shrimp, the normative relevance of this interpretative principle is reaffirmed by the Panel in the case of EC-Biotech Products.[126] The interpretation in this case did not eventually support the regulating Member's argument. Yet, the Panel's reasoning in its interpretation of the term reinforces the interpretative

[126] *European Communities - Measures Affecting the Approval and Marketing of Biotech Products ('EC - Approval and Marketing of Biotech Products'), WT/DS291/R, 2006*..

approach applied by the Appellate Body in US-Shrimp in accordance with Article 31(1) of the Vienna Convention.[127]

The Panel in fact included environmental considerations that were raised by the exporting Members. In doing so, the Panel laid down the theoretical applicability of Article 31(3)(C) and Article 31(1) of the Vienna Convention.[128] It outlined the different routes by which environmental considerations and instruments extrinsic to the WTO regime (including multilateral environmental agreements or MEAs) may become legally relevant in the interpretation of the WTO agreements.[129]

The first route is consistent with Article 31(3)(c), that the interpretation and implementation of WTO agreements must be "by reference to relevant rules of international law arising outside of the WTO context, as reflected in international

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[127] In fact, it has been observed that the Panel could arguably have better used other grounds in the Vienna Convention. It has been speculated that the Panel had applied the "interpretative tool" this way, which is more restrictive in incorporating considerations and rules outside of the WTO context, in order to follow the US-Shrimp jurisprudence. For more discussions on the particular case of EC-Biotech Products, see: Joe McMahon and Margaret Young, 'The WTO's Use of Relevant Rules of International Law: An Analysis of the Biotech Case' (2007) 56 International and Comparative Law Quarterly 907..

[128] This theoretical elaboration of the interpretative rules was not done in the Appellate Body's analysis in US-Shrimp. Some therefore argue that the Appellate Body's reasoning was based on more than the two provisions. McMahon and Young (n 123)., at footnotes 91-94. These are however debateable and some are rather far-fetching. Leaving the possible alternatives in the Vienna Convention aside (as they are not as relevant to my proposition), it is still admitted that the provision with the most direct relevance in the Appellate Body's reasoning was Article 31(1). Its relevance also seems the most apparent (in comparison with other provisions of the VCLT) as the terms "ordinary meaning" and "object and purpose" are key in the interpretation of "exhaustible resources" in US-Shrimp. See Chapter 5.

[129] See *Panel Report, EC - Approval and Marketing of Biotech Products, 2006* (n 122)., at paras. 7.74-7.96.

agreements and declarations.[130] Such rules must legally bind the disputing parties in the case.[131] The EC's inference to the Precautionary Principle to legitimise its measure was also rejected. The Panel followed the Appellate Body's ruling in the case of EC-Hormones by refusing the interpretative relevance of the Precautionary Principle in the case on the basis that its "legal status [...] remains unsettled".[132]

The second route is in accordance with Article 31(1) of the Vienna Convention, as WTO agreements must be interpreted (1) "in good faith" and (2) "in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose."[133] In essence, this

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[130] *Panel Report, EC - Approval and Marketing of Biotech Products, 2006* (n 122)., at paras. 7.49-7.50. It is however arguable as to what extent the environmental norms that are not legally binding but legally "significant" would be considered as "relevant rules of international law".

[131] It refused to include the 1992 Convention on Biological Diversity and the Cartagena Protocol into its interpretative consideration under Article 31(3)(C) as the US had not ratified to the 1993 Biodiversity Convention, and the three Claimants had not ratified to the 2000 Cartagena Protocol on Biosafety to the Convention on Biological Diversity. See Simon Lester, 'European Communities-Measures Affecting the Approval and Marketing of Biotech Products' (2007) 101 The American Journal of International Law 453., at p. 457.

[132] *Panel Report, EC - Approval and Marketing of Biotech Products, 2006* (n 122)., at paras. 7.76-7.89. My opinion is that the rationale of such a decision seems legitimate, from legal and political viewpoints, as the inclusion of such environmental rules under Article 31(3)(C) of the Vienna Convention is on the ground that the rules are "applicable in the relations between the parties". The points about the argumentation in the particular case however are not the direct interest in this thesis. More discussions could be found in for example: Tomer Broude, 'Genertically Modified Rules: The Awkward Rule-Exception-Right Distinction in EC-Bitech' (*Hebrew University International Law Research Paper No. 14-06*, 2006) <SSRN: http://ssrn.com/abstract=949623 or http://dx.doi.org/10.2139/ssrn.949623> accessed 1 March 2016; and Lester (n 127)..

[133] Article 31(1), the Vienna Convention.

route allows any "informative elements"[134] to be included into considerations in the implementation of the WTO agreement.

Although "consumers' tastes and habits" is not a treaty term per se, Article 31(1) provides an idea that should be constructive to its interpretation.[135] The second route could be useful for environmental regulators' argumentation for legitimacy of the contested measure as will be demonstrated in Sub-Section 5 It is also more flexible than the first route of Article 31(3)(c), as it does not require legal status of the inferred instruments applicable to both disputing parties.[136] This said, this route of argument is not without limitation.

According to the EC-Biotech Products, the Dispute Settlement Bodies are to include the environmental references on this basis only if it deems "informative" and necessary for the determination of the ordinary meaning.[137] They may therefore refuse to include some information if they deem it unnecessary in determining an "ordinary meaning" of a term or in identifying the context within which the term is to be interpreted.

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[134] Lester (n 127)..

[135] This has been pointed out but not explored in: McMahon and Young (n 123)., at p. 914. The authors point out that "likeness" is one of the "WTO treaty terms" of which interpretation could be assisted by international law, and that dispute settlement bodies "had to follow customary norms of treaty interpretation, which are codified, at least in part, by the [Vienna Convention]".

[136] Note that it does not require the instrument to be obligatory to *all* WTO Members but only the ones involved in the dispute. *Panel Report, EC - Approval and Marketing of Biotech Products, 2006* (n 122)., at paras 7.68.

[137] As the Panel stated: "a panel may consider other relevant rules of international law when interpreting the terms of WTO agreements if it deems such rules to be informative". *Panel Report, EC - Approval and Marketing of Biotech Products, 2006* (n 122)., at paras. 7.90-7.96, cited in Lester (n 127)., at p. 457.

4.1. Complex Nature of "Environmental" Considerations

At first glance, this route of Article 31(1) of the Vienna Convention above seems to provide a broad leeway for environmental regulators as it allows various environmental references, with or without legal status, to provide the context by which the consumers' tastes and habits are to be determined. However, such broadness means that there can be other sources of considerations that would lead to an undesirable decision for the regulating Member(s) as was the case in the Panel Report in EC-Biotech Products. They can then inform the interpretation in such a way that environmental considerations are undermined and became insignificant to the eventual decision-making.

There could also be considerations, international standards, and international instruments other than those referred to by the regulating Member but could be deemed as more relevant or informative on the matter. These instruments can include the ones that are centred on the environmental interests, as well as those that are not relevant to environmental protection. To make matters worse, it can become a discretional exercise to decide which sources are most relevant and should be considered as "informative".

In EC-Biotech Products, for example, it is not obvious whether the interpretation of the term "disease" should be informed by the definition established by the World Organisation for Animal Health (OIE) or the World Health Organization (WHO).[138] the interpretation of the terms in Annex A of the SPS Agreement,

[138] McMahon and Young (n 123)., at p. 925.

e.g. "pests", "disease", "additives" by the ordinary meanings as provided by a dictionary instead of specialised international standards,[139] led to the determination that the contested measures were specifically "sanitary or phystosanitary" (SPS) measures rather than the more generic "environmental protection" measures. The objectives were not characterised on the basis of the terms' attribution to the broader scheme of biodiversity objectives under the Convention on Biological Diversity (CBD) and the Cartagena Protocol on Biosafety.[140] If the terms were considered as matters of environmental protection, the measure would have been rendered outside the coverage of the SPS Agreement and instead fall under the TBT Agreement.[141] In the case of EC-Biotech Products, the measure was then scrutinised by the SPS rules which are

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[139] Such as the International Plant Protection Convention (IPPC) for the term "pest"; the OIE for the term "diseases"; Codex standards (which is the international food standards founded by the Food and Agriculture Organisation of the United Nations and the WHO) for the term "additives". McMahon and Young (n 123)., at p. 922-923.

[140] As argued by the European Community. *Panel Report, EC - Approval and Marketing of Biotech Products, 2006* (n 122)., at para. 4.502.

[141] *Panel Report, EC - Approval and Marketing of Biotech Products, 2006* (n 122)., at paras. 7.175- 7.433. As explained in Chapter 2, the coverage of the TBT Agreement excludes measures that constitute SPS measures as defined by Annex A of the SPS Agreement. SPS measures (sanitary or phystosanitary measures) are defined by objectives of the measure at issue. SPS objectives by definition of the SPS Agreement include:

> "(a) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;
> (b) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease causing organisms in foods, beverages or feedstuffs;
> (c) to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or
> (d) to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests." Annex A(1)(a)

more restrictive on domestic regulations than those of the TBT Agreement.

In general, external sources to inform the interpretation of an "environmental" term could be brought from various contexts, such as public health, disease prevention and other environment-related issues, some of which may also be related to other important environmental themes recognised in international forums that do not support the regulating Members' interpretation.[142] As explained in Chapter 6, an issue that may be generally identified under the "environmental" rubric can be intricately tied with overriding priorities and values other than those causally and materially related to the prevention and mitigation of environmental problems.

In this regard, another challenge is therefore the complex nature of "environmental" considerations and concerns, which can be conflicting despite being under the overall rubric of "environmental" or are related to "environmental protection".[143] No matter what it is, there will likely be the broad room for various types of information, considerations, political instruments and norms of varying legal significance – to support the argumentation of both regulating and exporting Members, even though their arguments are opposite from each others. Disputing Parties arguing on this basis would also need to prevent the inclusion of other elements that would result in an opposite interpretation.

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[142] See the summary of environmental themes acknowledged as important in international forums on sustainable development in Chapter 6.
[143] The issue of complexity and the definition of "environmental" is discussed in detail in Chapter 6.

Though there is such difficulty for the regulating Member due to the adversarial nature of dispute settlement systems, this interpretative route of integration could allow discussions on the environmental substances to take a more prominent role in the market-centric analysis (such as an interpretation of a term in the GATT,[144] SPS Agreement,[145] or the TBT Agreement; and the concept of like-products[146]).

This includes the interpretation of a term or a consideration of likeness criteria.[147] Even though the rhetoric used in deliberation may still be done by the market-based frame of analysis or in a trade parlance, environmental perspectives should have been incorporated into the substance of the decision. Dispute settlement bodies will have the responsibilities to justify their decision and will be answerable to the Members and the public if the environmental considerations are not adequately weighed in their analysis. It could also be argued that to refuse any kind of environmental considerations altogether would contradict the WTO's overall object and purpose of sustainable development.

5. How Could Environmental Instruments Be Used as Interpretative Tools in Considering the Criterion of Consumers' Tastes and Habits?

Note that there are other approaches proposed in accordance with the Vienna Convention by which the rules of interpretation could be applied in incorporating MEAs into the

[144] As seen in the case of US-Shrimp, see Chapter 5.
[145] As seen in the case of EC-Biotech Products, discussed above.
[146] As will be further explored below.
[147] The latter will be further explored below.

implementation of the WTO agreements. There have also been much commentaries and criticisms on the Panel's implementation in the case of EC-Biotech Products.[148] Below, I only explore the plausibility of the interpretative integration in alignment with Article 31(1) in the likeness analysis with the focus on the criterion of consumers' tastes and habits. The discussions will be done with a hypothetical scenario below.

5.1. A Hypothetical Case of the US Prohibition of Sales of Hunted Wildlife

Biodiversity degradation is among the most urgent environmental concerns and is recognised as one of the top priorities in the pursuit for sustainable development.[149] As noted in Chapter 6, one of the main causes to wildlife decline, endangerment and extinction is poaching and wild capture for trade, as recognised.[150] Controls and regulations on such trade are a widely accepted approach to address the problem under sustainable development agenda.[151] Such controls and

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[148] Such debates will not be included here as they require much depth in the discussions that is not an immediate interest of this thesis. For more detail on the integration between different international legal regimes in general See, e.g. 'Report of the Study Group of the 58th Session of International Law Commission, "Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law" A/CN.4/L.682, 13 April 2006' (1 March 2016) <http://legal.un.org/ilc/guide/1_9.shtml> For the relationship between WTO rules and MEAs, see, e.g. Agata Fijalkowski and James Cameron (eds), *Trade and the Environment: Bridging the Gap* (Cameron May 1998).. For more in-depth discussions in the context of the case of EC-Biotech Products, see, e.g. McMahon and Young (n 123)..

[149] As shown in Chapter 6.

[150] E.g. *The Future We Want as adopted in Resolution 66/288 of the 123th UNGA Plenary Meeting, A/RES/66/288*., 11 September 2012. For brief overview, see, e.g. World Wildlife Fund, 'Illegal Wildlife Trade: Overview' <http://www.worldwildlife.org/threats/illegal-wildlife-trade> accessed 1 March 2016.

[151] E.g. *The Future We Want, 2012* (n 146)..

regulations also fit under the concept of sustainable consumption and production (SCP), which endorses the life-cycle approach in addressing environmental problems beyond the point of consumption.[152] The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) specifically deals with trade in depleting species and plays the central role in creating international cooperation and national implementation of control, permitting, licensing and certification systems in trade of certain species.[153]

Depletion of several species has been attributed to the demand for pet trade.[154] One of the key approaches in addressing this[155] is by distinguishing between specimens that have been caught from the wild and those that have been bred in captivity.[156] In concept, the approach is not to prohibit the sales of such animals, but only the wild caught ones. In principle, this is to be realised via the processes of certification and licensing.[157]

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[152] See Chapter 6.

[153] The level of control depends on the level of threats to extinction of the species. For general information about the categorisation of species, see CITES, 'How CITES Works' <http://cites.org/eng/disc/how/php> accessed 1 March 2016..

[154] Snape III and Lefkovitz (n 67)..

[149] except for species which are "threatened with extinction" which are listed in Appendix 1 of CITES – as the import of such species for commercial purposes is prohibited. CITES (n 149)..

[156] As seen in, e.g. the 1992 US Wild Bird Conservation Act (WBCA). For summary about the legislation, see Snape III and Lefkovitz (n 67)..

[157] For summary of the distinction between the captive bred and wild caught pets, see: Tony Jones, 'Captive Bred vs. Wild Caught' (*Federation of British Herpetologists*, July 2012) <http://www.fbh.org.uk/facts/captive_bred_vs_wild_caught.html;> accessed 1 March 2016.. In practice, as will be further discussions below, the certificate and licensing systems may not be designed to allow breeders outside of the regulating Member, or prohibit imports from countries of their natural habitats. The US WBCA, for example, allows the sales of the specimens only if they are bred by breeders approved by the US' own domestic agencies. Snape III and Lefkovitz (n 67)., at 812.

5.1.1. Consumers' Tastes and Habits in Relation to the Regulatory Distinction of Traded Animals Based on the Harvesting Methods

Such prohibition of sales and certification and licensing processes, if applied to imports from WTO Members, could well be under the coverage of the TBT Agreement.[158] In trade terms, the regulatory distinction at issue is PPM-based, whether it is caught from the wild or is captive bred in this hypothetical case.

This rationale of such distinction would cite an immediate objective under the rubric of biodiversity protection which, as shown in Chapter 6, is internationally recognised as an urgent theme of concerns.[159] Yet, as I have explained earlier in this chapter, the environmental legitimacy associated with the cited objective will not be part of the characterisation of product-likeness, as the legitimacy consideration should be more relevant to the evaluation of the eventual legality of the measure.

For the purpose of identifying like-products, it is the four criteria that are relevant in trade terms: physical characteristics, end-use, functions and the consumers' habits

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[158] Provided that the measure is outside of the SPS coverage and constitutes one of the three technical measures defined in Annex 1 of the TBT Agreement, discussed in Chapter 2 and Section I of this Chapter, respectively. Note also that the SCP concept (as part of the sustainable development agenda) and CITES could be referred to as "informative" to the ordinary meaning of the term "products and related processes and production methods", which are one of the key components constituting a "technical regulation" and a voluntary "standard" under the TBT coverage, discussed in Section I of this Chapter.

[159] As presented in Chapter 6. See, e.g. *The Future We Want, 2012* (n 146)..

and tastes in regards to exotic pets. The two PPM-based categories of the animals may have some detailed differences in their visual appearances such as size and colours, behavioural characters and the different documentation disclosing the breeding information and the exporters, importers and breeders of the animals.

Before the Appellate Body's decision in EC-Asbestos, such physical differences may have included only those visible to ordinary consumers mentioned above, which may often be very difficult to identify by non-experts. For some species, visual differences may not have even been identified or recorded by scientific institutions to distinguish between wild-caught and captive-bred animals.

After EC-Asbestos Products, the physical properties under this criterion does not need to be recognisable visually by the consumers. This should be favourable to environmental regulators in some cases relating to exotic pets. Like the carcinogen substances in asbestos products found in the molecular level, the "physical properties" that may warrant "unlikeness" under trade term may include genetic interference in captive breeding, which plays an increasing role both for the purposes of developing traits suitable for being kept as pets by human. The physical aspects may also include behavioural characteristics of the animals raised in captivity which differ from those in the wild.

In fact, genetic records are a common practice in some contexts to certify animals' bloodline and prevent

inbreeding.[160] In addition, before the jurisprudence from the Appellate Body's decision in EC-Asbestos Products, the criterion of consumers' tastes and habits would certainly have had to be concluded by the evidence-based demonstration including empirical surveys of the exotic pet keepers, as the relevant group of consumers.[161] It would have had to be the "non-crystallised" tastes and habits, that is the consumers' perception formed without the influence of the contested measure.[162] Such perception would be difficult to demonstrate by hard/quantitative evidence. There may be some empirical observations that suggest moral preference of consumers,[163] but, it is hard to imagine that a vague survey would be sufficient to illustrate a clear-cut distinction as perceived by the general public and pet consumers regarding captive-bred and wild-caught animals.

As argued above, these hurdles would be most likely lifted in the case where there are strong moral values associated with the regulated products. In this hypothetical case, there are certainly some ethical and moral values in the prohibition of the sales of wild-caught specimens of depleting species. In fact, there is sometime a strong sentiment against hunting animals of any species from the wild to be kept as pet. So there is a chance that the rational approach in implementing the criterion of consumers' tastes and habits from EC-Asbestos

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[160] See Jones (n 153)..
[161] See sub-section 3 above.
[162] See sub-section 3 above.
[163] for example, those demonstrating a group of individuals "disagree[ing] with the statement '[k]eeping wild animals as pets at home is acceptable'". ENDCAP, 'Wild Pets in the European Union' <http://www.bornfree.org.uk/fileadmin/user_upload/files/zoo_check/reports/Endcap_Wild_Pets_EU_Report_0812_ROUGH_v10.pdf> accessed 1 March 2016, at 4.

may apply here. The circumstantial considerations may play a part here in influencing dispute settlement bodies. Yet, it wuld depend on the specific context in each case.

After EC-Asbestos Products, it should become arguable that consumers' tastes and habits and the market competitive relationship between such animals could be approached via logical articulation and the decision-makers' own "common sense" of what the public moral perception is in general, and take it as a basis in rationalising further in market-terms, i.e. that the caught and bred animals are not in market competition. The Appellate Body's approach should be favourable to the regulating Members as it eases the difficulty caused by the market-centred framework of like-product analysis, as the econometric speculation of consumers' preference may also be no longer required.

Although the Appellate Body's analysis in EC-Asbestos Products should offer guidance that makes the criteria more open to environmental integration and could allow broader application of the currently available criteria of likeness, there is still a critical hurdle for environmentalists to argue that they are "unlike" under the non-discrimination principle: The determination still depends on whether such values would be recognised so significantly that consumers' preference would certainly be assumed accordingly by the dispute settlement bodies. This is the same concern as the one raised in the previous Section about the "reality" of product-relatedness.

Bear in mind that the characterisation of "unlikeness" is not simply concluded by the differences in physical properties of and/or public perception about the animals. The crucial point

for likeness determination ultimately depends on whether such differences could, as speculated by dispute settlement bodies, eliminate the market competitive relationship between such wild-caught and captive-bred animals. The following sub-section discusses the shortfalls of the "common sense" approach in this hypothetical case.

5.1.2. Shortfalls of the Common Sense Approach in Articulating Consumers' Tastes and Habits

As also mentioned earlier, there are shortfalls in this approach of analysing the criterion of consumers' tastes and habits. The logic and value judgement made by the "common sense" of individuals who happen to be the decision-makers can be rendered in either direction.[164] In this hypothetical case, for example, their common sense may point towards either: (1) the importance of biodiversity and moral responsibility to prevent species extinction, and therefore rationalises the public perception against the wild caught animals of protected species – i.e. to conclude that the two categories of animals are not in competition, hence "unlike" under the criterion of consumers' tastes and habits; *or* (2) the common oblivion or the lack of moral concerns about biodiversity degradation and therefore concludes that the public would view the animals of two different types of origins as the same "end-product". Either way seems equally likely as there is yet to be a general guidance on the implementation of such value judgement.

In relation to this, it is worth mentioning the general notion of "green consumerism", which could inform the presupposition

[164] See sub-section 3 above.

of "unlikeness" under the criterion of consumers' tastes and habits. Determining between "environmental" and conventional goods as "like" has been read as the WTO's refusal of "market reality".[165]

The basic idea of the criterion of consumers' tastes and habits suggests the relevance of public perception in determining likeness. However, it is difficult to find the one moral perception or an ethical standard that is commonly shared by different groups within the society, or among different societies and cultures, towards a given environmental problem.[166] Such perception would also vary, depending on the environmental concern in question.[167]

There may be some reference to the general increase of public conscience on environmental issues. Such a claim is often informed by the observations and surveys from a very specific context. At the same time, it is very widely acknowledged that there are not sufficient empirical studies to demonstrate consumers' perception on "environmental" products.[168]

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[165] See Peter Van den Bossche, 'Chapter 4: Principles of Non-Discrimination', *The Law and Policy of the World Trade Organisation: Text, Cases and Materials* (2nd edn, Cambridge University Press 2008)., 320-400, at 381. The author refers to an example of Robert Howse, Petrus van Bork and Charlotte Hebebrand, 'WTO Disciplines and Biofuels: Opportunities and Constraints in the Creation of a Global Marketplace' [2006] IPC Discussion Paper <http://www.agritrade.org/Publications/DiscussionPapers/WTO_Disciplines_Biofuels.pdf,>, at 13; and, Monica Araya, 'WTO Negotiations on Environmental Goods and Services: Maximizing Opportunities?' [2003] Global Environmental and Trade Study, at 1-2.

[166] See Chapter 6. See also, in the context of GM food: Christiane D Stone, 'Is There a Precautionary Principle?' (2001) 31 Environmental Law Reporter, noting the different perceptions held by different societies due to the different national and cultural values; as cited in Kysar (n 105)., at 568.

[167] See Chapter 6.

[168] See, e.g. Kysar (n 105)., at 582-583.

There may be substantive green consumerist movements and market demands in some specific areas of interests and localities,[169] but I do not believe that it represents "market reality" in most circumstances. At the same time, there are numerous studies suggesting the public's lack of awareness about the environmental impact of their product consumption[170] and their unwillingness to bear the increased costs of environmental externalities.[171] Not only that, various commentators are concerned about the public confusion about and misguidance from environmental claims.[172] There are also concerns about the complexity of environmental assessment of products and their life-cycle which "green" labelling schemes may not adequately represent.[173]

On top of that, the common sense specifically regarding wild animals and exotic pets does not seem to be at the same level as the one on cancer inducing products. Although there are some moral and ethical values associated with keeping wild animals in general as pets,[174] some exotic pet keepers still prefer wild-caught animals, as they have a "pure" bloodline

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[169] Such as demands for sustainable forest resources, fishery, and organic food. Kysar (n 105)., at 582-583.
[170] See e.g. *UNEP Global Outlook on Sustainable Consumption and Production Policies: Taking Action Together ('Global Outlook on SCP Policies'), 2012* 19; and Sirieix, Grolleau and Schaer (n 69)..
[171] Sirieix, Grolleau and Schaer (n 69)..
[172] Lucy Yates (n 68)..
[173] See, e.g. Harald Neitzel, 'Application of Life Cycle Assessment in Environmental Labelling: German Experiences' (1997) 2 The International Journal of Life Cycle Assessment 241.
[174] Aisling Cronin, '7 Things You Never Knew about the Exotic Bird Trade and How You Can Help' (January 2014) <http://www.onegreenplanet.org/animalsandnature/7-things-you-never-knew-about-the-exotic-bird-trade-and-how-you-can-help/,> accessed 1 March 2016

and tend to be healthy adults suitable for further breeding.[175] On the basis above, it is not obvious that there would be such clear-cut and strong moral values in the distinction between captive-bred and wild-caught animals in general.

Such uncertainty in the common sense approach in translating the environmental regulatory distinction into "unlike" products under the criterion of consumers' tastes and habits may be improved by the application of the principle of systematic integration (such as the one reflected in Article 31(1). The principle can be applied in interpreting and articulating consumers' preference in this case. As mentioned above, the references to internationally recognised instruments could create more objectivity and better inform the likeness determination than the Panellists' personal value judgment. The approach in the principle should allow the inclusion of instruments that are more directly relevant to a given context, such as biodiversity conservation, and is more accurate than the common sense and assumptions of individual panellists of WTO dispute settlement bodies.

Below, I explore some of the "non-WTO" considerations that could be incorporated in articulating the consumers' tastes and habits. International instruments and policy frameworks,[176] as well as the moral values expressed in the social and policy contexts other than consumerist movements, should be incorporated in the rational articulation of "consumers' tastes

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[175] Pet University, 'Wild vs. Captive Breed' <http://www.petuniversity.com/reptiles/are-you-ready/wild-vs-captive-breed.htm> accessed 1 March 2016.

[176] such as CITES and the concept of sustainable consumption and production, the latter as explained in Chapter 5.

and habits" in this hypothetical case as "interpretative tools" outlined in the EC-Biotech case above. They should be useful to reflect public moral values and inform the rational articulation of consumers' tastes and habits.

5.1.3. "Informative" Considerations in the Common Sense Articulation of "Consumers' Tastes and Habits"

Before discussing the issues, note that Article 31(3)(c) of the Vienna Convention may be more favourable to the regulating Members when arguing the "unlikeness" between captive-bred and wild-caught animals, as there are indeed more parties to the Convention than Members to the WTO and the disputing Members in the case are likely the contracting parties to the CITES.[177] However, to explore a more common scenario relating to environmental problems, that is when any of the disputing WTO Members are not a contracting party to the agreements, the hypothetical scenario here is between Country A – a rich country with a large number of exotic pet hobbyists – and Country B – a tropical country in which several native species of birds and reptiles are declining due to illegal trade. Only one of them is a party to CITES. In such a hypothetical setting, the approach of Article 31(1) of the Vienna Convention seems to be more relevant.

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[177] Not only the issues of like-product interpretation, the whole discussions about the legality of the measure at issue may be shifted to a different legal regime altogether. The debates could then turn to the issues of conflicting rules and jurisprudence, which has been widely discussed already in the literature and is a topic too broad for the scope of this thesis. For relevant discussions on the issue, see, e.g. Pieter Jan Kuijper, 'Conflicting Rules and Clashing Courts The Case of Multilateral Environmental Agreements, Free Trade Agreements and the WTO' (2010) <http://www.ictsd.org/downloads/2011/12/conflicting-rules-and-clashing-courts.pdf> accessed 1 March 2016.

First, the following analysis explores how the two types of animals could be characterised as unlike on the basis of public perception as demonstrated in the Appellate Body's decision of EC-Asbestos Products. In light of the rationalisation in EC-Asbestos explained above, the public perception in this hypothetical case is not only the one that has been expressed in market-terms or by the actual purchasing behaviours of pet buyers. The public perception can be characterised by deductive rationalisation.

As explained above, the Appellate Body concluded the lack of market competition (or "unlikeness") between asbestos and other fibres with the emphasis on the criterion of consumers' tastes and habits as follow:

> "[...] we wish to highlight that consumers' tastes and habits regarding fibres, even in the case of commercial parties, such as manufacturers, are very likely to be shaped by the health risks associated with a product which is known to be highly carcinogenic. A manufacturer cannot, for instance, ignore the preferences of the ultimate consumer of its products. If the risks posed by a particular product are sufficiently great, the ultimate consumer may simply cease to buy that product. This would, undoubtedly, affect a manufacturer's decisions in the marketplace."[178]

Once the moral perception associated with the sale of wild-caught specimens of the protected species is acknowledged, it could provide the basis of the rationale to conclude in the exact same line as the above extract. The dispute settlement bodies may, on this basis, articulate that consumers will not deem the wild-caught and captive-bred animals as the same, or "like", products. Due to the moral values against the wild-caught animals of protected species, the two types of animals

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[178] *Appellate Body Report, EC - Asbestos, 2001* (n 13), at para. 122.

are not in market competition, rendering the wild-caught and captive-bred animals of such species "unlike".

In light of the approach in EC-Asbestos explained above, decision-makers could also follow the principle of systematic integration (instead of their personal value-judgment) and characterise "consumers' tastes and habits" by considering the recognition of the causal linkage between trade and biodiversity depletion and the moral responsibility borne by all walks of life in shaping "the world environment of the future", as consistently expressed in various political declarations and outcome of the UN sustainable development conferences.[179]

More specifically, the recognition in CITES should reflect the public's moral values associated with the sale of wild-caught animals from protected species. This is clearly reflected in the Preamble of the Convention, as it recognises:

> "... that wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural systems of the earth which must be protected for this and the generations to come;
> [...] [and]
> that *peoples and States* are and should be the best protectors of their own wild fauna and flora"[180]

The instruments should be a more constructive and reliable reflection of the public's moral values in this case than the common sense and intuition of the WTO panellists who tend to be lawyers and experts in the field of international trade. Note again that these instruments are not being inferred here for their legal status but for the moral values of the public that

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[179] E.g. *The Future We Want, 2012* (n 146).; and paragraph 7 of the preamble of Stockholm Declaration, respectively. Refer to Chapter 6 on the explanation about biodiversity protection.
[180] The first and third Recitals of the Preamble of CITES. [emphasis added]

are reflected in them. One may argue that the contested measure is in itself an expression of the public' moral values if its enactment has involved public participation and/or parliamentary approval. Such preparatory details of the measure alone may not provide strong persuasion, but should be relevant in reflecting the kind of moral values used in the Appellate Body's articulation of consumers' tastes and habits towards asbestos discussed above.

The values may be expressed via the democratic system, or may be sufficiently represented by a group of concerned citizen, who participate in environmental movement and/or civil society.

Second, the analysis shall explore what the useful ideas from the approach of Article 31(1) of the Vienna Convention is. The principle of systemic integration provides a good guidance in the interpretative query of the notion "consumers' tastes and habits". Via the route of Article 31(1) of the Vienna Convention, the "informative" instruments do not necessarily need to have a legally binding recognition from all disputing parties.

The multilateral environmental agreements or other non-WTO international instruments that are related to the field of environmental protection addressed by the contested measure, should inform the interpretation of consumers' tastes and habits. The Appellate Body's "evolutionary interpretation" of the term "natural resources" in Article XX in the case of US-Shrimp Products was informed by general

knowledge of environmentally aware persons.[181] Similarly, multilateral environmental agreements and instruments that are related to the environmental concern at issue should be considered as reflecting the ordinary meaning of the terms.

5.2. Limitation: Diversity of "Informative" Considerations

Admittedly, the route will likely be with limitation. There is the difficulty due to the nature of adversarial debates in which both sides could refer to a diverse range of informative materials in favour of their argumentation explained above. This could lead to an unfavourable outcome decision. In the case of EC-Biotech, the Panel's decision to interpret certain terms in Annex A(1)(b) of the SPS Agreement was based on the meaning given by a dictionary, and neglect the specialised organisations and standards as "informative" to its interpretation of the SPS coverage. This has been criticised as "de-contextualized and arbitrary reasoning".[182]

Even so, the route at least allows argumentation and debates from the environmental viewpoints and considerations about instruments that are extrinsic to WTO regime instead of being determined solely on a trade-centric viewpoint. The case of EC-Biotech Products sheds light on the direction that could be applied in referring to interpretative sources under Article 31(1) of the Vienna Convention.

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[181] See Chapter 6 for explanation.

[182] McMahon and Young (n 123)., at 924.

6. Complexity of Likeness Analysis

We shall now consider an example of an actual trade-restrictive measure that is similar to our hypothetical scenario above: the 1992 US Wild Bird Conservation Act (WBCA). Similarly to some other environment-related measures that have been rejected under the GATT,[183] in practice, the 1992 US Wild Bird Conservation Act (WBCA), a legislation adopting such PPM-based regulatory distinction being discussed here in seeking to protect birds listed in Appendix II of CITES, prohibits not only wild-caught animals but all imports of the listed animals. Sales of such animals required certificates declaring the breeders registered to the US' governmental agency essentially prevent birds bred outside of the US being recognised as captive-bred. Consequently, domestic "producers" or captive breeders thrive on such prohibition, taking all commercial benefits from the exotic pet markets. The measure can therefore seem like it serves a protectionist intent.

The regulatory distinction in the actual case therefore tend to differ from the environmental conception of distinguishing between the biodiversity damaging PPMs and those that are not. Many, like the US WBCA above, effectively applies the distinction based on the country of origin.

In likeness analysis, the objective of reducing hunting and trapping of wildlife may also be questioned due to its limited

[183] See *Appellate Body Report, EC-Seals Products, 2014* (n 10) In its regulatory distinction between seals hunted by indigenous groups or for conservation purposes vs. seals hunted by other groups – which turns out to prohibit all imported seals including those hunted by Norwegian Inuits while allowing those hunted by the Inuits within the EU.

efficiency. The intent of the prohibition of exotic animals from Country B (the tropical country in which the species are native) may be questioned if the imports of their animals are outright prohibited, while allowing imports from Country C (a third country in which the animals may have been captive-bred or illegally "laundered" after being wild-caught in its native country).[184]

In practice, therefore, the debates on likeness will not simply be formed by the concept theory that regulating Members claim as rationale of the regulatory distinction (i.e. the harvesting methods in this hypothetical case). The analysis will be on the actual groups of products that have been effectively treated differently by the contested measure (i.e. all pets from Country B, both wild-caught and captive-bred animals vs. captive-bred animals in other countries). The captive-bred animals from Country B and from elsewhere are equal from the standpoint of ecological impact of the PPMs. Because of that, the actual regulatory distinction such as that in the US WBCA could be seen as effectively country-based rather than PPM-based.

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[184] See Snape III and Lefkovitz (n 67)., claiming that Canada will likely become a new hotspot for laundering birds illegally caught from the wild in Mexico before being imported to the bigger market in the US. – Please note that the above text refers to the laundering of birds in the attempt to show the regulatory objectives declared by the regulating Members in likeness analysis are relevant in identifying products to be compared for likeness. Here, I try to stipulate a scenario similar to the one in US-Clove, in which menthol cigarettes have been particularly identified as the like-domestic-products to be compared with the clove cigarettes imported from Indonesia. The attention is drawn to menthol cigarettes specifically because of the regulating Member declared the reduction of young smokers who are attracted to cigarettes by the flavouring. The two groups of cigarettes shared similarities of being flavoured cigarettes, which also led to the regulating Member failure to argue that its measure was "even-handed".

This of course is not to say that such import prohibition is not legitimate and is not genuinely seeking to protect the species. There is a merit in prohibiting imports from certain countries altogether if, for example, the licensing and certificating system from such countries are unaccountable, or the risk in promoting illegal wild catch in its natural habitat is too high. This however is no longer the query of "likeness" of product in any meaning of the terms. The rationale of such regulatory distinction will be further examined in the second phase of the treatment no less favourable requirements in Section III.

7. Preliminary Conclusion of Section II

The environmentalists' attention drawn to the issue of like-products stems from the general belief that treatments accorded to products in order to address environmental purposes are bound to fail such examination due to their tendency to cause market disadvantage. The assumption leads to environmentalists' frustration in the market-based reading of the term "like". On the surface, the market-centric analysis may suggest a rejection of environmental rationale and ecological distinction of products and their PPMs. Such perception is also strengthened by the over-simplified understanding of the "product-process doctrine" that is misread as categorically rending PPM-measures as illegal under the requirement of treatment no less favourable.

The above discussions on like-products have demonstrated that, in contrast with the general assumption, the analysis is not exclusively determined by the physical appearance of products. Among the readily available criteria, the criterion of consumers' tastes and habits could be useful for arguing the

"unlikeness" of products on the basis of non-physical aspects such as the products' life-cycle – particularly if the criterion is to be implemented in the same fashion as that in the Appellate Body's analysis in EC-Asbestos Products: That is to interpret the criterion of consumers' tastes and habits by rationally analysing (as opposed to demonstration based on empirical survey and economic theories) whether the ecological difference of the products and/or their life-cycles is significant in the public perception to the point that the public would view the products "unlike" in accordance with the ecological footprints.

I have suggested in Section II that the Appellate Body's approach in EC-Asbestos Products may open door for environmental knowledge, policy instruments or principles as interpretative tools to be taken into account in the characterisation of likeness. I have discussed that a route of argumentation consistent with the principle of systemic integration, such as that provided in Article 31(1) of the Vienna Convention, may be applicable in the WTO jurisprudence, as laid down by the Panel in the case of EC-Biotech Products. This route may be useful only to the issues in relation to which certain approaches and rationales have been widely recognised by the international community at large.

This approach would be compliant with the integration principle under the concept of sustainable development and in this way contributes to the realisation of the objectives of sustainable development mentioned in the Preamble of the Marrakesh Agreement as explained in Chapter 5.

Section III: Non-Discrimination, Requirement of Treatment No Less Favourable and the "Balance" in the TBT Context

1. Introduction: the Principle of Non-Discrimination

In this chapter, the concept of non-discrimination should be introduced by revisiting the broader view of the policies served by the GATT, the originating context of the WTO's non-discrimination requirements. The overall agenda of the GATT since its origin in 1947 has seemed to be primarily centred on the commercialist economic interests even though it also expresses clear commitment to the objectives of sustainable development, as explained in Chapter 5. WTO policy statements would refer to both the "maximiz[ation of] global growth" as well as "equity", the approach to do so seem to be focused on increasing economic growth with reference to the goal of poverty reduction.[185]

In regards to non-tariff barriers on trade of goods, the GATT's overall agenda is constructed by its provision on the general elimination of "quantitative restrictions" and of protectionist discrimination—both of which play a great role in the

[185] Peter Sutherland, 'Beyond the Market, a Different Kind of Equity' *International Herald Tribne* (1997) cited in Peter Van den Bossche, 'Chapter 1: Economic Globalisation and the Law of the WTO', *The Law and Policy of the World Trade Organization: Text, Cases and Materials* (2nd edn, Cambridge University Press 2008), 1-74, at 32. Such equity is particularly to be created among developed and developing nations, both of whom are accused of being protectionistic while calling for open markets from other Members. See, e.g. Van den Bossche, 'Chapter 1: Economic Globalisation and the Law of the WTO', at 12.

interaction between the GATT and environmental measures.[186] The former, stipulated by Article XI, results in a general prohibition of a vast range of importing Members' measures,[187] under which many measures citing environmental objectives have been rejected. Such broad prohibition is understood to impose great restriction on regulators that seek to pursue the objectives of sustainable consumption and production (SCP) as many of such SCP measures are bound to be trade-related.

Such an application of the GATT rules serves the pro-commerce interests and could be at an extreme end of the WTO's pursuit towards the liberalisation of international trade, i.e. the "laissez-faire" policy.[188] While the pro-commerce benefits from the general elimination of quantitative restrictions are expected by all Members, they are to be weighed and balanced with importing Members' right to regulate.

In relation to this, the "balance" is pursued by the concept of non-discrimination in the narrow and broad senses. In the case of product-related measures, at the first stage, an extent of balancing is in the narrow sense of the National Treatment (NT) requirement stipulated in Article III: 4. Balance in this

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[186] WTO, 'WTO Rules and Environmental Policies: Key GATT Disciplines' <https://www.wto.org/english/tratop_e/envir_e/envt_rules_gatt_e.htm> accessed 12 February 2016..

[187] E.g. *Report of the Panel, India-Quantitative Restrictions on Imports of Agricultural, Textile and Industrial Products ('India-Quantitative Restrictions'), WT/DS90/R, April 1999*, at para. 5.129 - 5.130. Robert E. Hudec observes that Article XI:1 in fact prohibits "all non-tariff border restrictions unless otherwise excused [or the Ad Note to Article III is successfully invoked as a defense that the contested measure is within the scope of Article III and outside of Article XI]." Hudec (n 20), at 191.

[188] As characterised by David M Driesen, 'What Is Free Trade?: The Real Issue Lurking Behind the Trade and Environment Debate' (2001) 41 Virginia Journal of International Law 279.

sense is most overtly expressed in its first paragraph which stipulates the object and purpose of the NT requirement: to prevent protectionist policies disguised as product-related measures.[189] Some deems the NT requirements in Article III: 4 as an approach to strike the balance between Members' duty to comply with the GATT obligations (such as the general prohibition of quantitative restriction in Article XI) and their right to address the concerns of their domestic constituencies[190] as it prevents measures disguised as an environmental measure but in fact is designed with the intent to take market-advantage of other Members.[191]

At the same time, the mechanisms under this provision are centred on the market viewpoint and may be applied in the way that the interests of commerce and strict enforcement of the GATT obligations override other objectives such as environmental protection. The interpretation of NT obligations can therefore serve the "laissez-faire" policy and overly restrain the establishment and application of trade-related SCP measures. I will further elaborate these points later in this Section.

The capacity of such an NT obligation, which is clearly framed by commercial viewpoints and trade interests, to strike the is, in my view, questionable. The important point to mentioned here is that Article III:4, like other general obligations under

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[189] Article III:1, the GATT.
[190] Eg. Weihuan Zhou, 'US - Clove Cigarettes and US - Tuna II (Mexico): Implication for the Role of Regulatory Purpose under Article III:4 of the GATT' (2012) 15 Journal of International Economic Law 1075.
[191] Hudec (n 20), at 191. For useful summary, see also: WTO, 'WTO Rules and Environmental Policies: Key GATT Disciplines' (n 181)..

the GATT, is always applied in connection with Article XX, the general exemption provision. If Article III:4 is considered to strike some balance, the second stage of such balancing is shaped by the broad sense of non-discrimination and the concept of necessity adopted in the Chapeau and sub-paragraphs of Article XX, respectively.

Article XX may play a role in striking the balance between the extreme end of the pro-commerce interests above and the importing Members' right to regulate, but the WTO's focus in the application is rather on the balance between rights and duties of Members under the GATT (including the non-protectionist policy in the NT requirement).

With any rhetoric used in the application of Article XX, the provision embraces the notions of balance both between Members' right and duty under the obligations, as well as the one between the interests of international trade liberalisation and of other objectives.

Later in this Section, I will explain further the approach applied in implementing the Chapeau of Article XX, construing the concept of non-discrimination in the broad sense, and how it could provide a balancing approach in the application of the TBT requirement of treatment no less favourable in the way that is in line with the meaning of "balance" proposed in Chapter 5. Before doing so, I recapitulate the content of Article XX of the GATT.

The exception in Article XX comprises of two requirements: the prevention of a disguised form of discriminatory policies; and the non-trade objectives recognised as legitimate

considerations for the GATT-inconsistency. Although much of the exception is explained under the category of the concept of necessity in relation to the legitimate objectives in the sub-paragraphs of Article XX, its prerequisite is the former component, the non-discrimination conditions in the Chapeau: To avoid the abuse of the exception that otherwise could lead to the practical unenforceability of the whole agreement, the Chapeau of the provision mirrors the locus of the NT and MFN requirements[192] and imposes conditions with which the GATT-inconsistent measures need to observe in addition to having certain "relation"[193] with the objectives claimed to be pursued.[194] The concept of non-discrimination in the broad sense that is referred to in this thesis is based on such requirements of the Chapeau and its interpretation.

Considering the three provisions (Article XI, III and XX) and the broad view of the WTO policies above, it can be described that the non-discrimination principle is not exclusively

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[192] As the Chapeau states: "nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures" Note that the elements that constitute discrimination in the Chapeau of Article XX differ from those that would violate the NT obligation. *Appellate Body Report, United States - Standards for Reformulated and Conventional Gasoline ('US - Gasoline'), WT/DS2/AB/R, 1996*., at 23–24; and *Appellate Body Report, US - Shrimp, 1998* (n 50)., at 150. The Appellate Body in US-Gasoline also provides that the compliance with the Chapeau and those under the substantive obligations differ in standards. *Appellate Body Report, US - Gasoline, 1996*., at 23.

[193] As differently required in each sub-paragraph for the respective objectives. This includes the term "necessary" in paragraphs a, b and d; and "relating to" in paragraphs c, e and g of Article XX of the GATT.

[194] The term non-discrimination is generally associated to such treatment no less favourable requirements in the TBT Agreement and Article III in the GATT as they are the most straightforward formulation in realising the concept of non-discrimination in the form of substantive provisions. However, in light of the description above of non-discrimination as a balancing principle, the term "principle of non-discrimination" is used in this Section in a broader sense and includes not only the treatment no less favourable requirements but also the mechanisms to implement the balancing policy.

construed exclusively by the NT obligations and a strict prohibition of protectionist measures. The non-discrimination principle and the GATT's concept of "balance" is not complete without the concept embodied in the Chapeau of Article XX.

Unlike the GATT, the TBT Agreement lacks a general exception provision. Such an absence may seem like a minor difference in the structure of the provision. However, it leaves a significant gap in the TBT text in regards to the concept of balance under the non-discrimination principle. Viewing from the substantive provisions alone, the TBT discipline and its detailed administrative requirements[195] may be seen as creating even more burdens for environmental regulators.

However, this Chapter argues that such a "gap" can be filled by utilising the TBT Preamble as a legal ground in interpreting the substantive provisions of the Agreement. In the discussions below, I demonstrate how the "balancing agenda" explained above is in fact set out as the object and purpose of the whole Agreement when it comes into confrontation with environmental protection. I will also propose how the Preamble could be utilised as a significant ground to interpret the requirement of "treatment no less favourable" in the spirit of the principle of non-discrimination in the complete sense explained above, which at the same time, implement the principle of integration under the concept of sustainable development laid out in Chapter 5.

[195] such as those on notification and public participation in an establishment and application of a technical measures, explained in Chapter 3.

Note that, for convenience, Article 2.1 may be referred here as a shorthand for the requirement of "treatment no less favourable" in general (even though the requirement is also found in Article 5.1.1[196] and paragraph D of the Code of Good Practice[197]), and Article 2.2 for the prohibition of unnecessary trade-restrictiveness (even though the prohibition is also found in 5.1.2[198] and paragraph E of the Code of Good Practice[199]). The emphasis of this Section is on Article 2.1, which governs technical regulations, because this type of technical measure has been the main interest in disputes. Despite the specific reference to the provisions that govern technical reputation, the discussions below should be applicable to the other provisions concerning respective types of technical measures listed above, as it is unlikely that they would be interpreted inconsistently due to the similar text used in the provisions.

1.1. The Phrase "Treatment No Less Favourable" in the TBT Agreement

The phrase "treatment no less favourable" in Article 2.1 and other TBT provisions above originates from the NT requirement in Article III: 4 of the GATT. As introduced above, in the GATT, it is implemented to prevent protectionism disguised as product-related measures, the object and purpose stipulated in Article III: 1 and applied in close connection with Article XX which provides permissibility to some GATT-inconsistent measures. Although the requirement

[196] for "conformity assessment procedures"
[197] for voluntary "standards"
[198] for "conformity assessment procedures"
[199] for voluntary "standards"

in Article 2.1 of the TBT Agreement is written with the same phrase as that in Article III: 4 of the GATT, their interpretation should differ if the provisions are to serve different objects and purposes, considering the rules of treaty interpretation in Article 31(1) of the Vienna Convention on the Law of Treaty explained briefly in Section III.

Clearly, like other provisions of the GATT, Article III is meant to serve the same object and purpose stipulated in the Preamble of the GATT and those in the Marrakesh Agreement. However, in addition to that, the specific object and purpose of Article III is also to prevent protectionist measures. Such an object and purpose are specified in the first paragraph of the same provision, Article III: 1. In the TBT context, unlike Article III, the object and purpose of the treatment no less favourable requirement in the TBT Agreement are not separate from other provisions but are the ones stipulated in the Preamble.

The TBT Preamble sets out the object and purpose with the language that, as will be argued by this chapter, not only suggests its interests in facilitating international trade and preventing the protectionist measures, but also demonstrates its policy to "balance". The balancing policy is reflected with the phrases similar to the ones used in Article XX of the GATT. This chapter therefore proposes that the treatment no less favourable requirement in the TBT context and the one in Article III;4 of the GATT are to be interpreted differently despite the same phrase "treatment no less favourable" used in the provisions, so long as the contested measure is

necessary for the objectives recognised in the TBT Preamble, including environmental protection.

Before discussing the issues, note that, in the following discussions, the specific term of "requirement of treatment no less favourable" is used instead of the term non-discrimination requirement/standard although the latter term is more commonly used by commentators in the discussions about the GATT. This is to prevent confusion as the discussion proceeds to encompass the different agencies of non-discrimination in the broad sense under the Chapeau of Article XX and the non-discrimination standards in the narrow sense of Article III:4, as well as their respective examining formulas in the GATT obligations. The specification becomes significant in the discussion of this Section III as the TBT provisions are constructed with a different structure and formality from those in the GATT, which in fact underlies the different interpretation of the phrase "treatment no less favourable" in the two agreements.

It is worth distinguishing the phrase from the term "non-discrimination" because the latter, as a legal principle, is more nuanced than simply referring to the NT requirement or, in the case of Article III:4, the requirement of treatment no less favourable. With the backdrop of the GATT's pro-commerce pursuit of eliminating tariff and non-tariff barriers (as reflected in Article XI, for example, viewing the intricate relationship between Article III: 4 and Article XX offers an important perspective on the concept of non-discrimination, anti-protectionist agenda and the idea of "balance" in both the TBT Agreement and the GATT. Considering this, it can be said that

the content of the requirement of treatment no less favourable in different agreement could vary, depending on the primary policy that contextualises the interpretation and application of the requirement in each respective provision.

2. Specific Focus of the Treatment No Less Favourable Requirements: Market Competition Affected by the Measure

The concern from observers is that, for commercial interests of exporters, the treatment no less favourable requirement would be utilised to discourage and prohibit State Members from imposing any environmental regulations. This concern may be rooted from the past rejections as GATT violation of measures even though they cite popular environmental objectives, as well as from the broadly worded text of the requirement of "treatment no less favourable".

On face value, the phrase "treatment no less favourable" could be read to prohibit any "different" treatments accorded on products. This is because a measure that distinguishes products on the basis of environmental implications and/or the environmental credentials of the production processes or qualifications of producers will ultimately treat the products that are commercially "like" differently. Any difference in regulatory treatment could be deemed in one way or another as "less favourable" in the generic sense. Read in this way, the requirement of "treatment no less favourable" deters environmental/social measures and forces Members to adopt the laissez-faire approach in governing trade activities.

In principle, this is not accurate. The above impression is an overly broad reading of the text. The requirement of treatment no less favourable in Article III:4 of the GATT and in the TBT context does not prohibit just any "different" treatments among imported and domestic products. In principle, different treatments are allowed so long as the treatments do not: (1) accord market-disadvantages to imported products while (2) provide market advantages to domestically produced products.

Moreover, the "environmental" measures that directly interact with international trade rules are of a rather limited scope: those that concern imports, as explained in Chapter 6.[200] Those that are directly impacted by the TBT Agreement are in an even narrower scope: those constituting one of the three types of technical measures characterised in Annex 1 of the Agreement, as explained in Chapter 2.

The actual technical measures under the TBT discipline are those that embrace economic values and would unlikely seek to deter commercial and industrial development in general. They most likely embrace commercial values. The point of contention is only whether they serve the commercial interests of domestic manufacturers at the expense of exporting Members. As such, environmental measures affected by the TBT disciplines are unlikely those in the "dark green" spectrum of environmentalism, as explained in Chapter 6. It is unlikely that there would be a case of clear clashes of ideologies, such

[200] I have noted also in Chapter 6 that the environmental movements that would be under the direct impact of GATT and TBT requirements are those that concern imports and those constituting the three types of technical measures under the TBT definition, respectively.

as commercialism vs. environmentalism, under the TBT Agreement.

With governments being sensitive to the economic interests of their constituencies and with the growing participation of stakeholders in the establishment and application of technical measures explained in Chapter 3 and Chapter 6, it is very difficult that an environmental measure could operate in the way that neglects the market interests. In fact, they may seek to promote several aspects of commerce even though their ultimate objectives relate to environmental protection or even though they operate as a part of a broader scheme of environmental legislation. In a way, labelling schemes help promote commercial values of a product as they likely help in attracting consumers. Specific mechanisms implementing a broader environmental legislation have already been presented in Chapter 6, including the prohibition of shrimp products based on the particular tools used by the shrimp trawler which was a part of the US Endangered Species Act – an umbrella legislation under the theme of biodiversity protection.[201]

The interest of the TBT requirement of "treatment no less favourable" is therefore specific and not "any" different treatments. It focuses on the impact on market competition between products that are of different countries of origins but are otherwise "like" (in trade terms explained in Section II). In particular, the requirement is concerned with a technical measure's differentiation of such like-products, i.e. the

[201] As seen in the example of *Appellate Body Report, US - Shrimp, 1998* (n 50)..

"regulatory distinction",[202] and whether it causes market disadvantage exclusively or "uneven-handedly" for imports (including imports in general and imports from certain countries).

De jure or de facto, the disadvantage caused by the regulatory distinction is seen as Members intervention in the competition between producers of essentially the "same" products. The "uneven-handed" design or effects of a measure is typically deemed to represent the disguised protectionist intent of the regulating Member.

Such exclusivity or uneven-handedness is, for example, the ban of clove cigarettes, an imported flavoured cigarette from Indonesia, in the case of US – Clove Cigarettes. The ban purports a public health objective, to reduce smoking among American youths who are attracted to flavoured cigarettes. Although the Appellate Body seemed receptive to the cited regulatory objective, it found that the market impact of the measure, i.e. the prohibition of sale, was exclusive on the Indonesian cigarettes and not even-handedly accorded to the domestic flavoured cigarettes, Menthol cigarettes. The specific interest on market competition of the requirement means that the direct impact on environmental movement should be quite restricted and should affect a narrow area of environmental measures. This should retune the pretext of our discussions: The requirement of treatment no less favourable is not such a juxtaposition with environmental protection.

[202] The regulatory distinction refers to the differentiation made on the products that are deemed under the WTO rules as "like".

This said, the perceived "clashes" between the requirement and a technical measure is not unsubstantiated. In the case where more than one set of rules (such as WTO requirements and international environmental principles) covers the same subject matter, conflicts of rules may arise. The clash of ideology may be due to the gaps between different analytical rationales and examining systems that underlay the decision made by environmental regulators and WTO dispute settlement bodies. A regulatory distinction based on an environmental rationale and the "like" analysis under WTO/TBT rules would likely render incoherent categorisations of products and subsequently treat the imported products "less favourably". The question is whether (and if so, how) the different thinking of the TBT and environmental regimes can be bridged.

The bridging method would provide the reconciliation of regimes that conforms to the integration principle in the context of sustainable development explained in Chapter 5. Without such integration, the incoherence of trade and environmental logics may in fact be applied in such a way that over-broadly prohibits technical bodies' endeavour to address environmental concerns by means of product- and PPM-related measures.

Below I explore how the requirement may be applied in such an overly narrow approach – if it is to follow the same interpretation of treatment no less favourable requirement in Article III: 4 of the GATT (i.e. the non-discrimination in the narrow sense). Then, I discuss how it could be applied in

implementation of the integration principle under the concept of sustainable development.

3. The interpretation of the Requirement of Treatment No Less Favourable in the TBT Context

In the TBT context, case law application of the requirement of "less favourable treatment" has been fundamentally developed in the cases of US-Clove Cigarettes[203] and US-Tuna (Mexico) II[204] in 2012. In doing so, the Appellate Body takes Article III of the GATT and the sixth recital as the main point of reference in constructing the path via which the requirement of Article 2.1 is interpreted.

Essentially due to the phrase "less favourable treatment" used in both Article III: 4 and Article 2.1, the jurisprudence of Article III: 4 has been specifically recognised as "instructive" in the interpretation of Article 2.1 of the TBT Agreement.[205] Other GATT provisions are not deferred to in this part of the decisions.

The subsequent discussions, particularly in sub-section 4 of Section III, will explore the progressive parts of the Appellate Body's analysis that would constructively "open" for the inclusion of environmental considerations via the recognition of the "balancing" objective of the TBT Agreement and the

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[203] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)..
[204] *Appellate Body Report, United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products ('US - Tuna (Mexico) II'), WT/DS381/AB/R, 2012*.
[205] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)., e.g. at para. 180.

establishment of the concept of "legitimate regulatory distinction" in US – Clove Cigarettes. Sub-section 5 indicates my opinions, that there are parts that would render the application of Article 2.1 more restrictive and less "balanced" under the concept of sustainable development than what the Appellate Body might have initially promised.

The analysis will provide that the former shows a positive development of the TBT jurisprudence, that is a further progress of the WTO regime than that in the GATT in some contexts. It will however point out that the latter could reflect the same unwillingness of the regime to realise its objectives of "sustainable development" as declared in the Marrakesh Agreement. The analysis will then argue that the "legitimate regulatory distinction" should not only be determined by the market-centric views (the so-called "even-handedness" criterion) but should also give sufficient weight to environmental considerations and apply logics other than trade. Before doing so, the practices in Article III and the Chapeau of Article XX of the GATT are discussed in order to provide necessary background for comparison. Such a background is important as it shines light on the difference between the objectives of preventing protectionist measures and those of "balance".

3.1. Article III of the GATT: the Market-Focused Assessment

If the requirement of treatment no less favourable is to be applied strictly with the same interpretation as Article III: 4, the concept of non-discrimination in the TBT context would only be one of the narrow sense that implements the anti-protectionist policy without the more complete approach of "balance" that could have been offered by the concept of non-discrimination in the broad sense stipulated in the Chapeau of Article XX explained above.[206]

The determination of the "less favourable treatments" in Article III:4 of the GATT, is construed by two basic points: (1) the query on the likeness between the products identified by the Claimant; and (2) the investigation whether the contested measure causes market disadvantages exclusively to the products imported from the Claimant (and not the like-products originated from elsewhere). The analysis is founded on the aim of preventing a treatment imposed "so as to afford protection" for the domestic products, the policy of anti-protectionism as set out in Article III: 1.

In principle, the virtue of the prevention of a disguised protectionist policy is also accepted by environmentalist commentators.[207] In concept, the distinction between a "protectionist" measure and a "genuine" one lays in the "intent" of the regulating bodies.

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[206] See the Introduction in Sub-Section 1 above.

[207] E.g. Andrew Green, 'Climate Change, Regulatory Policy and the WTO How Constraining Are Trade Rules?' (2005) 8 Journal of International Economic Law 143; and Fijalkowski and Cameron (n 144)..

On this note, the potential disputes do not arise because of ideological conflicts but in reference to the implementation of protectionist prevention. This said, such a distinction between "disguised" and "genuine" measure is obvious only in the conceptual sense. In practice, it is certainly not straightforward.

Such "protectionist" intent will rarely (if at all) be expressed in the drafting record or the establishment of any measure.[208]With this in mind, it seems sensible that the "aim and effect" approach has been persistently rejected by the dispute settlement bodies. The approach is one of the proposals that are often suggested by GATT/WTO critics. By this approach, the likeness analysis would have been framed by the cited regulatory objective, and the illegal "less favourable treatment" under Article III: 4 would have been determined by considering the effectiveness of the measure.

In the GATT context, the issues relating to the regulatory objectives, such as environmental rationale adopted by the measure and its effectiveness – of which considerations should give the effects similar to the aim and effect approach, are mostly left to be dealt within the context of Article XX – the general exception that is absent in the TBT Agreement.[209]

The requirement would be obsolete if the violation of Article III: 4 is only the "de jure" protectionism in which the intent is written in the legislation or other measures. The GATT's

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[208] Van den Bossche, 'Chapter 4: Principles of Non-Discrimination' (n 161)., at 355.
[209] Also repeatedly recognised in *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)., e.g. at paras. 101 and 109.

approach to identify protectionism in the context of NT provision is by the uneven-handedness of the "detrimental effects" on the market competition explained above.[210]

The causal link between such effects and "factors or circumstances unrelated to the foreign origin [of products]" is not sufficient to demonstrate that the measure in question does not have protectionist intent. Instead, the dispute settlement body needs to find a "genuine relationship" between the measure and the effects.[211] Regulatory objectives may have been considered in implementing Article III: 4[212] but these considerations are not significant enough to warrant the legality of such market distorting measures.[213]

The clearest reflection of the market-focus (rather than the focus on the objectives and effectiveness of the measure) can also be found in the Panel's decision in Thailand-Cigarettes stating that: "assessment of 'less favourable treatment' under Article III: 4 does not concern the regulatory purpose [...] but rather whether the measure has the effect of modifying the competitive condition".[214]

The insignificance of environmental considerations in the assessment under Article III: 4 may not pose an absolute threat to environmental measures, provided that Article XX is properly applied. Under the GATT, NT obligations would have been counterbalanced by the application of Article XX under

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[210] See sub-section 2 above.
[211] Zhou (n 190)., at 1087 and 1090-1091.
[212] Zhou (n 190)., at 1079-1083.
[213] Zhou (n 190).
[214] Zhou (n 190)., at 1090.

which environmental objectives and their legitimacy are considered. The focus on market competition in the jurisprudence of the requirement of "treatment no less favourable", without the escape route in the like of the "aim and effect" approach to argue that the regulatory distinction is not of protectionist intent, renders the implementation of the requirement "unbalanced" and one-sided. The following discussions first ask whether the "balancing" agenda is included as one of the objects and purposes of the TBT Agreement.

3.2. Objects and Purposes of the TBT Agreement: the Preamble

While recognising the authoritative relevance of Article III: 4, the Appellate Body contextualise the requirement of treatment no less favourable in Article 2.1 of the TBT Agreement by discussing the object and purpose of the TBT Agreement reflected in the TBT Preamble. This sub-section therefore follows the approach and first looks into the mandate of the TBT Agreement. If trade facilitation is taken as the primacy of the agenda of the TBT discipline, the provisions are likely interpreted as elaborate restriction on Members' environmental measure, practically endorsing the "laissez-faire" policy above. It is a valid concern that the application of Article 2.1 would be so broad to serve the extreme end of the pro-commerce policy in the way similar to the interpretation of the general elimination of quantitative restriction in Article XI of the GATT explained above.

Note that, trade liberalisation, as a policy concept of the TBT Agreement, does not translate as the "laissez-faire" concept

mentioned above. This can be reflected by the TBT discipline explained in Chapter 4: In the TBT context, the promotion of international trade is not pursued by general elimination of technical measures. The TBT discipline only seeks to promote certain characteristics in technical measures such as non-discrimination, a utilisation of risk analysis and the harmonisation of trade-related measures via the reference to international standards.

State-State obligations also promote coordination among Members. It is therefore clear that, in the TBT context, commercialist interests are not promoted by the approach of general deregulation. This said, what are the object and purpose expressed in the Preamble of the TBT Agreement?

3.2.1. The TBT Interests in the Economic Dimension

Despite being recognised as an objective of the TBT Agreement,[215] the term trade liberalisation cannot be found in the text of the TBT Agreement itself. The sixth recital mentioned above is not the only part of the TBT Agreement. Other recitals must also be considered in identifying the object and purpose of the Agreement. They refer to the following themes of objectives:

> (1) To "further the objectives of the GATT 1994";
> (2) To promote the "development of [...] international standards and conformity assessment systems [that would improve efficiency of production and facilitating the conduct of international trade";[216]and,

[215] E.g. *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)., at paras. 95-96, 109 and 173-174.
[216] The third and fourth recitals of the TBT Preamble.

(3) To prevent technical measures under the TBT coverage "to create unnecessary obstacles to international trade".[217]

These statements in the TBT Preamble firmly express the TBT's interest in the economic dimension. In isolation of the sixth recital, which will be explained shortly, the above statements in the Preamble could be read as endorsing the "laissez-faire" approach in the objects and purposes of the TBT Agreement. In respect with the first policy above, "the objectives of the GATT" have often been criticised to have discouraged, if not outright prohibited, its Members' trade restrictive regulations. The deference to the GATT such as this does shine light on the policy that is to be served by the application of the TBT provisions.

In respect with the second and third policies above, the text of the Preamble does not explicitly refer to the outright elimination of technical measures, which would have been a clear expression of the "laissez-faire" policy and the primacy of commercial interests of exporting Members. Yet, it could be applied so elaborately to support a decision that puts the facilitation of import/export at the primacy above the non-trade interests such as environmental protection, and therefore pressurises importing Members to deregulate their market. If the only focus of the third and fourth recitals is to "improve efficiency of production and facilitating the conduct of international trade" and if "unnecessary obstacles to international trade" are read too broadly, the making and applying of regulatory measures could also be discouraged.

[217] The fifth recital of the TBT Preamble.

They too may well suggest the laissez-faire concept as part of the TBT policies.

3.2.2. The TBT "Balancing" Object and Purpose

The above recitals of the TBT Preamble are not the only expression of the TBT policies. The idea of "balance" is also recognised in the TBT context as one of the objects and purposes in the Preamble. Although not citing the concept of sustainable development explicitly, the text of the recital resonates with the notion of mutual supportiveness which is repeatedly promoted in the context of sustainable development. It states 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, and are otherwise in accordance with the provisions of this Agreement..."[218]

The notion of "balance" in the TBT context is recognised as the object and purpose of the Agreement in the Appellate Body report in the case of US-Clove Cigarettes on the basis of the sixth recital of the TBT Preamble above. The Appellate Body refers to the balance between the WTO Members' duty under the obligations on the one hand; and, on the other hand, their autonomy and their right to regulate and address the concerns of their constituencies. As reflected in the excerpt above, the

[218] Paragraph 6 of the Preamble of the TBT Agreement. [emphasis added]

right to regulate is closely tied with the interests that are often in competition with industrialisation and trade activities, including the "protection of human, animal or plant life or health, of the environment [...]". Similarly to the GATT context, the relationship of the TBT rules and environmental interests are addressed via the attempt to balance between Members' rights and their obligations.

With the sixth recital as a foundation of the Appellate Body's articulation of the balancing objective of the TBT provisions, the right of Members to address environmental concerns is at one end of balance, while at the other end is "trade liberalisation" especially the objectives "to create unnecessary obstacles to international trade" expressed in the fifth recital above.[219]

Although some parts of the TBT Preamble discussed above express the commercialist interests in the TBT policies, such as the harmonisation of technical measures and facilitation of international trade, the assertion of the sixth recital counter-balances them and, in overall, reflects the balancing policy as the overall object and purpose of the TBT Agreement in the case where environmental protection is involved.

First, the balancing policy may be suggested by the first part of the sixth recital: "no country should be prevented from taking measures necessary [for the recognised objectives]". This statement is an expressed affirmation of Members' autonomy, to address certain concerns, despite the TBT

[219] As pointed by the Appellate Body in the case of US – Clove Cigarettes. *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)., at paras. 95-96, 109 and 173-174.

obligations. It seems plausible that such necessary measures include those that would have been considered "so as to afford protection" or serving a protectionistic intent in the meaning under Article III: 1 of the GATT. In other words, the phrase seems to suggest that measures that are necessary to the recognised objectives would be permissible even if they exhibit features that otherwise would have constituted a violation of the requirement in the TBT Agreement. On this basis, the phrase could suggest that both the commercial interest *and* the non-protectionist policy need to be "balanced" with the considerations for the recognised objectives.

The above affirmation is not without conditions. It is contextualised by the conditions that the measures are not "a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade".

The statement is in fact the second suggestive element of the balancing object and purpose. It adopts the same text as the key phrases used in Article XX of the GATT. The content of the recital reflects several components that originate from Article XX of the GATT. In essence, the passage recognises Members' right to use trade measures to address environmental protection with the conditions under the non-discrimination concept in the broad sense discussed above.

The reference to "a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade" should be read in the meaning consistent with the spirit of the "balancing" policy reflected in the preceding phrase explained

above. Not only that, the term "necessary" used in the passage above resonates with the approach that the dispute settlement bodies have applied in their examination whether the GATT-inconsistent measure is an "arbitrary or unjustifiable discrimination". In Brazil – Retreaded Tyres case, the Appellate Body identified the "acceptable" discriminating rationale by assessing its contributory linkage between the purported regulatory objective(s).[220]

Again, on this basis, the text of the sixth recital suggest the "balancing" mandate as an overall object and purpose of the TBT Agreement in the case where certain regulatory objectives are involved. The recital encapsulates the concept of balance from Article XX, as it reiterates the legitimacy for Members to regulate in the way "necessary" in the broad sense, even when that might restrict exporting interests, for objectives including the protection of the environment. This is the notion of "balance" that does not simply refer to the prevention of disguised protectionism as some may view in relation to Article III: 1.[221] It is the balance that not only considers the normative interest of the multilateral trading obligations, but also gives weight to the relevance of the contested measure to other legitimate objectives such as the protection of the environment. It is therefore conceivable that not only the commercialist interests in facilitation and promotion of international trade (which in extreme case could result in the laissez-faire policy, explained above) but also the anti-protectionism policy could be "overridden" by non-market

[220] *Appellate Body Report, Brazil - Measures Affecting Imports of Retreaded Tyres ('Brazil - Retreaded Tyres'), WT/DS332/AB/R, 2007*., at para. 229.
[221] E.g. Zhou (n 190)..

based considerations, including the protection of the environment.

On the basis above, it could be argued that the policy of Article 2.1 differs from the anti-protectionist object and purpose set out in Article III: 1 of the GATT. With the different policy, the phrase "treatment no less favourable" in Article 2.1 should have a different interpretation from that of Article III:4 – provided that the objectives cited by the contested measure, or the regulatory objectives, fall under one of the broad themes of objectives recognised in the sixth recital of the TBT Preamble.

Do the above components of the sixth recital of the Preamble that are similar to Article XX of the GATT suggest that there can be room for justification or permissibility for measures that, without the sixth recital, would have been considered TBT-inconsistent?

I think they should. In light of the object and purpose set out here, measures declaring linkage to such regulatory objectives, including environmental protection, are to be examined with the "balancing" approach in their scrutiny under the TBT rules.

I think there is a risk that interpretation of the treatment no less favourable requirements would follow the NT standard of Article III: 4 in the pursuit of preventing protectionist measures as set in Article III: 1, and therefore would lack an adequate component that would serve the balancing policy. However, I discuss below that, because of the Preamble, it should follow the approach in applying the Chapeau of Article

XX, not Article III, when the regulatory objectives at issue are among the counterbalancing objectives cited in the Preamble.

3.2.2.1. "Necessary" in the Broad Sense of the TBT Preamble

Before discussing the issues, note that, the Appellate Body's examination under the Chapeau includes the assessment whether the contested measure is "necessary" in the broad sense. It clarifies in Brazil – Retreaded Tyres that the assessment does not replicate the requirement under the sub-paragraphs of Article XX.[222]

The recital embodies the concept of necessity which, in the GATT context, is elaborated in Article XX by the ten sub-paragraphs. However, in the TBT context, the requirements of the ten sub-paragraphs are more concretely translated into a substantive requirement[223] in Article 2.2 explained in Chapter 4. Not only the term "necessary" in the Preamble resonates with the Appellate Body's examination of the acceptable discrimination under the Chapeau above, there is also more resemblance of the sub-paragraphs of Article XX with Article 2.2 than that with the sixth recital. Moreover, if the sixth recital is applied in the same way as the sub-paragraphs of Article XX, the application would render Article 2.2 redundant.

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[222] *Appellate Body Report, Brazil - Retreaded Tyres, 2007* (n 214)., at para. 229.

[223] that "technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective [...] [such as] protection of human health or safety, animal or plant life or health, or the environment". Article 2.2, the TBT Agreement.

The list of regulatory objectives in the TBT Preamble differs from the one in Article 2.2. Without an explicit reference to "legitimacy", the recognition of objectives in the Preamble is formulated with a similar message to the recognition of objectives in Article XX. While Article 2.2 imposes a prohibition, a negative requirement, on Members' trade-restrictive measures, the Preamble empowers them by reassuring their right to regulate, even by means of trade-restriction, when the recognized objectives come into play.

The sixth recital of the Preamble not only reaffirms Members' right to regulate via trade-restrictive means, but also expressly recognises the listed objectives with a sense of added priority and permissibility to counterbalance with the substantive requirements in the TBT Agreement that could otherwise have been read to promote only economic interests and facilitate international trade, as provided in the second and third recitals of the Preamble explained above. Because of this, the objectives exhaustively listed in the Preamble are not only "legitimate objectives" which have been non-exhaustively listed in Article 2.2, but are also the "counterbalancing objectives" that are given priorities in the Preamble.

3.2.2.2. Being Necessary for Legitimate Objectives in the TBT Agreement

Despite similarities between the TBT Preamble and the sub-paragraphs in Article XX, the TBT Preamble should not be read as stipulating the necessity requirements in the same way as those under paragraph a, b and d of Article XX. Simply, the Preamble is not a substantive requirement, and is to be read as providing the context for the implementation of the

substantive provisions. The necessity requirement from the sub-paragraphs and its elaborate examining formula are more closely reflected in the prohibition of unnecessary trade-restrictiveness (most clearly reflected in Article 2.2). Similar to the sub-paragraphs, the content of Article 2.2 focuses on the relationship between the measure and the purported objective(s), as explained in Chapter 4. The Preamble and Article 2.2 should not be duplicated in function which could render either provision redundant or inutile.

3.3. The Sixth Recital of the TBT Preamble and the Resemblance with the Chapeau of Article XX of the GATT

Because the object and purpose of the TBT provisions are not only the facilitation of international trade or the prevention of protectionism but also the balancing policy as argued above, the phrase "treatment no less favourable" in Article 2.1 of the TBT Agreement should be interpreted accordingly. Though the treatment no less favourable requirements obligation in Article III: 4 is relevant for the interpretation of the phrase in Article 2.1 of the TBT Agreement,[224] it should not be an exclusive source of guidance for the overall application of the TBT treatment no less favourable requirements.

This sub-section presents the elements in the TBT Preamble that suggest the relevance of the Chapeau of Article XX. It shows the fundamental components shared in both provisions and summarises the key approaches by which they have been

[224] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)., at para. 100.

implemented in order to strike the "balance", or "elucidate the objectives of WTO Members with respect to the relationship between trade and the environment", in Article XX.[225]

In the GATT context, Article XX provides the framework to strike the balance between the WTO's interests in the economic dimension and those in the other dimensions such as the protection of the environment. At the core of the provision is the need to "balance" between "the *right* of a Member to invoke an exception [...] [in addressing legitimate objectives] and the *duty* of that same Member to respect the treaty rights of the other Members".[226] Such a right is tied with the objectives recognised as part of legitimacy justification in the ten paragraphs of Article XX.

First, the relevance of the Chapeau of Article XX is reflected in the terms "arbitrary or unjustifiable discrimination" or "a disguised restriction on international trade" which are also used in the TBT Preamble. In the GATT context, the three terms are fundamental in the balancing concept as they are a minimum non-discrimination standard required for the justification of any GATT-inconsistent measure. Their interpretation has shaped the relationship between the GATT and environmental regimes.[227]

The interpretation of "arbitrary discrimination", "unjustifiable discrimination" and "disguised restriction" under the Chapeau

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[225] *Appellate Body Report, US - Shrimp, 1998* (n 50)., at paras. 153–155.
[226] *Appellate Body Report, US - Shrimp, 1998* (n 50)., at paras. 156 and 159.
[227] *Appellate Body Report, US - Shrimp, 1998* (n 50)., at paras. 156 and 159.

of Article XX should therefore be most relevant as guidance in formulating a standard by which differential treatments would be scrutinized whether they are illegally "less favourable" under the TBT treatment no less favourable requirement, in the case where such treatments are related to the regulatory objectives recognised in the sixth recital of the TBT Preamble above. The interpretation of the three terms provides a non-discrimination standard by characterising a "genuine" and "non-protectionistic" measure.

Second, the text of the Preamble surrounding the three terms, especially the reference to "measures necessary to ensure [the recognised objectives]" also reflects a similar concept that is relevant to the identification of such genuineness and non-protectionistic intention by the standard of the Chapeau: the contributory relation between the declared objectives and the disadvantageous treatments accorded to the imported products.

In Article XX, the linkage between the purported objectives and the contested measure is more prominently discussed in relation to the application of the sub-paragraphs rather than the Chapeau. In order to invoke an exception, the regulating Members need to prove (1) that their GATT-inconsistent measures are not an "arbitrary discrimination", "unjustifiable discrimination" or "disguised restriction"; (2) that their regulatory objectives constitute one of the recognised objectives in the paragraphs, and; (3) that the linkage between the measure satisfies the requirement stipulated in each sub-paragraph.

However, such a linkage is also part of the assessment for the satisfaction of the conditions in the Chapeau.

In fact, this element of the non-discrimination concept in the broad sense under the Chapeau does resonnate with the "aim and effect" theory, which has always been rejected in the context of Article III. Although not stipulated in the text of the Chapeau, the linkage requirements in the sub-paragraphs has led the Appellate Body to identify the "non-discriminatory" measure via the contributory linkage between the declared objectives and the "cause or rationale of discrimination".[228]

In respect with the Chapeau, the level of "contribution" to reflect the genuine and non-protectionistic intent seems to be left vague and open to be assessed on a case by case basis, unlike the linkage requirements, such as "necessary", "related" or "essential" in the sub-paragraph of Article XX, all of which have been elaborately developed in the GATT jurisprudence.

Note also that the Appellate Body has clarified that the linkage does not depend "exclusively" on the achievement and effectiveness of the measure, but "the cause of the discrimination, or the rationale put forward to explain its existence".[229] In line with the idea of contributory linkage, the assessment of a measure against the non-discrimination standard under the Chapeau has considered other

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[228] *Appellate Body Report, Brazil - Retreaded Tyres, 2007* (n 214)., at para. 229.

[229] *Appellate Body Report, Brazil - Retreaded Tyres, 2007* (n 214)., at para. 226, citing *Appellate Body Report, US - Gasoline, 1996* (n 186).; *Appellate Body Report, US - Shrimp, 1998* (n 50).; and *Appellate Body Report, US - Shrimp (Article 21.5 - Malaysia), 2001* (n 35)..

considerations and qualities of the measure to assess the "discrimination" in question, for example: whether the measure in question allows flexibility or adaptation that would be appropriate to the context of the environmental concern in the exporting countries;[230] or "due process" or transparency in the application of the measure.[231]

The crucial point here is that, the idea of contributory linkage is mirrored in the sixth recital of the TBT Preamble. The Chapeau's approach in assessing the rationale of the discrimination and its contributory linkage with the declared objectives should provide a relevant guidance (when the contested measure is related to the objectives cited in the Preamble) in an examination of the differential treatments accorded to like-products under the TBT treatment no less favourable requirements. Essentially, in the case of environmental regulatory objectives, the non-discrimination standard in the treatment no less favourable requirements of the TBT Agreement should focus on such assessment of rationale rather than exclusively based on the market impact accorded to the imported products by the contested measure – if they are to be implemented in light of the object and purpose provided by the Preamble of the Agreement.

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[230] As seen in US-Shrimp, the particular Turtle Excluder Device (TED) is required without considering the conditions surrounding turtle by-catch and shrimp fishing in the exporting Members. This was deemed as "rigid", "inflexible" and consequently "arbitrary discrimination" as TED would not have contributed to the prevention of turtle by-catch in the context where the fishing methods do not cause the incidental killing in the first place. *Appellate Body Report, US - Shrimp, 1998* (n 50)., at para. 177.

[231] *Appellate Body Report, US - Shrimp, 1998* (n 50)., at paras. 180–181; and *Appellate Body Report, European Communities - Conditions for the Granting of Tariff Preference to Developing Countries ('EC - Tariff Preference'), WT/DS246/AB/R, 2004*, at paras. 7.228–7.229, 7.232 and 7.234.

The last similarity between the sixth recital of the TBT Preamble and the Chapeau is their common agenda in striking the "balance". As reiterated in the Appellate Body's decision in US-Shrimp, the application of the Chapeau serves the purpose of maintaining the "equilibrium between the right of a Member to [regulate and address their legitimate concerns] [...] under Article XX and the rights of the other Members under varying substantive provisions".[232] Such substantive provisions, from which Members could be exempted under Article XX, include the NT requirements in Articles III, even though the exemption shares the basic agenda and foundational elements with such NT and the requirements of Most-Favoured-Nation (MFN).[233]

> Such equivalence in agenda of the two provisions is recognised by the Appellate Body in US-Clove as it states that "[t]he balance set out in the preamble of the TBT Agreement [...] is not, in principle, different from the balance set out in the GATT 1994, where obligations such as national treatment in Article III are qualified by the general exceptions provision of Article XX".[234]

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[232] *Appellate Body Report, US - Shrimp, 1998* (n 50)., at paras. 158–159.

[233] The shared basis is concluded in *Appellate Body Report, US - Gasoline, 1996* (n 186)., at p. 23. Their differences are summarised in US-Shrimp:

> (1) "nature and quality of this discrimination is different from the discrimination in the treatment of product which was already found to be inconsistent with one of the substantive obligations of the GATT 1994, such as Articles I, III or XI"
> (2) "the discrimination must be arbitrary or unjustifiable in character"
> (3) "this discrimination must occur between countries where the same conditions prevail".

Appellate Body Report, US - Shrimp, 1998 (n 50)., ,at para. 150.

[234] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)., at paras. 88 and 96.

4. The Interpretation of the Treatment No Less Favourable Requirement in the TBT Agreement: The Balancing Policy as the TBT Object and Purpose

Key to the examination of Article 2.1 is the concept of "legitimate regulatory distinction". Below, I provide the summary of the concept based on the Appellate Body's decisions in the US-Clove Cigarettes and US-Tuna (Mexico) II. Despite the resemblance between the sixth recital and the policy concept of Article XX explained above, the Appellate Body in the US – Clove Cigarettes only expresses the deference to Article III jurisprudence for an interpretation of the requirement of treatment no less favourable in the TBT Agreement without equivalent reference to the case law interpretation of "arbitrary or unjustifiable discrimination and disguised restriction to international trade" stated in the Chapeau of Article XX of the GATT.

With the "aim and effect approach" was still rejected in likeness analysis, an exclusive deference to Article III:4 may raise concern for environmental regulators because the market-focused approach of Article III (without the balancing methods such as those adopted under Article XX or the aim and effect theory that would have framed the examining analysis from the perspective of regulatory objectives) would prohibit a legitimate "regulatory distinction" based on genuine environmental rationale.[235]

[235] Examples of measures that may differentiate between products from different countries of origin due to environmental reasons will be provided later as a case sample below.

Despite the clear recognition of the authoritative relevance of Article III, it must be said that the Appellate Body's decision in US – Clove Cigarettes did not entirely adopt the same unbalanced or one-sided method in examining the US technical regulation against the requirement of treatment no less favourable. In principle, the Appellate Body's approach seems to have opened door for deviating interpretation of the requirement despite the same text of Article III: 4 of the GATT and Article 2.1 of the TBT Agreement. The Appellate Body's approach to balance is translated into the notion of "legitimate regulatory distinction" in determining whether it is "less favourable" that violates Article 2.1.

In the TBT context, such regulatory distinction is not only assessed from aspects of the exclusiveness of the market disadvantage like Article III: 4 explained above. In light of the sixth recital, the assessment is outlined to also enquire whether the "detrimental effects" on the market competition "stem exclusively" from the regulatory objectives.[236] If applied in compliance with the integration principle, this assessing formula would open for considerations from perspectives of environmental protection. This would then resonate with the case law interpretation of the Chapeau of Article XX of the GATT, even though the jurisprudence of the Chapeau seems to have been intentionally unrecognised as authoritative like Article III: 4. Particularly similar with the broad concept of non-discrimination in the Chapeau of Article XX, the TBT's concept of legitimate regulatory distinction is based on the

[236] *Appellate Body Report, US - Clove Cigarettes, 2012* (n 79)..

satisfactory relation between the contested measure and regulatory objectives.

The theory laid down by the Appellate Body resembles the broad concept of non-discrimination in the Chapeau of Article XX. However, in practice, the notion of "even-handedness" in the market effects of the treatment still seems to be the primary determinant for any possible permissibility of a prima-facie less favourable treatment. In US-Clove Cigarettes, the relation between the regulatory distinction and the regulatory objectives is not fully evaluated as the focus of the treatment is on the relation between the domestic products (menthol cigarettes), and the public health problem cited by the regulating body (youths' attraction to flavoured cigarettes and the number of smokers). The contested measure was deemed "uneven-handed" (hence illegitimate) because the Appellate Body found that the US measure did not prohibit the domestic product with similar attributes that cause the health concerns in question. The query was without fully assessing the achievement of the measure, albeit uneven-handed from the market aspects. It was concluded that the health objective was pursued exclusively on the expense of exporting Members, while protecting the domestic competitors.

According to this analysis, the prohibition of flavoured cigarettes would seem to have been legal if menthol cigarettes had also been prohibited in the US market, despite the commercial loss of Indonesian producers. The practice of the well constructed formula therefore seems one-sided and has not yet implemented the integration principle as fully as it could have done.

5. My Observation and Proposals

This is not to say that I disagree with the outcome decision. There does not seem to be an apparent reason how the prohibition of only one product (with significantly less presence and popularity in the market than the domestic product with the attributes that are "like" under the US' own rationale of the regulatory distinction) could achieve such a significant public health objective. The one-sided analysis may also have been because the US' explanation why the domestic cigarettes were not banned (i.e. to avoid the problems from withdrawals expected to arise from the equal ban of menthol and clove cigarettes) was simply not persuasive. If it had been assessed in the context of the Chapeau in Article XX of the GATT, the discriminating rationale of the ban may not have the required "contributory linkage" to be deemed as justifiable or non-arbitrary discrimination. From the perspective of public health, the problem of youth's smoking is still far from being solved by imposing such a simple trade ban on a small player in the industry.

Although the outcome decision seems to have gained acceptance from commentators,[237] I think there are some flaws in the reasons of their determination of the "legitimacy" of the regulatory distinction. The components of their rationalisation would limit the inclusion of environmental considerations. On this basis, it is questionable whether the balancing agenda that the Appellate Body has set out in theory above would continue to be translated into practical mechanisms in future cases. I think there needs to be a more reliable guidance as to

[237] E.g. Zhou (n 190)..

how such legitimacy of a regulatory distinction should be tested.

5.1. The Rationalisation of "Legitimate Regulatory Distinction"

One of the points worth questioning is about the contributory relation between the contested regulatory distinction (albeit one that has been rendered uneven-handed from the market aspects) and the cited objective(s) of the regulation. The degree of achievement in reducing smokers by banning clove cigarettes might have made only insignificant contribution to stop youth smoking to warrant it as a legitimate regulatory distinction in US – Clove Cigarettes. It might have only dealt with certain groups of consumers attracted to a traditional kind of tobacco, but not those in the mainstream market that are appealed to smoking because of the modern menthol cigarettes.

From a regulator's perspective, no actions could have been taken if all problematic factors would all have to be simultaneously dealt with. With the contribution of the ban too insignificant to have been included in the consideration of legitimacy, the Appellate Body's analysis did not weigh such small impact of the measure against the interest of trade liberalisation. This has left the illegitimate regulatory distinction appearing to only require an incomplete analysis by which the inadequacy of the ban of one product is rationalised by the absence of the ban of the domestic like-product: Basically, the conclusion of the Appellate Body suggests that the ban of clove cigarettes was considered not "stem[ing] exclusively from" the health objective because menthol

cigarettes are also harmful. The harms to health of the menthol cigarettes may have raised questions about the genuine intent to protect the young American's health that the contested ban of clove cigarettes claims to serve.

Such an incomplete analysis will not be adequate in the more complex nature of environmental issues. In such cases, the dispute settlement bodies should ensure that there is an analysis directly on the contribution of the contested measure. The degree of the required achievement of the contested measure could follow the approach of the Chapeau. The test should not require an unattainable or idealistic fulfilment of the purported objective.

In this sense, the approach in assessing the acceptable "discriminating rationale" of a contested measure under the Chapeau of Article XX could offer some guidance in the interpretation of Article 2.1. It is readily available, is substantiated by the text of the TBT Preamble, and should be more desirable for the pursuit of "mutual supportiveness" between the WTO rules and other regimes than the exclusive focus on market competition inherited from Article III of the GATT. The idea of "legitimate regulatory distinction" as originally conceptualised by the Appellate Body (albeit not completely materialised) already resonates with the interpretation of the "justifiable and unarbitrary discrimination or disguised restriction to international trade, and therefore seems to be open for this route of analysis.

If this is applied, the requirement of "treatment no less favourable", the concept of "legitimate regulatory distinction" and the sixth recital of the TBT Preamble, would have a

relationship that is reflective of the one between the NT obligations (e.g. Article III) and the exception (Article XX) in the GATT. In other words, this route provides, in effect, the justifiability equivalent to an exception to Article 2.1 for environmental measures that could have otherwise been rendered a violation of the requirement. The way to materialise this proposal, in the implementation of Article 2.1, will be demonstrated later in this Section under a hypothetical case.

5.2. The Bodies Involved in the Decisions on "Trade Matters"

Viewing the analytical formula of Article 2.1 in detail, it becomes clear that various decisions that are typically considered to be an interpretation of trade rules, or "trade matters", can involve the determination of issues that have environmental content. The Appellate Body's determination on whether the regulatory distinction "exclusively stems from" the regulatory objective is a good example. Other plausible considerations, also include the assessment whether the distinction is "legitimate" in the general sense (as opposed to the market-centric sense defined by "even-handedness" explained above), and whether the market disadvantage on imports (without one being equally accorded to domestic/other like-products) is "necessary" from the environmental rationale in light of the sixth recital of the TBT Preamble. Such environmental necessity could include the potential environmental damage that could arise after the rejection of the contested technical measure and the potential solutions, which are considered to have been done in "good

faith" as required by the International Court of Justice in the case of Gabčíkovo-Nagymaros Project (Hungary/Slovakia) discussed in Chapter 5.

To deliver such adequate assessment on environmental issues, it would seem only appropriate that respective environmental experts are more involved, in the decisions on issues that are traditionally classed as trade matters.

5.3. The Informative Relationship between Article 2.2 and 2.1

The verdict on the necessary trade-restrictiveness requirement such as that in Article 2.2 should be considered in connection with the determination of "legitimate regulatory distinction" query of the requirement of treatment no less favourable. The relationship between the two requirements of the TBT Agreement, applied in connection with the sixth recital, should resemble the one between the Chapeau and the respective paragraphs of Article XX.[238]

It is clear that a technical regulation is expected to observe both Article 2.1 and 2.2, the same way that a GATT-inconsistent measure must satisfy requirements of both the Chapeau and one of the subsequent paragraphs of Article XX to be permitted under the GATT. Also, each of the two requirements contains components that mirror either the Chapeau or the sub-paragraphs of Article XX.

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[238] The content of the ten sub-paragraphs in Article XX of the GATT will not be discussed in this chapter. For explanation, see e.g. Peter Van den Bossche, 'Chapter 7: Trade Liberalisation Versus Other Societal Values and Interests', *The Law and Policy of the World Trade Organization: Text, Cases and Materials* (2nd edn, Cambridge University Press 2008).

Article 2.2 overtly resonates with the components of the sub-paragraphs of Article XX such as the requirement of "necessary trade restrictiveness, legitimate objectives and the "weighing and balancing" analysis.[239] The considerations in the sub-paragraphs seem to have become the requirement to consider the "risk of non-fulfilment" in Article 2.2. At the same time, as explained above, the concept of legitimate regulatory distinction under Article 2.1 and the wording of the sixth recital contain various elements found in the Chapeau of Article XX.

The Chapeau and sub-paragraphs are applied in relation to each other, as expressly announced by the Appellate Body in US-Shrimp. The queries of "arbitrary or unjustifiable discrimination" and "disguised restriction to international trade" under the Chapeau take into account the relation between the discriminating rationale of the measure and the regulatory objective(s) in order to create consistent considerations. By the same rationale, there would seem to be fundamental flaws in the decision that the regulatory distinction at issue is not "legitimate" and is therefore illegal under Article 2.1, while the measure is considered compliant with the prohibition of unnecessary trade restrictiveness in Article 2.2 – as seen in US-Tuna (Mexico) II.

On this basis, the analysis of Article 2.1 (in light of the sixth recital) and of Article 2.2 should deliver coherent outcome. In particular, the determination whether the trade-restrictiveness is necessary to address legitimate objectives should inform the

[239] As reaffirmed in e.g. *Appellate Body Report, Korea - Measures Affecting Imports of Fresh, Chilled and Frozen Beef ('Korea - Various Measures on Beef'), WT/DS161/R, 2000*. Refer to the explanation in Chapter 4.

"legitimacy" assessment of the regulatory distinction discussed above.

5.4. Hypothetical case: Contributory Linkage between the Origin-Based Market Disadvantages and Environmental Protection

Some environmental concerns may call for treatments that would impose more burden or restriction to imports than products that have been produced either locally or in certain countries of origin. This may be due to, for example, environmental or geographical attributes of the exporting country, the allegedly laxer environmental standards and/or ineffective law enforcement in the country of origin.

Some measures in the scheme of sustainable consumption and production explained in Chapter 6 may constitute such a high standard of practice that imported products could not comply with, and therefore could not enter the market of the regulating Members. This may not necessarily be imposed with the intention to create market advantages for domestic products. This includes, for example, a measure promoting the low/zero mileage of product transportation. The regulatory objective may be to reduce the use of fuel and carbon emission. Transnational transportation could effectively prohibit or disadvantage the imported products. Its rationale of regulatory distinction is linked with the concerns of both climate change and conservation of non-renewable energy which have been recognised as important to the concept of sustainable development.

Another example of origin-based product distinction is technical regulations, standards and conformity assessment procedures applied to the import of animals of protected species as already discussed in the hypothetical case in the discussions about like-product in Section II above. The measures are often adopted in the market of exotic pets. The common approach, as reflected in CITES, is the distinction between animals that are captured from its wild habitat and those bred in captivity. The former may be prohibited or allowed with some restriction while the latter needs to satisfy examinations and inspection.

The distinction based on the country of origin seems logical. From the environmental viewpoint, there is simply more risk of the animals imported from such countries to have been hunted from the wild as the illegal hunting only takes place in the countries in which the natural habitats of the protected species are located. Not only that, governments that have attempted to address the problem by imposing burdensome requirements on their constituencies may be pressured to prevent the environmentally damaging actions from simply being shifted outside the territorial jurisdiction of the regulating country to avoid the costs of high environmental standards. In such a situation, regulators may seek to effectively coerce other countries to impose equivalently burdensome requirements on their constituencies and create a level-playing field in the market competition for their local producers. This serves the environmental agenda as well as the economic one.

In addition, it may also be unattainable or even impossible for the importing Member to supervise and certify breeders in foreign countries. This could subsequently lead to prohibition of captive-bred imports.[240] Importing countries can only ensure the conformity with the requirement such as those under CITES via measures imposed on imports. The prohibition of sales of animals from breeders not certified by the importing Member's own breeder inspection could be legitimate when the conformity assessment certification provided by the exporting country's agencies is absent or unreliable.[241]

The measures may not expressly ban imports but create a de facto prohibition by imposing such a high standard in the requirement that cannot be met by overseas breeders, especially those in poor developing countries in which the natural habitats of many protected species are located. Yet, the prohibition would affect not only the wild-caught animals which are the direct concerns in the context of biodiversity protection, but also those bred in the farms from overseas due to the practicality reasons.

The import prohibition clearly modifies the market competition between overseas- and domestically-bred animals, and is likely to be deemed as "origin-based" and contested under the "treatment no less favourable" requirement. It may also be suspected as intending to favour the domestic breeders, of

[240] The US ban on imported birds of protected species that has been explained in Section II above, for example, allows the sales of animals from breeders certified by the US domestic agency.
[241] As claimed to be the case in some developing countries. See, e.g. an interview with an Indonesian licensee of wild-captured snakes, in: 'This World: Inside The Billionaire's Wardrobe' (2016).

which associations tend to be actively involved in the regulation-making processes themselves.

If determined exclusively by the test of even-handedness as explained above, such origin based regulatory distinction of captive breeders may be concluded as illegally "less favourable treatment" in violation of the treatment no less favourable requirement in the TBT context. Yet, if the agenda of balance as in the sixth recital and the objectives of sustainable development (as stated in the Preamble of the Marrakesh Agreement) are to be realised,[242] I believe that the assessment of the discrimination for the above reasons should follow the examining analysis of the Chapeau of Article XX and open for more involvement of biodiversity conservationists, as proposed above.

In such case, the assessment not only should consider the disadvantage on market competition of the imported products in comparison with the domestic one, in determining the legality of such an origin-based regulatory distinction under the requirement of treatment no less favourable. It should also give sufficient weight to the contributory linkage between the regulatory distinction, the measure in question and the objective of reducing/eliminating the hunting of protected animals from the wild for commercial reasons.

As proposed in Sub-Section 5.1, the direct linkage between the "treatment" (albeit uneven-handed) and the purported environmental objective(s) should be included in the analysis of "legitimate regulatory distinction" – to counterbalance with

[242] Discussed in Chapter 5.

the assessment on the "detrimental effects" on market competition which follows the "authoritative guidance" of Article III:4.

Not only that, the linkage should not be expected to demonstrate an idealistic level of efficiency or to have completely achieved the thematic environmental objectives cited in the broader scheme that imposes technical measures. The relation required for the regulatory distinction to be accepted as "legitimate" should also be considered from the aspects from the rationale of the above measure, i.e. the merits of preventing the hunting of certain wild animals and the relevance to the protection of the species.

As proposed in Sub-Section 5.2, such interpretation of the requirement of treatment no less favourable may be typically classed as trade matters but involve complex environmental issues. For example, the correctness of the measure with such a high standard of requirement in this case may be questioned in regard to its detrimental effects on the sale of captive-bred animals of the species under Appendix 2 of CITES, as the Biodiversity Convention in fact recognises the importance of commercial interests and welfare of the local communities in the country of natural habitats, whose livelihood may depend on the sale of captive-bred animals. As such considerations should be adequately factored in the above analysis without being overshadowed by trade-centric expertise of the WTO dispute settlement bodies.

Specialists on biodiversity conservation should therefore be engaged in the process of decision-making. Their involvement may take place via the route of a technical expert group

(according to Article 14 of the TBT Agreement) or Amicus Curiae submissions.[243] Such experts may include CITES Secretariat, conservation organisations and academia.

As proposed in Sub-Section 5.3, the query of "legitimate regulatory distinction" of the measure should be analysed in connection with the examination of the trade-restrictive features and effects under Article 2.2. The latter should inform the former determination, similarly to the way the satisfaction of respective sub-paragraphs of Article XX has informed the determination of justifiable or non-arbitrary discrimination under the Chapeau. Technical measures that restrict trade only to the extent necessary to the legitimate objective considering the "risks non-fulfilment would create".

6. Preliminary Conclusion

Section III seeks to present the TBT-TNLF requirement from the broader view of non-discrimination rules, as derived from Article III (especially paragraph 3) and the Chapeau of Article XX of the GATT. It explains the difference between (1) the TNLF requirement in Article III:3 that serves the non-protectionist agenda and (2) the non-discrimination principle in the broad sense that also include the balancing policy. In short, Chapter 7 points out that the current application of Article 2.1 in US-Clove Cigarettes can be too restrictive as it still follows the guidance of Article III:3, adopting the market-centric approach serving anti-protectionist agenda, and is yet

[243] See e.g. Article 13 of the Dispute Settlement Understanding on rules and procedures governing the settlement of disputes. For brief explanation see e.g. WTO, 'Participation in Dispute Settlement Proceedings' <https://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c9s3p1_e.htm> accessed 1 September 2016.

to demonstrate a clearer attempt to realise the balancing policy.

The lack of openness for sufficient regulatory considerations would be a step backward for the WTO's pursuit of sustainable development objectives, because the TBT Agreement lacks an exception provision. Its necessity consideration is formulated as a prohibition in Article 2.2, not a justification of measures with "uneven-handed" effects on imports. It is therefore important that the phrase TNLF in Article 2.1 is interpreted differently from Article III:4, despite the same text, and embody balancing approach – of which guidance may be available in the Appellate Body's explanation about the Chapeau of Article XX of the GATT in the case of US-Shrimp.

Conclusion

Chapter 1 has provided the introduction of the thesis. It explains the general background of the topic, the relevance of the TBT Agreement and the methodology adopted in this research. It has also declared the attempt of this research to contribute to the literature in the fields of the TBT rules, the principle of non-discrimination and the interface between international trade rules and environmental regimes.

Chapter 2 introduces the TBT instruments, as annexed to the TBT Agreement. It explains the scope of the Agreement, which is based on the definition of three technical measures: technical regulations, standards and conformity assessment procedures (CAPs). The discussions in this chapter also present the area of environmental measures that is of interest to this research from the TBT perspectives. It also touches upon the unsettled understanding and differing propositions among WTO Members about the extent to which the Agreement should cover technical measures related to production methods, as well as the implication of such coverage/non-coverage to environmental interests.

Chapter 3 explains how the Agreement imposes obligations on its Members to promote the observance of the TBT discipline by the different types of technical bodies that operate within their territories: the central government bodies, local government bodies and non-governmental bodies. It points to the specific definition of technical bodies recognised in the TBT context that is centred on the authoritative relationship

between a Member's central bodies and the technical body in question.

Chapter 4 discusses the normative discipline of the Agreement, namely: the requirement of treatment no less favourable, necessity, and use of international standards. They are the fundamental elements that determine the normative impact of the TBT regime to the arena of product-related governance. The discussions in this chapter does not yet dive into specific details on the relationship between the TBT discipline and environmental regimes as it seeks to provide the whole picture of the three principal requirements.

The chapter concludes that, in theory, there are mechanisms within the disciplines which would accommodate environmental measures, provided that they are of provable "environmental merits" of which aspects are reflected in the disciplines. The non-discrimination requirement leaves room for "legitimate regulatory distinction". The necessity concept is open for Members' domestic objectives which would allow a broad range of "environmental" matters that concern their constituencies. It exhibits the TBT model of "weighing and balancing" assessment similar to that of the GATT which could be receptive to the necessity of the environmental objective and the environmental performance of the measure at issue. And, the requirement for the use of international standards allows exceptions when they are not applicable.

This said, the chapter observes some lessons that should be learnt from the GATT. It warns of certain tendencies of application that may take place within the TBT context, such as (1) an overly narrow interpretation of "legitimate regulatory

distinction" that could result from the market-based analysis; and (2) the disproportionate emphasis on the comparison of trade-restrictiveness within the weighing and balancing assessment.

Chapter 5 sets out the conceptual framework and normative ground for the analysis in Chapter 7. It suggests the meaning of "balance" in light of the principle of integration under the sustainable development concept. It clarifies that the focus of the later analysis in the thesis is on the implementation of the principle, of which attention is on the procedural aspects of decision-making. The interest of this thesis is primarily on whether and how environmental considerations could be sufficiently taken into account in the process.

Chapter 6 provides general ideas about environmental governance in regards to (1) environmental problems and objectives as recognized within the UN sustainable development context, and (2) principles and approaches commonly found in public international law, that are often mirrored by environmental regulations in the domestic sphere and private measures. It also presents mechanisms within environmental governance that directly interact with the TBT requirements with the parlance centred on environmental regulations and standards, including: those that may constitute a technical measure under the TBT coverage, "international standards" mentioned in the Agreement, and technical bodies that are responsible for their establishment and application.

It also raises the question of what "environmental" means, as the term has generally been used in a very broad and

indefinite sense, especially by trade-environment critics.[1] In discussing that question, it raises awareness about the complexity and diversity of environmental problems and the governance systems that address them.

Chapter 7 discusses the relationship between the TBT Agreement and environmental protection by analysing the requirement of "treatment no less favourable" in the TBT provision. In particular, it discusses the scope of the Agreement in respect with production-related measures, the concept of like-product, and the examination of the "legitimate regulatory distinction".

Ultimately, it proposes that the sixth recital of the TBT Preamble should provide a significant legal ground for the more "balanced" interpretation of the term "treatment no less favourable". The market-centric application of Article III: 4 would not provide sufficient guidance for the interpretation due to the absence of the general exception provision in the TBT context. The chapter therefore argues that certain practices from the case law of the Chapeau of Article XX should provide a better instruction for the examination of the "legitimate regulatory distinction" under the TBT requirement of treatment no less favourable.

This thesis concludes that there are currently available mechanisms for implementation of integration principle in the TBT Agreement, to include environmental considerations into the interpretation and application of the requirement on

[1] As seen in, for example, John H Jackson, World Trade Rules and Environmental Policies: Congruence or Conflict? Washington and Lee Law Review, Vol. 49 (4), 1992, p. 1227-1278, at p. 1230.

treatment no less favourable. Yet, there are some tendencies that they would be applied in the way that would limit and restrain adequate inclusion of environmental considerations.

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