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TABLE OF CONTENTS

<u>INTRODUCTION.....</u>	<u>4</u>
RESEARCH QUESTION AND METHODOLOGY.....	5
<u>CHAPTER I: WTO AND THE ENVIRONMENT</u>	<u>7</u>
1. GENERAL CONSIDERATIONS.....	7
2. THE PREMISE OF THE NECESSARY DISTINCTION BETWEEN THE WTO AND ENVIRONMENTAL PROTECTION AGENCIES	8
2.1 THE INTERSECTIONAL NATURE OF TRADE AND ENVIRONMENTAL MEASURES.....	10
2.2 DISCOURAGING UNILATERAL ENVIRONMENTAL MEASURES LIMITING TRADE	10
3. THE WTO FRAMEWORK AND THE RISK OF CLASH BETWEEN CONFLICTING VALUES.....	11
4. THE POSITION OF THE WTO FRAMEWORK WITH RESPECT TO THE ENVIRONMENT	12
4.1 GENERAL EXCEPTIONS UNDER THE GATT	14
4.2 GENERAL EXCEPTIONS UNDER THE GATS.....	15
4.3 AGREEMENT ON TECHNICAL BARRIERS TO TRADE (TBT AGREEMENT).....	16
4.4 AGREEMENT ON SANITARY AND PHYTOSANITARY MEASURES (SPS AGREEMENT).....	17
5. THE PRACTICE BY THE WTO ADJUDICATING BODIES WITH REGARD TO GATT ARTICLE XX, SELECTED CASES	18
5.1 US-SHRIMP ON REGULATORY DISCRIMINATION AND RATIONAL CONNECTION STANDARD	18
5.2 BRAZIL-RETREADED TYRES ON QUALITATIVE NECESSITY TEST AND THE MATERIAL CONTRIBUTION TO THE OBJECTIVE	19
6. CONCLUSION: INTERACTION AND COMPLEMENTARITY OF THE TWO SYSTEMS.....	21
<u>CHAPTER II: WTO AND CLIMATE CHANGE.....</u>	<u>23</u>
1. OUTLINING THE MULTIPLE ISSUES AND IMPACTS RELATED TO CLIMATE CHANGE.....	23
1.1 IMPACTS OF CLIMATE CHANGE ON SECURITY CONCERNS	23
1.2. IMPACTS OF CLIMATE CHANGE ON THE RIGHTS OF ACCESS TO WATER, FOOD, AND ENERGY.....	27
1.3 THE ANTHROPOGENIC NATURE OF CLIMATE CHANGE AND THE NEED TO SAFEGUARD THE GLOBAL COMMONS THROUGH MULTILATERAL NEGOTIATIONS.....	28
2. STRATEGIES AIMED AT MATERIALIZING EFFECTIVENESS OF CLIMATE CHANGE REGIMES	29
3. THE INSTITUTIONAL FRAMEWORK OF PROVISIONS IN THE WTO AND IN THE CLIMATE CHANGE INTERNATIONAL REGIMES.....	32
3.1 PRE-EMINENCE OF FREE TRADE?	32
3.2. CLIMATE CHANGE AS A GLOBAL PROBLEM.....	34
3.2.1 THE PREDECESSORS: EMERGENCE OF LITIGATION WITH RESPECT TO POLLUTION AND THE OZONE LAYER... ..	35
3.2.2. ...UP TO RECENT DEVELOPMENTS REGARDING CLIMATE DAMAGES AND INTERNATIONAL COURTS	37
3.2.3 THE SYNCHRONOUS DEVELOPMENT OF MULTILATERAL TREATIES... ..	38
3.2.2 ...AND THE EMERGENCE OF CLIMATE CHANGE AS SCIENCE-BASED ISSUE LEADING TO THE BIRTH OF THE CLIMATE CHANGE REGIME	40
3.2.3 SPILL-OVER EFFECT ON THE WTO	42
<u>CHAPTER III: CLIMATE ACTION DISPUTED AT WTO LEVEL.....</u>	<u>45</u>
1. THE CRISIS OF THE DISPUTE SETTLEMENT SYSTEM AND THE DEMISE OF THE APPELLATE BODY IN 2019	45
2. THE WTO DISPUTE SETTLEMENT SYSTEM AS A FORUM FOR CLIMATE LITIGATION	47
3 TRADE RELATED CLIMATE LITIGATION	50
3.1 DEFINITION AND POSSIBLE TAXONOMY	50

3.2 Is the DSS a suitable forum for controversies?.....	53
4. Selected legal aspects of climate-related disputes before WTO panels or appellate body.....	59
4.1 Legal base for disputes	59
4.2. Preliminary issues of disputes before WTO dispute settlement system.....	61
4.3. Strands of climate related disputes and the relevance of renewable energy subsidies	63
CONCLUDING REMARKS	68
ABSTRACT.....	70
BIBLIOGRAPHY	71

INTRODUCTION

Around a hundred years ago mankind began tracking and recording accurately data about the global climate. Science has therefore demonstrated that increasing warm temperatures have become apparent during the last forty years¹, at least.

Especially after the Fourth Assessment Report of the Intergovernmental Panel on Climate Change was published in 2007, the circumstance according to which a significant climate change phase has begun for the planet is no longer disputed². Some scientists went even so far as to propose a new geological epoch, which they named the Anthropocene³, characterized by the intensive and decisive impact of human beings on nature and ecosystems, including, as noted in authoritative research, "social, political and economic constructs such as capitalism that drive ecological degradation and climate change"⁴. As emissions of global pollutants, especially CO₂ gases, have steadily increased their volume, a key role has been played by the expansion of trade⁵.

The international trade regime and the climate change set of regulations have evolved with a mere nominal reference to one another. At current times it is necessary that the first takes the weight of and sustains ecological measures. Conversely, the WTO system has the opportunity to intervene whenever its members point at protectionism disguised under measures which claim to be aimed at climate action, while in truth just limit trade liberalization⁶.

This manuscript aims at shedding light to the contributions that the multilateral trading system can offer in the fields of environment and, consequently, climate change. It argues that the WTO system is capable of giving a substantial contribution exactly *because* it is a framework for removing trade barriers and for fighting protectionism, may it appear in the form of tariffs, subsidies, quantitative restrictions, or any other trade distortive or restrictive practice.

¹ Sir John Houghton, *Warming. The Complete Briefing* (CUP 2015) 2.

² Daniel H. Cole, 'Climate Change and Collective Action' (2008) 61(1) *Current Legal Problems* 229.

³ Human-induced changes such as "rapid climate change, widespread pollution, plastic accumulation, species invasions, and the mass extinction of species" have been captured as permanent footprint in the geological history of rocks, this is the finding of author Erle C. Ellis, *Anthropocene: A Very Short Introduction* (OUP 2018) available at <<https://doi.org/10.1093/actrade/9780198792987.001.0001>> accessed 15 September 2023; similar findings are discussed by Colin N. Waters et al, 'The Anthropocene is functionally and stratigraphically distinct from the Holocene' (2016) 351 *Science* 137 available at <<https://www.science.org/doi/10.1126/science.aad2622>> accessed 15 September 2023; Lucy E. Edwards, 'What Is the Anthropocene?' available at <<https://eos.org/opinions/what-is-the-anthropocene>> accessed 15 September 2023.

⁴ Carolyn Merchant, 'The Anthropocene and the Humanities: From Climate Change to a New Age of Sustainability', (2019) 30(1) *Yearbook of International Environmental Law* 586, 588, available at <<https://doi.org/10.1093/yiel/yvaa077>> accessed 15 September 2023.

⁵ Glen P. Peters, Edgar G. Hertwich, 'CO₂ embodied in international trade with implications for global climate policy' (2008), 42(5) *Environ. Sci. Technol.* 1401 available at <<https://pubmed.ncbi.nlm.nih.gov/18441780/>> accessed 15 September 2023.

⁶ Tracey Epps and Andrew Green, *Reconciling Trade and Climate. How the WTO Can Help Address Climate Change* (Edward Elgar Publishing 2010) 50.

At the present moment, the dualistic function performed by the WTO, grounded on the legislative pillar and the judicial one, is stalling⁷. The multilateral negotiations have *de facto* halted at the Doha Round without bringing further development and liberalisation, putting the WTO at risk of becoming irrelevant⁸, whereas the Appellate Body functions were impaired due to the obstructionist attitude in particular of the United States.

Because of hesitation and stall at the level of multilateral negotiations, even with some achievements at the 2022 MC12 Ministerial Conference to be pointed out⁹, rulings by the "judicial" system of the WTO could be qualified to be a more efficient tool to solve conflicts in the correlation between trade and environment, with correlated relevance in the relationship between climate and trade¹⁰.

Research question and methodology

The research question revolves around the issue of the relationship between the WTO and climate action, and whether it is possible to make trade and climate action mutually supportive.

Therefore, an overview of the policy advancements and setbacks, as well as the legal ones, and the findings of the case law, though the reasoning of panels and Appellate Body pertaining specific questions will be presented. The work is based on the study of primary sources, including the GATT and WTO Agreements and the covered agreements, as well as secondary ones, such as monographies, relevant journal articles, newspapers articles and websites.

The paper begins with a first chapter scrutinising the relationship between the WTO and the environment, under the perspectives of textual analysis, interpretation, and evolution of the case law. It will be highlighted that the WTO is not an environmental protection agency and that its mandate is originally limited. Beside this acknowledgement, there are observable intersections between the two regimes. Nevertheless, a risk of clash between conflicting values cannot be prevented in the absence of a comprehensive agreement regulating specifically environmental issues. Still, provisions from the

⁷ Steve Charnovitz, 'A Better Transatlantic Agenda on Trade and Environment' (2021) Jean Monnet Network on Transatlantic Trade Politics (Policy Brief N.2, December 2021) 3.

⁸ Peter Ungphakorn and Robert Wolfe, 'The World Trade Organization is regularly in crisis, but this time could be different' (2021) *The Cosmopolitan Globalist* <<https://claireberlinski.substack.com/p/the-world-trade-organization-is-regularly>> accessed 15 September 2023. See also Robert Howse and Joanna Langille, 'Continuity and Change in The World Trade Organization: Pluralism Past, Present, And Future' (2023) 117(1) *American Journal of International Law* 1, 8.

⁹ Some multilateral agreements (so called "Geneva package") on important topics such as WTO reform, e-commerce, fisheries subsidies, agriculture, and food security were the result of long negotiations, even if many still necessitate further consultations and talks. See Robert Howse and Joanna Langille (n 8) 2.

¹⁰ Harro van Asselt, 'Trade and Climate Disputes before the WTO: Blocking or Driving Climate Action?' in Ivano Alogna, Christine Bakker, Jean-Pierre Gauci (eds), *Climate Change Litigation: Global Perspectives* (Brill-Nijhoff 2021) 433-461, 437; Nilmini Silva-Send, 'Climate Change Disputes at the World Trade Organization: National Energy Policies and International Trade Liability' (2013) 4 *JCEL* 195, 195 <<https://digital.san-diego.edu/jcel/vol4/iss1/8>> accessed 15 September 2023.

GATT, as well as from the covered agreements, should be considered and interpreted according to the object and purpose set forth in the Preamble. This does not mean giving merely credit to the 'teleological school of thought' with respect to the 1969 Vienna Convention on the Law of Treaties, but also considering how some provisions have obtained the status of customary international law. Indeed, the evolution displayed in the case law indicates an attentiveness towards measures that disguise protectionist intent and a caution not to unreasonably reprehend trade restrictive measures that pursue interests which are worthy of protection. Key questions include unilateral trade implementing measures with extraterritorial effect, discrimination based on processes and production methods and trade restrictions due to the circumstances under GATT Article XX.

The second chapter firstly conveys the bigger picture of the impacts of climate change on different fields like the one of security and human rights, at the same time presenting the anthropogenic nature of the issue and its linkages to the theory of global commons and common concern of mankind. It then proceeds in describing the transition from the defence of sovereignty to the gradual emergence of principles which now are enshrined in customary law, as well as the impact of globalisation and the development of the principle of non-regression in environmental law. The pre-eminence of free trade and the human-centred perspective that informed the first developments in the WTO, until climate change arose as a global problem. The analysis will then turn to the advances within case law from the first cases like the 1941 *Trail Smelter Arbitration* to the most recent ones in the jurisprudence of international courts. Space will be devolved also to the pressures which brought to international negotiations and the birth of the climate change regime and its spill-over effect onto the WTO.

Finally, the third chapter addresses the Dispute Settlement System, from the concerns regarding its demise in 2019 to the appropriateness of it being the forum for climate litigation at the WTO level. The concept of climate change litigation together with a possible taxonomy will be explored. Further, the hypothesis of the DSS as a suitable forum for climate-related litigation will be examined. Lastly, certain aspects of climate disputes will be scrutinised, in particular the ones dealing with renewable energy subsidies which have been selected as being one of the most burning issues at present, given the present evolution in the international landscape. The manuscript thus concludes with the assessment of some selected legal features of the controversies before panels and Appellate Body of the WTO, attempting at underlining prospects for the future steps.

Chapter I: WTO AND THE ENVIRONMENT

*'Where massive negative environmental externalities are allowed to exist,
trade liberalization can be like a fresh breeze of wind
on a house that is already set on fire'¹¹*

1. General considerations

The impact of the WTO on the environment has undoubtedly been debated for a long time and has increasingly become a central aspect under consideration in treaty negotiations and in international trade disputes alike¹².

From a first standpoint, trade measures may promise or actually serve the purpose of an enhanced protection of the environment. Indeed, some treaties, like the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer¹³ envisage the prospect of trade sanctions against the States that act in breach of certain minimum environmental standards.

More generally, however, trade liberalisation and environmental issues happen to be on a collision course: where the first points at abolishing state protectionism, the second looks upon the decisive state intervention favourably. One may think, for instance, of state authorities intervening in case of importations of products that are renown for clearly harming the environment, or a State may find it necessary to regulate or prohibit a particular production process because of evident negative consequences on the environment¹⁴.

In time, the need of reconciliation has become more and more manifest. The *Articles of Agreement* of the original GATT did not explicitly consider environmental issues. In Article XX there were exceptions tailored to suit the needs of human, animal, plant life or health, or of the conservation of

¹¹ Eric Neumayer, 'The WTO and the Environment: Its Past Record is Better than Critics Believe, but the Future Outlook is Bleak' (2004) 4(3) *Global Environmental Politics* 1, at 5, available at <<https://www.mitpress-journals.org/doi/10.1162/152-6380041748083>>, accessed 15 September 2023.

¹² Ken Belcher, Anna L. Hobbs, William A. Kerr, 'The WTO and environmental sustainability: is there a conflict?' (2003) 2(1) *Int. J. Environment and Sustainable Development* 2, 3 available at <<https://pdfs.semanticscholar.org/2b98/79664-22758-80a33aab5ed66fdb2e4dd4c831.pdf>>, accessed 15 September 2023.

¹³ Montreal Protocol on Substances that Deplete the Ozone Layer, opened for signature 16 September 1987, entered into force 1 January 1989, 1522 UNTS 3. The treaty, a multilateral environmental agreement tackling the issue of the production and consumption of nearly 100 man-made chemicals referred to as ozone depleting substances (ODS), is to date the only UN treaty to have reached the result of being universally ratified. See UN Environment Programme, 'The Montreal Protocol' available at <<https://www.unenvironment.org/ozonaction/who-we-are/about-montreal-protocol>> accessed 15 September 2023.

¹⁴ Antonio Cassese and Paola Gaeta, *Diritto Internazionale. II. Problemi della Comunità Internazionale* (Il Mulino 2004) 239, 239-240.

exhaustible natural resources. Nevertheless, this openness was not broad enough to permit the inclusion of other aspects, such as the preservation of exhaustible mineral resources, like oil, coal, and natural gas, and, even less, further concepts, such as the protection of ecosystems or biodiversity¹⁵.

The negotiations at the *Uruguay Round* provided an opportunity to tackle these issues, and in 1994 the participating countries crafted the WTO's Committee for Trade and Environment (CTE), with the mandate to identify the link between trade measures and environmental protective measures with a view of promoting sustainable development. A second task of the Committee was that of issuing recommendations suggesting possible amendments of the WTO rules. Unfortunately, there have not been relevant results in this perspective.

However, progress has been made on two sides. First, on treaty level, with the 1994 Agreement on Technical Barriers to Trade (TBT Agreement) being negotiated and finally citing the "environment" among the reasons in Article 2, para 2, among the reasons justifying trade restricting technical regulations. Second, on the dispute resolution level, with Panels and Appellate Bodies adopting an open attitude towards environmental topics¹⁶.

The present chapter deals with the assessment of what kind of relationship can be derived from the interplay between the legal framework in which the WTO is inscribed and the practice set forth by its adjudicating bodies, with a view to the aim of effectively protecting the environment. In order to do so, firstly the relevant provisions in GATT, GATS, TBT Agreement and SPS Agreement will be presented, and secondly the pertinent jurisprudence will be dealt with, in particular some selected cases that are specifically related with the GATT provisions.

In the conclusions it is eventually argued that considerable steps have been taken in the direction of an advantageous balance between trade and environment and that the contended purely negative impact of the WTO on the ecosystem is an incorrect simplification.

2. The premise of the necessary distinction between the WTO and Environmental Protection Agencies

The starting point that comes to relevance when discussing the relationship between trade and environment, is that WTO does not specifically design environmental protection policies, nor does it

¹⁵ Antonio Cassese, Paola Gaeta, *ibid.* 239.

¹⁶ Antonio Cassese, Paola Gaeta, *ibid.* 240.

contain a specific agreement regarding environmental protection. Its mandate is, indeed, that of setting up and maintaining an open and non-discriminatory trading system¹⁷.

The WTO Secretariat often receives questions about what specific provisions dealing with the environment are set forth by the WTO system of rules, and the response is that no direct rules on the topic can be found, as the WTO does not constitute an Environmental Protection Agency, nor does it possess the objective of being one¹⁸.

The WTO does not display neither the mandate nor the competence which are proper of environmental agencies¹⁹, such as the UN Environment Program (UNEP). Its mandate, derived from the multifaceted functions illustrated in Article II:1 and III of the WTO Agreement²⁰, is rather that to set up and maintain an open and non-discriminatory trading system. Therefore, it only addresses environmental issues in so far as environmental policies touch on trade-related aspects that have a significant impact on trade.

The WTO's Committee for Trade and Environment (CTE), a forum created in the WTO for trade and environment discussions, has consistently reiterated that, for trade and environment to complement each other, appropriate environmental policies need to be put in place. However, developing such policies is not in the mandate of the CTE, which is a trade body. All it can do is appeal other specialized international fora, such as the UNEP, and national governments to do so.

At a fundamental level, environmentalists criticize the WTO from a philosophical and constitutional standpoint, holding that nation states are an inappropriate concept for modern integrated world governance and sustainable development²¹. Yet, it is in the WTO framework that an interesting tendency has begun to move its first steps. At the 2001 Doha Declaration of the fourth WTO

¹⁷ WTO, 'Trade and Environment at the WTO' (2004) available at <https://www.wto.org/english/tratop_e/envir_e/envir_wto2004_e.pdf> accessed 15 September 2023, 6.

¹⁸ Doaa Abdel Motaal, 'Trade and Environment in the World Trade Organisation: Dispelling Misconceptions' (1999) 8(3) *RECIEL* 330, 330; WTO, '10 common misunderstandings about the WTO' (2008) available at <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=11&cad=rja&uact=8&ved=2ahUKEwiVv_3u5IbjAhVq5KYKHmVCtsQFjAKegQIAxAC&url=https%3A%2F%2Feuropa.eu%2Fcapacity4dev%2Ffile%2F50803%2Fdownload%3Ftoken%3D5iZZXOUo&usg=AOvVaw2mGA1VSzIm29H-08fAssB3> accessed 15 September 2023, 5: "Also important is the fact that it's not the WTO's job to set the international rules for environmental protection. That's the task of the environmental agencies and conventions".

¹⁹ A number of institutions have demonstrated interest in environmental subjects: beginning with the International Court of Justice, and proceeding with other UN and non UN ones, as listed by Waincymer: the Food and Agriculture Organization, the World Health Organization, the World Meteorological Organization, UNESCO, the International Maritime Organization, the International Atomic Energy Agency, the International Union for the Conservation of Nature and Natural Resources, the United Nations Convention on the Law of the Sea. See Jeff Waincymer, 'International economic law and the interface between trade and environmental regulation' (1998) 7(1) *Journal of International Trade & Economic Development* 3 available at <<https://doi.org/10.1080/09638199800000002>> accessed 15 September 2023, at 14-15.

²⁰ Peter Van den Bossche and Werner Zdouc, *The World Trade Organization. Text, Cases and Materials* (CUP 2017) at 88-101. Its cardinal functions include administering the WTO trade agreements, providing a forum for trade negotiations, monitoring national trade policies and handling trade disputes, providing technical assistance and training for developing countries and cooperating with other international organizations. See also WTO (18), at 11.

²¹ Waincymer (19) 11.

Ministerial Conference, the Ministers underlined their commitment towards sustainable development “convinced that the aims of upholding and safeguarding an open and non-discriminatory multilateral trading system and acting for the protection of the environment [...] can and must be mutually supportive”²².

The question is then: is it possible to make trade and environment mutually supportive?

2.1 The intersectional nature of trade and environmental measures

If sustainable development ought to be represented in a graph, we could imagine it as three different spheres acting close to each other, namely the economic, the social and the environmental one, intersecting and originating the concept of sustainability.

The indispensable interplay between the economic and the environmental spheres has been restated in multiple occasions. For instance, it has been confirmed in the words of Principle 4 of the Rio Declaration: "in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it"²³. Further, within the Agenda 21 a concept of a similar tenet is expressed: "the international economy should provide a supportive international climate for achieving environment and development goals by [...] the integration of environmental concerns into decision-making"²⁴.

2.2 Discouraging unilateral environmental measures limiting trade

We now proceed to a logical step further, starting from the assumption that the WTO creates a multilateral forum for trade negotiations and that it is within this context that sustainable development and environmental protection can and must be integrated. Again, in the words of the Agenda 21, what lies outside the WTO principles is discouraged. "Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade"; "unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided"; "environmental measures addressing international environmental problems should, as far as possible, be based on an international consensus"²⁵.

²² World Trade Organization, Ministerial Declaration of 14 November 2001, WTO Doc. WT/MIN(01)/DEC/1, 41 ILM 746 (2002) [Doha Declaration] para 6.

²³ United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, adopted 14 June 1992, A/CONF.151/26/Rev.1(Vol.I), Annex I, 31 ILM 874 [Rio Declaration] Principle 4.

²⁴ United Nations Conference on Environment and Development, Agenda 21: programme of action for sustainable development, adopted 14 June 1992, A/CONF.151/26/Rev.1(Vol.I), Annex II [Agenda 21].

²⁵ Agenda 21, para. 39.3 (d).

Similarly, the Rio Declaration, Principle 12, adopts an equivalent language, except for: "environmental measures addressing transboundary or global environmental problems should [...] be based on an international consensus"²⁶, except for the mitigating addition "as far as possible". In the following paragraph we advance our analysis into the way the different values interact.

3. The WTO framework and the risk of clash between conflicting values

The provisions of Articles XX of the GATT 1994 and Article XIV of the GATS are weaved precisely on the backdrop of balancing differing values. On one hand, trade liberalisation, market access and non-discrimination, on the other, different, and distinct primary values that are equally to be considered crucial aspects of the governmental action in a contemporary state: economic development, national security considerations, consumer protection, employment safeguards²⁷. In this second grouping of tenets, two emerge and stand out to be closely interrelated: public health and environmental protection.

Striking the balance, WTO rules set the aim of allowing the governments of the Members, under pre-determined conditions, to implement trade-restrictive legislation or other measures²⁸. Through these, Members have the possibility to put into practice their choice of giving priority to important societal values or interests *over* the economic aspirations of trade liberalization, market access and non-discrimination²⁹. Such measures will therefore be legitimate even if they conflict and are divergent from the substantive disciplines contained in the GATT 1994 or in the GATS.

The underlying question to be answered here is in which way do the differing values risk a clash within the WTO system. The answer must consider some of the core principles of the multilateral trading system which may prevent Members in enacting measures that protect the environment.

There are two fundamental obligations, by means of which the WTO attempts at reducing protectionism and liberalize trade³⁰: on one hand the 'most favoured nation' or 'MFN' treatment, encompassed in GATT Article I, which forbids any discrimination in trade between 'like' foreign products. According to this norm, Members must grant to products originating in another Member State 'treatment no less favourable' than the one they accord to like products originating in any other country. The result is that there is no trading advantage guaranteed to a country as commercial partner that will not be extended to the WTO Members. Thus, also developing countries will have access,

²⁶ Rio Declaration, Principle 12.

²⁷ Van den Bossche, Zdouc (20) 623-624.

²⁸ Antonio Cassese, Paola Gaeta (14) 239-240.

²⁹ Van den Bossche, Zdouc (20) 545.

³⁰ Matthew Stilwell and Jan Bohanes, 'Trade and Environment', in Macrory P.F.J., Appleton A.E., Plummer M.G. (eds), *The World Trade Organization: Legal, Economic and Political Analysis* (Springer 2005) 511, 513-514.

even though with a small economic leverage, to the benefits deriving from any trading condition negotiated by a WTO Member³¹. This Article is relevant to the environmental discussion because a country may decide to discriminate against an imported product arguing such choice on the basis of an asserted (harmful) environmental impact of it.

On the other hand, the 'national treatment' principle, incorporated in GATT Article III and requiring Members to refrain from discrimination between 'like' domestic and foreign products with respect to internal taxes and regulations³². After entering the national market, the norm at stake imposes a treatment 'no less favourable' than that granted to the corresponding domestically produced item³³.

The no-discrimination principle, as underpinning of the WTO itself, safeguards the liberalized trade from the perils of arbitrary discrimination between like products imported from different countries and between nationally produced and foreign products. such arbitrary discrimination could be the outcome of an abuse of environmental measures, which would therefore be put in place as disguised restrictions to trade, i.e. illegal protectionist measures³⁴.

The two provisions composing the principle of non-discrimination are further complemented by GATT Article XI, which addresses the aim of eliminating quantitative restrictions, with the view that Member States should convert them into tariffs. Since tariffs are to be considered a less trade distortive means and are more transparent, the Article prohibits all those restrictions that are not duties, taxes or other charges on imports from or exports to other WTO Member States³⁵. This Article has been at the centre of various environmental related disputes originated by some Member States' bans on the importation of specific products and attempted to justify them through a link to environmental issues.

After analysing the multiple values at stake and the possible abuses, it is appropriate to turn to the specific benchmarks linking the WTO legal structure to the environmental concerns.

4. The position of the WTO framework with respect to the environment

³¹ WTO (17) 49.

³² Duncan Brack and Thomas Branczik, 'Trade and Environment in the WTO: After Cancun' (2004) Briefing Paper No. 9, London: Royal Institute of International Affairs, Sustainable Development Programme available at <<https://www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/t&efeb04.pdf>> accessed 15 September 2023, 1-4; Matthew Stilwell (30).

³³ WTO (17) 49.

³⁴ WTO (17) 50.

³⁵ Brack, Branczik (32); WTO (17) 49-50.

Preambles are meant to cast a light and help during the interpretation mechanism of a treaty's object and purpose³⁶. In the case of the WTO framework, the objectives of the are clearly set forth in the Preamble:

The *Parties* to this Agreement,

Recognizing that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development³⁷

One might note, therefore, that the Preamble makes an explicit reference to the objective of sustainable development and to the protection of the environment. It also reproduces the developments of the WTO system from the initial and exclusive pursuit of economic objectives to the inclusion of environmental aims. In 1947, the Preamble of the GATT would indeed encourage the pure "full use of the resources of the world"³⁸, without any hint at environmental considerations³⁹. In 2004, the Sutherland Report⁴⁰ underlined this progress by stating:

Neither the WTO nor the GATT was ever an unrestrained free trade charter. [...] [B]oth [...] provide a structured and functionally effective way to harness the value of open trade to principle and fairness. In so doing, they offer the security and predictability of market access advantages [...]. But the rules provide checks and balances including

³⁶ In this context, the so called "teleological school of thought" has been established with respect to the rules of interpretation crystalized in Articles 31 to 33 of the 1969 Vienna Convention on the Law of Treaties (VCLT). It promotes the careful assessment of the object and purpose of a treaty, in addition to the examination of the text (objective approach) and of the intention of the parties (subjective approach). It is also important to note that such rules of interpretation in the VCLT have attained, according to the International Court of Justice, the status of being reflective of customary international law, at least in the part regarding the rules on interpretation. This has been affirmed in multiple case law, e.g. the *Genocide Convention* case, (*Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Croatia vs. Serbia)*), Judgement, I.C.J. Reports 2015) at para 138: interpretation 'in good faith 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', as prescribed by customary law as reflected in Article 31 of the Vienna Convention on the Law of Treaties'; or the more recent *Nicaragua v. Colombia* case, Preliminary Objections, (*Question of the Delimitation of the Continental Shelf between Nicaragua and Colombia beyond 200 Nautical Miles from the Nicaraguan Coast (Nicaragua v. Colombia)*), Preliminary Objections, Judgment, I.C.J. Reports 2016, p. 100) para 35: 'interpretation [...] in light of the text of all the provisions concerned, their context and the object and purpose of the treaty'. See Malcolm N. Shaw, *International Law*, (CUP 2017) 685, 707.

³⁷ Marrakesh Agreement Establishing the World Trade Organization, 15 April 1994, 1867 U.N.T.S. 154 [Marrakesh Agreement], Preamble, First Recital. See Agreement Establishing the World Trade Organization, Preamble, reprinted in World Trade Organization, *The WTO Agreements - The Marrakesh Agreement Establishing the World Trade Organization and its Annexes* (CUP 2017) 1.

³⁸ General Agreement on Tariffs and Trade (1947) 55 U.N.T.S. 194, Preamble, Second Recital.

³⁹ Stilwell, Bohanes (30) 514.

⁴⁰ World Trade Organization, *The Future of the WTO. Addressing Institutional Challenges in the New Millennium. Report by the Consultative Board to the Director-General Supachai Panitchpakdi [Sutherland Report]* (2004) available at <https://www.wto.org/english/thewto_e/10anniv_e/future_wto_e.pdf> accessed 15 September 2023, at para 39.

mechanisms that reflect political realism as well as free trade doctrine. It is not that WTO disallows market protection, only that it sets some strict disciplines under which governments may choose to respond to special interests⁴¹.

However, after conducting a closer analysis of the documents composing the comprehensive WTO legal regime, the absence of a unified, systematic consideration of the interplay between trade, sustainable development and environment must be ascertained⁴². Thus, pertinent obligations, and exceptions thereto, with respect to the field of trade and environment are present in a number of the treaties annexed to the Marrakesh Agreement, in particular in the General Agreement on Tariffs and Trade (GATT), the General Agreement on Trade in Services (GATS), the Agreement on Technical Barriers to Trade (TBT Agreement), the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)⁴³.

4.1 General exceptions under the GATT

Under GATT rules, discrimination between like products because of environmental concerns may result in an infringement of GATT Article I: General Most-Favoured-Nation Treatment (MFN) and GATT Article III: National Treatment on Internal Taxation and Regulation.

However, these obligations laid down in the GATT find a distinctive exception in Article XX, pursuant to which Members are allowed to set up trade-related environmental measures that would otherwise be inconsistent with their obligations under WTO law:

"Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised

⁴¹ Joost Pauwelyn, 'The Sutherland Report: A Missed Opportunity for Genuine Debate on Trade, Globalization and Reforming the WTO' Duke Law School Legal Studies Paper No. 68 (2005) 8(2) *Journal of International and Economic Law* 329, available at <<https://ssrn.com/abstract=774149>> accessed 15 September 2023.

⁴² Stilwell and Jan Bohanes (30) 511, 513.

⁴³ Other relevant agreements are the Agreement on Subsidies and Countervailing Measures, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1869 U.N.T.S. 14, [SCM Agreement], the Agreement on Agriculture, 1867 U.N.T.S. 410, the Agreement of Trade-Related Aspects of Intellectual Property (TRIPS Agreement), 1869 U.N.T.S. 299, the Understanding of Rules and Procedures Governing the Settlement of Disputes (DSU), 1869 U.N.T.S. 401. Also relevant is the WTO Agreement on Government Procurement (GPA), a plurilateral agreement, which therefore applies only to parties that have accepted it and not to all of the others WTO members. The latest version of this is the Revised Agreement on Government Procurement, Mar. 30, 2012, Marrakesh Agreement Establishing the World Trade Organization, Annex 4(b), 1915 U.N.T.S. 103 [2012 GPA], the previous ones are: Agreement on Government Procurement, Apr. 12, 1979, General Agreement on Tariffs and Trade, 1235 U.N.T.S. 258 [1979 GPA] and Agreement on Government Procurement, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 4(b), 1915 U.N.T.S. 103 [1994 GPA]. See Stilwell, Bohanes (30) 513-519; World Trade Organization, UN Environment, *Making trade work for the environment, prosperity and resilience*, (2018) available at <https://www.wto.org/english/res_e/publications_e/unereport2018_e.pdf> accessed 15 September 2023, at 57.

restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures [...]":

[...]

"(b) necessary to protect human, animal or plant life or health"

[...]

"(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption"

This provision epitomises the balancing attempt between the trade and the environmental values⁴⁴. As established by the Appellate Body in *US-Gasoline* (1996), the norm in analysis pinpoints a two-tier test. Firstly, the defending party must demonstrate that the measure it has adopted falls within at least one of the exceptions⁴⁵, the relevant ones for environmental matters being constituted by paragraphs (b) and (g). Such condition, if met, gives rise to a "provisional justification by reason of characterization of the measure"⁴⁶ under one of the exceptions.

The second step will then be the determination whether the specific requirements of the introductory clause of Article XX, also called "chapeau", are met⁴⁷. This latter condition entails that the measure does not have the effect of an "arbitrary discrimination between countries where the same conditions prevail" nor of "a disguised restriction in international trade".

4.2 General exceptions under the GATS

The General Agreement on Trade in Services, negotiated within the Uruguay Round, also encompasses a general exception provision, which is very similarly formulated as Article XX(b) GATT. Article XIV(b) GATS allows WTO Member States to enact measures 'necessary' to protect human, animal or plant life or health, which would otherwise be inconsistent with the GATS rules, with two caveats. First, the result must not be an arbitrary or unjustifiable discrimination, and second, it must not identify with a disguised restriction of the international trade⁴⁸.

⁴⁴ Van der Bossche (20) 548.

⁴⁵ WTO, *United States - Standards for Reformulated And Conventional Gasoline*, Appellate Body Report, WT/DS2/AB/R, 20 May 1997, 22. Similar statements are contained in WTO, *Brazil - Measures Affecting Imports of Retreaded Tyres*, Appellate Body Report, WT/DS332/AB/R, 17 December 2007, para 139; *European Communities - Measures Prohibiting the Importation and Marketing of Seal Products*, Appellate Body Report, WT/DS400/AB/R and WT/DS401/AB/R 22 May 2014, para 5.169; *Colombia - Measures Relating to the Importation of Textiles, Apparel and Footwear*, Appellate Body Report, WT/DS461/AB/R, 22 June 2016, para 6.20.

⁴⁶ Appellate Body Report, *US-Gasoline*, ibidem.

⁴⁷ WTO (17) 51.

⁴⁸ WTO (17) 54.

4.3 Agreement on Technical Barriers to Trade (TBT Agreement)

The WTO Agreement on Technical Barriers to Trade, one of the most important set of rules from an environmental perspective⁴⁹, acknowledges in its Preamble the right of individual Governments to set environmental protection standards at the level that the single country considers more appropriate, however these should not be discriminatory or create unnecessary obstacles to international trade⁵⁰. A country may introduce any environmental standard, but it must consequently apply it to all like products, regardless of their source. A country may develop a product standard that creates obstacles to trade, but it must ensure that such obstacles are not unavoidable. If they are, a less trade-restrictive measure should be sought for, to strike a better balance between the environmental protection objective and the open, equitable and non-discriminatory trading system.

Therefore, the TBT Agreement supplements the GATT introducing a discipline for two national rules categories, on one hand the technical regulations, mandatory provisions that require certain characteristics from products, related processes or production methods. On the other hand, standards, which relate to the same subject matter, but are non-mandatory, i.e. voluntary⁵¹. Thus, there are multiple measures that Member States can enact with environmental purposes: efficiency standards, waste management rules, eco-labelling schemes. At the same time, they may implement multilateral environmental agreements (MEAs).

The crucial point that the TBT Agreement demands from regulations and standards is expressed in Articles 2.1 and 2.2. First, respecting the WTO cornerstone represented by the non-discrimination principle is essential. Members must comply with such principle during the "preparation, adoption and application of product specifications and conformity assessment procedures"⁵². A central feature thereto is the requirement of transparency: specifications and conformity assessment procedures must be notified to the WTO Secretariat and national enquiry points have to be established⁵³.

Additionally, they shall not impose stricter trade restrictions than those 'necessary' to reach one of the legitimate objectives: the safeguard of human life and safety, animal or plant life or health, or the environment⁵⁴. In other words, if a product standard introduced by a country is not unavoidable, then

⁴⁹ Stilwell, Bohanes (30) 514.

⁵⁰ WTO (17) 54.

⁵¹ Agreement on Technical Barriers to Trade, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1868 U.N.T.S. 120 [TBT Agreement]. See Matthew Stilwell, Jan Bohanes (42) 515; WTO (17) 54.

⁵² WTO, *ibid*.

⁵³ *Ibid*.

⁵⁴ Stilwell, Bohanes (30) 514.

a less restrictive measure must be adopted in order to reach a fairer balance between the values at stake⁵⁵.

Typical of the TBT Agreement is also the quest for harmonisation among the different measures adopted by Members. Article 2.4 demands that states deploy the relevant international standards as source for their domestic technical regulations, unless they prove that they would be ineffective or inappropriate to reach the legitimate objective⁵⁶.

4.4 Agreement on Sanitary and Phytosanitary measures (SPS Agreement)

The scope of application of the Agreement on Sanitary and Phytosanitary measures is constituted by those national measures adopted by member States with the aim of protecting human, animal and plant life or health inside of the Member state's territory. Therefore, despite being similar to the TBT Agreement, it covers a narrower variety of measures. Included are measures directed at ensuring the safety of food and beverages from the threat of contaminants, additives, toxins and disease-provoking organisms, as well as measures designed at avoiding the propagation throughout the country of pests or diseases⁵⁷.

The SPS Agreement ensures the right of States to adopt pertinent measures, although with some limitations. Firstly, the regulations at issue must be based on a risk assessment. Article 2.2 requires that Members implement measures grounded on "scientific principles" and "sufficient scientific evidence", which is a fundamental principle that pervades the entire Agreement⁵⁸. In particular, when the measures "conform to international standards, guidelines and recommendations", a presumption operates that they are in conformity with both the SPS Agreement and the GATT 1994, otherwise States must prove the scientific base on a case-by-case assessment. When the "relevant scientific evidence is insufficient", Members are still allowed to adopt measures, but these must be founded on the "available pertinent information" and will only be adopted provisionally.

The second restraint posed by Article 2.2 to the implementation of measures by Members is that they must be applied "only to the extent necessary to protect human, animal or plant life or health".

⁵⁵ Moots (18)330.

⁵⁶ Stilwell, Bohanes (30)

⁵⁷ Stilwell, Bohanes (30) 515; WTO (17) 56. The SPS objectives can be divided into four groups, the first relates with the protection of human or animal life from additives, contaminants, toxins or disease-causing organisms that may threaten food, beverages and foodstuffs. The second, aims at protecting human life from the risks posed by diseases carried by plants or animals (zoonoses). Third is the protection of animal and plant life from pests, diseases, or disease-causing organisms. the fourth group deals with protecting a country from damages caused by the entry into its territory, or establishment or spread of pests.

⁵⁸ Stilwell, Bohanes (30) 515.

The third limitation, set forth by Article 2.3, is the prohibition of applying SPS measures in a way constituting a "disguised restriction on international trade". In particular, discriminatory treatment should be avoided between countries where similar situations are displayed.

Lastly, Article 5.5 provides for the fourth caveat, i.e., the measures adopted must present a certain level of consistency of the protection among comparable situations⁵⁹.

5. The practice by the WTO adjudicating bodies with regard to GATT Article XX, selected cases

At present, WTO Members rarely managed to successfully justify their measures under Article XX of the GATT, striking a "victory for the environment"⁶⁰, whereas in other cases when the norm was appealed, it was done in a not successful or correct manner.

Sometimes GATT-inconsistent measures had first to be modified, based on the content and recommendations of DSB, and then resulted in compliance with the rules of the multilateral trading system. An example of this is the *US-Gasoline* case, in which a panel attacked the measure adopted by the US blocking imports of Venezuelan and Brazilian gasoline that would, according to the US, infringe the American clean-air laws. The AB distinguished between the clean-air law per se, which was legitimate as a trade barrier "relating to the conservation of exhaustible natural resources" and the regulation enacted for the administration of such law, which were imposing stricter standards to foreign gasoline suppliers, discriminating them against domestic ones⁶¹. The simple solution for the US was to bring the administrative procedures into compliance with WTO rules⁶².

Other times, the measures adopted by the states were already in accordance with the GATT provisions and therefore did not undergo a dispute settlement⁶³.

5.1 US-Shrimp on regulatory discrimination and rational connection standard

In the 1998 *United States – Import Prohibition of Certain Shrimp and Shrimp Products* case⁶⁴, the contested measure was a specific legislation introduced by US government, the US Endangered

⁵⁹ Chad P. Bown, and Rachel McCulloch, 'Environmental Issues', in Macrory P.F.J., Appleton A.E., Plummer M.G. (eds), *The World Trade Organization: Legal, Economic and Political Analysis* (Springer, 2005) at 1734-1767.

⁶⁰ Editorial (2014) 23 (3) *RECIEL* 285.

⁶¹ Michael M. Weinstein and Steve Charnovitz, 'The Greening of the WTO' (2001) 80:6 *Foreign Affairs* 147, at 156, 151.

⁶² This happened e.g., in the *US-Shrimp* case: WTO, *United States – Import Prohibition of Certain Shrimp and Shrimp Products: Recourse to Article 21.5 of the DSU by Malaysia*, Appellate Body Report (WT/DS58/AB/RW) and Panel Report (WT/DS58/RW), 26 November 2001. See Peter van der Bossche (20) 556.

⁶³ Peter van der Bossche, *ibid*.

⁶⁴ WTO, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, Appellate Body Report, WT/DS58/AB/R, 6 November 1998.

Species Act of 1973, specifically aimed at avoiding the accidental death of sea turtles during the harvesting of shrimps. It entailed a prohibition of importation of shrimp and shrimp products collected with technologies that may have adversely affected certain sea turtles— unless the harvesting country was certified for not using a certain net in catching shrimps⁶⁵. Such import ban was found in breach of both GATT Article XI, regarding the prohibitions on quantitative restrictions, and of GATT Article XX(g). In particular, the newly established AB ruled that the import ban was indeed defensible as permissible exception related to the conservation of exhaustible natural resources, pursuant to Article XX letter (g), but, if scrutinized under the chapeau of Article XX, it appeared an arbitrary and unjustifiable discrimination⁶⁶. The significance of this decision lies in the fact that the AB reversed the findings of the Panel with reference to the correct application of the two-tier test in Article XX. The proper sequence is that of first assessing the provisional justification of a measure under the listed exceptions of the Article, while only secondarily it must be further assessed under the introductory paragraph⁶⁷.

Another relevant point touched by this decision is the necessary, but sufficient, existence of a rational connection between the measure adopted by the Member state and the policy objective the state aims at reaching, which in the case at issue was the conservation of sea turtle species⁶⁸. In the wake of what had previously been stated in the *US-Gasoline* case⁶⁹, the AB indulged in a comprehensive evaluation of the chosen measure, which need not be 'primarily aimed' at the conservation of exhaustible natural resources in order to find its appropriate rationale in letter (g)⁷⁰, but rather must display an inescapable reasonable⁷¹ connection between the means used and the ends pursued.

5.2 Brazil-Retreaded Tyres on qualitative necessity test and the material contribution to the objective

⁶⁵ Aaron Cosbey, Petros C. Mavroidis, 'Heavy Fuel: Trade and Environment in the GATT/WTO Case Law' (2014) 23 (3) *RECIEL* 288, 294.

⁶⁶ In particular, the measure turned out to be discriminatory in an unjustifiable manner because it deliberately and tangibly forced foreign governments members to the WTO to take certain policy decisions. Furthermore, it was discriminatory in an arbitrary manner because it required a rigorous and strict application, without at the same time providing transparency and fairness in the administrative procedures regarding trade regulations.

⁶⁷ WTO, '*US-Shrimp* Summary' available at

<https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds58sum_e.pdf> accessed 15 September 2023.

⁶⁸ Cosbey, Mavroidis (65) 297.

⁶⁹ WTO, *US - Gasoline*, at 35, the AB had disagreed with the decision of the Panel at para 141: "the measure must be 'primarily aimed at' the conservation of exhaustible natural resources", but "the phrase 'primarily aimed at' [...] was not designed as a simple litmus test for inclusion or exclusion from Article XX (g)".

⁷⁰ Cosbey, Mavroidis (65) 296-297.

⁷¹ In the words of the AB: "not disproportionately wide in its scope and reach in reach and in relation to the policy objective of protection and conservation of sea turtle species". WTO, *US - Gasoline* at 35, para 141.

In the 2007 *Brazil - Measures Affecting Imports of Retreaded Tyres* case⁷², the core issue was related to a range of trade-restrictive measures introduced by Brazil with a view that waste tyres improperly stored were breeding grounds for mosquitos and therefore the ban was necessary to protect human and animal life from mosquito-borne illnesses such as malaria or the fearsome dengue fever, or could give origin to accidental fires the smoke of which is heavily toxic. The actions taken included the import ban on retreaded tyres, fines on importing, marketing, transportation, storage, keeping or warehousing of retreaded tyres; state law restrictions on the marketing of imported retreaded tyres and exemptions both from the ban and from the fines for importations from Mercosur countries⁷³.

Understandably, the import ban and the fines were inconsistent with the prohibition on quantitative restrictions set forth by GATT Article XI:1, and clearly the state law restrictions conflicted with the national treatment principle established by GATT Article III:4. What is more interesting with respect to the application of Article XX, is that the Panel engaged in a balancing test between the obstacle to trade enacted through the measures and the other values pursued, finding that it was 'necessary' and no other 'reasonably available' alternative measures would effectively reach the same result, which was then confirmed by the Appellate Body. Therefore, a provisional justification under Article XX(b) was possible. The AB underlined that for a measure to be consistent with the exception of letter (b), only a qualitative analysis had to be performed, and not an additional quantitative one⁷⁴. In particular, a measure is deemed "necessary" when it provides for "a material contribution to the achievement of its objective"⁷⁵, which can be assumed when there is "a genuine relationship of ends and means"⁷⁶ between the objective and the measure.

As regards the chapeau of Article XX, the AB revised the previous reasoning of the Panel, which had considered that only a result in import volumes 'significantly' undermining the achievement of the aim of import ban would constitute an "unjustifiable discrimination" and a "disguised restriction on international trade". The Appellate Body underlined instead that the appraisal of the arbitrariness and justifiability of a measure has to take as a rationale the objective of the measure itself. Thus, the MERCOSUR exemption, as well as the judicially challenged imports of used tyres, had caused indeed an arbitrary or unjustifiable discrimination and also a disguised restriction on international trade within the meaning of the introductory paragraph of Art. XX⁷⁷.

⁷² WTO, *Brazil - Retreaded Tyres*, Appellate Body Report, 17 December 2007.

⁷³ WTO, '*Brazil-Retreaded tyres Summary*' available at <https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds332-sum_e.pdf>, accessed 15 September 2023.

⁷⁴ Cosbey, Mavroidis (65) 297.

⁷⁵ WTO, *Brazil - M Retreaded Tyres*, para 150.

⁷⁶ WTO, *Brazil - Retreaded Tyres*, para 210.

⁷⁷ WTO, '*Brazil-Retreaded tyres Summary*' (73).

It can be concluded that the AB reprimanded Brazil not on the substance of its chosen policy measures, but rather on their discriminatory facets⁷⁸. The purport and consequence of such observation is, with an *argumentum a maiore ad minus*, that even a total ban would have been legitimate, had it been applied in a non-discriminatory, most-favoured nation consistent, manner⁷⁹.

6. Conclusion: interaction and complementarity of the two systems

While the history of the relationship between trade and environment is characterized by a substantial difficulty in amending the rules that compose the WTO framework, significant progress is by contrast to be found in the interpretation of the relevant provisions relating to environmental matters⁸⁰. However, it is contended that there is a persisting negative impact of the WTO on the environment. This is clearly an incorrect simplification, and it would be more thorough to look for the underlying causes of the existing impasse: the tangible political choices of Member States rather than a supposed inaction of the WTO as an institution.

As said, the case law that has been elaborated by Panels and Appellate Body in the context of WTO displayed a valuable evolution. One must recognize that an attitude of substantial regard has emerged towards Member States' policy objectives and the specific choices taken by different nations to obtain goals related to environmental protection, without unreasonably excluding trade restrictive measures, even if unilateral, as opposed to the general favour towards the multilateralization of trade relations. The precondition that the jurisprudence has insisted on is the lack of protectionist aim, i.e., disguised protectionist measures that attempt at using environment friendly objectives to hinder free trade. The ultimate way to assess whether there is indeed a protectionist intent is through the application of the non-discrimination principle, which is the cornerstone of the GATT framework.

As some commentators have noted, this approach complements that of the framers of the GATT, who wanted the States to be able to regulate, even unilaterally if needed, but provided that no protectionist aims would interfere with trade⁸¹. Simple advancements like reading the word 'necessary' in Article XX(b) as entailing a material contribution, stating that exhaustible natural resources also comprise living things, and claiming that a measure is still 'related to' the conservation of exhaustible resources even if this is not its 'primary' objective, are all steps that bring the WTO institution closer to the ideal balance between trade and environment⁸².

⁷⁸ Cosbey, Mavroidis (65) 299.

⁷⁹ Ibidem.

⁸⁰ Brack, Branczik, (32) 1; Cosbey, Mavroidis (65)300-301.

⁸¹ Cosbey, Mavroidis, *ibid*.

⁸² Ibid.

Trade regulation and environmental protection are bound to interact, since both seek to reach the most efficient use of natural resources. However, while the first type of rules looks at how to increase the benefits deriving from the Ricardian model of comparative advantage, the second one emphasizes the necessary environmental sustainability of each economic progress⁸³. It is at this point that an effective environmental policy framework comes into play: if adequately fabricated, it can be a useful tool to counterbalance adverse impacts on the environment⁸⁴.

Similarly, also the WTO jurisprudence has played and can play a role as commentators noted it has become "more amenable to integrating environmental concerns"⁸⁵. Although the first panels, dating back before the creation of WTO, had ruled against those unilateral measures adopted within the GATT system which States tried to justify with the aim of protecting the environment (*Tuna-Dolphin* disputes), this has been labelled as an "outlier" in trade law jurisprudence⁸⁶, with the more recent and significant line of interpretation being rather the one exemplified by the "*Shrimp-Turtle* rulings".

⁸³ Duncan Brack, Thomas Branczik, (32).

⁸⁴ Duncan Brack, Thomas Branczik, (32)4.

⁸⁵ Van Asselt (10) 434.

⁸⁶ Cosbey and Mavroidis (65) 288.

Chapter II: WTO and climate change

"The saddest aspect of life is that science gathers knowledge
faster than society gathers wisdom"⁸⁷

1. Outlining the multiple issues and impacts related to climate change

In the previous Chapter sought to convey a picture of the approach to environmental matters from the standpoint of substantial rules, on one hand, and of judicial interpretation, on the other, within the WTO system. We will now proceed extending the subject matter from the mere environmental concerns to the urgent issue of climate change.

Climate change can be regarded as the most urgent challenge of our times, pertaining to various areas of human understanding: the ecosystem in which humanity is inscribed, the health and wellbeing of the general population, and the global economic context⁸⁸. Mitigating its harmful effects, i.e., reducing GHG emissions in the perspective of sustainability has been therefore recognized as a chief objective⁸⁹ within the contemporary global governance⁹⁰. Another aim is that of planning and adapting to the current outcomes of climate change and to the ones that can be foreseen by scientific experts⁹¹. The combined efforts of mitigation and adaptation shape what is called "climate action". But what kind of issues must the international community face when tackling climate change and building effective policies under the umbrella of climate action?

1.1 Impacts of climate change on security concerns

⁸⁷ Isaac Asimov and Jason A. Shulman, *Isaac Asimov's Book of Science and Nature Quotations* (Weidenfeld & Nicolson 1988) 281.

⁸⁸ 'COP27 Multilateral Development Banks Joint Statement' available at <<https://www.eib.org/attachments/press/cop27-mdb-joint-statement-en.pdf>> accessed 15 September 2023

⁸⁹ Xinyan Zhao, 'The WTO Panel Report on US-Safeguard Measure on PV Products: A Decisive Victory for the Fight Against Climate Change?' (2022) *European Yearbook of International Economic Law* 175, p. 176.

⁹⁰ Thomas Cottier and Tetyana Payosova, 'Common concern and the legitimacy of the WTO in dealing with climate change' in Delimatsis Panagiotis (ed) *Research handbook on climate change and trade law* (Edward Elgar Publisher 2016) 9–30; Jean-Frédéric Morin and Amandine Orsini (eds), *Essential Concepts of Global Environmental Governance* (Routledge 2020) 38.

⁹¹ EURLEX, 'Climate action' available at <<https://eur-lex.europa.eu/EN/legal-content/glossary/climate-action.html>> accessed 15 September 2023.

According to a first perspective, the threats posed by climate change effects display a relevant impact in the assessment of security concerns⁹², both for developed and developing countries⁹³. In its Climate Change Overview, the World Bank estimates that one of the effects by 2050 could be an impressive 216 million⁹⁴ people forced-migration wave, due to extreme events, nature loss, insufficient crop yields, water shortages, as well as, under a social dimension perspective, lack of livelihood security and deprivation of cultural identity⁹⁵. Researchers at the Notre Dame Global Adaptation Initiative have examined the propensity for climate-driven water scarcity to act as a trigger for armed conflict and observed how increasing the level of adaptive capacity in turn lessened the risks of such violent responses⁹⁶.

Similarly, the most recent report of the International Law Commission (ILC)⁹⁷ in its advanced version dated August 2023 deals, inter alia, with the issue of sea-level rise in relation to international law⁹⁸ and draws attention to the implications of this topic for international peace and security, as recalled by the UN Security Council in a meeting of February in the same year⁹⁹. Furthermore, other juridical Committee meetings have been held across northern and southern America¹⁰⁰. Consequently, the ILC Report underscores the "emergence of new concepts, such as 'climate displacement', 'climate refugees' and 'climate statelessness', that were undefined in international law"¹⁰¹.

⁹² Kurt M. Campbell et al., *The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change* (2007) Center for Strategic and International Studies, available at <<https://www.lpl.arizona.edu/sites/default/files/resources/globalwarming/societal-consequences.pdf>> accessed 15 September 2023, 9-10. According to this report climate change is one of the greatest "foreign policy and national security challenge(s)", leading to "a broader (...) range of potential problems, including disease, uncontrolled migration, and crop failure, that are (...) likely to overwhelm the traditional instruments of national security (the military in particular)".

⁹³ Panagiotis Delimatsis, 'Introduction: Climate change and trade law - challenges for governance and coordination' in Delimatsis Panagiotis (ed) *Research Handbook on Climate Change and Trade Law* (Edward Elgar 2016) 1.

⁹⁴ World Bank, *Climate Change Overview*, <<https://www.worldbank.org/en/topic/climatechange/overview#:~:text=According%20to%20our%20research%2C%20climate,world%27s%20most%20food%2Dinsecure%20regions>> accessed 15 September 2023.

⁹⁵ World Bank, *Social Dimension of Climate Change* available at <<https://www.worldbank.org/en/topic/social-dimensions-of-climate-change>> accessed 15 September 2023.

⁹⁶ Patrick Regan and Hyun Kim, 'Water Scarcity, Climate Adaptation, and Armed Conflict: insights from Africa' Working Paper, Notre Dame Global Adaptation Initiative (ND-GAIN) 22-24 available at <<https://gain.nd.edu/projects/water-scarcity-climate-adaptation-and-armed-conflict/>> accessed 15 September 2023.

⁹⁷ Following the resolution adopted by the UNGA on 7 December 2022 (A/RES/77/103), the ILC held its seventy-fourth session from 24 April to 2 June and from 3 July to 4 August 2023 in Geneva.

⁹⁸ ILC, 'Report of the International Law Commission', Seventy-fourth Session, 24 April-2 June and 3 July-4 August 2023 (A/78/10) Advance version of 14 August 2023, 90.

⁹⁹ UNSC, 9260th meeting, 14 February 2023, New York, S/PV.9260.

¹⁰⁰ In this regard, reference must be made to the Inter-American Juridical Committee in the inter-American regional context, and the Committee on Juridical and Political Affairs of the Organization of American States. See ILC Report (98) at para 138.

¹⁰¹ *Ibid.*

Correspondingly, in 2022 the ILC adopted the 'Draft principles on protection of the environment in relation to armed conflicts'¹⁰². Here, surprisingly, there is only one, merely indirect, reference to climate change, namely in the preliminary remarks:

*"Recognizing that environmental consequences of armed conflicts may be severe and have the potential to exacerbate global environmental challenges, such as climate change and biodiversity loss"*¹⁰³.

Analogously, in the Commentary to the Draft Principles¹⁰⁴ climate change is just considered incidentally, as it was a marginal, merely potential issue:

*"The third preambular paragraph refers to environmental consequences of armed conflicts, which may be severe and have the potential to exacerbate global environmental challenges, such as climate change and biodiversity loss. It was understood that the word "severe" also encompasses that the effects can be long-term or irreversible. This is particularly evident in the context of the loss of biological diversity; when a species becomes extinct, it cannot be restored. The paragraph also refers to the fact that environmental effects of armed conflicts are not only local but may have broader ramifications. Research shows that armed conflicts have frequently taken place in biodiversity hotspots. Deforestation as a result of armed conflict may similarly have serious local effects, but also contributes to climate change"*¹⁰⁵.

Actually, war and climate change are two topics which have to be considered in their tight interrelationship: they inevitably influence one another. Firstly, armed conflicts have an effect on climate before they arise, during military operations, and even after the termination of hostilities¹⁰⁶. Instinctively one thinks of bombing which discharges gases into the environment, especially as a product of burning oil, as it happened during the first Gulf War because of the fires originating from 700 oil fields in Kuwait¹⁰⁷. The combination of war and violence, together with extreme events like floods and draught and the detrimental effects of armed conflicts on environment and climate have produced some 108 million forcefully displaced people, according to the estimates produced by the United Nations High Commissioner for Refugees (UNHCR) for 2022¹⁰⁸. The Global Report on

¹⁰² ILC, 'Draft principles on protection of the environment in relation to armed conflicts' (A/CN.4/L.968) Geneva, 18 April–3 June and 4 July–5 August 2022.

¹⁰³ ILC, *ibid.*, Preamble.

¹⁰⁴ ILC, 'Draft principles on protection of the environment in relation to armed conflicts, with commentaries' (A/77/102022).

¹⁰⁵ ILC, *ibid.* 98-99, emphasis added.

¹⁰⁶ Kira Kolesnik, Aleksi Heikkinen and Tiina Väänänen, 'The Environmental Costs of Armed Conflicts' INTOSAI Working Group on Environmental Auditing, available at <<https://www.environmental-auditing.org/blogs/the-environmental-costs-of-armed-conflicts/>> accessed 15 September 2023.

¹⁰⁷ UNFCCC, 'Conflict and Climate' (2012) available at <<https://unfccc.int/blog/conflict-and-climate>> accessed 15 September 2023.

¹⁰⁸ UNHCR, 'Global Trends. Forced displacement in 2022' (2023) 2 available at <<https://www.unhcr.org>> accessed 15 September 2023.

Internal Displacement 2023¹⁰⁹, underlines how a "significant part of the picture" is not yet considered and studied enough, "given that displacement triggered by slow-onset hazards linked to climate change is still largely unaccounted for"¹¹⁰. Food security is here a key factor, and the Report suggests urgent investments in, among another crucial areas, "climate change adaptation"¹¹¹.

While this reasoning only considers the effects of wars during the actual conduct of hostilities, another aspect of the issue is the contribution provided by the manufacturing and managing of military equipment, as well as by testing of weapons and military training, which largely utilise natural resources and consequently produce GHG¹¹². Militaries are therefore to be considered as "huge energy users"¹¹³, being responsible, as it has been estimated, for about 5.5% of the global amount of GHG emissions¹¹⁴, the largest sources of which are buildings and fuel, followed by military operations¹¹⁵. Still, military emissions reporting to the UN Framework Convention on Climate Change is modest if not insufficient¹¹⁶.

Secondly, it has been demonstrated that the outcomes of climate change have a strong impact on the likelihood and threat of armed conflict. Scientific research on one hand and security analysis on the other point out that global warming and associated phenomena such as climatic catastrophes, rising sea levels, draught, and famine, all contribute fatally to political instability¹¹⁷.

¹⁰⁹ IDMC, 'Global Report on Internal Displacement. Internal displacement and food security' (2023) available at <<https://www.internal-displacement.org/global-report/grid2023/>> accessed 15 September 2023.

¹¹⁰ *Ibid.*, at 117.

¹¹¹ *Ibid.*, at 113.

¹¹² Kolesnik, Heikkinen and Väänänen (106). In the article it is underlined that the more ancient the military equipment, the bigger amounts of GHG gases will be emitted in the atmosphere. See also: 'U.S. military consumes more hydrocarbons than most countries -- massive hidden impact on climate' *ScienceDaily* (Lancaster University, 20 June 2019) available at <www.sciencedaily.com/releases/2019/06/190620100005.htm> accessed 15 September 2023.

¹¹³ 'The Military Emissions Gap' available at <<https://militaryemissions.org/>> accessed 15 September 2023.

¹¹⁴ Doug Weir, 'How does War Damage the Environment' *Conflict and Environment Observatory* (4 June 2020) available at <<https://ceobs.org/how-does-war-damage-the-environment/>> accessed 15 September 2023; "Glaring gap": Why don't militaries have to report their greenhouse gas emissions?' *Euronews.green* (14 August 2023) available at <<https://www.euronews.com/green/2023/07/10/glaring-gap-why-dont-militaries-have-to-report-their-greenhouse-gas-emissions>> accessed 3 September 2023.

¹¹⁵ Neta Crawford, 'POV: Global Warming Is Now a National Security Concern. Cutting Pentagon greenhouse gas emissions will help save lives in the United States' *BU Today* (2019) available at <<https://www.bu.edu/articles/2019/pov-global-warming-is-now-a-national-security-concern/#:~:text=The%20DOD%20maintains%20over%20560%2C000,of%20fuel%20for%20operational%20purposes.>> accessed 15 September 2023.

¹¹⁶ For this reason, the so called "military emissions gap" is being studied. On one hand, reporting of military emissions is voluntary, according to the Paris Agreement. Data about military missions abroad have been excluded from the Kyoto Protocol and the obligations in the Paris Agreement due to national security concerns. Reported data is the result of obligations taken by governments to report to the UNFCCC. On the other hand, due to the Intergovernmental Panel on Climate Change (IPCC) guidelines specifically formulated for the reporting, a difference should be made between mobile and stationary fuel use, in other words: fuel used for terrestrial, aerial, or naval transportation and fuel used for heating at military bases. But these different categories often generate mistakes in reporting and overall unclear and inconsistent data. See *Euronews.green* (114); 'The Military Emissions Gap' (113); Anny Oberlink, 'Military Organizations Produce Significant Amounts of Unreported Greenhouse Gases' *Nexus Media News* (18 January 2022) available at <<https://www.pbs.org/wnet/peril-and-promise/2022/01/militaries-produce-6-of-ghgs-but-theyre-not-required-to-report-it/>> accessed 15 September 2023.

¹¹⁷ Neta Crawford (115).

1.2. Impacts of climate change on the rights of access to water, food, and energy

Besides the effects onto the security field, also those pertaining to the nexus between water, food and energy deserve consideration. There is a cycle of interdependence between these three factors: energy availability permits to treat and transport water. This, in turn, plays a central role for energy production, agricultural irrigation, crop health and livestock life and productivity. Anything decreasing the efficiency of this cycle will be reflected in product or service shortages and rising prices. Higher concentrations of carbon dioxide (CO₂) in the air, paired with 3 degrees warmer temperatures are estimated to result in either crop failure, lessened nutritional contents of food, and even higher diffusion of pathogens affecting food production¹¹⁸.

In 2007 the question of which impact climate change would strike on the human population was raised by the UN Deputy High Commissioner for Human Rights in the context of the Bali climate negotiations. Since 2008 a sequence of resolutions and reports have seen the light, demonstrating how human rights, specifically the rights to life, food, water, health, housing, and self-determination¹¹⁹, are influenced by climatic vicissitudes, and how this can affect people with vulnerabilities, such as the elderly or the ones who suffer disabilities, even more intensely¹²⁰. Consequently, inspired by the words of the special procedures mandate holders of the Human Rights Council, which in 2008 had highlighted the need to face the challenges to human rights and development "effectively" by acting "collectively"¹²¹, the 2009 Report emphasized an obligation of cooperation for the international community, besides the national level obligations¹²², especially recognizing that "the effects and risk of climate change are significantly higher in low-income countries"¹²³.

It has been observed that, due to the alleged uneven allocation of efforts, on one side, and perceived benefits, on the other, linked with climate change mitigation policies, countries appeared to be inclined to negotiate and act mainly autonomously, with the aim of pursuing their national interest¹²⁴.

¹¹⁸ WEF, 'Climate Adaptation: Seizing the Challenge' (2014) 4 available at <<https://gain.nd.edu/projects/world-economic-forum/>> accessed 15 September 2023.

¹¹⁹ Helga Haflídadóttir and Anthony F Lang Jr, 'Responsibility and Climate Change: Reframing Norms, Practices, and Community' in Hannes Hansen-Magnusson and Antje Vetterlein (eds), *The Rise of Responsibility in World Politics* (CUP 2020) 155-156 available at <<https://www-cambridge-org.uaccess.univie.ac.at/core/books/rise-of-responsibility-in-world-politics/environment/14C3137F009BF058BC1617ACF1CA7EB2>> accessed 15 September 2023.

¹²⁰ 'Reports on human rights and climate change' available at <<https://www.ohchr.org/en/climate-change/reports-human-rights-and-climate-change>> accessed 15 September 2023.

¹²¹ Human Rights Council, 'Joint statement on International Human Rights Day, Commemoration of Human Rights Day at the Palais des Nations in Geneva, Switzerland' (10 December 2008).

¹²² UNHCHR, 'Report of the Office of the United Nations High Commissioner for Human Rights on the relationship between climate change and human rights' A/HRC/10/61 (15 January 2009) paras. 72-83.

¹²³ UNHCHR, *ibid.*, paras. 84-91.

¹²⁴ Cole (2) 41-42.

This worry has also been expressed by Pascal Lamy who declared in 2008 that "some WTO members are increasingly beginning to lean towards a "go-it-alone approach" in tackling climate change"¹²⁵. It has also been pointed out that this and other problems deriving from the lack of collective action marked the root and legacy of the Kyoto Protocol, causing inefficiencies¹²⁶. Observers underlined that only incremental improvements within existing institutions together with a negotiating strategy within the framework UNFCCC's Conference of the Parties could have paved the way for lasting results¹²⁷.

Specular and opposed to the need for cooperation at the international level though the global environmental governance is the awareness that to respond efficiently and tackle climate change, it is still demanded from environmental politics to make the most of a fragmented global system, composed of 195 sovereign States¹²⁸ and their complex and not seldom contradictory needs and objectives¹²⁹. In this perspective the motto is to "think globally - act locally".

1.3 The anthropogenic nature of climate change and the need to safeguard the global commons through multilateral negotiations

As regards the nature of climate change, a conscience has gradually emerged in time, grounded on the scientific investigations and work of the Intergovernmental Panel on Climate Change (IPCC), around the evidence that the climate change issues the world is facing are largely human determined¹³⁰. The anthropogenic matrix of the problem reached the political agenda in the 1980s¹³¹, with States commencing the process of treaty negotiations about a decade later, when the conflicting stances of developing and developed countries came to light.

From another perspective, a common trait of trade and climate challenges is that they both rest on the arena of public goods¹³². In an ideal world, enhancing free trade could visibly boost the public good of social welfare though the mitigation of climate change. Cooperation in this respect aims indeed at reducing the risk of "climate free-riding states" deriving positive externalities from the commitment

¹²⁵ Pascal Lamy, "Speech to the Temporary Committee on Climate Change, European Parliament" (Brussels, 29 May 2008) <https://www.wto.org/english/news_e/sppl_e/sppl91_e.htm> accessed 14.07.2023.

¹²⁶ Cole (2) 41-42.

¹²⁷ Cole, *ibid*. The author suggested a two-headed strategy based on "(1) small-probability, high magnitude climate events and (2) the secondary and indirect consequences of climate change. Such a strategy would better align the interests of the parties and ameliorate the sizeable collective action problems that resulted in a weak Kyoto Protocol."

¹²⁸ These can be classified into 193 UN Member States and 2 others having the status of Observer States.

¹²⁹ John Vogler, 'Environmental Issues', in John Baylis, Steve Smith, Patricia Owens, *The Globalization of World Politics. An Introduction to International Relations* (OUP 2017) 386-387.

¹³⁰ Delimatsis (93).

¹³¹ Harro van Hasselt, 'Climate Change Regime' in Jean-Frédéric Morin and Amandine Orsini (eds) *Essential Concepts of Global Environmental Governance* (Routledge 2020) 38.

¹³² Epps and Green (6) 249.

and efforts of others, without contributing their fair share to the costs¹³³. Data with respect to climate vulnerability gathered shortly after the Paris Agreement showed how developed countries such as Canada, the United States, European states, and Australia incurred in a disproportionately small amount of costs, especially as regards food and water resources, although being the biggest emitters of GHG emissions¹³⁴. Similarly, central theme to the international trading system is the public good of an increasing standard of life¹³⁵ for the world's increasing population. This, too, is to be reached with the means of cooperation in the international efforts¹³⁶, countering the free-ride of some parties at the expenses of others, which typically happens when policymakers are mainly motivated by increasing domestic welfare¹³⁷. The obtainment of public goods as aim of the international community is notably arduous given the absence of a sovereign international government with the capacity to directly enact such ambitious target.

It can be therefore concluded that the goals combating poverty and providing, as far as possible, a safe, healthy, and climatically stable environment should mutually support each other. International environmental cooperation has been portrayed as a portion of the liberal approach to global reform¹³⁸. Its purposes are to confront transnational environmental questions while safeguarding the global commons¹³⁹ through an effective multilateral reaction¹⁴⁰. It remains to be proven if the affirmations of realists, are to be taken seriously, in particular when they warn that States and international organizations in their international efforts are merely pursuing power, wealth and particular advantages, boycotting the advancement even of Specialized Agencies and delivering formal international texts with the only objective of displaying some formal progression in international law, much to the detriment of our planet¹⁴¹.

2. Strategies aimed at materializing effectiveness of climate change regimes

Research shows that sovereignty as a value has always enjoyed pre-eminence in the field of international environmental law; consequently, it is uncommon to witness States responding to environmental threats in terms of "unambiguous legally binding obligations"¹⁴².

¹³³ Glenn Althor, James Watson, and Richard Fuller, 'Australia, the US and Europe are climate 'free-riders': it's time to step up' in *The Conversation* (05 February 2016) available at <<https://theconversation.com/australia-the-us-and-europe-are-climate-free-riders-its-time-to-step-up-53953>> accessed 15 September 2023.

¹³⁴ Althor, Watson, Fuller, *ibid*.

¹³⁵ Epps, Green, (6) 23.

¹³⁶ Epps, Green, *ibid*.

¹³⁷ Epps, Green, *ibid*.

¹³⁸ Vogler (129) 389.

¹³⁹ Vogler *ibid*.

¹⁴⁰ WTO 'World Trade Report 2022. Foreword by the WTO Director-General' 6.

¹⁴¹ Vogler (129) 390.

¹⁴² Ulrich Beyerlin and Jenny Grote Stoutenburg, "Environment, International Protection" *MPEPIL* (OUP 2010) 466.

Oftentimes States do reach an agreement, but only to commit on core principles and ideas of international environmental law, a classical example of which is sustainable development. These are vital to the construction of subsequent norms, nevertheless they remain, at least initially, rather indefinite, and have therefore been described as "twilight norms"¹⁴³ floating in the territory between soft and hard law. This space is portrayed as a "thin layer" populated by major basic and nevertheless abstract concepts like international solidarity and justice¹⁴⁴. Despite having a rather limited direct effect on the conduct of States, they are relevant as ethical principles orienting a second group of concepts.

This second level, in turn, functions as a "transmission belt" with regard to the final layer of legal norms, facilitating the translation of non-legal standards into mandatory principles, be it in treaty or customary form¹⁴⁵. To the second group belong the principles of the 1992 Rio Declaration such as the "no harm" rule, precautionary action, common but differentiated responsibilities, the "polluter pays" principle, environmental impact assessment, sustainable development, intergenerational equity. These values inform the interpretation of the object and purpose of treaties and may even result in universally accepted customary norms.

An example of this crystallization into customary international law is the prohibition of causing transboundary harm, which has been long-established in subsequent State practice¹⁴⁶ and then acknowledged as a customary principle in the Advisory Opinion of the ICJ on the *Legality of the Threat or Use of Nuclear Weapons*, para. 29, 30 and 31¹⁴⁷:

"The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond their control is now part of the corpus of international law relating to the environment."

The Court then provides support to its reasoning through the combined provisions of Principle 24 of the Rio Declaration recognizing warfare as a destructing factor for sustainable development and urging States to "provide protection for the environment" instead, and Articles 35, para. 3, and 55 of the Additional Protocol I to the Geneva Conventions of 1949¹⁴⁸. These norms together:

¹⁴³ Beyerlin, Stoutenburg (142).

¹⁴⁴ Beyerlin, Stoutenburg, *ibid.*

¹⁴⁵ Beyerlin, Stoutenburg (142) 467.

¹⁴⁶ Subsequent practice becomes relevant also for treaty interpretation, according to the Vienna Convention on the Law of Treaties (VCLT), concluded 23 May 1969, entered into force 27 January 1980, 1155 UNTS 331.

¹⁴⁷ ICJ, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, ICJ 3, ICJ Reports 1996, p. 226, at 241-242.

¹⁴⁸ UN, Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), adopted 8 June 1977, entered into force 7 December 1978, 1125 UNTS 3.

"embody a general obligation to protect the natural environment against widespread, long-term and severe environmental damage"

While sovereignty has manifested as a hurdle in the field of international environmental law, States have thrived thanks to the process of globalization. Within the context of globalization much has been written on the reciprocal influence between the degradation of the ecosystems and the depletion of natural resources, however such relationship has been described as contradictory¹⁴⁹. It is true that the opportunities generated through the globalized economy, such as transfer of business and production and relocation of working population to industrial districts, have granted better commercial exchanges and income to some developing countries. They indeed contributed to sustaining the expansion of once remote markets and higher levels of consumption. Nonetheless, all these factors also contributed to greater concentration of effluents and greenhouse gases (GHG) emissions, which certainly amount to the unfavourable environmental consequences.

Economists, however, insisted that a "race to the bottom" in environmental standards¹⁵⁰ must not necessarily occur. On the contrary: it is precisely with material wealth increasing that improvements of the environmental and climate related circumstances are more likely to be discussed and taken into effective consideration¹⁵¹.

Another point that deserves consideration is the development of the principle of non-regression¹⁵², which has been defined as prohibiting:

'any recession of environmental law or existing levels of environmental protection, and comprises its protective norms in the category of non-revocable and intangible legal rules, in the common interest of humanity'¹⁵³

As regards its legal basis, the International Union for Conservation of Nature's World Commission on Environmental Law (IUCN WCEL) drew up a World Declaration on the Environmental Rule of Law¹⁵⁴ where it stated that "States [...] shall not allow or pursue actions that have the net effect of

¹⁴⁹ Vogler (129) 386.

¹⁵⁰ Vogler, *ibid.*

¹⁵¹ One way to do so would be to impact the market through the inclusion in the products prices the environmental damages caused by their production processes.

¹⁵² Michel Prieur, 'Non-regression in environmental law' (2012) 5(2) S.A.P.I.E.N.S. available at <<https://journals.openedition.org/sapiens/1405>> accessed 15 September 2023.

¹⁵³ Michel Prieur 'Le principe de non régression en droit de l'environnement, condition du développement durable' (2013) RADE.

¹⁵⁴ This has been defined as the 'legal framework of procedural and substantive rights and obligations that incorporates the principles of ecologically sustainable development in the rule of law. [...] Without it, environmental governance and the enforcement of rights and obligations may be arbitrary, subjective, and unpredictable.' See IUCN World Congress on Environmental Law, 'IUCN World Declaration on the Environmental Rule of Law' (2017) available at <<https://www.iucn.org/our-union/commissions/world-commission-environmental-law/our-work/history/foundational-documents-4>> accessed 15 September 2023. The IUCN has observer and consultative status at the United Nations.

diminishing the legal protection of the environment or of access to environmental justice"¹⁵⁵. It has further been explained by the environmental scholar Mario Peña Chacón that:

'[i]t is intended to avoid removing or weakening norms in favor of interests that have not been demonstrated to be higher in importance than the public interest in the environment, given that, in many circumstances, backsliding can lead to environmental consequences that are irreversible or difficult to repair'¹⁵⁶

This concept is meant to be understood as one of the "general principles of law" to be applied before courts in the sense of the "general principles of law recognized by civilized nations"¹⁵⁷, even though, as Bryner underlines, environmental law recognises both principles belonging to the realm of soft law such as those of the Stockholm declaration, as well as those of binding treaties such as the UNFCCC¹⁵⁸.

3. The institutional framework of provisions in the WTO and in the climate change international regimes

3.1 Pre-eminence of free trade?

Analogously to what observed above with respect to environmental provisions within the WTO framework, the Marrakesh Agreement and its covered agreements envision as first and predominant objective that of trade liberalization, contextually providing a forum for negotiations, a dispute settlement system and assisting with the implementation of the various legal provisions established. This means that, at first sight, no preference in the formal texts is given to the objective of climate mitigation.

This has further been confirmed by the words of the WTO Director-General Pascal Lamy at the Trade Ministerial Meeting during the UNFCCC Conference of the Parties in Bali, in 2007. The WTO, as well as the whole international community dealing with the development of trade policies, could have

¹⁵⁵ IUCN World Declaration on the Environmental Rule of Law, Principle 12.

¹⁵⁶ Definition and translation from: Nicholas S. Bryner, 'Never Look Back: Non-Regression in Environmental Law' (2022) 43 *U. Pa. J. Int'l L.* 555, at 5, available at <https://digitalcommons.law.lsu.edu/faculty_scholarship/456> accessed 15 September 2023, from the text of Mario Peña Chacón, 'El Principio de No Regresión Ambiental en la Legislación y Jurisprudencia Costarricense', in Mario Peña Chacón (ed.), *El Principio de No Regresión Ambiental en el Derecho Comparado Latinoamericano 12* (U.N. Development Programme 2013).

¹⁵⁷ Statute of the International Court of Justice, 33 UNTS 993, Article 38.

¹⁵⁸ Respectively: UNGA United Nations Conference on the Human Environment, adopted 15 December 1972 A/RES/2994 [Stockholm declaration], available at <<https://www.refworld.org/docid/3b00f1c840.html>> accessed 15 September 2023 - the Stockholm Declaration listed 26 principles aiming at the "preservation and improvement of the human environment", while the UN Framework Convention on Climate Change, adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107 [UNFCCC], presents principles that shall guide the parties for achieving the objectives of the Convention and for its implementation. See Bryner (156).

a mere ancillary function, while the main role pertains to the international community which directly deals with climate change objectives and action:

It is not in the WTO that a deal on climate change can be struck, but rather in an environmental forum, such as the United Nations Framework Convention on Climate Change (UNFCCC). Such an agreement must then send the WTO an appropriate signal on how its rules may best be put to the service of sustainable development [...] ¹⁵⁹.

During a speech at the European Parliament in 2008, the WTO Director-General admitted that the members to the organization had "very different perceptions on what the trading system ought to do on climate change" ¹⁶⁰. As logical consequence of this admission regarding a lack of global consensus on the matter, the issue seems to be destined to be only discussed amid targeted climate change negotiations, even if these would be equally confronted and plagued with the difficulties of reaching a far-reaching agreement ¹⁶¹.

However, all bodies of law undergo interpretation, and this can well happen in an evolutionary and holistic manner. On one side the adjudicative approach of WTO panels, on the other the advancement of societal values brought significant enlightenment to the scope of trade agreements, moving beyond what has been defined as the "implicit prima facie pre-eminence of free trade" ¹⁶².

Recent publications underline that the ultimate and broadly recognised goal is rather that of "increasing *human* wellbeing" ¹⁶³. This accent on the human-centred perspective is nothing new: after all the whole body of environmental law has developed initially under a *human* perspective rather than under a sheer interest for the environment. Therefore, is even less surprising that the Preamble to the WTO Agreement, dealing primarily with trade, and informing both the GATT 1994 and the other covered agreements, aims at reconciling trade with: "raising standards of living", "full employment and a large and steadily growing volume of real income and effective demand" and then "the optimal use of the world's resources in accordance with the objective of sustainable development", as well as protecting and preserving the environment. Because of the results of

¹⁵⁹ Pascal Lamy, 'Speech at the Informal Trade Ministers' Dialogue on Climate Change in Bali' (8-9 December 2007).

¹⁶⁰ Pascal Lamy, 'Speech to the Temporary Committee on Climate Change', European Parliament, Brussels (9 May 2008) available at <https://www.wto.org/english/news_e/sppl_e/sppl91_e.htm> accessed 15 September 2023.

¹⁶¹ Epps, Green, (6) 37-38.

¹⁶² Sarah Joseph, *Blame it on the WTO? A human rights critique* (OUP 2011); Rüdiger Wolfrum and Peter-Tobias Stoll, 'Chapter Two. Concepts and Legal Structure' in Peter-Tobias Stoll, Frank Schorkopf, *WTO - World Economic Order, World Trade Law. Volume:1*, in: *Max Planck Commentaries on World Trade Law (Vols. 1-7)* (Martinus Nijhoff 2006) 33: regarding the objectives pursued by the WTO, "according to the relevant provisions [...] *free trade is neither the only nor the overriding purpose*. Incidentally, this term does not appear at all in the preamble to the WTO Agreement", which "lists several overriding and paramount objectives".

¹⁶³ Aaron Cosbey, "Trade and climate change: working through the conflicts and synergies", in Michael Jakob (ed) *Handbook on Trade Policy and Climate Change* (Edward Elgar Publishing 2022) 12.

Rio+20¹⁶⁴ and the 2030 Agenda for Sustainable Development¹⁶⁵, trade has been evaluated and presented in the framework of the Sustainable Development Goals as a crucial factor, facilitating and sustaining the obtainment of the other Goals. Sustainable development has therefore to be understood as a concept resting on three pillars among which there is no hierarchy, and which can be defined as: economic advance, environmental concerns, and social issues¹⁶⁶.

Regarding the adjudicative approach, through which the WTO judicial bodies decide about the legality of member's action which limits trade to ensure non-trade objectives, the Panel in *EC-Tariff Preferences* also confirmed that WTO framework refers to "multiple policy objectives" and regarding the grading among them, it underlines that "all [...] are important"¹⁶⁷.

3.2. Climate change as a global problem

Twenty years after the Stockholm Conference, Principle 7 of the legally non-binding Rio Declaration¹⁶⁸, an instrument which for the first time marked the merging of two political goals into the "single, integrated policy objective"¹⁶⁹ of sustainable development, urged a cooperation between States in a spirit of "global partnership" with reference to "the health and integrity of the Earth's ecosystem"¹⁷⁰.

The emergence of this awareness regarding an international, common responsibility is relatively recent. In fact, for many years the matter was perceived as an issue to be strictly dealt with inside national boundaries¹⁷¹.

¹⁶⁴ United Nations Conference on Sustainable Development, 20-22 June 2012 [Rio+20].

¹⁶⁵ UNGA 'Transforming our world: The 2030 Agenda for sustainable development' A/RES/70/1 (2015) available at <<https://sdgs.un.org/2030agenda>> accessed 15 September 2023. See Sabine Weiland, Thomas Hickmann, Markus Lederer, Jens Marquardt and Sandra Schwindenhammer, 'The 2030 Agenda for Sustainable Development: Transformative Change through Sustainable Development Goals?' (2021) 9(1) *Politics and Governance* 90, available at <<https://www.cogitatiopress.com/politicsandgovernance/article/viewFile/4191/4191>> accessed 15 September 2023.

¹⁶⁶ Alessandra Guida, *Biosafety Measures, Technology Risks and the World Trade Organization. Thriving and Surviving in the Age of Biotech* (Routledge 2023) 121.

¹⁶⁷ *European Communities — Conditions for the Granting of Tariff Preferences to Developing Countries*, Panel Report, WT/DS246/R, 01 December 2003, 7.52, first sentence.

¹⁶⁸ Apart from the enunciation of principles of law in Article 2, the other principles stated in the declaration are merely aspirational, see 'Rio Declaration', in *Encyclopedic Dictionary of International Law* John P. Grant and J. Craig Barker (OUP 2009). The Declaration revolves around an anthropocentric focus instead of recognizing the obligations of humankind towards the environment, as the proponents of an Earth Charter had wished: "human beings are at the center of concerns for sustainable development", see 'Rio Declaration', in *Encyclopedia of Global Change*, David Cuff, Andrew S. Goudie (OUP 2005).

¹⁶⁹ Cuff, Goudie, *ibid.*

¹⁷⁰ "States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command" Principle 7, Rio Declaration on Environment and Development, UNGA, A/CONF.151/26 (Vol. I), Report of the United Nations Conference on Environment and Development.

¹⁷¹ Rika Koch, 'Green public procurement under WTO law. Experience of the EU and Prospects for Switzerland', 9 *EYIEL Monographs - Studies in European and International Economic Law* (Springer 2019) 39.

3.2.1 The predecessors: emergence of litigation with respect to pollution and the ozone layer...

A first step in case law dealing with a transboundary damage to the environment is the arbitration relating to the dispute involving the United States and Canada¹⁷². It was within these contours that the International Joint Commission (IJC) recognized the cornerstone principle of duty to prevent trans-boundary harm, together with what is known as the polluter pays rule. The landmark case at hand was precisely the *Trail Smelter* Arbitration of 1941¹⁷³, dealing with across-the-border air pollution and the consequent damage to the environment generated to the neighbouring State. It can be noted that the remedy chosen by the Commission was not the drastic shutting down of the Canadian lead and zinc smelter in order to prevent further pollution and crop damage. Such a decision would have recognised the protection of the environment as the paramount good to be protected, but at the cost of damaging the economic interests of the region and its community, as many workers would have lost their jobs. Instead, the Commission aimed at finding what it considered a fair balance, i.e. a monetary compensation to be recognized for the farmers who suffered the environmental harm and a change in the operations of the smelter such as to result in decreased amount of chemical emissions. Therefore, it can be argued, the Commission demonstrated that an injury to the environment was acceptable after all, as long as this could be considered commensurate to the compensation paid by the company causing it¹⁷⁴.

We may identify the second relevant step in case law in the judgement on the *Gabčíkovo-Nagymaros* case¹⁷⁵ by the International Court of Justice (ICJ). Despite the ongoing proliferation of environmental treaties, in 1997 the Court had to evaluate for the first time the "consequences of the legal developments in the field"¹⁷⁶. While validating the existence of the prohibition of causing transboundary damage to the environment, the Court expanded its reasoning about the limitations of it in an *obiter dictum*¹⁷⁷. In particular, it denied the status of peremptory norm to the environmental damage asserted by Hungary and thus refused to consider it as a valid ground to terminate the treaty

¹⁷² John D. Wirth, *Smelter Smoke in North America: The Politics of Transborder Pollution* (Lawrence 2000) 1. The author also reports about a later case, involving American copper smelters in the 1980s.

¹⁷³ *Trail Smelter (United States of America v Canada)* (1938/41) 3 RIIA 1905.

¹⁷⁴ The investment imposed on the smelter to change its processing methods amounted to about 20 million dollars, see Catherine Prunella, 'An International Environmental Law Case Study: the Trail Smelter Arbitration' *International Pollution Issues*, Fall 2014, <<https://intlpollution.commons.gc.cuny.edu/an-international-environmental-law-case-study-the-trail-smelter-arbitration/#:~:text=The%20two%20principles%20arising%20from,along%20with%20the%20decisions%20themselves>> accessed 15 September 2023.

¹⁷⁵ ICJ, *Case concerning the Gabčíkovo-Nagymaros project (Hungary v. Slovakia)* 1997 I.C.J. Rep. 68.

¹⁷⁶ Phoebe N. Okowa and Malcolm D. Evans, "Case concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)" 47(3) *The International and Comparative Law Quarterly* 688 (1998) <<https://www.jstor.org/stable/761430>> accessed 15 September 2023.

¹⁷⁷ Silva-Send (10).

obligation of building a hydroelectric power system¹⁷⁸. In so doing, this judgement reiterated the struggle to find a balance between economic and environmental interest, letting the first ones dominate, again.

The ICJ has been involved in environmental related cases other three times. In the 2010 *Pulp Mill* judgement¹⁷⁹, it engaged with the status of the environmental impact assessment (EIA)¹⁸⁰ in international law, stating that:

“[..], the obligation to protect and preserve, under Article 41 (a) of the Statute, has to be interpreted in accordance with a practice, which in recent years has gained so much acceptance among States that it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.”¹⁸¹

In the case regarding *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*¹⁸² the ICJ for the first time in 2015 recognised a compensation for an environmental damage. The Government of Costa Rica had lamented an impaired ability of the excavated area in providing environmental goods and services, in particular gas regulation and air quality services, which were directly dependant on the activities carried out by Nicaragua¹⁸³. In particular, because of the removal of 300 of trees and 6.19 hectares of vegetation, the court found that "impairment or loss of these four categories of environmental goods and services [had] occurred": "trees, other raw materials, gas regulation and air quality services, and biodiversity"¹⁸⁴. Moreover, the Court held:

"that it is appropriate to approach the valuation of environmental damage *from the perspective of the ecosystem as a whole*, by adopting an overall assessment of the impairment or loss of environmental goods and services

¹⁷⁸ ICJ, *Case concerning the Gabčíkovo-Nagymaros project (Hungary v. Slovakia)* at para 51: "the state of necessity is a ground recognized by customary international law for precluding the wrongfulness of an act [...]. [...] Such ground [...] can only be accepted on an exceptional basis[...]". "[...]Thus, according to the [International Law] Commission, [it] [...] can only be invoked under certain strictly defined conditions which must be cumulatively satisfied; and the State concerned is not the sole judge of whether those conditions have been met".

¹⁷⁹ ICJ, *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* Judgment, I.C.J. Reports 2010, p. 14.

¹⁸⁰ Nevertheless, the ICJ also noted the lack of a definition of EIA in international law, the determination of its content shall therefore take place within national legislations.

¹⁸¹ ICJ, *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, para 204.

¹⁸² ICJ, *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Judgment, I.C.J. Reports 2015, p. 665.

¹⁸³ Because of this, Costa Rica was adjudicated a compensation of 120,000 US\$. The ICJ stated that: "damage to the environment, and the consequent impairment or loss of the ability of the environment to provide goods and services, is compensable under international law. Such compensation may include indemnification for the impairment or loss of environmental goods and services in the period prior to recovery and payment for the restoration of the damaged environment", see ICJ, *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, *Compensation Owed by the Republic of Nicaragua to the Republic of Costa Rica*, 2018 2 February General List No. 150, at para 42.

¹⁸⁴ ICJ, *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, *Compensation Owed by the Republic of Nicaragua to the Republic of Costa Rica*, para 75.

prior to recovery, rather than attributing values to specific categories of environmental goods and services and estimating recovery periods for each of them"¹⁸⁵

But also:

First [...] *the most significant damage to the area*, from which other harms to the environment arise, is the *removal of trees* by Nicaragua during the excavation of the *caños*. An overall valuation can account for the correlation between the removal of the trees and the harm caused to other environmental goods and services (such as other raw materials, gas regulation and air quality services, and biodiversity in terms of habitat and nursery).¹⁸⁶

3.2.2. ...up to recent developments regarding climate damages and international courts

Lastly, the most recent case is the *Request for an Advisory Opinion on the obligations of States with respect to climate change*¹⁸⁷, filed by the United Nations General Assembly (UNGA) in 2023 and which is still pending.

"Noting with utmost concern the scientific consensus, expressed, inter alia, in the reports of the Intergovernmental Panel on Climate Change, including that anthropogenic emissions of greenhouse gases are unequivocally the dominant cause of the global warming observed since the mid-20th century, that human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability, and that across sectors and regions the most vulnerable people and systems are observed to be disproportionately affected,

Acknowledging that, as temperatures rise, impacts from climate and weather extremes, as well as slow-onset events, will pose an ever-greater social, cultural, economic and environmental threat,

*Emphasizing the urgency of scaling up action and support, including finance, capacity-building and technology transfer, to enhance adaptive capacity and to implement collaborative approaches for effectively responding to the adverse effects of climate change, as well as for averting, minimizing and addressing loss and damage associated with those effects in developing countries that are particularly vulnerable to these effects"*¹⁸⁸

The UNGA, having recalled important instruments such as the UNFCCC, the Kyoto Protocol and the Paris Agreement "as expressions of the determination to address decisively the threat posed by climate change"¹⁸⁹, recalls the implementation challenges which at present time persist. On one hand, "the gap between the aggregate effect of States' current nationally determined contributions and the emission reductions required to hold the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase to

¹⁸⁵ *Ibid.*, at para 78.

¹⁸⁶ *Ibid.*, at para 79.

¹⁸⁷ UNGA, Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change, A/77/L.58, 1 March 2023. This is the first time that the world's highest court has been filed a request directly aimed at the topic of climate change, see: Joana Setzer and Catherine Higham, 'Global trends in climate change litigation: 2023 snapshot' (Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science) (2023) 18.

¹⁸⁸ UNGA, Request for an advisory opinion, *ibid.*, p. 3.

¹⁸⁹ UNGA, Request for an advisory opinion, *ibid.*, p. 2.

1.5 degrees Celsius above pre-industrial levels", on the other the gap " between current levels of adaptation and levels needed to respond to the adverse effects of climate change".

With the request for an Advisory Opinion the UNGA poses two questions. The first one concerns the obligations of States under international law with regard to "the protection of the climate system and other parts of the environment from anthropogenic emissions of greenhouse gases for States and for present and future generations"¹⁹⁰. The second one inquires which legal consequences descend from such obligations for States "where they, by their acts and omissions, have caused significant harm to the climate system and other parts of the environment"¹⁹¹. Hereto the query further differentiates between harm suffered by States, particularly small island developing ones, and by individuals, particularly those belonging to future generations¹⁹².

Against this background it appears obvious that a conscience has emerged at the international level. It encompasses not only good intentions and attempts which took place in the last two decades, like the small island developing States preparing a recourse to the ICJ¹⁹³ and lamenting damages due to rising sea levels linked to climate change, or the Pacific Island nation of Palau seeking its Advisory Opinion on the topic of damages due to GHG¹⁹⁴. It actually led to the requests of three different Advisory Opinions only between 2022 and 2023¹⁹⁵, all of them dealing with issues originated because of climate change.

3.2.3 The synchronous development of multilateral treaties...

In the meantime, international negotiations had brought a multilateral agreement, the Convention on Long-Range Transboundary Air Pollution of 1979¹⁹⁶, with the purpose of limiting, reducing, and

¹⁹⁰ UNGA, Request for an advisory opinion, *ibid.*, p.3.

¹⁹¹ UNGA, Request for an advisory opinion, *ibid.*, pp. 3-4.

¹⁹² *Ibid.*

¹⁹³ Richard Barnes, *An Advisory Opinion on Climate Change Obligations Under International Law: A Realistic Prospect?* available at <<https://munin.uit.no/bitstream/handle/10037/28461/article.pdf?sequence=2>> accessed 15 September 2023. Another attempt was the petition issued by the Inuit Circumpolar Conference with respect to the Inter-American Commission on Human Rights, Joanna Harrington, 'Climate Change, Human Rights, and the Right to Be Cold' 18 *Fordham Environmental Law Review* 513 (2007).

¹⁹⁴ UN News, 'Palau seeks UN World Court opinion on damage caused by greenhouse gases' available at <<https://news.un.org/en/story/2011/09/388202#:~:text=The%20Pacific%20island%20nation%20of,do%20not%20harm%20other%20States>> accessed 15 September 2023.

¹⁹⁵ Other than the ICJ, the International Tribunal for the Law of the Sea (Request for an Advisory Opinion Submitted by the Commission of Small Island States on Climate Change and International Law, ITLOS Case No. 31/2022 (12 December 2022) available at <https://www.itlos.org/fileadmin/itlos/documents/cases/31/Request_for_Advisory_Opinion_COSIS_12.12.22.pdf> accessed 15 September 2023) and the Inter-American Court of Human Rights (Ministry of Foreign Affairs, Government of Chile, 'Chile y Colombia realizan inédita consulta a la Corte Interamericana de Derechos Humanos sobre emergencia climática' (9 January 2023) available at <<https://www.minrel.gob.cl/noticias-antiores/chile-y-colombia-realizaninedita-consulta-a-la-corte-interamericana-de>> accessed 15 September 2023).

¹⁹⁶ Convention on Long-Range Transboundary Air Pollution, adopted 13 November 1979, entered into force 16 March 1983, 1302 UNTS 217. The convention was integrated by eight subsequent protocols for its implementation, which

preventing air pollution. Its regime successfully established *ad hoc* regional environmental standards aimed at controlling the levels of contamination in the air¹⁹⁷.

Still, despite scientific data and concern about the effects of GHG emissions on climate warming being already evident as early as 1957¹⁹⁸, the issue remained largely unheard.

A momentaneous spark of attention within the general attitude of disregard and neglect of the urgent climate issues was the international reaction which suddenly triggered after the discovery of the ozone layer depletion in 1985. This time the scientific community was pointing out the detrimental effects of the chlorofluorocarbon gases (CFCs) which were causing the "ozone hole". The findings that this posed a threat to the human health and the environment needed to be dealt with so quickly as possible, the ideal fora being the ones which, at that time, claimed an almost universal membership: the UN and the GATT. While the UN level responded to the threat of the global atmosphere with the adoption of the Vienna Ozone Convention in 1985¹⁹⁹, and the subsequent Montreal protocol in 1987²⁰⁰, both of which enjoy almost universal ratification²⁰¹, on the GATT/WTO scene a so called "race to the bottom" was taking place.

At the UN level, the United Nations Environmental Programme (UNEP) managed to identify and regulate around a hundred different man-produced substances which damage the stratospheric ozone layer and efficiently realised the principle of common but differentiated responsibilities for the first time²⁰². In fact, both developed and developing countries were bound to lessen and gradually eliminate the production and utilisation of the named chemicals. Developing countries were allowed to postpone within a ten-years-phase the obtainment of the target results²⁰³, provided that the fulfilling of their obligations was supported by adequate financial assistance and technology transfer by developed countries²⁰⁴. In accordance with this, the parties to the Protocol created the Multilateral Fund for the Implementation of the Montreal Protocol in 1990, which turned out to be the decisive

gradually dealt with multiple pollutants and the different effects on the environment "such as acidification, tropospheric ozone formation and eutrophication", as reported in Beyerlin, Stoutenburg (142) 469.

¹⁹⁷ Beyerlin, Stoutenburg, *ibid.*

¹⁹⁸ Studies concerning the link between using fossil fuels and causing GHG emission and consequent climate warming were published by Roger Revelle and Hans Suess from the Scripps Institute of Oceanography, California, see Sir John Houghton (1).

¹⁹⁹ Vienna Convention for the Protection of the Ozone Layer, adopted 22 March 1985, entered into force 22 September 1988, 1513 UNTS 293.

²⁰⁰ Montreal Protocol (13).

²⁰¹ UNEP, 'About Montreal Protocol' available at <<https://www.unep.org/ozonaction/who-we-are/about-montreal-protocol>> accessed 15 September 2023.

²⁰² Beyerlin, Stoutenburg (142) 469.

²⁰³ Montreal Protocol, Art. 5.

²⁰⁴ Beyerlin, Stoutenburg (142) 470.

encouragement and proved to enhance compliance. Notably, since its entry into force, the global consumption of the ozone-damaging particles has diminished by 98%²⁰⁵.

Conversely, the agreements the trading system relied upon were being employed and exploited by some member parties in order to downtrend ecological parameters. In so doing they would offer favourable circumstances for investors, while nations more committed in safeguarding the environment would experience the so called "carbon leakage"²⁰⁶.

3.2.2 ...and the emergence of climate change as science-based issue leading to the birth of the climate change regime

The evolution of an international conscience regarding climate change clearly implies advancements in the scientific community. In fact, this sharpened its research efforts and identified the major atmospheric gases which are related to increase in global temperatures, finding that they include the most renowned carbon dioxide (CO₂), as well as methane (CH₄) and nitrous oxide (N₂O)²⁰⁷. Even though climate is constantly evolving because of natural causes, these atmospheric emissions originated, *inter alia*, from industrial processes and transport, end in the atmosphere as gases and aerosols and there they "trap heat and raise the temperatures near the ground"²⁰⁸, a phenomenon identified as "greenhouse effect".

The biggest challenge the climate change system has to face in comparison to the ozone regime is that these perilous substances which cause Earth's temperature to rise cannot easily be substituted. Instead, the efforts include demanding reforms of the productive and commercial structure and functioning within developed countries, whereas developing countries need to modify and adjust their routes for economic progress²⁰⁹. this determines enormous political and financial transformations, which are sometimes considered to be too ambitious and even deemed to undermine the effectiveness of the struggle²¹⁰.

But there are also similarities to the so successful ozone regime, namely that the framework to tackle climate change is also dynamic. This means that scientific progress can be incorporated into the

²⁰⁵ EUR-LEX, *Vienna Convention for the Protection of the Ozone Layer* available at <<https://eur-lex.europa.eu/EN/legal-content/summary/vienna-convention-for-the-protection-of-the-ozone-layer.html>> accessed 15 September 2023.

²⁰⁶ Rika Koch (171); Kaufmann Christine and Rolf H. Weber, "Carbon-related Border Tax Adjustment: Mitigating Climate Change or Restricting International Trade?" (2011) 10(04) *World Trade Review* 497.

²⁰⁷ "Less prevalent, but very powerful, GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆)", according to the definition of GHG in: UNEP, 'Emissions Gap Report (EGR) 2022: The Closing Window – Climate crisis calls for rapid transformation of societies' XII.

²⁰⁸ UNFCCC Secretariat, 'United Nations Framework Convention on Climate Change Handbook', Bonn, 2006, available at <<https://unfccc.int/resource/docs/publications/handbook.pdf>> accessed 15 September 2023, 16.

²⁰⁹ Beyerlin, Stoutenburg (142) 470.

²¹⁰ Beyerlin, Stoutenburg, *ibid*.

regulations by means of subsequent amendments or protocols agreed by the Conference of the Parties (COP)²¹¹.

If one wanted to recall how the climate regime developed, the starting point of it can be found the official identification of climate change as an "urgent world problem" which had to be solved through global cooperation took place in the course of the first World Climate Conference in 1979²¹².

Almost a decade later, in 1988, under the aegis of the Villach Conference of Experts, the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO), together with the International Council of Scientific Unions (ICSU) convened on the institution of the Intergovernmental Panel on Climate Change (IPCC)²¹³. Such organisation undertook the commitment to issue periodic Assessment Reports assessing the state of knowledge of climate change. Accordingly, the Reports provide political leaders with the relevant and updated scientific information on the topic²¹⁴, which are meant to constitute a solid basis for the creation of the much-needed adaptation and mitigation strategies²¹⁵. The authoritativeness of the work by the IPCC has been recognized by the Academies of Science of G8 member States with the addition of China, India and Brazil, in their joint declaration advocating serious action on climate change in 2005²¹⁶. Even if this recognition may seem promising, a critical assessment of the global political leadership of G8 must acknowledge its missed targets, due to internal diverging trends, absence of compliance monitoring, the outsider status of major States²¹⁷ and the resistance about advancing climate policies enacted by some member States²¹⁸.

Also in 1988, the United Nation General Assembly Resolution 43/53 confronted the problem for the first time affirming that climate change has the status of "common concern of mankind"²¹⁹. A couple of years later, in its Resolution 45/212 of 1990, the status of common concern for mankind was reaffirmed and the GA urged:

"[...] governments and, as appropriate, intergovernmental and non-governmental organizations and scientific institutions to collaborate in a concerted effort with the aim of preparing, as a matter of urgency, a framework

²¹¹ Beyerlin, Stoutenburg, *ibid*.

²¹² UNFCCC Secretariat (2008) 17.

²¹³ UNFCCC Secretariat, *ibid*.

²¹⁴ Philippe J. Sands and Ilona Millar, 'Climate, International Protection' *OPIL* (OUP 2011) 237.

²¹⁵ IPCC, 'IPCC at the Bonn Climate Conference' (2023) available at <<https://www.ipcc/2023/06//02/ipcc-at-theunfccc/sb58/>> accessed 15 September 2023.

²¹⁶ 'Joint Science Academies' Statement, G8 plus China, India & Brasil' (June 2005) available at <https://www.ipcc.ch/site/assets/uploads/2018/04/IPCC_WG1.pdf> accessed 15 September 2023.

²¹⁷ Dries Lesage, Thijs Van de Graaf and Kirsten Westphal, 'The G8's Role in Global Energy Governance Since the 2005 Gleneagles Summit' 15 *Global Governance* 259 (2009).

²¹⁸ Reference is made, in particular, to the United States, see Henrike Peichert and Nils Meyer-Ohlendorf, 'G8 Impact on International Climate Change Negotiations - Good or Bad?' available at <https://www.ecologic.eu/sites/default/files/publication/2015/g8_impact_on_international_climate_change_negotiations_0.pdf> accessed 15 September 2023.

²¹⁹ UNGA Resolution A/RES/43/53, 6 December 1988.

convention on climate change, and other related instruments, containing appropriate commitments for action to combat climate change and its adverse effects, taking into account the most up-to-date, sound scientific knowledge and any existing uncertainties, as well as the particular needs and development priorities of developing countries."²²⁰

The UNFCCC, adopted in May 1992 was effectively the first step in this collaborative response²²¹, setting for the Member States the clear aim of stabilising the GHG concentrations within the text of its Art. 2, and thus the further objective of preventing "dangerous anthropogenic interference with the climate system".

3.2.3 Spill-over effect on the WTO

In 2006 the Stern review highlighted the financial context in which climate action would have to be enclosed:

"if we don't act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year [...] If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP [...] or more. In contrast, the cost of action – reducing greenhouse gas emissions [...] – can be limited to around 1% of global GDP each year."²²²

This estimate has been also recently confirmed, even if the percentage to get to a net-zero carbon economy could be 2% of annual global GDP²²³, according to the International Energy Agency²²⁴, or up to 3% , based on a study promoted by Reuters and gathering the assessments of climate economists²²⁵, or even up to 5% according to the International Renewable Energy Agency's World Energy Transitions Outlook. In any case, it is a one-digit percentage and very close to the 2018

²²⁰ UNGA, 'Protection of global climate for present and future generations of mankind' Resolution (21 December 1990) A/RES/45/212.

²²¹ Beyerlin, Stoutenburg (142).

²²² Nicholas Stern, *The Economics of Climate Change: The Stern Review* (CUP 2007) xv.

²²³ Yuval Noah Harari, 'The Surprisingly Low Price Tag on Preventing Climate Disaster' *Time* (18 January 2022) available at <<https://time.com/6132395/two-percent-climate-solution/>> accessed 15 September 2023; 'IRENA's World Energy Transitions Outlook' Press Release (30 June 2021).

²²⁴ Justin Worland, '"A Narrow Pathway": How a New Climate Report Rocked the Energy World' *Time* (19 May 2021) available at <<https://time.com/6049584/climate-change-iaea-report/>> accessed 15 September 2023; and IEA 'Net Zero by 2050. A Roadmap for the Global Energy Sector' (2021) available at <https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroBy2050-ARoadmapfortheGlobalEnergySector_CORR.pdf> accessed 15 September 2023.

²²⁵ Swathi Nair, 'Climate inaction costlier than net zero transition: Reuters poll' Reuters (25 October 2021) available at <<https://www.reuters.com/business/cop/climate-inaction-costlier-than-net-zero-transition-economists-2021-10-25/>> accessed 15 September 2023.

estimate of the IPCC, which indicated an annual investment in clean energy of 3% in order to limit climate change to 1.5°C²²⁶.

Possibly in light of these calculations and considerations, in his speech at the Informal Trade Ministers Dialogue on Climate Change Issues, which took place alongside the UN Climate Conference in Bali²²⁷, the former Director-General Pascal Lamy affirmed:

"[t]he WTO tool-box of rules can certainly be leveraged in the fight against climate change, and “adapted” if governments perceive this to be necessary to better achieve their goals”²²⁸

These words showcased a "win-win approach" to the relationship between WTO and climate change, which consequently stimulated efforts at the WTO Secretariat. Such constructive attitude was then reiterated about two years later with the publishing of a joint Report by UNEP and WTO in 2009, with a detailed analysis of their multi-level interconnections²²⁹.

Soon afterwards, individual States began at their own initiative to bring forward attempts at reconciling trade with climate change. The Doha Round negotiations offered the much-needed platform to discuss the liberalisation of goods and services which could sustain the aim of climate preservation and even activities beneficial to tackle climate change²³⁰. However, the results of the round were modest if not unsatisfactory due to lack of agreement on major topics, with the exception of the Trade Facilitation Agreement (TFA)²³¹.

Subsequent developments on the WTO scene include the rise of the understanding and standards regarding carbon footprints and labelling schemes²³² and the discourse concerning the unilateral measure of carbon-related border tax adjustments²³³. Further, WTO Committees, the most relevant of which is for this topic the Committee on Trade and Environment also have dealt with the subject

²²⁶ IPCC, 'Special Report. Global warming of 1.5°C' available at <<https://www.ipcc.ch/sr15/>> accessed 15 September 2023; Justin Worland, 'Scientists Just Laid Out Paths to Solve Climate Change. We Aren't on Track to Do Any of Them' Time (8 October 2018) available at <<https://time.com/5418134/ipcc-climate-change-report-2030-crisis/>> accessed 15 September 2023.

²²⁷ WTO, 'Lamy: Doha Could Deliver Double-Win for Environment and Trade' Informal Trade Ministers' Dialogue on climate change — Bali (9 December 2007) available at <https://www.wto.org/english/news_e/sppl_e/sppl83_e.htm> accessed 15 September 2023.

²²⁸ Van Asselt (10) 440.

²²⁹ UNEP and WTO 'Trade and Climate Change. A Report by the United Nations Environment Programme and the World Trade Organization' (2009) available at <<https://wedocs.unep.org/handle/20.500.11822/22882>> accessed 15 September 2023.

²³⁰ Argentina, 'The Doha Round and Climate Change' TN/TE/W/74 (23 November 2009) para 7. See Van Asselt (10) 440.

²³¹ WTO Agreement On Trade Facilitation. Annex To The Protocol Amending The Marrakesh Agreement Establishing The World Trade Organization, WT/L/940, entered into force on 22 February 2017.

²³² WTO, 'Summary Report of the Information Session on Product Carbon Footprint and Labelling Schemes' WT/CTE/M/49/Add.1 (28 May 2010). See Van Asselt (10) 440.

²³³ Singapore, 'Promoting Mutual Supportiveness between Trade and Climate Change Mitigation Actions: Carbon-Related Border Tax Adjustments' WT/CTE/W/248 (30 March 2011). See Van Asselt, *ibid*.

since the last years of the 2000 decade²³⁴. Besides these developments, climate litigation in the international context and at the WTO level also plays a considerable role, therefore it deserves a deeper examination.

²³⁴ Harro van Asselt (10) 440.

Chapter III: Climate action disputed at WTO level

'Pour ce qui est de l'avenir, il ne s'agit pas de le prévoir, mais de le rendre possible.'²³⁵

Antoine de Saint Exupéry, *Citadelle*, 1948

1. The crisis of the Dispute Settlement System and the demise of the Appellate Body in 2019

The WTO Dispute Settlement mechanism has been defined as the most active²³⁶, powerful²³⁷ and sophisticated instrument of mediating trade disputes in public international law²³⁸ and enforcing multilateral trade regulations²³⁹. As of December 2022, the Dispute Settlement Body received 615 requests for consultations, which were circulated to the WTO membership²⁴⁰.

In turn, the Appellate Body has been described by Van den Bossche as being the "World Trade Court" "nobody foresaw [...] it would become"²⁴¹.

Its Understanding on the Rules and Procedures Governing the Settlement of Disputes (DSU)²⁴² has successfully established a "quasi-judicial"²⁴³ dispute settlement system, which is characterised by an exclusive and compulsory, contentious²⁴⁴ jurisdiction, the decisions of which are binding for all WTO Member States²⁴⁵ and lead to sanctions for non-compliance²⁴⁶.

However, since December 2019, when the terms of two of the three remaining Appellate Body members expired, it has not been possible to form Divisions of three Appellate Body members because any new appointments to the Appellate Body were blocked by the United States. The US

²³⁵ Translated: 'As for the future, it's not a question of predicting it, but of making it possible.'

²³⁶ WTO, 'Dispute Settlement' available at <https://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm> accessed 15 September 2023.

²³⁷ CSIS, 'The World Trade Organization: The Appellate Body Crisis' <<https://www.csis.org/programs/scholl-chair-international-business/world-trade-organization-appellate-body-crisis>> 15 September 2023.

²³⁸ Van Asselt (10) 433.

²³⁹ WTO (236)

²⁴⁰ WTO, *ibid.*

²⁴¹ Rufus Yerxa and Bruce Wilson, 'Key Issues in the WTO Dispute Settlement: The First Ten Years' (2008) 19 *EJIL* 617, 621.

²⁴² Understanding on Rules and Procedures Governing the Settlement of Disputes, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 UNTS 401.

²⁴³ Georges Abi-Saab, 'The WTO Dispute Settlement and General International Law' in Rufus Yerxa and Bruce Wilson (eds) *Key Issues in WTO Dispute Settlement. The First Ten Years* (CUP 2005) 9–10.

²⁴⁴ This means that its jurisdiction is not advisory: after the first stage of consultation, if the parties proceed to adjudication, then according to Article 3.2 of the DSU the provisions of the covered agreements will be clarified, in order for the rights and obligations of Member States under such agreements to be upheld in the determination of the outcome of the specific dispute between them. See David Unterhalter, and Erika Schneidereit, "Institutions", in Daniel Bethlehem, Donald McRae, Rodney Neufeld, Isabelle Van Damme (Eds.), *The Oxford Handbook of International Trade Law* (OUP 2022) 897.

²⁴⁵ Kati Kulovesi, 'Climate Change and Trade: At the Intersection of Two International Legal Regimes' in E.J. Hollo et al. (eds.), *Climate Change and the Law, Ius Gentium: Comparative Perspectives on Law and Justice* (Springer Science+Business Media 2013) 21.

²⁴⁶ Van Asselt (10) 433.

specifically criticized the appeals judges for distancing themselves from the texts of the WTO agreements and in so doing overreaching their limited mandate²⁴⁷. Therefore, the US Trade Representative condemned in 2020 what he considered jurisdictional activism, with the view that it could lead to violations to the US sovereignty²⁴⁸. Even with the new government, the administration endured in the decision of vetoing the reappointment of the judges of the WTO's appellate court²⁴⁹. The vitality and helpfulness of the DSS has been juxtaposed to the inconclusiveness of the rule-making mechanisms. In particular, the length and uncertainty associated with the Doha Round of negotiations threaten to culminate with failure of the decision-making process, putting uneven pressure on the judicial branch of the WTO institutions²⁵⁰. Such a reasoning seems to build on a national, constitutional system, where the balance of powers is protected through a weights and counterweights system. The weakness of this parallelism is that WTO is an intergovernmental organisation and that there is no trace of such an intent of flawless constitutional balance in the acts by the founding members who negotiated at the Uruguay Round.²⁵¹

Moreover, critics contest how the present US government still pursues the objective of its predecessors to reindustrialise America, even if some new elements should be taken into account, namely: supporting renewable energy sources and combating climate change²⁵². What is even worse, the new administration determined that "it can no longer sell globalisation to the American people", thus reinforcing what has been defined a "decisive break with a 40-year-old consensus on trade, globalisation and China"²⁵³.

While the multilateral trading system is arguably facing the worst crisis since it came to existence²⁵⁴, with the activity at its appeal level troubled by the lack of the compulsory quorum of three judges, the EU together with other 22 WTO members tried to disentangle the impasse through a "multi party interim appeal arbitration arrangement" (MPIA)²⁵⁵, which is operational since the end of April

²⁴⁷ United States Trade Representative, 'Report on the Appellate Body of the World Trade Organization' (February 2020) <https://ustr.gov/sites/default/files/Report_on_the_Appellate_Body_of_the_World_Trade_Organization.p-df>, accessed 15 September 2023, 4.

²⁴⁸ WTO (236). Already in September 2017 "Robert Lighthizer, America's [...] trade representative [...] complained that decisions from WTO judges had "diminished" what America had bargained for and imposed obligations it had not agreed to when it joined the WTO", see 'Dispute unsettled. America holds the World Trade Organisation hostage' *The Economist*, London, 23 September 2017, <<https://www.economist.com/finance-and-economics/2017/09/23/america-holds-the-world-trade-organisation-hostage>> accessed 15 September 2023.

²⁴⁹ Charnovitz (7).

²⁵⁰ Stuart Harbinson, 'Great Expectations, Hard Times: Dickensian Decision-Making at the World Trade Organisation?' in WTO, *The WTO: Governance, Dispute Settlement & Developing Countries* (Juris Publishing 2008) 237.

²⁵¹ Harbinson, *ibid.*, 238.

²⁵² Gideon Rachman, 'Why Joe Biden is the heir to Trump' *Financial Times* (7 August 2023) available at <<https://www.ft.com/con-tent/f43f0e63-0fa4-4771-8eb4-b5d61f87ada4>> accessed 15 September 2023.

²⁵³ Rachman, *ibid.*

²⁵⁴ CSIS (237).

²⁵⁵ Van Asselt (10) 343.

2020²⁵⁶. Ten persons of recognised authority and expertise in law have been appointed from a pool of arbitrators with the aim of overcoming the impasse of the AB²⁵⁷.

Pursuant to Article 25 DSU, this interim regime permits to essentially mirror the procedures of the Appellate Body according to Article 17 DSU²⁵⁸, through the selection of three persons from a list of agreed arbitrators, in order to decide the appeals phase concerning decisions previously taken by panels²⁵⁹. The first award was issued in the last days of December 2022²⁶⁰, therefore the functioning of the MPIA on one hand successfully preserved the appeals mechanism, and on the other it will act as a laboratory for future reform of the dispute settlement system²⁶¹.

Another crucial aspect to be considered in evaluating the WTO system under the lens of the challenges posed by the halting of the Appellate Body, is that the WTO system rests, apart from its rulemaking and dispute settlement pillars, on its rule-implementation task. This is precisely the enactment of the rules agreed upon by member states' Governments²⁶². This function is essential to the point that, while Members routinely notify their latest trade measures, only a tiny percentage escape this smooth mechanism and become legal disputes²⁶³. In fact, in case of disagreement, the parties engage in compulsory discussions within the appropriate WTO committee, which in the majority of cases bring to a satisfactory agreement and thus avoid turning into dispute settlement.

2. The WTO Dispute Settlement System as a forum for climate litigation

²⁵⁶ EU Directorate-General for Trade, 'The WTO multi-party interim appeal arrangement gets operational' available at <https://policy.trade.ec.europa.eu/news/wto-multi-party-interim-appeal-arrangement-gets-operational-2020-08-03_en> accessed 15 September 2023.

²⁵⁷ WTO, 'Statement On A Mechanism For Developing, Documenting And Sharing Practices And Procedures In The Conduct Of WTO Disputes - Supplement' JOB/DSB/1/Add.12 (31 July 2020) available at <https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=263504> accessed 15 September 2023.

²⁵⁸ *Ibid.*

²⁵⁹ Unterhalter, Schneidereit (244) 917.

²⁶⁰ MPIA, *Colombia – Anti-Dumping Duties on Frozen Fries from Belgium, Germany and The Netherlands*, Arbitration under Article 25 of the DSU, Award of the Arbitrators, WT/DS591/ARB25 (21 December 2022).

²⁶¹ Joost Pauwelyn, 'The WTO's Multi-Party Interim Appeal Arbitration Arrangement (MPIA): What's New?' in *World Trade Review* (2023) 9 available at <<https://www.cambridge.org/core/journals/world-trade-review/article/wtos-multi-party-interim-appeal-arbitration-arrangement-mpia-whats-new/B279E8A106380A510AAA28F4E1A4130F>> accessed 15 September 2023.

²⁶² Ungphakorn, Wolfe (4). The authors underline how newspapers articles often report and create headlines which are based on a misunderstanding. An example of this phenomenon is the New York Times claiming there has been a "loss of the world's primary trade referee" because the dispute settlement, "its most effective part" is temporarily idle.

²⁶³ Ungphakorn, Wolfe (4). The authors cite the example of "standards and regulations applied to goods, potentially some of the most significant trade barriers aside from tariffs (or import duties)", "out of the tens of thousands of measures notified in the WTO, only about 2 percent are questioned in the committees, [...] only about 0.07 percent become legal disputes—99.93 percent are not challenged legally".

Since the rule-based system of global trade cannot rely upon the speed of negotiations on climate change or upon the consistency and clarity of their results, case law may play an important role in shedding light on treaty and customary legal principles and obligations under international law²⁶⁴.

In the absence of judicial climate-related dispute settlement procedures²⁶⁵, litigation at the WTO has emerged as a viable strategy, as its DSS constituted for decades the epicentre of the trade and environment debate within the multilateral trading system²⁶⁶. Even if some recent developments in the field of Advisory Opinions and human rights litigation certainly strengthen climate action, the arena of international economic institutions presents rather peculiar challenges. In fact, the transformation of the economy from the one based upon fossil fuels, as we have known it, to a greener and cleaner one, necessarily involves enormous investments and correlated investment disputes, and these are blamed for slowing down climate action²⁶⁷. But what is most relevant for the area of the multilateral trading system is that many policies which tackle climate change are deemed to clash with the rules of international trade for being trade restrictive.

Consequently, while governments are committed to encourage low-carbon industries, commentators²⁶⁸ distinguish three different perspectives regarding which role to attribute to the WTO rules. The first one sees the WTO and its DSS as an obstacle to climate action since they would primarily pursue the objective of trade liberalisation. But, bearing in mind what analysed in Chapters I and II, economic growth and trade expansion and liberalization are not the primary and only aims of the trading system. One must remember that further objectives are listed in the Preamble also have to be considered: optimal use of the world's resources, sustainable development, protection, and preservation of the environment²⁶⁹.

According to a second perspective, the forum offered by the multilateral trading system is vital for combating concealed protectionism and even "eco-imperialism"²⁷⁰.

²⁶⁴ Roda Verheyen, and Cathrin Zengerling, 'Climate Change Litigation. International Dispute Settlement' in Cinnamon P. Carlarne, Kevin R. Gray, Richard Tarasofsky (eds), *The Oxford Handbook of International Climate Change Law* (OUP 2016) 418; Henok Asmelash, 'The WTO dispute settlement system as a forum for climate litigation?' (2023) 32(2) *RECIEL* 321 available at <<https://doi.org/10.1111/reel.12490>> accessed 15 September 2023.

²⁶⁵ In comparison to this, arbitral tribunals have dealt with climate-related cases, such as International Centre for the Settlement of Investment Disputes (ICSID) and the Permanent Court of Arbitration (PCA). Verheyen, Zengerling (264).

²⁶⁶ Asmelash (264).

²⁶⁷ Investment treaties and the pertaining dispute settlement system have also been accused of acting in favour of fossil fuel investors. See Benoit Mayer and Harro van Asselt, 'The rise of international climate litigation' (2023) 32(2) *RECIEL* 175, 179 available at <<https://doi.org/10.1111/reel.12515>> accessed 15 September 2023.

²⁶⁸ Van Asselt (10) 435.

²⁶⁹ Marrakesh Agreement Establishing the World Trade Organization, 1994, Preamble, First Recital. *Supra*, Chapter I, n. 4; Chapter II n. 3.

²⁷⁰ Margaret A. Young, 'Trade Measures to Address Environmental Concerns in Faraway Places: Jurisdictional Issues' (2014) 23(3) *Review of European Community & International Environmental Law* 302, 304. The author points out how the GATT case "*US-Tuna I*" was a circumstance in which developing countries denounced an attitude of "environmental colonialism". In fact, the debated measure, adopted by the United States and posing an embargo on tuna captured with methods that also hurt dolphins, represented a case of extraterritorial jurisdiction, since it exceeded the limits of American territorial waters. Thus, the Panel, in its Report of 1991, which was never adopted, found the measure to be impermissible

The third view considers how trade rules and litigation within the WTO may represent a valuable instrument in combating those State regulations which simultaneously harm free trade and accelerate climate change, namely fossil fuel subsidies²⁷¹.

It can be observed that, for a long time, WTO panels avoided the direct confrontation with climate issues, which remained practically untouched until 2007, when they started to appear to a certain degree in disputes, particularly in the ones concerning recycled materials (2007 *Brazil-Retreaded Tyres*)²⁷² and renewable energy (2013 *Canada-Renewable Energy*)²⁷³.

Further, with regard to the promotion of clean energy from renewable energy technology, a potential dispute started by the US complaint against policies adopted by China and concerning wind farm equipment²⁷⁴ ended in 2010 in the consultation stage due to the strategic withdrawal of the objected measures. Soon afterwards, other Chinese policies, this time dealing with subsidies in favour of domestic solar panel businesses, sparked criticism from the side of the United States.

Subsequently, because of the rise of climate action as a response to the commitments stipulated with Article 2(1)(a) of the Paris Agreement, which envisaged:

"holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels"²⁷⁵,

a new wave of trade disputes, stirred by measures in favour of low-carbon industries, has developed. This could finally offer the occasion to the dispute settlement system to prove itself as being "the jewel in the crown of the WTO", as its 1996 Director-General Renato Ruggiero expected from it²⁷⁶. After all, even if crucial cases have been dealt with by the WTO Appellate Body, such as *US-Gasoline*, *US- Shrimp*, *Brazil-Retreaded Tyres*, which granted governments some competence to pursue aims of environmental protection, the Appellate Body itself has currently ceased to exist and the attention of the AB in such controversies appeared anyway to be primarily focused on trade, rather

in the GATT framework because of its "extra-jurisdictional application". (GATT, *United States –Restrictions on Imports of Tuna*, DS21/R, Panel Report (3 September 1991)). Some years later, the issue led to the opposite solution, when the AB dealing with the "*US-Shrimp*" case, in the WTO framework, held that the ban issued by the United States on shrimps captured with methods that also harmed, this time, sea turtles, was legitimate given the nexus between such species and the importing country. It considered sufficient that sea turtles would cross American territorial waters during their migratory stage. (WTO, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, Appellate Body Report (6 November 1998)).

²⁷¹ Van Asselt (10) 435.

²⁷² *Brazil—Measures Affecting Imports of Retreaded Tyres*, WT/DS332/AB/R (adopted 17 December 2007)

²⁷³ *Canada—Certain Measures Affecting the Renewable Energy Generation Sector*, WT/DS412/AB/R (adopted 24 May 2013) [*Canada-Renewable Energy*].

²⁷⁴ *China-Measures concerning Wind Farm Equipment*, Request for Consultations, WT/DS419/1 (22 December 2010).

²⁷⁵ Paris Agreement, adopted 12 December 2015, entered into force 4 November 2016, 55 ILM 740, Art 2(1)(a).

²⁷⁶ Peter Van den Bossche, Werner Zdouc, *The Law and Policy of the World Trade Organization. Texts, Cases and Materials* (CUP 2022) 315.

than a genuine concern for the environment²⁷⁷. But still, the WTO DSS possesses a "tool-box of rules that can be leveraged in the fight against climate change and 'adapted' [...]"²⁷⁸

Therefore, the question arises: since the WTO Dispute Settlement System remains *de facto* "untested as a venue for climate change litigation"²⁷⁹, do the most recent cases where the trade-climate relationship is at stake merely duplicate the trade-environment relationship, which was established in its most prominent disputes, or do they show a progress? Does the DSS constrain its role to the interpretation of environmental exceptions in dealing with climate issues or does it advance creative solutions based on general international law obligations?

3 Trade related climate litigation

3.1 Definition and possible taxonomy

First of all, it is necessary to delineate what is understood when discoursing on "trade related climate litigation".

For this task one can rely on the scholarly writings, which began in the middle of the 1970s with attempts at outlining the contents of "environmental disputes" and more recently turned to the subject matter of climate-related disputes²⁸⁰.

An issue common to environmental as well as to climate change litigation is the reluctance to qualify the dispute based on its environmental aspects. For instance, when dealing with the case named *Canada - Certain Measures affecting the Renewable Energy Generation Sector*²⁸¹, which, as the title already indicates, rests on a strong link with the protection of the environment, or to say the least, with measures affecting the environment - and, one could argue, also with climate mitigation - the WTO Panel refrained from addressing the subject²⁸². The dispute was thus restricted to the subject matter of trade, specifically as an "investment and trade dispute"²⁸³.

²⁷⁷ Asmelash (264).

²⁷⁸ In the words of the 2007 WTO-Director-General Pascal Lamy, *supra* at 219.

²⁷⁹ Asmelash (264).

²⁸⁰ Justine Bendel, *Litigating the Environment. Process and Procedure Before International Courts and Tribunals* (Edward Elgar Publishing 2023) 3. Some scholars proposed a definition, such as Richard Bilder, Catherine Cooper, while others like Cesare Romano emphasized the "changing nature" of such disputes or, like Philip Sands, suggested to avoid a definition since parties to the dispute were unlikely to agree on it and stressed that the mere presence of an "environmental or natural resources component".

²⁸¹ *Canada - Certain Measures affecting the Renewable Energy Generation Sector*, Reports of the Panels, WT/DS412/R; WT/DS426/R, p. 31, para 7.7.

²⁸² Bendel (280) 4.

²⁸³ It must be noted that, in the first line, it was the the parties to the case that did not mention environmental claims. See Bendel, *ibid.*

Turning back at the definitions attempted by scholars, while "climate change litigation" has been described as including "cases before judicial and quasi-judicial bodies that involve material issues of climate change science, policy, or law"²⁸⁴, and "international climate litigation" as "strategic litigation aimed at advancing climate change litigation"²⁸⁵, the notion of "trade-related climate litigation" is meant to be narrower. It encompasses only the controversies that directly refer to trade measures and which have the effect of either strengthening or weakening climate action²⁸⁶.

This endeavour at classifying disputes has been accompanied in the last years by a broad expansion of measures taken by States in accordance with climate action. They are exemplified by the ones undertaken by Member States to the Paris Agreement and listed as nationally determined contributions (NDC) in the effort of reducing GHG emissions. As these strategies elaborated by States often challenge the rules of the trade regime, there have been discussions within the UNFCCC's "response measures" forum, however they regrettably remained unproductive²⁸⁷. This unconstructive result can be explained because of the apprehension, generated upon countries whose exports would suffer from the adoption of climate measures, that sooner or later they would be subject to some "compensation obligations"²⁸⁸. Another reason of concern was the belief that trade consultations would better take place within the WTO²⁸⁹.

The WTO, in turn, records environmental-related notifications that its members submit, which amount to 931 out of the 4933 of the total amount of submitted notifications²⁹⁰, around two times the number listed in 2009²⁹¹. The TBT Agreement is related to the highest number of notifications, around 60% in 2021, while the main objectives pursued are: Chemical, toxic and hazardous substances management (17.2%), Energy conservation and efficiency (14.3%), Sustainable agriculture management (11.3%), Alternative and renewable energy (10.3%), Biodiversity and ecosystem (10.1%), and Climate change mitigation and adaptation (9.2%)²⁹². Moreover, environmental-related measures adopted in 2021 amount to 2250, almost three times the number

²⁸⁴ Setzer, Higham (187) 8. This is the definition adopted by the Sabin Center for Climate Change Law at Columbia Law School which was utilised to draft its Climate Change Litigation Databases.

²⁸⁵ Mayer, Van Asselt (267).

²⁸⁶ Asmelash (264) 321.

²⁸⁷ Regarding future scenarios, some authors envision new possibilities of productive discussions, particularly when the concept of "sustainable transition" comes into play. See Andrei Marcu and Stoefs Wijnand, 'The Role of Response Measures in Ensuring the Sustainable Transition to a Low-GHG Economy' (2017) Policy Brief, ICTSD available at <https://unctad.org/system/files/non-official-document/ditc-ted-03102017-Trade-Measures-Role_of_Response_Measures-ICTSD.pdf> accessed 15 September 2023.

²⁸⁸ Clara Brandi, 'Trade Elements in Countries' Climate Contributions under the Paris Agreement' (2017) Issue Paper, , ICTSD available at <<https://euagenda.eu/upload/publications/untitled-81229-ea.pdf>> accessed 15 September 2023, 3.

²⁸⁹ Brandi, *ibid.*

²⁹⁰ WTO, "Environmental Database" <<https://edb.wto.org>> accessed 15 September 2023.

²⁹¹ WTO, "Environmental Database for 2021. Note by the Secretariat", WT/CTE/EDB/21, 23 February 2023, p. 5.

²⁹² WTO, *ibid.*, p. 7.

registered in 2009²⁹³. The analysis of the types of measures gives us a clear picture: grants and direct payments have increased in one year from 7.8%²⁹⁴ to 33.8%, whereas technical regulation and specifications reach 30.9%, import licences account for 11.5%, non-monetary support 8%, ban/prohibitions 7.6%, tax concessions 6.7%, loans and financing 5.5%, conformity assessment procedures 5.2% and export licenses 4.5%²⁹⁵.

Nevertheless, measures which increase trade and directly undermine the efforts of tackling climate change have also seen an increase in their number. One may think of the liberalisation of carbon-intensive goods such as fuels and metals, or their subsidization, or the imposition of tariffs or other barriers on the importation of renewable energy linked products and technologies²⁹⁶.

Against this background of ever-increasing quantity of measures adopted by WTO Members, Van Asselt proposes four main categories of climate-change related disputes can be staged and they may be classified as follows: a) disputes relative to renewable energy support measures b) disputes relative to biofuels, c) border carbon adjustments; d) fossil fuel subsidies²⁹⁷.

A further potential distinction is described by Asmelash between two groups of controversies: "pro-climate" and "anti-climate action". The first litigation category refers to disputes which attack trade measures that harm or insufficiently protect the climate, whereas the second refers to disputes that contest "climate-friendly trade measures"²⁹⁸. Consequently, he envisages three possible scenarios: claims "against climate-friendly trade measures driven by trade concerns", or "against the lack (or inadequacy) of climate climate-friendly trade measures", driven by climate concerns, or, the last one, "against climate-unfriendly trade measures"²⁹⁹. The second and third settings constitute cases of pro-climate litigation and would be started by individuals or civil society organisations in order to motivate governments to adopt new climate regulations or to refine existing ones. The issue underlying such an ambitious scenario is that no such dispute can take place before the WTO DSS as the multilateral trading system does not impose a *direct obligation* of tackling climate change ³⁰⁰.

Among the anti-climate action controversies, which have also been defined as "anti-regulatory" or "defensive" litigation, because they are directed against the implementation of policies aimed at combating climate change though specific regulations or laws³⁰¹, both investor-State disputes and

²⁹³ WTO, *ibid*, p. 5.

²⁹⁴ Asmelash (264) 323.

²⁹⁵ WTO (291) p. 8.

²⁹⁶ Asmelash (264) 323.

²⁹⁷ Van Asselt (10) 442-456.

²⁹⁸ Asmelash (264) 321.

²⁹⁹ Asmelash (264) 324.

³⁰⁰ In the exact same way as it does not prescribe a direct obligation of protecting the environment, see *supra*, Chapter I, n.2. See Asmelash (264) 324: "the absence of such an obligation makes it difficult, if not impossible, for potential complainants to find legal grounds to challenge the lack or insufficiency of trade-related climate action".

³⁰¹ Asmelash, *ibid*.

trade-environment disputes between WTO Member States³⁰² can be listed. In the WTO framework, it is only in the last decade that unequivocal reference to climate change obligations can be found. For instance, the Appellate Body dealt in 2016 with the legitimacy of Indian domestic content requirements (DCR) mandatory for solar power developers that aimed to sell electricity to the government, in connection with the project of India's Jawaharlal Nehru National Solar Mission (NSM)³⁰³. Such requests were described from the side of the defendant within the *India-Solar Cells* case as enactment of its obligations derived from national and international law concerning, among other issues, also climate mitigation³⁰⁴. Nevertheless, the main question remains: are these references to climate change and its connected obligations derived from international law obligations enough to set the WTO DSS as a proper forum for climate change litigation?

3.2 Is the DSS a suitable forum for controversies?

After shaping the subject matter of this specific type of litigation, the next issue is to evaluate if the WTO Dispute Settlement System is a suitable forum to deal with climate related controversies.

In the absence of well-defined standards, Asmelash suggests some relevant criteria that can be extrapolated from literature on the topics of dispute settlement and climate litigation: "mandate or jurisdiction, subject-matter expertise, enforcement mechanism and compliance record, remedies, and time and costs of proceedings"³⁰⁵. The WTO dispute settlement appears to be well placed in a context of 'multi-forum strategies' to deal with the challenges of climate change: it is one of different possible fora, and a promising one³⁰⁶. Leveraging existing rules, even if these were not purposely established to tackle climate change, permits to develop international law though its application to new situations emerging from practice. Even if a comprehensive treaty dealing with all possible aspects of climate change has not been drafted yet, the international community has diverse litigation rules and fora

³⁰² Although in the cases which usually are mentioned to this regard, namely: *US-Tuna*, *US-Gasoline* and *US-Shrimp* cases, the issue of climate change was not at stake. Rather, it was utilized to justify the measures deemed by the complainant to nullify or impair their rights under GATT/WTO/covered agreements. See Asmelash (264).

³⁰³ WTO, *India-Solar Cells* Summary
<https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds456sum_e.pdf> accessed 15 September 2023.

³⁰⁴ *India - Certain Measures Relating to Solar Cells and Solar Modules*, Appellate Body Report, WT/DS456/AB/R, 14 October 2016.

³⁰⁵ Asmelash (264) 322.

³⁰⁶ Deepak Raju *et al.*, 'Multi-Forum Strategies to Tackle Climate Change and Other Complex Problems: A Note from Practitioners' (2002) *EJIL: Talk!* available at <<https://www.ejiltalk.org/multi-forum-strategies-to-tackle-climate-change-and-other-complex-problems-a-note-from-practitioners/>> accessed 15 September 2023. The author cites the example of the 2017 Gulf diplomatic crisis and how Qatar resorted to different fora (ICJ, CERD Committee, ICAO Council, arbitration with the Universal Postal Union, and not least the WTO). The sequence of events brought first to some victories for Qatar and in the end to a positive settling of the different disputes. This serves to demonstrate that complex problems often are best solved when considered holistically and from multiple angles of international law.

available and utilising the existing procedures can enable the emergence of reasonings, rules and principles³⁰⁷.

However, relevant scholars like Harro Van Asselt and Steve Charnovitz disagree on this and argue on the contrary that the WTO dispute settlement is not in the best position to deal with the balancing of trade and environmental or climate issues.

Van Asselt suggests that it may not be desirable that the WTO DSS rules on climate-related issues. This because they raise fundamental policy questions the resolution of which is not encompassed in the Panels' competence³⁰⁸. Further, he draws attention to the fact that, despite the positive developments concerning environmental concerns, Panels do not seem ready to accommodate climate considerations in other disputes, such as the *Biotech*³⁰⁹ one. Moreover, he warns that finding a balance between opposing interests would probably bring to favouring certain ones to the detriment of others and even damage some countries green industrial policies and harm international collaboration on climate issue or even the external legitimacy of the WTO³¹⁰. Lastly, he proposes a set of changes to make the DSS more suitable to deal with climate change. From a first standpoint, increasing the expertise of the panel and Appellate Body members within the SDU existing provisions³¹¹. From a second standpoint, panel and Appellate Body members could give more relevance to the "information and technical advice from any individual or body which it deems appropriate" as stated in Article 13 DSU. However, this poses the risk of the panel not being able to fully assess or contradict the experts' advice and this could have been the reason for not considering any of the briefs from amicus curiae to the panel and Appellate Body in the *Canada-Renewable Energy* case³¹².

The opinion of Charnovitz is also rather unenthusiastic: as the WTO showed a "disappointing track record over the past 26 years", it shall not be considered as an institution qualified to be tasked with "important *non-trade* problems"³¹³. The author maintains this viewpoint based on the comparison between the multilateral rounds within the GATT, which successfully lead to trade liberalization, and the merely "legislative achievements" obtained by WTO institutions³¹⁴. A second indication for this observation is the belief that the WTO does not possess the "jurisdictional and technical competence" to assess environmental topics and "formulate solutions", while environmental regimes like "e.g. the

³⁰⁷ Deepak Raju *et al.*, *ibid.*

³⁰⁸ Van Asselt (10) 456-7.

³⁰⁹ WTO, *European Communities - Measures Affecting the Approval and Marketing of Biotech products*, Panel Report, WT/DS291/R (29 September 2006), paras 7.74-75, 7.95.

³¹⁰ Van Asselt (10) 457-8.

³¹¹ Van Asselt (10) 458.

³¹² Van Asselt (10) 459.

³¹³ Charnovitz (7).

³¹⁴ "[...] including the Information Technology Agreement (1996), the Telecommunications Reference Paper (1996), the 2005 amendment to the Agreement on Trade-Related Intellectual Property Rights (TRIPS), the Trade Facilitation Agreement (2013), and 36 Accession agreements admitting new Member governments into the WTO" see Charnovitz, *ibid.*

Vienna Convention on Ozone" would be more efficient³¹⁵. In particular, climate change related issues should be dealt with by the UNFCCC, while the Paris Agreement should "have included some normative rule to allocate responsibility for GHG emissions occurring from imported products", which the author recognizes as a *lacunae*, but still prefers delegating to these specific regimes the establishment of a solution, preferably though a forthcoming and appropriate reform³¹⁶. Moreover, environmental regimes benefit from transparency and stakeholder participation, while the "so called government-Member-driven WTO" cannot rely on such features. The last point of the author concerns the perceived risk that, if tasked with the "new job [...]" of "solving environmental problems", the WTO might be less "successful in its real job which is promoting trade liberalization and managing trade relations"³¹⁷.

To this criticism, one could counter-argument that it is true that the WTO is not tasked to "solve environmental problems", but surely its DSS must consider certain values it proclaims in its own Preamble to the WTO Agreement, and it cannot be asked to ignore the climate governance regime. A reasoning that is worthwhile exploring is that of Justine Bendel. Arguably, she offers a more holistic approach³¹⁸ which considers the complexity and facets of the matter at issue. Defining environmental - as well as climate - disputes is controversial enough, but probably it is not so fundamental, outside of scholarly discourse. In fact, every binding decision that settles an environmental dispute regularly also involves other, non-environmental aspects, and often one of these is trade. Environmental treaties are at the forefront in entailing also non-environmental subjects, one may think of Convention on International Trade in Endangered Species of Wild Fauna and Flora³¹⁹. This gives rise to a certain complexity and interconnection among treaties, which can only be reflected in the subsequent phases of implementation and litigation. Sometimes it is the incidence of political reasons which inhibits States from referring to a dispute as environmental, this was the case that determined the attitude of Slovakia with respect Hungary in the above-mentioned *Gabčíkovo-Nagymaros* judgement³²⁰. In any case, the existence of a specific court or tribunal expressly competent to deal with environmental issues doesn't constitute a strong argument in favour of disputes being directed to and effectively solved by that specific and competent institution, as the absence of cases for the Special Chamber for Environmental Matters in the International Court of Justice demonstrates³²¹: no petition *ratione materiae* was filed to the Chamber, and the degree of technicality or complexity was also not

³¹⁵ Charnovitz, *ibid.*

³¹⁶ Charnovitz, *ibid.*

³¹⁷ Charnovitz, *ibid.*

³¹⁸ Bendel (280) 3

³¹⁹ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), adopted 3 March 1973, entered into force 1 July 1975, 993 UNTS 243.

³²⁰ ICJ, *Gabčíkovo-Nagymaros* (175)

³²¹ Bendel (280) 4.

decisive³²². The dissolution of the Chamber in 2006 should not be considered *per se* a failure³²³, it should much more pragmatically be considered a source of valuable lessons to be learned.

Another point against the institution at all costs of specialised bodies dealing with specialised subject matter is the often criticised and feared fragmentation of international law³²⁴. At first sight it could indeed be claimed that functionally specialized international organisations like the WTO and the UNEP should be deeply involved in solving the issues pertaining to their particular regime, the economic one versus the environmental one³²⁵. As Bradford recalls, Keohane³²⁶, one of the most prominent experts in this field, studied the differences between regimes and simple international agreements. One finding was that *ad hoc* regimes do offer advantages: they can "facilitate the negotiation of and compliance with" mere international agreements, especially in fields in which the amount of controversy is high³²⁷. On one side, regimes enable the creation of international commitments creating favourable conditions for reciprocity, i.e. when gains within a specific topic would be unevenly distributed, they offer strategic linkages which help finding compensation for States that would "lose" from a single agreement, therefore facilitating a "win-win" bargain³²⁸. Moreover, they enhance diffused and enduring reciprocity, as benefits deriving from cooperation efforts will be evident over the long term³²⁹. On the other hand, since the concern that one's efforts could be exploited by others, which is exactly the issue with free-riding states in the struggle to combat climate change³³⁰, could constitute an obstacle for cooperation, the monitoring within a regime makes it difficult for a party to escape attention on non-compliance from other parties and thus facing negative consequences. In particular, States will incur in the risk of retaliation in the following round of negotiations and could diminish its reputation as a trusted partner therefore deteriorating future chances at cooperation³³¹.

Notwithstanding such positive characteristics, when specialized regimes pursue self-sufficiency either from one another, or from general international law, this becomes a problem³³². Even if the

³²² Basile Chartier, 'Chamber for Environmental Matters: International Court of Justice (ICJ)' in *Max Planck Encyclopedias of International Law [MPIL]* (2018) paras 8 and 9, available at <<https://opil-ouplaw-com.uaccess.univie.ac.at/display/10.1093/law-mpeipro/e3339.013.3339/law-mpeipro-e3339?print=pdf>> accessed 15 September 2023.

³²³ Chartier, *ibid.*, at para 18.

³²⁴ Fragmentation can be functional, when it develops around the subject-matter, and geographical, when it develops along regional lines. Because of the fact that most substantive rules of international law are not universal in their scope of application, fragmentation has become more and more a discussed topic, especially around what are known as 'horizontal fragmentation issues'. See Joost Pauwelyn, 'Fragmentation of International Law' *MPIL* 2006, paras 2-4.

³²⁵ Anu Bradford, 'Regime Theory' *MPIL* 2007, para 2.

³²⁶ Robert O. Keohane 'The Demand for International Regimes' (1982) 36(2) *International Organization* 325.

³²⁷ Bradford (325) para 5.

³²⁸ Bradford, *ibid.*, para 12.

³²⁹ Bradford, *ibid.*, para 13.

³³⁰ On the problem of "climate free-riders": Althor, Watson, Fuller (133).

³³¹ Bradford (325) paras 15-17.

³³² Pauwelyn (324) para 2.

ILC Study Group recognised, in its Analytical Study of 2006, that "normative conflict is endemic to international law" and therefore, "routine for international tribunals to establish the rights and duties of States [...] by reference to many types of legal materials that are applicable, as part of the work that they are called upon to do"³³³, international organisations only really operated in isolation in the initial phase after their creation between World War II and the Cold War. This was the time in which economic issues were separately dealt with by the Bretton Woods Institutions, while the UN with its Specialised Agencies would handle individual security or political matters³³⁴. But this rigorous separation has progressively become blurred in the wake of the advancement of the phenomenon of globalisation³³⁵, which not only revealed interdependent relationships between countries, but it also uncovered close interconnections between different regimes³³⁶. An example are the areas of trade, development, and environment. Among the impacts of the process of globalisation, as Mégret underlined, was the "stretching of the legal fiction that States are and should be the only subjects of international law"³³⁷ and even the changing of the "nature of international organisations"³³⁸. In fact, a new conscience emerged, namely that some current issues are "inherently global"³³⁹, especially when they are related with the protection of the so called "global commons", like the protection of the environment and of the climate. Mégret further explains how, because of globalisation, three broad themes, which constituted the core of international law, began to develop in new ways. On one hand, international trade treaties, which were traditionally bilateral, embraced the global nature of the markets and institutions like the European Union, the GATT and then WTO, and others, came to existence. The same happened to the area of the "protection of the human being", with its ramifications of human rights, humanitarian law and many others. Finally, a similar advancement can be observed in the area of the "protection of earth", from the early decisions hinged upon the relevance

³³³ ILC, Report of the Study Group of the International Law Commission, finalized by Mr. Martti Koskenniemi, 'Fragmentation of International Law: Difficulties Arising from The Diversification and Expansion Of International Law' A/CN.4/L.682 and Add.1* (13 April 2006) available at <https://legal.un.org/ilc/documentation/english/a_cn4_l682.pdf> accessed 15 September 2023.

³³⁴ International Bank for Reconstruction and Development, International Monetary Fund and General Agreement on Tariffs and Trade. Among the specialized UN agencies, the UN Environment Programme, tasked with issues related to the environment ('UNEP'). See Pauwelyn (324) para 8.

³³⁵ Its innovative and integrative forces had been adding up for a long time before they would find the proper circumstances to be released and thus develop into the interconnected system that forced a "formidable expansion and integration of the world economy", see: Frédéric Mégret, "Globalization" (*MPIL* 2009) para 8-10.

³³⁶ Pauwelyn (324) para 8.

³³⁷ Mégret (335) para 20.

³³⁸ Mégret, *ibid.*, para 21. The author notes how the United Nations expanded its activities and begun interacting with non-state actors, while what originally was the European Communities extended its mandate to become a "proto-federal" organization.

³³⁹ Mégret, *ibid.*

of transboundary elements of pollution³⁴⁰ to the latest conventions and progresses relating to climate change.

As Bendel points out, when a dispute develops in the framework of a non-environmental treaty regime, its qualification as environmental is crucial for the application of this treaty. On the other hand, jurisdiction and competence of international tribunals and courts are determined according to classical procedural rules. Despite the enlargement of the international judiciary in the post-Cold war age, the proliferation of judicial bodies³⁴¹ doesn't automatically mean that any international court is competent to hear cases dealing with international environmental law are limited, on the basis of jurisdiction *ratione materiae*. Therefore, the WTO DSS cannot deal with a case centred on environmental or climate change law, but it can well deal with disputes based on trade law which present environmental or climate related aspects. There is indeed an crucial elasticity in the notion of the competence, since the traditional *Kompetenz-Kompetenz* has been extended through the doctrine of inherent powers³⁴². This has often happened when international courts felt the "need to ensure the fulfilment of their functions"³⁴³, even if it raised controversies as some scholars point out the risk of "overreaching their proper functions" without recognising any limits and therefore assert the necessity to limit such possibility to extremely limited circumstances³⁴⁴. The Appellate Body has articulated it extensively in the *Mexico-Taxes on Soft Drinks*³⁴⁵ case, stating:

"WTO panels have certain powers that are inherent in their adjudicative function. Notably, panels have the right to determine whether they have jurisdiction in a given case, as well as to determine the scope of their jurisdiction. In this regard, the Appellate Body has previously stated that "it is a widely accepted rule that an international tribunal is entitled to consider the issue of its own jurisdiction on its own initiative, and to satisfy itself that it has jurisdiction in any case that comes before it."³⁴⁶ Further, the Appellate Body has also explained

³⁴⁰ These were at the core of the above-mentioned *Trail Smelter Arbitration* as well as of the UNEP Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, 2 March 1989, 1673 U.N.T.S. 126.

³⁴¹ Cesare Romano, 'Symposium Issue: The Proliferation of International Tribunals: Piecing Together the Puzzle' 31(4) *New York University Journal of International Law and Politics* 709 (Summer 1999) 709.

³⁴² Bendel (280) 6.

³⁴³ Chester Brown, 'Inherent Powers in International Adjudication' in Cesare PR Romano, Karen Alter, Yuval Shany (eds) *The Oxford Handbook of International Adjudication* (2013) 829.

³⁴⁴ Brown, *ibid*.

³⁴⁵ WTO, *Mexico - Taxes on Soft Drinks and Other Beverages*, Appellate Body Report WT/DS308/AB/R (12 January 2007) para 45.

³⁴⁶ WTO, *US - 1916 Act*, Appellate Body Report WT/DS136/AB/R, WT/DS162/AB/R (28 August 2000) para. 54, footnote 30, referring to questions of jurisdiction to be addressed by the Panels. See also: Appellate Body Report, *Mexico - Corn Syrup (Article 21.5 - US)*, para. 53. In that dispute, the Appellate Body also stated that: "panels have to address and dispose of certain issues of a fundamental nature, even if the parties to the dispute remain silent on those issues [...] [P]anels cannot simply ignore issues which go to the root of their jurisdiction—that is, to their authority to deal with and dispose of matters. Rather, panels must deal with such issues—if necessary, on their own motion—in order to satisfy themselves that they have authority to proceed" (*Mexico - Anti-Dumping Investigation Of High Fructose Corn Syrup (Hfcs) From The United States, Recourse To Article 21.5 Of The DSU By The United States [Mexico - Corn Syrup (Article 21.5 - US)]*, Appellate Body Report WT/DS132/AB/RW, 22 October 2001, para. 36).

that panels have "a margin of discretion to deal, always in accordance with due process, with specific situations that may arise in a particular case and that are not explicitly regulated"³⁴⁷

Moving away from the clear function to decide on jurisdictional issues, it has been argued that international courts possess not only a private function, in order to decide disputes presented to them, but also a public one³⁴⁸. This entails "ensuring the proper administration of international justice", as well as playing a role "in the clarification and the progressive development of international law"³⁴⁹. Therefore, it can be argued that as the ICJ "fulfills a public or constitutional role" within the UN system, so does the WTO within the boundaries formed by the WTO Agreement and its covered agreements³⁵⁰. An important aspect is clearly to define the limits of the inherent powers³⁵¹, but, provided the pertinent restrictions are respected, inherent powers can strengthen the authority of the WTO panels to assess their competence and better administer international justice³⁵² with its complex challenges deriving from climate change.

4. Selected legal aspects of climate-related disputes before WTO panels or Appellate Body

4.1 Legal base for disputes

The major multilateral trade agreements belonging to the WTO framework which come into consideration for possible disputes are the GATT, the Agreement on Technical Barriers to Trade (TBT) and the Subsidies and Countervailing Measures Agreement (SCM). The principles herein stated are relevant to environmental disputes and therefore, by extension, to disputes involving climate change issues³⁵³.

³⁴⁷ WTO, *Mexico-Taxes on Soft Drinks*, para 45.

³⁴⁸ Brown (343) 843.

³⁴⁹ Hersch Lauterpacht, *The Development of International Law by the International Court* (Grotius Publications 1958) 227–8.

³⁵⁰ Brown (343) 843.

³⁵¹ These limits are to be identified as the function that an international court has been conferred by its founding treaty, statute, and rules of procedure, and the presence of a specific *clause contraire*. Such limits derive from the jurisprudence of the ICJ *Nottebohm* and *Norwegian Loans* and IUSCT *Iran v. United States* cases (see: ICJ, *Nottebohm (Liechtenstein v Guatemala)* Judgement of 18 November 1953, ICJ Rep 111, 119; ICJ, *Certain Norwegian Loans (France v Norway)* Judgment of 6 July 1957 ICJ Rep 9, 34, 45 (Separate Opinion of Sir Hersch Lauterpacht); Iran-United States Claims Tribunal, *Iran v. United States Decision No. DEC 134- A3/A8/A9/A14/B61* (Decision Ruling on Request for Revision by Iran (1 July 2011), para. 61: "in order to determine which powers international courts and tribunals may exercise as inherent powers one must take into account the particular features of each specific court or tribunal, including the circumstances surrounding its establishment, the object and purpose of its constitutive instruments and the consent of the parties as expressed in that and related instruments").

³⁵² Brown (343) 846.

³⁵³ Silva-Send (10).

The first of these rules is the one involving non-discrimination, manifested in GATT Art. I (MFN principle) and Art. III (national treatment principle)³⁵⁴.

The TBT Agreement specifies GATT Art. III with regard to "laws, regulations and requirements" that have an effect on internal trade³⁵⁵. A regulation that may display such an effect is a technical standards barrier, hence it would be ideal to reach an international harmonisation³⁵⁶ regarding such standards, since this would ease international trade based on more efficient production³⁵⁷. Implementation of existing standards is mandatory, so that national regulations prescribing technical standards are "rebuttably presumed" to be in conformity to this obligation³⁵⁸, and if such regulation displays a significant influence on international trade, the State has an obligation to publish and notify such regulation in advance "to enable interested parties in other Members to become acquainted with it"³⁵⁹.

The SCM Agreement provides a definition of subsidies as governmental contributions, or contributions from other public bodies³⁶⁰, which results in a benefit³⁶¹ and meets certain conditions. They must be direct (e.g., grants, loans, equity infusions) or potentially direct (e.g., loan guarantees)³⁶², constitute a government revenue "otherwise due" that is "foregone or non-collected" (e.g. fiscal incentives, tax credits)³⁶³, constitute a government provision of goods and services other than general infrastructure³⁶⁴, and be "in the form of income or price support" in the sense of Article XVI of GATT 1994³⁶⁵.

The SCM Agreement further distinguishes among subsidies that are either prohibited, or actionable or non-actionable, according to its provisions. Regarding the first two categories, "specificity" must be proven, meaning that they are specific to an enterprise or industries or a group of these³⁶⁶. The prohibited subsidies are, according to Article 3, those (a) "contingent [...] upon export performance" or (b) "upon the use of domestic over imported goods"³⁶⁷. The actionable ones are, under Article 5, those that "cause [...] adverse effects to the interests of other Members", specifically though "(a) injury to [their] domestic industry", "(b) nullification or impairment of benefits" accruing to them under GATT 1994, therefore referring to tariff concessions, and "(c) serious prejudice to the interests

³⁵⁴ Supra, Chapter I, n. 3.

³⁵⁵ For a description of the main elements regarding the TBT Agreement, see supra, Chapter I, n. 4.3.

³⁵⁶ TBT Agreement, Preamble.

³⁵⁷ Silva-Send (10).

³⁵⁸ TBT Agreement, Arts. 2.4 and 2.5.

³⁵⁹ TBT Agreement, Arts. 2.9.1-2.

³⁶⁰ SCM Agreement, Art. 1.1(a)(1)(iv).

³⁶¹ SCM Agreement, Art. 1.1(b).

³⁶² SCM Agreement, Art. 1.1(a)(1)(i).

³⁶³ SCM Agreement, Art. 1.1(a)(1)(ii).

³⁶⁴ SCM Agreement, Art. 1.1(a)(1)(iii).

³⁶⁵ SCM Agreement, Art. 1.1(a)(2).

³⁶⁶ SCM Agreement, Art. 2.1.

³⁶⁷ SCM Agreement, Art. 3.

of other Members"³⁶⁸. The serious prejudice originates where one of three alternative events takes place: first, the "total ad valorem subsidization of a product exceeding 5 per cent", second, the coverage of operating losses of an industry, or an enterprise, excluding one-time, non-recurrent measures, third, the "direct forgiveness of debt"³⁶⁹.

Unfortunately, since it was negotiated in a decade prone to favour privatization over State interventions³⁷⁰, the Agreement does not consider potential differences in the purpose of subsidies. It could not foresee that subsidies would eventually come into play as an effort to deal with emerging non-trade concerns and therefore abstains from integrating environmental exceptions.

4.2. Preliminary issues of disputes before WTO dispute settlement system

As stated in Articles 3.2 and 3.3 of the Dispute Settlement Understanding:

“The dispute settlement system of the WTO is a central element in providing security and predictability to the multilateral trading system”

and

“The prompt settlement of situations in which a Member considers that any benefits accruing to it directly or indirectly under the covered agreements are being impaired by measures taken by another Member is essential to the effective functioning of the WTO”.

It appears evident how the DSS, with its compulsory, exclusive and contentious jurisdiction, plays a vital role for Member States. Nevertheless, some preliminary questions must be considered by the panels before entering to the merits of the dispute. Particularly in cases of overlapping jurisdiction from WTO and free trade agreements, with their inherent dispute settlement mechanisms, this is an issue to be carefully pondered³⁷¹.

In general, whether the subject-matter of a dispute relating to environmental and climate regulations can be assessed by WTO panels is a question that can be answered through the analysis of the exceptions found in each specific Agreement. For instance, with respect to the GATT, Article XX

³⁶⁸ SCM Agreement, Art. 5.

³⁶⁹ SCM Agreement, Art. 6 (a), (b), (c).

³⁷⁰ Paolo Davide Farah and Elena Cima, 'The World Trade Organization, Renewable Energy Subsidies, and the Case of Feed-in Tariffs: Time for Reform toward Sustainable Development?' (2015) 27(1) *The Georgetown International Environmental Law Review* 515, 517.

³⁷¹ 'The Issue of the Admissibility of Disputes Before WTO Panels in Conflicts Related with Free Trade Agreements: Does the WTO's Dispute Settlement Body's Jurisdiction Prevail over the FTA's Dispute Settlement Mechanism?' Proyecto de Grado, Pontificia Universidad Javeriana (2017) 20.

letters (b) and (g) will come into play, whereas concerning the TBT Agreement, Article 2.2 will be central, in order to avoid discriminations or to create unnecessary restrictions to free trade³⁷².

In the case of the SCM Agreement, since no explicit indication can be found in the text and scholars debate as to the applicable solution³⁷³, it is significant to follow the judicial evolution in the DSS, as the applicability of Article XX GATT can be well influenced by non-legal considerations³⁷⁴. The first question is whether GATT rules may be invoked in non-GATT disputes. A second question is whether a subsidy could be justified based on the exceptions of Article XX GATT.

For instance, some countries have adopted feed-in-tariffs (FITs) to support sustainable energy production, which work conferring to each individual or business, upon generating green energy, a type of compensation or bonus which exceeds the market price³⁷⁵. In 2009 the Appellate Body was tasked with this matter in the *China-Audiovisuals* case³⁷⁶, concerning a violation of China accession protocol which contained the words "in accordance with the WTO agreement" and ruled therefore for the applicability of GATT. Two years later the Appellate Body stated the contrary in a similar case, based on the lack of an analogous reference to the WTO agreement. Some commentators claim that the SCM Agreement has the value of *lex specialis* with respect to the GATT, nevertheless, since the SPS Agreement explicitly refers to Article XX GATT, this brings to the argument that, conversely, the silence of the SCM Agreement is motivated by a specific will not to make the exceptions of Article XX readily available³⁷⁷. Moreover, former Article 8 of the SCM Agreement designed specific list of subsidies that were deemed as "non-actionable". The provision only applied provisionally, but it may be a sign of the will of the parties that any exception regarding justified subsidies had to appear directly in the text of the SCM Agreement and no external reference to the scope of Article XX was acceptable.

As to the second issue, when a measure represents a subsidy within the definition of the SCM Agreement, then it can also constitute an actionable one when it produces the required adverse effects. In this case the measure can be justified under Article XX GATT since it would otherwise violate a WTO Agreement. But FITs can also be contingent on local input requirements, and in such case the local content requirement must be "necessary to protect human, animal or plant life or health" or related to "the conservation of exhaustible natural resources".

³⁷² See Chapter I, 4.1-4.4. See also Silva-Send (10) 202, 203.

³⁷³ Silva-Send, *ibid.* The issue has been examined by Alan O. Sykes, 'The economics of WTO Rules on Subsidies and Countervailing Measures', John M. Olin Program in Law and Economics Working Paper No. 186 (2003) available at <https://chicagounbound.uchicago.edu/law_and_economics> accessed 15 September 2023, and Marie Wilke, ICTSD, 'Feed-in tariffs for Renewable Energy and WTO Subsidy Rules: An Initial Legal Review', Issue Paper n.4 (2011).

³⁷⁴ Wilke, *ibid.*, 20.

³⁷⁵ Wilke, *ibid.*, vi.

³⁷⁶ *China-Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products (China-Audiovisuals)*, WT/DS36.

³⁷⁷ Wilke (373) 18-19.

Already in 1996, one year before the Kyoto Protocol, the Appellate Body ruled in the *US-Gasoline* case that paragraph (g) of Article XX GATT did cover the protection of clean air as an exhaustible resource³⁷⁸. Twelve years later, the Appellate Body added, in the occasion of the *Brazil-Tyres* case, that even when the contribution of a measure is not immediately observable, such measure can be justified under the exceptions of Article XX GATT³⁷⁹. In fact:

"the results obtained from certain actions – for instance, measures adopted in order to attenuate global warming and climate change [...] may manifest themselves only after a certain period of time – can only be evaluated with the benefit of time"³⁸⁰

Whether a local content requirement or a FIT as such can be justified is also a debated subject, especially so in the context of the recent disputes between the U.S. and China triggered by green energy technologies and their support measures³⁸¹.

But, as Robert Howse noted, one should not narrow the focus to:

"whether the parties to a specific treaty are in compliance with its rules. The emerging climate regime, while plagued with compliance issues, is actually shaping behavior even of states not parties to it and affecting the way in which other areas of international law, like the global trading system, govern world markets. The dispute between the U.S. and China [...] is a great example. Its implications go beyond questions of compliance either with trade rules or with the climate regime each on its own, to how these systems interact, and how international law generally understands the challenge of 'sustainable development'"³⁸².

4.3. Strands of climate related disputes and the relevance of renewable energy subsidies

Climate change related disputes can be divided in several groups. Van Asselt recalls that the most recent and relevant strands derive from an umbrella of "green industrial policy" measures which raise new questions³⁸³ and divides them into four categories³⁸⁴. Some are centred around renewable energy

³⁷⁸ *United States – Standards for reformulated and conventional gasoline (US-Gasoline)*, Appellate Body report WT/DS2/AB/R, para 8.2.

³⁷⁹ But not under its Chapeau, which would require a non-discriminatory application. See Wilke (373) 20.

³⁸⁰ *Brazil-Measures Affecting Imports of Retreaded Tyres (Brazil-Tyres)*, Appellate Body report WT/DS332/AB/R, para. 151.

³⁸¹ Wilke (373) 21. *China-Measures concerning wind power equipment (China-Wind Power)* WT/DS419. See ICTSD Bridges Weekly (8 June 2011) 'US Proclaims Victory in Wind Power case; China Ends Challenged Subsidies' available at: <<http://ictsd.org/i/news/bridgesweekly/108230/>> accessed 15 September 2023.

³⁸² 'Robert Howse wins Global Policy Journal's Best Article Prize for 2010' *NYU Law News* (5 April 2011); Robert Howse and Ruti Teitel, 'Beyond Compliance: Rethinking Why International Law Really Matters', 1(2) *Global Policy* 127 (2010) 131.

³⁸³ Mark Wu and James Salzman, 'The Next Generation of Trade and Environment Conflicts: The Rise of Green Industrial Policy'(2014) 108(2) *Northwestern University Law Review* 401.

³⁸⁴ Van Asselt (10) 441-442.

subsidisation, others develop against measures in support of biofuels, while possible disputes could arise from border carbon adjustments and or fossil fuels subsidies.

Against the backdrop of the newest developments on the international scene, involving on one hand the US Inflation Reduction Act (IRA) of 2022³⁸⁵, involving *inter alia*, noteworthy investments into local energy production and clean energy³⁸⁶, and on the other hand the threat of a EU-China tariff war after the announced anti-subsidies probe from European Commission President Ursula von der Leyen was received by China as a "naked protectionist act" on electric cars, it is foreseeable that subsidies will be a long time at the heart of the economic landscape. And, arguably, more controversies will arise and need consultations or dispute settlement at the WTO.

For these reasons it is worthwhile to analyse how the Dispute Settlement System has confronted the topic of subsidies until now.

The expansion of clean energy mechanisms in order to diminish the concentration of carbon dioxide and in general GHG in the atmosphere is supported, above all, though the instrument of subsidies³⁸⁷. In particular, efforts are directed to forge a new ratio in energy subsidies: discouraging those which are detrimental to the environment and the climate, upholding the ones which contribute to clean and efficient energy³⁸⁸. The best results would be achieved through a "better harmonisation of subsidy calculation methodologies", shared "definitions of what constitutes a subsidy" and clear "boundary conditions" for their implementation³⁸⁹.

In the meantime, subsidies aimed at supporting renewable energy have given rise to a group of disputes, some of which were resolved in the consultations stage, while others were dealt with by WTO panels. In the *Canada – Renewable Energy* case³⁹⁰ Japan lamented a violation of multilateral trade rules because of a new legislation introduced by Canada, under which a feed-in tariff supported electricity produced from renewable energy, but conditional to local content requirements (LCRs). In 2009, the government of Ontario had adopted this measure and began to remunerate a guaranteed rate for said electricity, higher than the market price, but requested that the subsidised green producers

³⁸⁵ US Public Law 117-169, 16 August 2022 [Inflation Reduction Act]

³⁸⁶ 'Biden Signs Expansive Health, Climate and Tax Law', *The New York Times* (16 August 2022); Ella Nilsen, 'Clean energy package would be biggest legislative climate investment in US history' (July 28, 2022) available at < <https://edition.cnn.com/2022/07/28/politics/climate-deal-joe-manchin/index.html>>; 'Biden's Climate Law Is Reshaping Private Investment in the United States. Lucrative tax incentives have fueled a surge in solar panels but failed to boost wind power, data from a new project show' *The New York Times*, (12 September 2023).

³⁸⁷ UNEP Division of Technology, Industry, and Economics, 'Reforming Energy Subsidies: Opportunities to Contribute to the Climate Change Agenda' (2008) 19.

³⁸⁸ Michael Taylor, *Energy Subsidies. Evolution in the Global Energy Transformation to 2050* (2020) International Renewable Energy Agency, Abu Dhabi, available at < https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Apr/IRENA_Energy_subsidies_2020.pdf> accessed 15 September 2023, p.7.

³⁸⁹ Michael Taylor, *ibid.*

³⁹⁰ WTO, *Canada – Renewable Energy* case (273).

used a certain amount of local produced components for production³⁹¹. The plaintiff lamented that such green subsidies were inconsistent with Articles III:4 and III:5 of the GATT 1994, because they accorded less favourable treatment to imported products than to like domestic products. Moreover, they were trade-related investment measures which infringed Article 2.1 of the TRIMs Agreement on local content requirements because they were in violation of Article III GATT. Lastly, Japan claimed the violation of Articles 3.1(b) and 3.2 of the SCM Agreement because of this governmental contribution, or a form of income or price support conferring a benefit, therefore it was to be considered as a prohibited subsidy³⁹². The WTO Panel upheld Japan's claim with respect to the violations of the GATT and TRIMs Agreement because it constituted an investment measure that negatively affected the trade prospects of imported products due to the "Minimum Required Domestic Content Level". It also contradicted Canada's exception under Article III:(a) GATT denying a justification as government procurement. These findings were confirmed in 2013 by the Appellate Body, as well as the statement that it was not possible to define whether the incentives constituted a "benefit" under the SCM Agreement. But while the Panel had left the issue open due to lack of comparable market standards, the Appellate Body underlined that the comparison should have involved merely previous energy support measures taken by the Ontario government³⁹³. It thus remained unclear whether the programme provided by the State of Ontario can be understood as "subsidy"³⁹⁴.

Another case was the *India – Solar Cells*³⁹⁵, where the United States challenged the domestic content requirements imposed by India on solar power developers selling electricity to the government as effect of the regulation concerning the Jawaharlal Nehru National Solar Mission. Both the Panel and the Appellate Body found the measures at issue to be inconsistent with Articles Art. III:4 GATT and Art. 2.1 TRIMs, regarding national treatment. India did invoke Article XX GATT but letters (d) and (j), the question remains open as to what the result would have been, had India invoked Article XX letters (b) or (g) to justify its measures as actions aimed at tackling climate change³⁹⁶.

³⁹¹ Van Asselt (10) 443; 'DS-412: Canada — Certain Measures Affecting the Renewable Energy Generation Sector' available at <<https://climatecasechart.com/non-us-case/ds-412-canada-certain-measures-affecting-the-renewable-energy-generation-sector/>> accessed 15 September 2023.

³⁹² Article 1.1 of the SCM Agreement, see *supra*, Chapter III, at 5.1. concerning the SCM Agreement.

³⁹³ The AB could on proceed to further analysis because of the procedural limits in Article 17.6 of the DSU.

³⁹⁴ Since renewable energy could only compete with conventional-produced electricity because of the governmental incentives.

³⁹⁵ *India – Certain Measures Relating to Solar Cells and Solar Modules*, Appellate Body Report, WT/DS456/AB/R (14 October 2016).

³⁹⁶ India sought justification with the exceptions of measures necessary to 'secure compliance with laws or regulations' and 'products in general or local short supply', see Appellate Body Report, para 5.154. See also "WTO, 'One-page summary of key findings of this dispute, *India – Solar Cells*', available at <https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds456sum_e.pdf> accessed 15 September 2023, and Van Hasselt (10) 444-445.

A third case, *United States – Renewable Energy*³⁹⁷, came recently to conclusion with a mutually agreed solution notified on 13 July 2023, pursuant to Art 3.6 DSU³⁹⁸. In 2017 India reported the violation of GATT, together with TRIMs and SCM Agreements, because of several renewable energy programs introduced in various states in the United States, which granted financial incentives for the 'purchase, installation, and use of "made-in-state" renewable energy systems and related products'³⁹⁹. In 2019 the panel report⁴⁰⁰, containing the statement of inconsistency of the measures at issue with Article III:4 GATT 1994, since it was discriminating based on the origin and caused a less favorable treatment for the like imported products, was circulated to WTO Members. For reasons of judicial economy⁴⁰¹, the other claims regarding the TRIMs Agreement, Arts. 2.1 and 2.2, and the SCM Agreement, Arts. 3.1(b) and 3.2, were not further investigated⁴⁰².

In a fourth dispute, *US – Countervailing Measures (China)*⁴⁰³, China complained and requested consultation in 2012 regarding countervailing duty measures introduced by the U.S. against some Chinese imported products, among which solar panels and wind towers. Interesting in this case is the analysis of "the existence of an unwritten subsidy programme". Such subsidy programme in the sense of Article 2.1 of the SCM Agreement, is deducted and evidenced, in the reasoning of the Panel, *inter alia* from a "systematic activity" granting financial contributions to specific enterprises⁴⁰⁴. But then, since "the Panel did not provide any case-specific discussion or references to the USDOC's determinations of de facto specificity at issue prior to reaching its conclusion", the Appellate Body reversed the findings of the Panel⁴⁰⁵ and did not proceed in further analysis regarding the subsidy programme in China's appeal⁴⁰⁶.

Other two very recent disputes, which are still at the stage of consultation, can be added to the list. The first one is *China – Measures Concerning Wind Power Equipment* (DS419). In 2020 the United States requested consultations with China criticizing governmental measures ("grants, funds, or awards") "contingent on the use of domestic over imported goods" which the State granted to local

³⁹⁷ *United States–Certain Measures Relating to the Renewable Energy Sector* (DS510) [US-Renewable Energy]

³⁹⁸ WTO, G/L/1149/Add.1 G/SCM/D1111/1/Add.1 G/TRIMS/D/42/Add.1 WT/DS510/8.

³⁹⁹ WTO, WT/DS510/R, 27 June 2019, para 7.339.

⁴⁰⁰ *United States – Renewable Energy*, Panel Report, WT/DS510/R (27 June 2019).

⁴⁰¹ The concept was defined in *Canada – Wheat Exports and Grain Imports* (Appellate Body Report, 2004, para 133) and especially in *EU – PET (Pakistan)* (Appellate Body Report, 2018, para 5.20) as the "discretion of a panel to address only those claims [necessary][...] to resolve the matter in issue in the dispute". See Sybilla C Fries, 'Judicial Economy: Dispute Settlement System of the World Trade Organization (WTO)' (2009) in *Max Plank Encyclopedias of International Procedural Law*, available at < <https://opil-ouplaw-com.uaccess.univie.ac.at/display/10.1093/law-mpeipro/e3566.013.3566/law-mpeipro-e3566?print=pdf>> accessed 15 September 2023.

⁴⁰² *United States – Renewable Energy*, para 7.368.

⁴⁰³ *United States – Countervailing Duty Measures On Certain Products From China* [US-Countervailing Measures (China)], Appellate Body Report, WT/DS437/AB/R (18 December 2014).

⁴⁰⁴ 4.3.2

⁴⁰⁵ 4.151

⁴⁰⁶ 4.157

companies manufacturing wind power equipment⁴⁰⁷ and which it deemed to be inconsistent with Article 3 of the SCM Agreement.

The second dispute in the consultations phase is *United States – Certain Measures Related to Renewable Energy* (DS563). In 2018 China complained about the introduction by various States and municipalities within the United States of measures deemed to be subsidies or domestic content requirements pertaining to the energy sector. It reported such programs to be inconsistent with Article III:4 GATT 1994, Arts. 2.1 and 2.2 of the TRIMs Agreement and Arts.3.1(b) and 3.2 of the SCM Agreement⁴⁰⁸.

Interestingly, in all the above cases, the measures were either not classified as subsidies in the sense of the SCM Agreement at all, or a further inquiry could not take place because of processual rules at the appeals stage. Rather, the issue was the discriminatory nature of local content requirements. Therefore, it can be concluded, "the status of renewable energy support measures under the SCM Agreement [...] remains uncertain"⁴⁰⁹.

Another common element in the texts is the lack of any reference to the GATT Article XX exceptions which could arguably have enforced the justification of renewable energy subsidisation based on imperative reasons linked to climate change: letters (b) and (g). The only reference to climate change can be found in the Appellate Body report to the *Canada – Renewable Energy* dispute, where it is stated, *en passant*:

"fossil energy resources are exhaustible, and thus fossil energy needs to be replaced progressively if electricity supply is to be guaranteed in the long term"⁴¹⁰.

This statement can be interpreted as an opening of the dispute settlement body to future argumentation in favour of measures that subsidise green energy with the aim of tackling climate change⁴¹¹.

⁴⁰⁷ WTO, WT/DS419/1 G/L/950 G/SCM/D86/1, 'China - Measures concerning wind power equipment. Request of consultations by the United States' 6 January 2011. The United States also indicated that the measures neither had been notified, therefore violating GATT Art. XVI:1 and Article 25.1, 25.2, 25.3 and 25.4 of the SCM Agreement, nor any translation of their contents in a WTO language was made available, which is an obligation pursuant to the Protocol of Accession, Part I, para 1.2.

⁴⁰⁸ WTO, WT/DS563/1, G/L/1258 G/TRIMS/D/43, G/SCM/D120/1, 'United States–Certain Measures Related to Renewable Energy. Request for consultations by China 16 August 2018. Para 4 provides the description of one of these measures at issue, i.e., the 'Renewable Energy Cost Recovery Incentive Payment Program ("RECIP")' of the State of Washington, with which 'qualifying customers of light and power businesses' are granted 'investment cost recovery incentives for generating electricity from a customer-generated electricity renewable energy system'.

⁴⁰⁹ Van Asselt (10) 445.

⁴¹⁰ *Canada – Renewable Energy* (273)

⁴¹¹ Van Asselt (10) 445.

Concluding remarks

While it appears that the international community resolved to follow the model that Newell and Paterson named "climate capitalism"⁴¹², i.e., "a model which squares capitalism's need for continual economic growth with substantial shifts from carbon-based industrial developments", a sort of revolution is taking place. Unlike other ones, it is a transformation of the world's economy started by the collective economic response to a global challenge: climate change⁴¹³. Humanity is expected to modify its way of conduct and integrate products and energy sources that help curbing global GHG emissions. Carbon-intensive goods and services should give way to green counterparts⁴¹⁴.

There is therefore a comprehensible anticipation that the multilateral trading system does its part and faces with urgency the issues that have been slowing down its activity in order to overcome its crisis. Solutions like a harmonised and significant world carbon price to fight GHG emissions seem utopian, since they are either deemed as invasive taxation or as deplorable acceptance of fossil fuels employment⁴¹⁵.

Undoubtedly, a specific free trade agreement for green technology in the framework given by the WTO would be the optimal approach⁴¹⁶. This could mimic the successful model set forth by the Information Technology Agreement (ITA), established among 29 Members in 1996 and counting at present 82 Members, which is tantamount to 97% of world trade in IT products.

Instead, the issue of climate change seems influenced by the gloomy prospects of a very different world, in which geopolitical tensions, the enduring effects of the pandemic and wars have turned in little more than a decade the enthusiasm for globalisation into scepticism concerning economic interdependence⁴¹⁷. Still, if advancements in reaching the net-zero emissions goal are to be seen, these will benefit from competition, scale efficiencies based on international trade and specialisation⁴¹⁸ which are all at the foundation of the WTO.

At the WTO public forum 2023 a high-level panel discussed ways forward regarding climate action and envisioned the drafting of an agreement on environmental goods and services to be discussed at the COP28 of Dubai in November 2023⁴¹⁹.

⁴¹² Peter Newell and Matthew Patterson, *Climate Change Capitalism: Global Warming and the Transformation of the Global Economy* (CUP 2010) 2.

⁴¹³ Newell and Patterson, *ibid.*, 1-10.

⁴¹⁴ Hanson and Slaughter, 'How Commerce can Save the Climate', (2023) 102(2) *Foreign Affairs* 119.

⁴¹⁵ Hanson and Slaughter, *ibid.*, 120.

⁴¹⁶ Hanson and Slaughter, *ibid.*

⁴¹⁷ Ngozi Okonjo-Iweala, 'Why the World Still Needs Trade. The case for Reimagining - Not Abandoning - Globalization', (2023) 102(4) *Foreign Affairs* 94, 95.

⁴¹⁸ Okonjo-Iweala, *ibid.*, 98.

⁴¹⁹ WTO Public Forum 2023, 'High-level panel discusses inclusive strategies for climate action, sustainable trade' (14 September 2023) available at <https://www.wto.org/english/news_e/news23_e/pf23_14sep23_e.htm> accessed 15 September 2023.

Against this backdrop, the question whether trade and climate action are necessary divergent regimes has to be answered negatively, bearing in mind the purpose for trade and climate action to be discussed at the WTO with a constructive approach. An important role can and must be left to the dispute settlement mechanism, provided that States are also bold enough to bring claims with the necessary legal base to fight trade distortive measures and protectionist policies and advance climate action and mitigation.

In turn, panels and Appellate Body should adopt a flexible approach, because, as reminded by the Appellate Body in the *Japan–Alcohol II* case:

" WTO rules are reliable, comprehensible, and enforceable. WTO rules are not so rigid or so inflexible as not to leave room for reasoned judgements in confronting the endless and ever-changing ebb and flow of real facts in real cases in the real world. They will serve the multilateral trading system best if they are interpreted with that in mind. "⁴²⁰.

⁴²⁰ WTO, *Japan–Taxes on Alcoholic Beverages (Japan–Alcohol II)*, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R Appellate Body Report (4 October 1996) 3.

Abstract

(English)

While the concepts of "green economy", "decarbonisation of the economy" have become widespread and the collective conscience increasingly awakened to the consequences of anthropogenic climate change, the stalling WTO negotiations at the Doha Round were met with much anticipation and growing scepticism alike. Yet, in the Preamble of the Marrakesh Agreement establishing the WTO some additional objectives, beside the 'trade and economic endeavour', are unmistakably engraved: the 'optimal use of the world's resources', 'sustainable development', and 'to protect and preserve the environment'. It is therefore paramount to define what relationship has matured between the WTO and the environment, since this circumstance effects and inspires further progress also concerning climate change.

The present contribution explores the evolution and the impacts of the intertwining of the environmental regime - as pioneer - and climate-change regime, with that of the multilateral trading system. It analyses some relevant principles, theories, and selected case law, identifying the WTO Dispute Settlement System as a suitable and promising venue for climate-related litigation.

(Deutsch)

Während die Begriffe "grüne Wirtschaft" und "Dekarbonisierung der Wirtschaft" weit verbreitet sind und das kollektive Bewusstsein für die Folgen des anthropogenen Klimawandels zunehmend erwacht, wurden die ins Stocken geratenen Welthandelsorganisation-Verhandlungen im Rahmen der Doha-Runde sowohl mit großer Erwartung als auch mit wachsender Skepsis aufgenommen. In der Präambel des Marrakesch-Abkommens, mit dem die Welthandelsorganisation gegründet wurde, sind jedoch neben den "Handels- und Wirtschaftsbestrebungen" unmissverständlich einige weiteren Ziele verankert: die "optimale Nutzung der Ressourcen der Welt", die "nachhaltige Entwicklung" und der "Schutz und die Erhaltung der Umwelt". Es ist daher von größter Wichtigkeit zu definieren, welche Beziehung zwischen der Welthandelsorganisation und der Umwelt herangereift ist, da dieser Umstand weitere Fortschritte auch im Hinblick auf den Klimawandel beeinflusst und inspiriert.

Der vorliegende Beitrag untersucht die Entwicklung und die Auswirkungen der Verflechtung des Umweltregimes - als Vorreiter - und des Klimaregimes mit dem multilateralen Handelssystem. Er analysiert einige relevante Grundsätze, Theorien und ausgewählte Rechtsfälle und identifiziert das Welthandelsorganisation-Streitbeilegungssystem als geeigneten und vielversprechenden Ort für klimabezogene Rechtsstreitigkeiten.

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