Stanford – Vienna
Transatlantic Technology Law Forum

A joint initiative of
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European Union Law Working Papers

No. 63

Navigating the Global Economy towards Net-Zero within the Confines of WTO Law and Jurisprudence: A Critical Analysis of the European Union's Carbon Border Adjustment Mechanism and its Implications on International Trade

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2022

European Union Law Working Papers

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Suggested Citation

This European Union Law Working Paper should be cited as:
Siddharth Saigal, Navigating the Global Economy towards Net-Zero within the Confines of WTO Law and Jurisprudence: A Critical Analysis of the European Union's Carbon Border Adjustment Mechanism and its Implications on International Trade, Stanford-Vienna European Union Law Working Paper No. 63, http://ttlf.stanford.edu.

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Abstract

The intersection between international trade law and international environmental law represents a whirlpool of colliding interests. On the one hand, there is the global imperative to mitigate the drivers of climate change and avert a crisis beyond human control. In this light, contemporary climate change mitigation policies focus on attaining 'net-zero' emissions by specific target dates and temperature trajectories linked to binding international agreements. On the other hand, a strong gravitational pull toward non-renewable sources of energy prevents a significant proportion of the global economy from implementing trade-based measures that penalise emissions-intensive technologies and production processes. These measures are primarily perceived as an existential threat to trade, commerce and economic development rather than an opportunity to decarbonise and transform the global economy into one that is circular and green.

Against this backdrop, the European Union (EU) remains on the verge of implementing a Carbon Border Adjustment Mechanism (CBAM) – a unilateral trade-based measure designed to complement the bloc's domestic climate ambitions and equalise competitive conditions between imports and exports for certain emissions-intensive products within its internal market. Moreover, the EU Commission has claimed that the CBAM was designed to be compatible with various arms of international law. However, this assurance has done little to temper the international resentment towards unilateralism in trade policy. Instead, the CBAM's design raises serious questions about the circumstances in which a state can lawfully implement unilateral measures with extraterritorial effects, which may inadvertently limit international trade and conflict with existing obligations under international law.

To this end, this dissertation critically analyses the legality of the proposed CBAM through the lens of international trade law and international environmental law. This analysis is premised on an intertextual interpretation of the international treaties annexed to the Agreement Establishing the World Trade Organisation (WTO) and an application of the corresponding jurisprudence to the CBAM's proposed legal framework. Finally, as a measure with significant extraterritorial effects, this dissertation will conclude by analysing the international response to the CBAM and its implications on international trade.

Acknowledgements

Pursuing an international LL.M. degree amid a global pandemic has been a challenging yet rewarding experience. In completing this dissertation, I have been fortunate to have had the unwavering support of my professors, colleagues, partner, family and friends, whom I would like to duly acknowledge.

I would like to sincerely thank Professor Lentner for supervising this dissertation with enthusiasm in this complex area of the law. Your advice has been of great assistance in shaping the final body of work. I look forward to building a professional relationship with you in the coming years.

I would also like to thank Dr Sturm and Professor Fina for their assistance during the academic year.

To Professor Maschmeyer, I would like to acknowledge your ongoing support since completing my Honours Thesis under your supervision. It has undoubtedly influenced my career trajectory, and I look forward to exchanging stories in the near future.

To Dr Taylor, I cannot thank you enough for the advice, mentorship and encouragement you have given me during the last few years. It has been invaluable for my personal and professional development.

I would like to extend my gratitude to the Higher Education Scholarship Foundation for Law Students at the University of Vienna for granting me an academic scholarship to support my research in the European and International Business Law LL.M. program.

Lastly, I would like to thank my partner, family, and friends. A special mention to my father for all his unconditional support throughout my long years at university. For this, I am always grateful.

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List of Abbreviations

BTA	Border Tax Adjustment
BTB	Brown Trading Bloc
CAT	Climate Action Tracker
CBAM	Carbon Border Adjustment Mechanism
CBDR	Common But Differentiated Responsibilities
CER	Clean Energy Regulator
CTE	The Committee on Trade and Environment
DFAT	Department of Foreign Affairs and Trade
DSB	Dispute Settlement Body
DSU	Dispute Settlement Understanding
EGD	European Green Deal
EITE	Emissions-Intensive and Trade Exposed
ERF	Emissions Reduction Fund
ETS	Emissions Trading Scheme
EU	European Union
EU-ETS	European Union Emissions Trading Scheme
FITs	Feed-In Tariffs
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
GCP	Glasgow Climate Pact
GHGs	Greenhouse Gases
GTB	Green Trading Bloc
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency

MEAs	Multilateral Environmental Agreements
MFN	Most Favoured Nation
NPR-PPMs	Non-Product-Related Processes and Production Methods
PR-PPMs	Product-Related Processes and Production Methods
RPS	Renewable Portfolio Standards
TBT	Technical Barriers to Trade
TEDs	Turtle Excluding Devices
TIR	The Third Industrial Revolution
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UK	United Kingdom
US	United States of America
WTO	World Trade Organisation

'Carbon must have its price – because nature cannot pay the price anymore'

–Ursula von der Leyen, President of the European Commission, speaking at the

State of the Union Address at the European Parliament Plenary

16 September 2020

Chapter 1: Introduction

In the Anthropocene,[1] the urgency of the climate crisis is at an inflection point in a struggle between the restitution and ecological transformation of a planet engulfed in a suffocating greenhouse gas ('GHG') blanket.[2] Current climate-change mitigation policies place an acute focus on attaining 'net-zero' emissions through measures that radically reduce humanity's dependence on sources that produce GHGs, including the combustion of fossil fuels and 'dirty' industrial processes. Given the cross-border nature of climate change, net-zero can be thought of as an important *frame of reference* that must be operationalised in social, political, legal and economic spheres.[3]

In this light, this dissertation explores one facet of the legal sphere with increasing international significance,[4] namely the intersectionality between international trade law and international environmental law, to analyse how trade-based climate change measures can contribute to meeting critical environmental protection and mitigation goals.[5] Traditionally, three types of environmental objectives are addressed by trade regulations on the domestic and international planes:[6]

I. The protection of wildlife and ecological systems;

II. The regulation of harmful organisms and products that adversely affect the environment; and

[1] The Anthropocene is a proposed geological epoch, defined from when human activity began to have a significant impact on Earth's geology, climate and ecosystems.
[2] See the Intergovernmental Panel on Climate Change, *Climate Change 2022 - Impacts, Adaptation and Vulnerability: Summary for Policymakers* (WGII Sixth Assessment Report, 28 February 2022) ('*Impacts, Adaptation and Vulnerability IPCC Report*').
[3] Sam Fankhauser et al, 'The meaning of net zero and how to get it right' (2022) 12(2) *Nature Climate Change* 15, 15.
[4] Philippe Sands et al, *Principles of International Environmental Law* (Cambridge University Press, 4th ed, 2018) 841.
[5] Ibid 842.
[6] Ibid 844.

III. The protection of the global commons, including the high seas, outer space and the atmosphere.[7]

The emission of potent GHGs such as carbon dioxide (CO_2) and methane (CH_4) into the atmosphere pose a significant threat to meeting the abovementioned environmental objectives, both in synergistic and conflicting ways.[8] This is because GHGs transfuse state borders, accumulate in the atmosphere and trap heat energy that would otherwise radiate into outer space.[9]

Trade-based environmental measures can be implemented unilaterally by a sovereign state or economic union or multilaterally by a collection of states through an international agreement. The latter, however, is recognised as the preferred mechanism for the protection of the global commons, given their transboundary nature.[10] To date, the Montreal Protocol[11] (1987) is the only international agreement that explicitly employs trade measures to protect the global commons.[12] Specifically, the Montreal Protocol regulates the importation and exportation of ozone-depleting substances between parties and non-parties to limit their accumulation in the atmosphere.[13] The Kyoto Protocol[14] (1997) sparingly employs trade-based measures under its compliance mechanism.[15]

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[7] Ibid 12.
[8] Laurence Carvalho et al, 'Protecting and restoring Europe's Waters: An Analysis of the Future Development Needs of the Water Framework Directive' (2019) 658 *Science of the Total Environment* 1228, 1234.
[9] Fankhauser et al (n 3) 16.
[10] Panel Report, *United States – Import Prohibition on Certain Shrimp and Shrimp Products, Recourse to Article 21.5 of the DSU by Malaysia,* WTO Doc WT/DS58/RW (15 June 2001) ('*US Shrimp/Turtle Panel Recourse Report*') [4.49],[5.56],[5.88].
[11] *The Montreal Protocol on Substances that Deplete the Ozone Layer*, opened for signature on 6 September 1987, 1152 UNTS 3(entered into force 1 January 1989) ('*Montreal Protocol*').
[12] Sands et al (n 4) 844.
[13] *Montreal Protocol* (n 11) arts 4, 4B.
[14] *Kyoto Protocol*, opened for signature on 11 December 1997, 2303 UNTS 162 (entered into force 16 February 2005) ('*Kyoto Protocol*').
[15] See United Nations Framework Convention on Climate Change, *Decision 27/CMP.1, Procedures and Mechanisms Relating to Compliance under the Kyoto Protocol* (Report of the Conference of the Parties serving as the Meeting of the Parties on its first session) UN Doc FCCC/KP/CMP/2005/8/Add. (28 November–10 December 2005).

In contrast, unilateral measures directed towards protecting the global commons outside the context of an international agreement have proliferated since the early 21st century; approximately 4,355 trade-related measures directed towards addressing climate change were notified to the World Trade Organisation[16] (the 'WTO') between the years 2009 to 2019.[17] The marked increase in unilateralism is arguably driven by the politicisation of climate change on the multilateral level, leading to a growing disparity between environmental protection standards and climate change mitigation ambitions between countries across the economic and political spectrum.[18]

This trend raises serious questions about the circumstances in which a state can lawfully implement unilateral environmental protection measures with extraterritorial effects, as they may inadvertently limit international trade and conflict with existing obligations under international trade law.[19] As a result, international economic tribunals find themselves increasingly involved in adjudicating international trade disputes inextricably linked to environmental conservation objectives. Moreover, the unique and efficient dispute resolution system of the WTO places this permanent multilateral institution at the centre of resolving sensitive trade issues with broader social implications.[20] The General Agreement on Tariffs and Trade[21] (the 'GATT') under the WTO umbrella of international trade agreements remains the substantive agreement directed to eliminating barriers to trade between states. Therefore, the

[16] *Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) ('*WTO Agreement*').
[17] Daniel Ramos et al, *Trade and Climate Change Information Brief No.1, MAPPING PAPER: TRADE POLICIES ADOPTED TO ADDRESS CLIMATE CHANGE* (WTO Publications, 2021) 1.
[18] Sands et al (n 4) 849.
[19] Sands et al (n 4) 843.
[20] See *Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 2 ('*Understanding on rules and procedures governing the settlement of disputes*') ('*DSU Agreement*') art 16-17. Under the negative consensus rule, Panel or Appellate Body Reports are automatically adopted by the WTO Members unless there is a unanimous decision to reject the recommendations.
[21] *Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 1A ('*General Agreement on Tariffs and Trade 1994*') ('*GATT 1994*').

conformity of any unilateral measure with the GATT becomes critical in assessing its purported legality. In essence, the GATT/WTO regime requires that measures designed to combat negative environmental externalities must not constitute a means of 'arbitrary or unjustifiable discrimination' or a 'disguised restriction on international trade.'[22] This position remains the 'consensus language'[23] adopted by 176 states in the comprehensive United Nations (UN) Agenda 21 plan.[24]

Against this backdrop, the European Union's ('EU') proposed Carbon Border Adjustment Mechanism (the 'CBAM') is a complex unilateral trade-based measure designed to mitigate the drivers of climate change. [25] The CBAM targets the 'embedded' GHG emissions associated with the production of goods in foreign jurisdictions that choose not to implement an equivalent carbon pricing mechanism in some regulatory form. In doing so, the CBAM seeks to prevent carbon leakage. This phenomenon occurs when domestic GHG emissions reduction efforts are stymied through imports of carbon-intensive products manufactured in third countries pursuing climate change policies that are significantly weaker when compared to the EU.[26] At present, carbon leakage from the EU is addressed by allocating free allowances to domestic industries regulated by the European Union's Emissions Trading Scheme (the 'EU-ETS'). [27] Once fully operational, the CBAM will 'function in parallel'[28] to the EU-ETS and gradually replace existing mechanisms preventing carbon leakage by placing an equivalent carbon price for

[22] Ibid art XX.
[23] Sands et al (n 4) 848.
[24] See United Nations Division for Sustainable Development, *Agenda 21*. (United Nations Conference on Environment & Development 3 – 14 June 1992) [39.3(d)].
[25] European Commission, *Proposal for a Regulation of the European Parliament and of the Council of 14 July 2021 establishing a Carbon Border Adjustment Mechanism*, 564 final, 2021/0214 ('*CBAM Regulation Proposal*').
[26] Council of the EU, *Council agrees on the Carbon Border Adjustment Mechanism (CBAM)* (Web Page, 15 March 2022) <https://www.consilium.europa.eu/en/press/press-releases/2022/03/15/carbon-border-adjustment-mechanism-cbam-council-agrees-its-negotiating-mandate/>.
[27] *Parliament and Council Directive 2003/87/EC of 13 October 2003 Establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC* [2003] OJ L 275.
[28] Council of the EU (n 26).

imports and domestic products and commodities subject to the EU-ETS.[29] Whilst the underlying objectives of the CBAM are laudable, its design raises serious legal concerns under international trade law. This is because the CBAM is a measure attempting to regulate the Non-Product-Related Processes and Production Methods (NPR-PPMs) of goods produced outside the EU, which may not conform to the GATT non-discrimination principles nor the GATT general exceptions in its current permutation.

To assess the legality of the CBAM, one must traverse a complex environmental law landscape that is moderated through the prism of international trade law. The EU Commission claims that the CBAM was designed to be compatible with the GATT/WTO regime.[30] To determine the accuracy of this claim, this dissertation pursues three substantive aims:

I. To determine whether the CBAM is compatible with WTO law and jurisprudence by analysing the design of the underlying EU regulation and the strength of legal arguments that may be raised in its support and opposition;

II. To clarify, as best as possible, the legality of environmental measures targeting the underlying NPR-PPMs in general and in the context of the CBAM; and

III. To analyse the international response to the CBAM and its implications on international trade in general and on the Australian economy as a selected case study.

The potential implications of the CBAM on the Australian economy are of particular interest for this dissertation. Firstly, Australia's resource-driven economy depends on exporting critical minerals and fossil fuel energies produced within emissions-intensive industries that are not subject to an EU-equivalent carbon pricing mechanism.[31] Secondly, Australia's renewable

[29] *CBAM Regulation Proposal* (n 25) recital 13.
[30] Ibid 1.
[31] Department of Foreign Affairs and Trade, *Australia's Trade Through Time* (Web Page) < https://www.dfat.gov.au/publications/minisite/tradethroughtimegovau/site/index.html>.

energy transition remains a somewhat nebulous aspiration and inconsistent with the nation's international obligations without substantive policies to support its net-zero commitments. Thirdly, Australia's trade exposure to the CBAM is predicted to vary between the short and long term, largely depending on the design and scope of the CBAM in its final permutation. Lastly, the prevailing attitude towards the CBAM is negative,[32] undoubtedly shaped by Australia's highly politicised carbon landscape over the last decade.[33]

Chapter 2 will explore the relationship between trade policy and environmental policy in light of the net-zero agenda. In doing so, this chapter seeks to demonstrate how the principles of international environmental law, when moderated through the prism of international trade law, theoretically provides sovereign states with the legal ammunition required to address the urgency of the climate crisis and unilaterally implement trade-based climate change reduction measures.

Chapter 3 will analyse the proposed CBAM regulation before assessing its legality under international trade law. This entails an in-depth analysis of WTO jurisprudence interpreting the relevant GATT rules on non-discrimination, the legality of NPR-PPMs when formulating trade-based climate change reduction measures and the applicability of the general exceptions under Article XX GATT.

Chapter 4 will analyse the international response to the CBAM and its implications on international trade in general and on the Australian economy as a selected case study.

Chapter 5 will present the conclusions of this dissertation.

[32] Daniel Bergin et al, Perception of the Planned EU Carbon Border Adjustment Mechanism in Asia Pacific — An Expert Survey (March 2021) ('*CBAM Expert Survey*') 15-21.
[33] Nicky Ison, 'Australia can swiftly end the climate wars and become a renewable superpower', *The Guardian* (online at 24 May 2022) <https://www.theguardian.com/australia-news/commentisfree/2022/may/25/australia-can-swiftly-end-the-climate-wars-and-become-a-renewable-superpower-heres-how>.

Chapter 2: Trade and Climate Change in the Anthropocene

2.1 Quantifying the Climate Crisis

The scientific evidence underpinning anthropogenic climate change is no longer in credible dispute. Currently, the atmospheric concentration of the GHG, carbon dioxide (CO_2), is reported to be in excess of 410 ppm.[34] This figure is compared to the atmospheric concentration of carbon dioxide in the pre-industrial era of human civilization (1750), reported as 280 ppm.[35] This increase, unprecedented during the last 10,000 years, has prompted several international studies, which stress that average global temperatures may increase faster than once predicted.[36] Moreover, the remarkably linear relationship between the net accumulation of GHG emissions into the atmosphere on the one hand, and the GHG-induced surface warming of the planet on the other,[37] is strong evidence for the proposition that climate change is unequivocally human-induced and beyond natural climate variability.[38]

In their detailed reports on the state of the climate crisis, the Intergovernmental Panel on Climate Change (the 'IPCC') stress that humanity effectively has a three-year window to limit the increase of average global temperatures to 1.5°C.[39] Upon crossing this critical threshold, the consequences upon ecosystems would be pervasive,[40] characterised by 'widespread and rapid changes'[41] in the atmosphere, ocean, cryosphere and biosphere.[42] This transformation

[34] Intergovernmental Panel on Climate Change, *Climate Change 2021 - The Physical Science Basis: Summary for Policymakers* (WGI Contribution to the Sixth Assessment Report) ('*The Physical Science Basis IPCC Report')* 4-6.
[35] Eric Hand, 'Fossil leaves bear witness to ancient carbon dioxide levels' (2017) 355 *Science* 14.
[36] See Intergovernmental Panel on Climate Change, *Global warming of 1.5° C: an IPCC special report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty: Summary for Policymakers* (2018) 6-8.
[37] Myles R Allen et al, 'Warming caused by cumulative carbon emissions towards the trillionth tonne' (2009) 458 *Nature* 1163.
[38] *Impacts, Adaptation and Vulnerability IPCC Report* (n 2) 9.
[39] Intergovernmental Panel on Climate Change, *Climate Change 2022 – Mitigation of Climate Change: Summary for Policymakers* (WGIII Contribution to the Sixth Assessment Report, 4 April 2022) 21.
[40] *Impacts, Adaptation and Vulnerability IPCC Report* (n 2) 10.
[41] *The Physical Science Basis IPCC Report* (n 34) 4-6.
[42] Ibid 4.

would normalise climate extremes, exacerbate weather events, prolong periods of droughts and intensify irregular precipitation patterns through a disruption of the global water cycle.[43]

2.1.1 The International Response to the Climate Crisis

The Paris Agreement marked a pivotal point in the fight against climate change by implementing a new international legal regime targeting the global GHG emissions footprint.[44] It was adopted by 195 states under the United Nations Framework Convention on Climate Change (the 'UNFCCC') and entered into force in November 2016.[45] Under the Paris Agreement, the signatory states agreed to 'holding'[46] the increase in the global average temperature to 'well below 2°C above pre-industrial levels'[47] whilst pursuing 'efforts to limit the temperature increase to 1.5°C above pre-industrial levels.'[48] Regrettably, the international response to meeting the Paris Agreement targets was largely aspirational, as the global average temperature of the planet reached 1.1°C by 2021[49] and was on a trajectory toward 2.7°C above pre-industrial levels by the end of the 21st century.[50] With the Paris Agreement failing to trigger widespread climate action, the message from the international scientific community through the IPCC's Sixth Assessment Report series is clear:

> '[G]lobal warming of 1.5°C and 2°C *will*[51] be exceeded during the 21st century unless deep reductions in CO_2 and other greenhouse gas emissions occur in the coming decades.'[52]

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[43] Ibid 10.
[44] Cara A Horowitz, 'Paris Agreement' (2016) 55(4) *International Legal Materials* 740, 740.
[45] Paris Agreement, In *Report of the Conference of the Parties to the United Nations Framework Convention on Climate Change* (FCCC/CP/2015/10/Add.1) ('*Paris Agreement*').
[46] Ibid art 2(1)(a).
[47] Ibid.
[48] Ibid.
[49] *The Physical Science Basis IPCC Report* (n 34) 5.
[50] Climate Action Tracker, *Glasgow's 2030 credibility gap: net zero's lip service to climate action Wave of net zero emission goals not matched by action on the ground* (Warming Projections Global Update, November 2021) i-iii ('*CAT Climate Report'*).
[51] Emphasis added.
[52] *The Physical Science Basis IPCC Report* (n 34) 14.

Humanity's voracious consumption of oil, coal and gas, which accounts for approximately 84% of global energy consumption, remains a significant obstacle to meeting the Paris Agreement targets.[53] Moreover, advanced economies, including Japan, South Korea, and Australia, continue to place significant reliance on coal and gas for their electricity generation mix as late as 2030 under their current policies.[54]

Under this backdrop, the COP 26 UN Climate Conference in Glasgow (2021) was a renewed call for the international community to respond to the exigencies of climate change. Emerging from the lengthy and emotional deliberations was the Glasgow Climate Pact (the 'GCP'), which is deemed humanity's last chance to keep the 1.5°C commitment alive under the Paris Agreement.[55] Notably, the GCP strengthened the Paris Agreement in several ways, including a legally binding agreement to 'phase down'[56] coal power, reverse deforestation and implement a climate finance fund to meet adaptation and mitigation objectives in developing countries.[57] Under the GCP, over 90% of the world's GDP is now covered by net-zero commitments, including the juggernaut economies of India, China, the USA and the EU.[58] However, the net-zero commitments emerging from the GCP have been met with scepticism due to a divergence in regulatory standards, climate change policies and net-zero target designs.[59] On one level, this sentiment was echoed by the COP 26 President, Alok Sharma, who felt that the pulse of the Paris Agreement remained 'weak and [would] only survive if we [kept] our promises and translate commitments into rapid action.'[60]

[53] Helen Thompson, 'The geopolitics of fossil fuels and renewables reshape the world' (2022) 603 *Nature* 364.
[54] *CAT Climate Report* (n 50) iii.
[55] United Nations Climate Change Conference, *COP 26 The Glasgow Climate Pact* (November 2021) 2.
[56] Ibid 10.
[57] Ibid 5, 11, 19.
[58] Ibid 5.
[59] *CAT Climate Report* (n 50) iii.
[60] Ibid 2.

2.1.2 The Race towards Net-Zero

Current climate-change mitigation policies focus on attaining *net-zero* emissions through specific target dates and temperature trajectories linked to the Paris Agreement.[61] However, as net-zero is intrinsically a scientific concept,[62] one must turn to the fundamental concepts underpinning physical climate science. At present, anthropogenic CO_2 emissions into and out of the atmosphere are in a non-equilibrium state (i.e. imbalanced).[63] Achieving global net-zero CO_2 emissions requires balancing anthropogenic CO_2 emissions with anthropogenic removals of CO_2 from the atmosphere.[64] This balancing act requires the world's largest carbon polluters to establish a finite carbon dioxide budget that may enter the atmosphere[65] if humanity is to stabilise the CO_2-induced global surface temperature increase that has perpetuated since the dawn of the First Industrial Revolution.[66]

Thus, achieving net-zero necessitates:

I. A radical reduction in sources that produce GHG gases, including fossil fuels and 'dirty' industrial processes;[67] and
II. An increase in geological and biological sinks, which capture excess GHG emissions.[68]

For policymakers targeting the first limb, net-zero can be considered an important *frame of reference* that must be operationalised in social, political, legal and economic spheres.[69] With broad discretion imparted upon states towards moulding their net-zero policy framework, the results have been mixed. Independent scientific analysis conducted by Climate Action

[61] Fankhauser et al (n 3) 15-16.
[62] Ibid 15-16.
[63] Ibid 16.
[64] *The Physical Science Basis IPCC Report* (n 34) 30.
[65] Fankhauser et al (n 3) 15.
[66] *The Physical Science Basis IPCC Report* (n 34) 30.
[67] International Energy Agency, *Net Zero by 2050 A Roadmap for the Global Energy Sector* (October 2021) 117.
[68] Fankhauser et al (n 3) 15-17.
[69] Ibid 15.

Tracker[70] (the 'CAT') has reported that approximately 40 countries,[71] corresponding to only 6% of the global GHG emissions, have defined their net-zero targets in an 'acceptable manner'[72] based on their 'scope, architecture and transparency.'[73] In contrast, nations such as China and Australia have adopted net-zero targets that are 'poor'[74] by failing to provide necessary details on the abovementioned assessment parameters. As a result, approximately 73% of global GHG emissions are covered by net-zero targets with an 'inadequate target design'[75] when compared to the CAT's design blueprint. Furthermore, the CAT analysis reiterates that humanity's dependence on oil, coal and gas in the electricity sector has stymied progress toward effective net-zero policies.[76] With the international community unable to agree to 'phase out coal' but only 'phase it down',[77] a fundamental question emerges; which areas of the law can countries invoke to justify implementing novel regulatory mechanisms designed to meet internationally binding climate change commitments?

To transform the net-zero concept into a valuable frame of reference, it must translate into a myriad of 'decarbonisation pathways'[78] that moderate the economic activities of states, companies and other organisations. Naturally, the law serves as an essential mechanism to assist in this translation process. Accordingly, this dissertation explores the intersectionality of trade and environmental policy through an international legal lens, as both spheres become the key enablers of a transition towards a climate-neutral and circular global economy.[79]

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[70] See Climate Action Tracker, *What is CAT* (Web Page) < https://climateactiontracker.org/about/>.
[71] Including the EU and the UK.
[72] *CAT Climate Report* (n 50) 7-9.
[73] Ibid.
[74] Ibid.
[75] Ibid 9.
[76] Ibid iii.
[77] Fiona Harvey, Damian Carrington and Libby Brooks, 'Cop26 ends in climate agreement despite India watering down coal resolution' *The Guardian* (online at 13 November 2021) <https://www.theguardian.com/environment/2021/nov/13/cop26-countries-agree-to-accept-imperfect-climate-agreement>.
[78] Fankhauser et al (n 3) 16.
[79] European Parliament, *A WTO-compatible EU carbon border adjustment mechanism* (European Parliament resolution of 10 March 2021) ('*European Parliament CBAM Proposal Resolution*') 8.

2.2 Environmental Policy vs Trade Policy – a Misconceived Dichotomy?

The relationship between environmental policies with an extraterritorial effect and international trade is regarded as one of the 'most controversial issues' [80] on the contemporary trade policy agenda. This controversy is typically framed as a dichotomy that is perceived to *perpetually* exist between economic progress and environmental policy, which forms a significant obstacle for the net-zero movement.[81] Specifically, three central trade principles are threatened by environmental policies with an extraterritorial effect: market access, non-discrimination and subsidisation.[82] In the legal sphere, this has translated into a haze of uncertainty shrouding the lawfulness of unilateral trade policies directed toward mitigating global environmental concerns. Frustratingly, international trade law, as developed through the jurisprudence of the WTO and in particular, the GATT, has failed to resolve the debate in unequivocal terms (see **Chapter 2.4**).

In an attempt to de-mystify the relationship, a collaborative report between the WTO and United Nations Environment Programme (the 'UNEP') titled '*Trade and Trade and Climate Change*'[83] (the 'Report') sought to demonstrate to national policymakers how trade and climate policies can interact to become 'mutually supportive.'[84] The findings of the Report are critical as authoritative sources of international environmental law, including the UNFCCC and the Kyoto Protocol,[85] make no reference to specific trade measures that are permissible to combat the

[80] Michael J Trebilcock and Joel Trachtman, *Advanced Introduction to International Trade Law* (Edward Elgar Publishing, 2nd ed, 2020) 186.
[81] Jeremy Rifkin, *The Third Industrial Revolution: How lateral power is transforming energy, the economy and the world* (Palgrave Macmillan, 1st ed, 2011) Chapter III – Turning Theory into Practice, 148.
[82] Krista Nadakavukaren Schefer and Pablo Arnaiz, *Duty to protect, climate change and trade*; in Panagiotis Delimatsis (Ed), *Research Handbook on Climate Change and Trade Law* (Edward Elgar Publishing, 2016) 68-70.
[83] United Nations Environment Programme and the World Trade Organisation, *Trade and Climate Change* (WTO Publications, 2009) ('*Trade and Climate Change*').
[84] Ibid v.
[85] *Kyoto Protocol* (n 14).

climate crisis.[86] However, national policies addressing negative environmental externalities are inextricably linked to trade-related policies and rules in practice. These include:[87]

I. Domestic border measures that account for inadequate or non-existent GHG charges on imported goods; [88]

II. Product standards and labelling requirements;[89] and

III. The subsidisation of clean technologies.[90]

With limited financial and technical means, developing countries make a passionate plea against the use of such measures due to the disproportionate impact they tend to have on their economic development. [91] In pursuing this line of argument, the narrative of incompatibility between environmental policy and trade policy is repeatedly asserted as an underlying axiom of modern economics.

2.2.1 Dissecting the Dichotomy

The dichotomy between economic progress, trade policy, and environmental policy is historically grounded. Renowned economic theorist Jeremy Rifkin outlines how the great economic revolutions of human civilisation occur when novel communication technologies converge with new energy regimes and transportation systems.[92] The coal-powered First Industrial Revolution of the 19th century and the oil-dependent Second Industrial Revolution in the 20th century spawned an unprecedented era of international trade in human history.[93] Driving the industrial economic engine was inevitably at the expense of the natural

[86] Thomas Cottier and Tetyana Payosova, *Common concern and the legitimacy of the WTO in dealing with climate change*; in Panagiotis Delimatsis (Ed), *Research Handbook on Climate Change and Trade Law* (Edward Elgar Publishing, 2016) 25.
[87] Ibid 9.
[88] Schefer and Arnaiz, (n 82) 68-70.
[89] Ibid.
[90] Ibid.
[91] Trebilcock and Trachtman (n 80) 194-195.
[92] Rifkin (n 81) see Introduction.
[93] Ibid 117.

environment, as the 'locus of control'[94] over energy production and distribution lay with centralised fossil fuel energy companies.[95] However, advances in technology, digitalisation and the increasing international imperative to mitigate the drivers of climate change have ushered in the 'Third Industrial Revolution' (the 'TIR'). In the TIR, the convergence of a communications internet, a renewable energy internet and a driverless transport internet are predicted to transform the global economy into one that is circular and green by the second half of the 21st century.[96] In the TIR, the existing energy landscape is radically transformed to power the global economic engine through renewable sources of energy (including wind, solar, geothermal, and hydrogen). In addition, it can store excess electrical energy with advanced technologies such as batteries, capacitors and super-capacitors.[97] In this period of significant socio-economic change, the dichotomy between economic progress and environmental policy makes little sense. The EU stands as one exemplar of embracing Rifkin's five-pillar TIR infrastructure strategy through various initiatives, including the adoption of 'An Open, Sustainable and Assertive Trade Policy.'[98] In doing so, the institutions of the EU have reinforced the centrality of international trade and trade policy when transitioning towards a 'climate-neutral, resource-efficient [and] circular global economy.'[99]

The inertia towards embracing transformative climate-trade policies for developing countries may partly stem from the fact that their economies remain, for the most part, powered by the architecture and energy sources of the First and Second Industrial Revolutions. In this economic climate, the objectives of trade and environmental policies are pulled in opposing directions.

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[94] Ibid, see Chapter 4: Distributed Capitalism.
[95] Ibid.
[96] Ibid, see Chapter 9: Morphing from the Industrial to the Collaborative Era.
[97] Jeffrey Y. Tsao et al, 'The electrification of energy: Long-term trends and opportunities' (2018) 5 *MRS Energy & Sustainability* 1, 1-5.
[98] European Commission, *Trade Policy Review - An Open, Sustainable and Assertive Trade Policy* (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 18 February 2021) ('*An Open, Sustainable and Assertive Trade Policy*') <https://trade.ec.europa.eu/doclib/docs/2021/february/tradoc_159438.pdf>.
[99] *European Parliament CBAM Proposal Resolution* (n 79) 8.

However, trade and environmental policies become increasingly complementary as the global economy transitions into TIR, causing the rigid dichotomy to naturally disintegrate. To accelerate this process, contemporary principles of international environmental law and international trade law must conceptualise how trade and climate policies can interact to become mutually supportive in the TIR.[100]

2.2.2 International Environmental Law – An Enabler of Unilateral Environmental Trade Policy

The principles of international environmental law, when moderated through the prism of international trade law, provide sovereign states with the legal ammunition required to address the urgency of the climate crisis and unilaterally implement trade-based climate change reduction measures.[101] Embarking on such a path, however, remains highly controversial.[102]

One legal basis stems from the cross-border nature of environmental harms resulting in negative externalities beyond a state's geographical jurisdiction.[103] As stated in Principle 21 of the Stockholm Declaration,[104] which has international customary law status,[105] states have the 'sovereign right to exploit their own resources pursuant to their own environmental policies'[106] but also the 'responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other [s]tates or areas beyond the limits of national jurisdiction.' [107] The UNFCCC and the Paris Agreement explicitly recognise the climate crisis as a global common concern for humankind in relation to the latter responsibility.[108] This characterisation is appropriate given that GHG emissions are inherently extraterritorial in that

[100] Cottier and Payosova (n 86) 9.
[101] Ibid.
[102] Sands et al (n 4) 206.
[103] Trebilcock and Trachtman (n 80) 186-188.
[104] Stockholm Declaration on the Human Environment, *Report of the United Nations Conference on the Human Environment* (UN Doc.A/CONF.48/14) Principle 21.
[105] *The Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion)* [1996] ICJ Rep 679.
[106] Stockholm Declaration on the Human Environment, in *Report of the United Nations Conference on the Human Environment* (UN Doc.A/CONF.48/14) Principle 21.
[107] Ibid.
[108] *Paris Agreement* (n 45) 1.

they damage interdependent ecosystems and reduce air or water quality in geographical locations far away from the source of pollution.[109]

Furthermore, the natural environment, being a global resource, does not belong to any state. For this reason, the extraterritorial consequences of GHG pollution cannot be refuted on arguments championing absolute and unimpeded state sovereignty.[110] Hence, the duty not to cause transboundary harm, when considered against the backdrop of the emerging principle of global common concern, highlights that unilateral trade-based environmental measures may be necessary given the global divergence in climate policy ambitions. In this light, Article 3(5) of the UNFCCC explicitly permits states to employ unilateral measures to combat climate change, as long as they do not 'do not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.'[111] Clearly, other co-existing obligations under international law moderate the right to unilateral action. However, Article 3(5) of the UNFCCC is not to be confused with imposing an *obligation* on states to act unilaterally to mitigate the climate crisis, as this would be highly controversial.[112]

A second legal basis arises from the principle of Common but Differentiated Responsibilities (the 'CBDR Principle'), which recognises that different states, based on their levels of social and economic development, have different responsibilities with respect to mitigating the effects of climate change.[113] The CBDR Principle seeks to equitably shift the costs and burdens associated with implementing climate-change-related policies within the social, legal and economic spheres of developing and developed counties. Notably, the Paris Agreement speaks

[109] Trebilcock and Trachtman (n 80) 186.
[110] Cottier and Payosova (n 86) 21.
[111] *United Nations Framework Convention on Climate Change*, opened for signature on 4 June 1992, UNTS (entered into force 21 March 1994) art 3(5) ('*UNFCCC Treaty*').
[112] Cottier and Payosova (n 86) 16.
[113] Anastasios Gourgourinis, *Common but differentiated responsibilities in transnational climate change governance and the WTO: A tale of two 'interconnected worlds' or a tale of two 'crossing swords'*; in Panagiotis Delimatsis (Ed), *Research Handbook on Climate Change and Trade Law* (Edward Elgar Publishing, 2016) 33.

of achieving net-zero on the 'basis of equity.'[114] The CBDR Principle is operationalised in several Multilateral Environmental Agreement ('MEA') provisions, such as those contained in the treaty law of the UNFCCC and the Kyoto Protocol.[115] Outside this normative realm, the CBDR Principle forms an important soft law and policy principle guiding the activities of sovereign states.[116] Clearly, the CBDR Principle holds a prominent place in the international laws on climate change. It also forms an important tool used to assess the efficacy of the unilateral trade policies pursuing the objective of a climate-neutral economy, including the EU's CBAM (see **Chapter 2.3**).

The implications of the CBDR Principle upon meeting the specific target dates and temperature trajectories linked to the Paris Agreement and the GCP are the following:[117]

I. Advanced economies must reach net-zero before developing economies to create a useable carbon budget for the latter; and
II. Each economy must devise an appropriate decarbonisation pathway to reach net-zero, considering their comparative advantages and constraints.

In essence, the cross-border nature of environmental harms coupled with the global common concern and the CBDR Principle provides a compelling legal basis for implementing trade-based climate change reduction measures. However, it is conceded that there is some practical difficulty in defining the parameters or precise legal status of the abovementioned principles of international environmental law due to conflicting interpretations based on state practices.[118] Nevertheless, as discussed in **Chapter 2.4**, international trade law moderates the legal

[114] *Paris Agreement* (n 45) art 4.
[115] *UNFCCC Treaty* (n 111) art 3; *Kyoto Protocol* (n 14) art 10.
[116] Gourgourinis (n 113) 37.
[117] Fankhauser et al (n 3) 18.
[118] Sands et al (n 4) 197-201.

ammunition provided by international environmental law, reinforcing how domestic environmental policies incorporating net-zero targets can also be designed as trade-friendly.[119]

2.3 The EU Carbon Border Adjustment Mechanism

In response to the urgency of the climate crisis compounding in a negative synergy with biodiversity loss and environmental degradation, the EU Commission implemented a new economic growth strategy touted as the 'European Green Deal' (the 'EGD') (2021).[120] The primary objective of the EGD is to ensure that the bloc can transition towards a climate-neutral and environmentally sustainable economy by 2050.[121] Notably, the EGD's climate neutrality (i.e. net-zero) objective is legally binding.[122] In its race towards net-zero, the EU seeks to reduce its 'GHG footprint'[123] by a minimum of 55% compared to emission levels in 1990 by 2030.[124] This shorter-term objective aligns with the bloc's commitments under the Paris Agreement, which are internationally binding under the UNFCCC.[125] In 2020, the European Commission adopted the 'Fit for 55' package, encompassing a comprehensive set of policy proposals designed to meet the EU's legal obligations,[126] including a CBAM with extraterritorial implications.[127] The proposed CBAM has attracted significant global attention as it would be the first of its kind to move beyond academic conjecture once fully operational.[128]

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[119] Schefer and Arnaiz, (n 82) 68-70.
[120] *An Open, Sustainable and Assertive Trade Policy* (n 98).
[121] European Commission, *A European Green Deal* (Web Page) <https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en#relatedlinks>.
[122] *Parliament and Council Regulation EU 2021/1119 of 30 June 2021 on Establishing the Framework for achieving Climate Neutrality and Amending Regulation (EU) 2018/1999 ('European Climate Law')* OJ L 243,1.
[123] Per Recital 17 of the *CBAM Regulation Proposal* 'The GHG emissions to be regulated by the CBAM should correspond to those GHG emissions covered by Annex I to the EU ETS in Directive 2003/87/EC, namely carbon dioxide ('CO_2') as well as, where relevant, nitrous oxide ('N_2O') and perfluorocarbons ('PFCs').
[124] *An Open, Sustainable and Assertive Trade Policy* (n 98) 1-3.
[125] *CBAM Regulation Proposal* (n 25) 1.
[126] European Commission, '*Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality* (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 14 July 2021) 1-6.
[127] *CBAM Regulation Proposal* (n 25) 1.
[128] Kateryna Holzer and Nashina Shariff, 'The inclusion of border carbon adjustments in preferential trade agreements: Policy implications' (2012) 6(3) *Carbon & Climate Law Review* 246,248; Clifford Chance, *10 QUESTIONS ON THE PROPOSED CARBON BORDER ADJUSTMENT MECHANISM* (Web Page, July 2021) <https://www.cliffordchance.com/content/dam/cliffordchance/briefings/2021/07/10-questions-on-the-proposed-carbon-border-adjustment-mechanism.pdf>.

The objectives of the CBAM are multifaceted. Firstly, the CBAM seeks to reduce the bloc's territorial carbon footprint, which is grossly underestimated in failing to account for the GHG emissions associated with its international trade activities.[129] In quantitative terms, the ratio of imported-to-exported emissions in the EU was approximately 3:1 (1,317 billion tonnes of CO_2 imported and 424 million tonnes exported).[130] Suppose the proportion of imported emissions resulting from the EU's international trading activities is to decrease. In that case, the CBAM must target the 'harder-to-treat' sectors, including construction, agriculture, aviation, and mining, through a *price signal* that drives innovation and a willingness to adopt net-zero carbon technologies and infrastructure.[131] Additionally, the CBAM seeks to address the risks associated with carbon leakage, stimulate domestic and foreign investments in 'low or zero-carbon technologies' and equalise the carbon pricing for domestic production and imported goods.[132] Two concepts require further explanation, namely, what constitutes a 'border adjustment mechanism' (also referred to as a Border Tax Adjustment) and 'carbon leakage.'

2.3.1 Border Tax Adjustments

The CBAM, being a 'border adjustment mechanism', is an example of a Border Tax Adjustment ('BTA'). According to the definition provided by the 1970 GATT Working Party on Border Tax Adjustments, BTAs are fiscal measures imposed on goods in the country (or customs union) of consumption at the point of import or export.[133]

[129] *European Parliament CBAM Proposal Resolution* (n 79) 2.
[130] Paola Fezzigna, Simone Borghesi and Dario Caro, 'Revising Emission Responsibilities through Consumption-Based Accounting: A European and Post-Brexit Perspective' (2019) 11(2) *Sustainability* 488, 497-498.
[131] Fankhauser et al (n 3) 17.
[132] *CBAM Regulation Proposal* (n 25) 47.
[133] *1970 report of the GATT Working Party on Border Tax Adjustments*, GATT Doc L/3464 (20 November 1970) [4].

A BTA may consist of a domestic tax that is:

I. Imposed on imported products that correspond to a tax placed on similar domestic products (i.e. an import BTA); or
II. Refunded when the domestic products are exported (i.e. an export BTA).[134]

The CBAM is an example of an import BTA, which recognises that the price of carbon pollution between countries varies from negligible to non-existent compared to the price imposed under EU regulations.[135] Thus, the CBAM seeks to 'level the playing field' by addressing the inherent asymmetries in competitiveness resulting from a divergence in regulatory approaches and pricing mechanisms between trading partners.[136] Without an adjustment mechanism, domestic sectors in the EU under proposed reforms would be heavily taxed for their GHG emissions compared to foreign producers operating in third countries. In theory, an import BTA targeting these untaxed goods ensures that they are 'trade-neutral'[137] whilst encouraging domestic and foreign industries to pursue more ambitious GHG emission reduction strategies.[138]

2.3.2 Carbon Leakage

A core objective of the CBAM is to prevent the phenomenon of carbon leakage, particularly in relation to energy-intensive industries.[139] Carbon leakage occurs when industries relocate or transfer their polluting production processes to countries with weaker environmental policies and regulations[140] or when cheaper and more carbon-intensive imports replace domestic products.[141] A divergence in climate ambition in the global arena places the EU's EGD at real

[134] *Trade and Climate Change* (n 83) 100.
[135] Ibid 99.
[136] Ibid 100-101.
[137] Ibid 100.
[138] Erich Vranes, *Carbon taxes, PPMs and the GATT*; in Panagiotis Delimatsis (Ed), *Research Handbook on Climate Change and Trade Law* (Edward Elgar Publishing, 2016) 78.
[139] *Trade and Climate Change* (n 83) 94.
[140] Ibid 99.
[141] European Commission, *Carbon Border Adjustment Mechanism* (14 July 2021) <https://data.europa.eu/doi/10.2778/584899>.

risk of failure without a mechanism to eliminate the competitive advantages associated with carbon leakage to carbon haven countries.[142] By placing environmental taxes on 'dirty imports',[143] the EU is equipped to respond to consumers' preference for cheaper products.[144] Several studies have attempted to quantify the effects of carbon leakage in real terms, however, their results vary significantly.[145] Despite this variation, evidence from an OECD study suggests that BTAs such as the CBAM, when designed by a coalition of countries, *can* reduce carbon leakage associated with losses in international trade competitiveness.[146]

In addition, the CBAM may produce beneficial 'indirect effects'[147] if the fiscal revenues generated from the measure are invested in the low emissions technologies it purports to support or if the policy provides a means to 'enhance emission-reducing changes'[148] in investment and consumption patterns through the passage of time.[149]

At present, the EU-ETS[150] is an existing mechanism designed to address the risks associated with carbon leakage through the free allocation of EU-ETS allowances and other supporting financial measures for domestic industries impacted by the regulation.[151] A significant disadvantage of the free allowance system under the EU-ETS is that it weakens the price signal on the polluting effects of carbon and discourages sectors targeted by the EU-ETS from investing in technologies that accelerate the abatement of GHG emissions.[152] The proposed CBAM addresses carbon leakage differently by placing an equivalent carbon price for imports

[142] *Trade and Climate Change* (n 83) 99.
[143] Schefer and Arnaiz, (n 82) 69.
[144] Ibid.
[145] Holzer and Shariff (n 128) 249.
[146] See Jean-Marc Burniaux, Jean Chateau and Romain Duval, 'Is there a case for carbon-based border tax adjustment? An applied general equilibrium analysis' (2013) 45(16) *Applied Economics* 2231.
[147] *Trade and Climate Change* (n 83) 95.
[148] Ibid.
[149] Ibid.
[150] *Parliament and Council Directive 2003/87/EC* (n 27).
[151] *CBAM Regulation Proposal* (n 25) recital 10.
[152] Ibid.

and domestic products and commodities subject to the EU-ETS.[153] Initially, the CBAM will apply to specific goods imported into the customs territory of the EU from third countries that are 'most at risk'[154] of carbon leakage. The CBAM would exempt imported goods from third countries subject to or linked to the EU-ETS.[155] The goods deemed 'most at risk' of carbon leakage include cement, iron & steel, aluminium, fertiliser and electricity.[156]

The CBAM in targeting the 'embedded emissions' contrasts with the EU-ETS, which applies to specific production processes and activities contributing to the climate crisis.[157] The free allowances granted to domestic EU industries under the EU-ETS for sectors covered by the CBAM will be progressively phased out whilst the CBAM measure is phased in. As a result, the EU measures would accord 'no more favourable treatment for Union goods compared to goods imported into the customs territory of the Union.'[158] Eventually, the CBAM will consist of a regulatory system that applies a carbon price to imported goods equivalent to one that would have been incurred under a reformed EU-ETS without free allowances.[159] **Chapter 3.1** provides a detailed explanation of the operation of the CBAM.

To summarise, the CBAM is designed to penalise the 'embedded emissions' contained in products entering the EU in a serious attempt to 'preserve the integrity of the EU's climate ambition.'[160] However, whether such an emphasis is permissible remains critical in assessing the legality of the CBAM under international trade law.

[153] Ibid recital 13.
[154] Ibid recital 14.
[155] Ibid.
[156] Ibid Annex I or II.
[157] Ibid recital 25.
[158] Ibid recital 11.
[159] Ibid recital 13.
[160] Ibid 3.

2.4 Trade-based Climate Change Reduction Measures within the Confines of WTO Law and Jurisprudence

Although a global common concern, climate change has not been at the 'heart of international trade regulation.'[161] This is surprising and somewhat alarming, given that most contemporary strategies toward net-zero employ trade-related policies and tools.[162] Nevertheless, the WTO provides a necessary legal framework for its members to implement their climate policies that can be seen as falling into two streams:[163]

I. A multilateral approach consisting of intense negotiations amongst all the WTO Members on the effectiveness and economic viability of climate-related trade measures; or

II. A unilateral approach, in which a WTO Member (invoking their rights under international trade law and international environmental law) adopts climate-related trade measures.

An MEA outlining when a carbon-tax-related BTA could be legally implemented is preferable. This approach would provide consistency and certainty. It would also prevent aggrieved WTO Members from unilaterally imposing retaliatory measures in the event of a trade dispute.[164] However, the wheels of the multilateral trading system are slow to turn as it can take years for negotiations to blossom into an agreement.[165] Given the urgency of meeting the emission and temperature trajectories linked to the Paris Agreement, the multilateral approach should be pursued in parallel with some scepticism of its ability to produce timely results.

Unilateral measures in the form of a carbon-tax related BTA are not prohibited per se. However, their design must conform to established GATT/WTO principles centred on non-

[161] Cottier and Payosova (n 86) 9.
[162] Ibid 9.
[163] Ibid 22.
[164] Holzer (n 128) 254.
[165] The Doha Round of Negotiations are still ongoing after beginning in 2001.

discrimination, market access and equity, which is a challenging endeavour at the very least. Unfortunately, the interaction of these principles in the environmental context remains somewhat nebulous as no international trade agreement contains detailed provisions on the relationship between trade policy and the environment.[166] At best, the preamble to the Agreement Establishing the World Trade Organisation provides a timid nexus to addressing environmental concerns through trade by referring to:

> '[T]he 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 [the members'] respective needs and concerns at different levels of economic development.'[167]

On one interpretation, this broad-stroke statement heavily qualifies the role of trade policy in meeting the environmental objective of sustainable development by emphasising the 'needs and concerns' of WTO Member States with respect to their economic development. Regrettably, the Panel in the *US – Tuna/Dolphin* disputes adopted an overly literalist and context divorced approach when interpreting the GATT and placed no weight on the concept of sustainable development.[168] The Appellate Body in the *US – Shrimp/Turtle* dispute heavily criticised this approach. It held that the explicit reference to sustainable development 'must add colour, texture and shading to [their] interpretation of the agreements annexed to the WTO Agreement', including the GATT.[169]

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[166] Trebilcock and Trachtman (n 80) 186-190.
[167] *WTO Agreement* (n 16) preamble.
[168] David Sifonios, *Environmental Process and Production Methods (PPMs) in WTO Law* (Springer International Publishing, 2018) 104.
[169] Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Doc WT/DS58/AB/R (adopted 6 November 1998) ('*US Shrimp/Turtle AB Report*') [153].

Under this backdrop, unilateral BTAs targeting the carbon content of their products are likely to be challenged under the GATT. According to the Report, the debate would fixate on:

I. The specific policy mechanisms implemented by governments to mitigate climate change; [170]
II. The concerns over competitiveness, carbon leakage and heightened risk of protectionism; [171] and
III. The perceived legal uncertainties in GATT and WTO provisions about measures regulating production processes (particularly concerning NPR-PPMs).[172]

2.4.1 Non-Product-Related Processes and Production Methods

The academic literature on the legality of measures regulating the NPR-PPMs is prolific and remains to be fully clarified under the WTO dispute settlement system.[173] The urgency of clarifying the legality of NPR-PPMs measures is stressed because they are regarded as one of the most important unilateral policies for differentiating between products according to their 'climate friendliness.'[174] The uncertainty arises from the fact that the GATT places an acute focus on regulating tangible goods and individual products without addressing the legality of PPM measures. Despite this uncertainty, carbon tax-related BTAs intentionally target the non-renewable energy inputs consumed in the production or processing of products.[175] Importantly, these energy inputs may not be physically present in the final product and are classed as NPR-PPMs.[176] By way of contrast, PPM measures that do indeed leave some trace in the final product are referred to as product-related PPMs ('PR-PPMs').[177] An example of the latter would be the

[170] *Trade and Climate Change* (n 83) 103.
[171] Ibid.
[172] Ibid.
[173] Ibid.
[174] Cottier and Payosova (n 86) 26.
[175] Vranes (n 138) 79.
[176] Cottier and Payosova (n 86) 79.
[177] Sifonios (n 168) 4.

use of pesticides in agriculture, which are present in some form and quantity in the final product.[178]

To elaborate on the contentiousness of NPR-PPMs, consider an identical product X produced in countries **A** (i.e. the domestic product) and **B** (i.e. the imported product). It is known that the GHG emissions associated with processing and producing product X in country **A** are lower than in country **B** due to differences in the environmental friendliness of the underlying energy inputs. To clarify beyond doubt, the differences in the NPR-PPMs do not affect the physical characteristics of the final product. The question is whether product X, produced in countries **A** and **B** can still be considered 'like' under circumstances where there are inherent differences in the underlying PPMs that do not leave a trace in the final product.[179]

If the answer is no, then a carbon tax-related BTA such as the CBAM could legally discriminate between the two types of product X given their 'unlike' nature. This outcome supports the legality of trade-based climate policies seeking to distinguish products based on their NPR-PPMs.

If the answer is yes, then the non-discrimination principles in Articles I-III GATT need to be considered. This outcome restricts the scope of trade-based climate policies seeking to distinguish products based on their NPR-PPMs. In this case, unilateral trade measures must be designed to ensure that the imported product is not more heavily affected by domestic regulations when compared to the 'like' domestic product in the internal market.[180]

[178] Ibid.
[179] *Trade and Climate Change* (n 83) 107.
[180] Holzer and Shariff (n 128) 251; Sifonios (n 168) 154.

In designing the CBAM, the EU Commission is seemingly aware of the uncertainty surrounding the characterisation of NPR-PPMs and has opted for targeting the 'embedded'[181] GHG emissions contained within imported goods falling under the regulation.[182] The word 'embedded' seeks to provide the energy inputs with some form of physical presence in the final product. In doing so, product X produced from clean energy inputs in country **A** would be 'embedded' with less GHG emissions when compared to product X produced with fossil-fuel energy inputs in country **B**.

This characterisation seeks to provide the EU with a basis for product differentiation to escape the application of GATT non-discrimination principles. Whether using the word 'embedded' leads to a different legal outcome or is merely semantics disguising the CBAM's NPR-PPM nature is an important facet when assessing its legality under GATT/WTO Law (see **Chapter 3**).

2.4.2 The GATT Principles of Non-Discrimination

The non-discrimination principles contained in the GATT are triggered when comparing the 'likenesses' of domestic and imported products.[183] If the domestic and imported products are found to be 'like', their treatment must conform to the Most-Favoured Nation (MFN) and National Treatment principles.[184] Hence, the broader the definition of what constitutes 'like' products, the larger the scope of the abovementioned non-discrimination principles.

[181] *CBAM Regulation Proposal* (n 25) art 1(1).
[182] Ibid art 3: Importation is defined as the release of goods for free circulation in the EU Internal Market.
[183] *Trade and Climate Change* (n 83) 106.
[184] Ibid.

As to what constitutes 'likeness', the Appellate Body in *EC – Asbestos* analysed the product's shared characteristics, including:[185]

I. The physical properties of the products;[186]

II. The extent to which the products are capable of serving the same or similar end-uses;[187]

III. The extent to which consumers perceive and treat the products as alternatives when satisfying a particular want or demand;[188] and

IV. The international classification of the products for tariff purposes.[189]

The Appellate Body in *EC – Asbestos* stressed that these characteristics were 'simply tools to assist in the task of sorting and examining the relevant evidence'[190] and did not form a closed list of criteria that would determine the legal characterisation of products.[191] For this reason, determining the 'likeness' of products under the GATT needs to be conducted on a case-by-case basis.[192] The jurisprudence of the WTO, however, seemingly suggests otherwise as it is perceived that the WTO panellists, when assessing the 'likeness' of products based on their underlying PPMs with differing environmental impacts, have formed a 'rigid dichotomy' between permissible measures (such as product standards) and those that are prohibited, which are most PPMs.[193] Accordingly**, Chapter 3** is dedicated to exploring the interrelationship between 'likeness' on the one hand and the relevance of NPR-PPM differences on the other.

[185] Appellate Body Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WTO Doc WT/DS135/AB/R (adopted 5 April 2001)('*EC Asbestos AB Report*').
[186] Ibid [101].
[187] Ibid.
[188] Ibid.
[189] Ibid.
[190] Ibid.
[191] Ibid
[192] Ibid; Appellate Body Report, *Japan – Taxes on Alcoholic Beverages*, WTO Doc WT/DS11/AB/R (4 October 1996 adopted 1 November 1996) ('*Japan – Alcoholic Beverages II AB Report*') 21, 26.
[193] Sifonios (n 168) 283.

2.4.3 Introduction to the GATT General Exceptions

The GATT regime plays a central role in balancing the international trade commitments of WTO members on the one hand, with their territorial sovereignty and corresponding rights to pursue other legitimate policy objectives such as climate change on the other.[194] Specifically, Article XX of the GATT provides an escape mechanism for violations of the rules on non-discrimination under tightly circumscribed circumstances. [195] Ideologically, Article XX GATT is the battleground in trade policy; if it is successfully invoked by a WTO member, it will trump any inconsistent trade obligation. The majority view remains that the Article XX GATT mechanism best deals with trade measures directed towards mitigating negative environmental externalities. Thus, when assessing the legality of the CBAM, Articles XX(b), XX(g) and the Article XX chapeau are the most relevant provisions of the GATT. The CBAM may be provisionally justified under Article XX(b) GATT if it is deemed 'necessary to protect human, animal or plant life or health'[196] or under Article XX(g) GATT if it relates to the 'conservation of exhaustible natural resources.'[197]

Additionally, the application of the provisionally justified measure must conform to the chapeau of Article XX (the 'Chapeau') GATT as it cannot constitute an 'arbitrary or unjustified form of discrimination where the same conditions prevail'[198] or a 'disguised restriction on trade.'[199] However, the Chapeau also imposes a duty on the EU to negotiate with WTO Members affected by the CBAM before it can be lawfully implemented under international trade law due to its intrinsic extraterritorial effects.[200] At this juncture, it is essential to highlight that WTO jurisprudence has not definitively answered whether unilateral trade measures in the form of a

[194] Cottier and Payosova (n 86) 28.
[195] *GATT 1994* (n 21) art XX.
[196] Ibid art XX (b).
[197] Ibid art XX (g).
[198] Ibid art XX.
[199] Ibid.
[200] Cottier and Payosova (n 86) 28.

CBAM can eventually be justified under Article XX GATT.[201] Hence any environmental PPM measure with an extraterritorial reach must be analysed in light of various objectives. They include the transboundary nature of environmental externalities, the importance of preserving global common goods and the role of multilateralism in securing trade-based environmental solutions.[202]

[201] *Trade and Climate Change* (n 83) 99.
[202] Sifonios (n 168) 7.

Chapter 3: Analysing the Legality of the CBAM

3.1 The CBAM Regulation

3.1.1 Key Definitions

The European Commission's proposed CBAM regulation[203] (the 'Regulation') defines the following terms to underpin its material scope and operation.[204]

Term	**Definition**
Greenhouse Gases	Greenhouse gases as specified in Annex I in relation to each of the goods listed in that Annex.
Emissions	The release of greenhouse gases into the atmosphere from the production of goods.
Direct Emissions	Emissions from the production processes of goods over which the producer has direct control.
Indirect Emissions	Emissions from the production of electricity, heating and cooling, which are consumed during the production processes of goods.
Embedded Emissions	Direct emissions released during the production of goods, calculated pursuant to the methods set out in Annex III.
Production Processes	The chemical and physical processes carried out to produce goods in an installation.
Actual Emissions	The emissions calculated based on primary data from the production processes of goods.
Installation	A stationary technical unit where a production process is carried out.

[203] *CBAM Regulation Proposal* (n 25).
[204] Ibid art 3.

3.1.2 Material Scope

At its core, the Regulation seeks to prevent the risk of 'carbon leakage'[205] by placing a price on the 'direct' GHG emissions 'embedded'[206] in specific goods that are 'imported'[207] into the EU. The goods targeted by the Regulation are identifiable by their designated classification in the combined nomenclature (CN) codes listed in Annex I.[208] The CBAM is designed to progressively replace the carbon leakage mechanisms established under the EU-ETS by placing an equivalent carbon price between imported products subject to the Regulation and domestic products subject to the EU-ETS. [209]

Specifically, the Regulation will apply to all goods or 'processed products from those goods'[210] listed in Annex I, which include cement, electricity, fertilisers, iron & steel, and aluminium (the 'Annex I Goods') when they originate from a third country and are imported into the EU.[211] The Regulation, however, does not apply to Annex I Goods originating from countries and territories listed in Annex II, Section A,[212] as their production is already subject to the EU-ETS or to a carbon pricing system that is fully integrated with the EU-ETS.[213] In the latter case, the carbon price imposed on foreign producers in the third country must not be distorted by any rebate 'beyond those also applied in the EU ETS'[214] if an importer wishes to remain outside the scope of the Regulation.[215]

[205] Ibid art 1(1).
[206] Ibid.
[207] Ibid art 3: Importation is defined as the release of goods for free circulation in the EU Internal Market.
[208] Ibid recital 25.
[209] Ibid art 31(1): The CBAM certificates that are surrendered in accordance with Article 22 'shall be adjusted to reflect the extent to which EU ETS allowances are allocated free of charge in accordance with Article 10a of Directive 2003/87/EC to installations producing, within the Union, the goods listed in Annex I.'
[210] Ibid art 6(3): It will apply to the "inward processing procedure referred to in Article 256 of Regulation (EU) No 952/2013 of the European Parliament and of the Council.
[211] Ibid art 2(1).
[212] Ibid art 2(3).
[213] Ibid recitals 14, 15; art 2(5)(a).
[214] Ibid art 2(5)(b).
[215] Ibid.

3.1.3 Practical Operation

The Regulation, once fully operational, would grant authorised EU importers the exclusive right to import Annex I Goods into the bloc.[216] An authorised EU importer is referred to as an 'authorised declarant'[217] in the Regulation. As such, an authorised declarant must submit to the competent national authority, by the 31st of May each year, a 'CBAM declaration'[218] for the preceding calendar year.[219] The CBAM declaration must provide evidence of:

I. The total quantity of Annex I Goods that were imported;
II. The total amount of 'embedded emissions';[220] and
III. The total number of CBAM certificates corresponding to the total 'embedded emissions' to be surrendered.

Regarding obligation (II), the authorised declarant must ensure that an accredited person verifies the total amount of 'embedded emissions' stated in the CBAM declaration.[221] If the actual emissions cannot be adequately verified, the number of CBAM certificates to be surrendered by the authorised declarant must be determined using 'default values'[222] prescribed for goods and electricity by Annex III 4.1 and 4.2 of the Regulation respectively.[223] As discussed in **Chapter 3.3.2**, the method by which default values are determined under the Regulation may violate GATT non-discrimination principles.

Regarding obligation (III), the total number of CBAM certificates surrendered by an authorised declarant would be reduced in the event a carbon price was paid in a country of origin outside

[216] Ibid art 4.
[217] Ibid arts 4-5.
[218] Ibid art 6.
[219] Ibid art 6(2).
[220] Which, pursuant to Article 6(2)(b) of the *CBAM Regulation Proposal* (n 25) is to be 'expressed in tonnes of CO2e emissions per megawatt-hour of electricity or for other goods per tonne of CO2e emissions per tonne of each type of goods, calculated in accordance with Article 7 and Annex III.'
[221] Ibid, the verifier is accredited pursuant to Article 18 and based on the verification principles set out in Annex V.
[222] Ibid 7(2).
[223] There is a cascading mechanism used to determine the default values.

the EU or adjusted to reflect the allocation of free EU-ETS allowances to domestic producers in the Regulation's transition period.[224] In these circumstances, the authorised declarant is required to keep records of the documentation relating to the carbon price paid, which must also be certified by an independent person who can demonstrate that the declared 'embedded emissions' were subject to a carbon price in the country of origin of the goods.[225] Given the administrative and practical complexities that may arise from implementing a CBAM, a transitional period will apply for the Regulation, wherein the CBAM will apply as a simplified reporting obligation for importers of Annex I Goods.[226]

3.1.4 Acquisition, Sale and Repurchase of CBAM Certificates

The competent authority of each Member State[227] is responsible for administering the sale, re-purchase and cancellation of CBAM certificates.[228] For each calendar week, the EU Commission will calculate the price of CBAM certificates based on the average closing prices of EU-ETS allowances on the common auction platform.[229] With fluctuations in the carbon price, an authorised declarant may not know the exact quantity of CBAM certificates they are required to surrender in a given calendar year. However, they must ensure that the number of CBAM certificates in their possession corresponds to 'at least 80 per cent of the embedded emissions.' [230] This amount can be determined by referring to calculated default values.[231]

Furthermore, the Regulation implicitly requires an authorised declarant to exercise caution when purchasing their CBAM certificates for any given calendar year. This is because the competent authority of each Member State can only re-purchase up to one-third of the total

[224] Ibid art 6(2)(c).
[225] Ibid art 9(2).
[226] Ibid art 32.
[227] A 'Member State' refers to states that are within the European Union.
[228] *CBAM Regulation Proposal* (n 25) art 20.
[229] Ibid art 21(1).
[230] Ibid art 22(2).
[231] Ibid.

CBAM certificates purchased during the previous calendar year.[232] Excess certificates held by the authorised declarant and are not re-purchased by the competent Member State authority are to be cancelled after two years.[233] In preventing authorised declarants from carrying forward all the unused certificates beyond their two-year validity[234] or from trading the certificates, the Regulation seeks to prevent the market from distorting the price associated with carbon pollution. In doing so, the Regulation postulates that distorting the price on carbon would undermine the effectiveness of the CBAM in meeting the EU's climate objectives whilst simultaneously jeopardising the 'even-handed' treatment afforded to operators from different third countries.[235] Thus, in a delicate balancing act, the Regulation attempts to preserve the legitimacy of the carbon price through weekly auctions on the one hand and the importer's right to leverage some of their costs over the period of validity of the CBAM certificates on the other.[236]

3.1.5 Non-Compliance

An authorised declarant who fails to surrender the number of CBAM certificates corresponding to the emissions embedded in the Annex I Goods imported during the previous calendar year is liable to a penalty. The monetary value of the penalty is identical to the excess emissions penalty set out in Article 16(3) of Directive 2003/87/EC regulating the EU-ETS.[237] Additionally, the authorised declarant may be subject to administrative or criminal sanctions in accordance with a Member State's national rules.[238] The EU Commission would also be empowered to respond to malicious practices that seek to circumvent the Regulation.[239] For example, the EU Commission would discipline importers who replace Annex I Goods (under strict regulatory

[232] Ibid art 23(2).
[233] Ibid art 24.
[234] Ibid recital 44.
[235] Ibid recital 22.
[236] Ibid.
[237] Ibid art 26.
[238] Ibid art 26(5).
[239] Ibid art 27.

obligations) with 'slightly modified products' that do not correspond to the combined nomenclature (CN) codes listed in Annex I but nonetheless belong to a sector included in the scope of the Regulation.[240]

3.2 The WTO Dispute Settlement Body System

The CBAM, in its current permutation, may traverse the fringes of what may be permissible under international trade law. In other words, the circumstances in which a measure targeting the underlying NPR-PPMs may comply with pervasive GATT non-discrimination principles remain to some extent, unsettled.[241] In light of this uncertainty, several WTO Members may take issue with the Regulation and file a complaint to the Dispute Settlement Body (DSB) for purported violations of the GATT.[242] This complaint could be an allegation of discrimination and, therefore, contrary to Articles I – III GATT. An aggrieved WTO Member may also wish to file an Article XXIII(a) 'violation complaint', in which the complainant alleges that the EU has caused 'nullification or impairment' of any benefits accruing to them under the GATT.[243] The terms 'nullification' and 'impairment' can be understood as referring to damages, injuries or loss of benefits in a legalistic sense.

Once the complainant has established a prima facie case of violation, they would benefit from a rebuttable legal presumption to the effect that they *have* suffered 'nullification or impairment' from the legal/regulatory measures implemented by the EU.[244] No respondent in the jurisprudence of the WTO has successfully displaced the rebuttable presumption.[245] The EU

[240] Ibid art 27(2).
[241] Sifonios (n 168) 4.
[242] See generally *CBAM Expert Survey* (n 32).
[243] *GATT 1994* (n 21) art XXIII.
[244] *DSU Agreement* (n 20) art 3(8).
[245] Peter Van den Bossche, Werner Zdouc, *The Law and Policy of the World Trade Organization Text, Cases and Materials* (Cambridge University Press, 4th ed, 2017) 492.

would bear the heavy burden of proving that although they have violated their obligations under the GATT, their actions have not caused the complainant 'nullification or impairment.'[246]

3.3 The Compatibility of the CBAM with Articles II and III GATT

3.3.1 Interpretation of Articles II and III GATT

The National Treatment principle contained in Article III GATT prohibits *de jure* or *de facto* discrimination between foreign and domestic products within the internal market of each WTO Member State.[247] According to the general principle outlined in Article III(1) GATT, WTO Members, when implementing 'internal regulations, laws and taxes' should not apply them in such a manner 'so as to afford protection to domestic production.'[248] Specifically, Article III(2) GATT prohibits direct or indirect fiscal (i.e. tax) discrimination between imported and 'like' domestic products or between imported goods and 'a directly competitive or substitutable product.'[249] Article (III)(4) GATT prohibits regulatory discrimination through 'laws, regulations and requirements'[250] to ensure that imported goods are accorded treatment that is 'no less favourable' than that accorded to 'like' domestic products.[251] In essence, the National Treatment principle formulated in the GATT is a necessary legal tool to discipline non-tariff barriers that advertently or inadvertently distort international trade.[252]

Article II(2)(a) GATT, which concerns tariff concessions and customs duties permits WTO Members the right to impose an import BTA, namely a charge equivalent to an internal tax in respect of the 'like' domestic product or in respect of 'an article from which the imported product has been manufactured or produced in whole or in part.'[253] However, the right to

[246] Ibid.
[247] *GATT 1994* (n 21) art III.
[248] Ibid art III(1).
[249] Ibid art III(2); Annex I art III(2).
[250] Appellate Body Report, *United States – Certain Country of Origin Labelling (COOL) Requirements*, WTO Doc WT/DS384/AB/R / WT/DS386/AB/R (adopted 23 July 2012) [269].
[251] *GATT 1994* (n 21) art III(4).
[252] Sifonios (n 168) 95.
[253] *GATT 1994* (n 21) art II(2)(a).

impose an import BTA is moderated by the preamble to the Addendum Note attached to Article III GATT, which states that any BTA is to be regarded as an 'internal tax' and subject to the provisions of Article III GATT.[254]

In relation to the first legal bases contained in Article II(2)(a) GATT, an import BTA can aim to offset higher production costs faced by domestic EU producers in complying with domestic environmental regulations.[255] The CBAM may fall under Article II(2)(a) GATT by design. It seeks to place an equivalent carbon price between imported products subject to the Regulation and domestic products subject to the EU-ETS.[256]

In relation to the second legal basis contained in Article II(2)(a) GATT, some experts have interpreted the right to impose a BTA on an *article* from which the imported product has been manufactured or produced to restrict its application to inputs that are physically incorporated in some form into the final product.[257] Based on this interpretation, the CBAM, as an import BTA, could not be justified under the second legal bases contained in Article II(2)(a) GATT. This is because the CBAM places a price signal on the 'direct emissions', which in the Regulation target the 'energy sources used in the production processes of goods over which the producer has direct control.'[258] To circumnavigate this interpretation, the CBAM seeks to provide the energy inputs with a form of physical presence in the final product through the adjective 'embedded.' This characterisation, however, may be interpreted as a semantic strategy with no legal implications (see **Chapter 3.3.4**).

[254] Ibid, see the Ad Note attached to Article III.
[255] Schefer and Arnaiz, (n 82) 70.
[256] *CBAM Regulation Proposal* (n 25) art 31(1).
[257] *Trade and Climate Change* (n 83) 103-104.
[258] *CBAM Regulation Proposal* (n 25) art 3(15).

In the GATT *Border Tax Adjustment Report* (the 'BTA Report'),[259] a discussion arose as to whether specific categories of taxes, known as the 'tax occultes' (i.e. hidden taxes), were eligible for adjustment at the border.[260] There was some uncertainty as 'tax occultes' include taxes on inputs that are not physically incorporated in the final product (i.e. NPR-PPMs). Given the design of the CBAM, it may fall into this category of taxes. Ultimately, the BTA Report reached no consensus on whether 'tax occultes' could be adjusted. However, the jurisprudence of the WTO has developed since the BTA Report to emphasise that Article III(2) GATT applies whenever a tax is applied to individual imported goods, irrespective of the motivation for imposing the tax.[261] Given the Appellate Body's broad interpretation of what is considered an internal tax applied indirectly to products, 'tax occultes' such as the CBAM are likely to fall within the scope of Article III(2) GATT. In essence, the first legal basis contained in Article II(2)(a) GATT, when read in conjunction with the case law interpreting Article III(2) GATT, suggests that an import BTA targeting the NPR-PPMs of a particular product is *prima facie* permissible.[262]

Moreover, Article III(4) GATT applies to 'laws, regulations and requirements', which affect the 'internal sale, offering for sale, purchase, transportation, distribution or use of the imported products.'[263] Notably, the word 'affecting' has been interpreted broadly in the jurisprudence of the WTO and covers any measure that has an *effect* on the internal sale of an imported product.[264] Thus, Article III(4) GATT extends to regulations that *only* apply to imported

[259] GATT Working Party, *Border Tax Adjustments* (1970) ('*BTA Report*').
[260] Ibid [15].
[261] See Panel Report, *Argentina – Measures Affecting the Export of Bovine Hides and the Import of Finished Leather,* WTO Doc WT/DS155/R (adopted 16 February 2001) ('*Argentina – Bovine Hides and Leather Panel Report*'); Appellate Body Report, *Canada – Certain Measures Concerning Periodicals*, WTO Doc WT/DS31/AB/R (adopted 30 July 1997) ('*Canada – Periodicals AB Report*'); Panel Report, *United States – Taxes on Petroleum and Certain Imported Substances*, L/6175 (adopted 17 June 1987) ('*US – Superfund Report'*) [3.2.5].
[262] See *Trade and Climate Change* (n 83) 104; US – Superfund *Report* (n 258) [5.2.4], [5.2.10], [5.2.7].
[263] *GATT 1994* (n 21) art III(4).
[264] See Sifonios (n 168) 92 and consider note 32.

products, such as the Regulation.[265] The Regulation underpinning the CBAM affects the internal sale of an imported product as it imposes several obligations on importers of Annex I Goods from third countries, who face criminal and administrative sanctions in the event of non-compliance.[266]

To summarise, if the CBAM is deemed a fiscal measure within the meaning of Article II(a) GATT, its legality will be analysed under Article III(2), which imposes stringent obligations on the WTO Member. If, however, the CBAM is deemed to be a regulatory measure of a non-fiscal nature, it will be scrutinised under Article III(4) GATT, which provides the WTO Member with a greater degree of flexibility when designing the measure. As the CBAM encompasses elements of both a fiscal and regulatory nature, its purported legality is analysed under both GATT provisions in the following sections.

3.3.2 The Scope of National Treatment

National Treatment is premised on a two-stage analysis requiring the WTO adjudicative body (i.e. the Panel or Appellate Body) to determine:

I. Whether the two products are 'like' [Article III(2) GATT first sentence or Article (III)(4) GATT] or 'directly competitive or substitutable' [Article III(2) GATT second sentence]; and

II. Whether the treatment accorded to the products amounts to discrimination against the imported product when compared to the domestic product identified in part I of the analysis.

[265] See generally, Panel Report, *India – Measures Affecting the Automotive Sector*, WTO Doc WT/DS146/R, WT/DS175/R and Corr.1 (adopted 5 April 2002).
[266] See *CBAM Regulation Proposal* (n 25) arts 26-27.

The determination of 'likeness' or direct competitiveness and substitutability has significant consequences. First, it determines the scope of National Treatment. Second, it delineates the regulatory autonomy of a WTO Member that seeks to impose unilateral trade measures with extraterritorial effects.[267] For example, suppose two products are not deemed 'like' or 'directly competitive and substitutable' within the meaning of Article III GATT. In this case, WTO Members are permitted to grant less favourable treatment to the imported product. If, however, the two products are deemed 'like' or 'directly competitive and substitutable' under Article III GATT, in that case, the WTO Member must ensure that there is a level playing field for these products within their internal market and one which remains as such in perpetuity. For a subsequent finding of distortion in the level playing field, there must be a 'genuine relationship between the measure at issue and its adverse impact on competitive opportunities'[268] for the imported product when compared to the domestic product identified in part I of the analysis.

3.3.3 The Concept of Likeness

As discussed in **Chapter 2.4.1**, the GATT regulates tangible goods and individual products without explicitly defining the concept of 'likeness.' This raises questions as to whether differences in the underlying NPR-PPMs can render identical products 'unlike.' The starting point for the analysis lies in dissecting the unadopted WTO Panel Reports of the *US – Tuna/Dolphin* dispute.[269] This case concerned a US import prohibition (i.e. a unilateral measure) on Mexican exporters that caught yellow-fin tuna in a *manner* that harmed dolphins. The Panel categorically rejected the legality of unilateral trade measures that sought to address global environmental concerns due to their extra-jurisdictional scope and implications on

[267] Sifonios (n 168) 97.
[268] Appellate Body Report, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, WTO Doc WT/DS406/AB/R (adopted 24 April 2012) ('*US Cloves AB Report*') [179] and fn 372.
[269] Panel Report, *United States – Restrictions on Imports of Tuna*, DS21/R (3 September 1991, unadopted) ('*US – Tuna/Dolphin I Panel Report*'); Panel Report, *United States – Restrictions on Imports of Tuna*, DS29/R (16 June 1994, unadopted) ('*US – Tuna/Dolphin II Panel Report*').

international trade.[270] Whilst the controversial WTO Panel Reports can no longer be regarded as good law concerning the legality of unilateral trade measures with extraterritorial effects,[271] the decisions continue to cast serious doubt over the compatibility of trade-based environmental measures that distinguish between imported and domestic products based on their NPR-PPMs. Frustratingly, WTO law remains to be fully clarified on this point.[272]

The 1991 Panel infamously held that the US measures were contrary to Article III(4) GATT, which:

> '[C]alls for a comparison of the treatment of imported tuna *as a product* with that of domestic tuna *as a product*. Regulations governing the taking of dolphins incidental to the taking of tuna could not possibly affect tuna as a product.'[273]

Applying this restrictive interpretation of Article III GATT, the US could not grant less favourable treatment to Mexican yellow-fin tuna imports based on differences in the underlying NPR-PPMs. With the NPR-PPMs deemed irrelevant by the Panel for the 'likeness' analysis, the products were held to be 'like' within the meaning of Article III(4) GATT.[274] In hindsight, the Panel was widely criticised for failing to interpret the GATT in line with international customary rules on treaty interpretation, which according to Article 31(1) of the Vienna Convention on the Law of Treaties, requires that:

> '[A] treaty shall be interpreted 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.'[275]

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[270] *US – Tuna/Dolphin I Panel Report* (n 269) [5.26]; [5.32].
[271] Sands et al (n 4) 855.
[272] Ibid.
[273] *US – Tuna/Dolphin I Panel Report* (n 269) [5.15].
[274] Ibid.
[275] *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980) art 31(1).

Instead, the WTO Panels in the *US – Tuna/Dolphin* dispute had adopted a purely 'objective analysis'[276] as to what could constitute 'likeness' under the GATT, which placed a disproportionate weighting on a product's objective features, such as its physical characteristics and tariff classifications.[277] The 1991 Panel, however, upheld labelling requirements that restricted the use of 'Dolphin Safe' labels within the US to those yellow-fin tuna products that were produced in a manner that did not harm dolphins.[278] While the US – Tuna/Dolphin reports technically have no legal status, being unadopted decisions,[279] they nonetheless formed a seemingly 'rigid dichotomy' between permissible measures (such as labelling product standards) and prohibited ones, which are most NPR-PPMs.[280]

In the aftermath of the *US – Tuna/Dolphin* dispute, a significant multilateral institutional change occurred, namely the formation of the WTO and an explicit reference in the Preamble Agreement to the concept of sustainable development (see **Chapter 2.4**). The *US – Shrimp/Turtle* dispute, being factually similar to the *US – Tuna/Dolphin* saga, was an opportunity seized by the Appellate Body to clarify that the explicit reference to sustainable development 'must add colour, texture and shading to [their] interpretation of the agreements annexed to the WTO Agreement', including the GATT.[281] In this light, the Appellate Body rejected the assertion that PPM measures were *ipso facto* prohibited by the GATT because they required the exporting country to adopt environmental policies prescribed by the state imposing unilateral measures.[282]

[276] Sifonios (n 168) 100.
[277] Ibid.
[278] *US – Tuna/Dolphin I Panel Report* (n 269) [5.44].
[279] *Japan – Alcoholic Beverages II AB Report* (n 192) 14-15.
[280] Sifonios (n 168) 283.
[281] *US Shrimp/Turtle AB Report* (n 169) [153].
[282] Sifonios (n 168) 4.

However, the formulation of the unilateral measure in *US – Shrimp/Turtle*, was problematic for non-conformity with other WTO obligations.[283] After a subsequent challenge by Malaysia, the Appellate Body held that the reformed US measure, which unilaterally sought to distinguish products based on regulatory programs that protected sea turtles (i.e. an NPR-PPM), was permissible under GATT/ WTO law. [284] As Sifonios contends, the product-process distinction was implicitly rejected by the Appellate Body.[285] However, it is important to recognise that the US did not argue that the measure was in compliance with the National Treatment principle. Therefore, Article III GATT was never examined. Instead, the analysis concerning the measure's legality was centred on the Article XX GATT general exceptions. Therefore, the *US – Shrimp/Turtle* dispute did not clarify the interrelationship between 'likeness' on the one hand and the relevance of NPR-PPM differences on the other.[286]

This is not to say that the jurisprudence on the interrelationship has not developed. On the contrary, the Appellate Body of the WTO has repeatedly asserted that 'likeness' was a concept that could not be bound by 'one precise and absolute definition' and was inherently dependent on the factual matrix of a particular case and the applicable provisions of the GATT/WTO regime.[287]

[283] Sands et al (n 4) 863.
[284] Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products – Recourse to Article 21.5 of the DSU by Malaysia*, WTO Doc WT/DS58/AB/RW (adopted 21 November 2001) ('*US Shrimp/Turtle Appellate Body Recourse Report*') [187].
[285] Sifonios (n 168) 4.
[286] Ibid 115.
[287] *Japan – Alcoholic Beverages II AB Report* (n 192) 21.

To conceptualise the variability of 'likeness', the Appellate Body in *Japan – Alcohol II* evoked an image of an accordion, one which:

> '[S]tretches and squeezes in different places as different provisions of the WTO Agreement are applied. The width of the accordion in any one of those places must be determined by the particular provision in which the term 'like' is encountered as well as by the context and the circumstances that prevail in any given case to which that provision may apply.'[288]

The Appellate Body held that the 'accordion' of 'likeness' stretches differently when comparing Article III(2) GATT first sentence with Article III(2) GATT second sentence or when comparing each sentence of Article III(2) GATT with Article III(4) GATT. For example, the concept of 'likeness' in Article III(2) GATT first sentence has been narrowly interpreted, given that *any* difference in taxation between a 'like' imported and domestic product can amount to discrimination.[289] In contrast, Article III(2) GATT second sentence, which concerns 'directly competitive and substitutable products' would naturally stretch the accordion of 'likeness' to a greater width. However, the Appellate Body implied that the scope of Article III(2) GATT as a whole and Articles III(4) GATT must be construed similarly to prevent WTO Members from abusing one of the provisions from differing conceptions as to what constitutes 'likeness.'[290]

Moreover, the rigid textual approach adopted by the WTO Panels in the *US – Tuna/Dolphin* dispute was criticised for failing to consider the object and purpose of the GATT, which is to reduce protectionism and protect the competitive relationship between products. Contemporary WTO jurisprudence suggests that an 'economic approach' to determining 'likeness' has

[288] *Japan – Alcoholic Beverages II AB Report* (n 192) 21.
[289] Panel Report, *Japan – Taxes on Alcoholic Beverages*, WTO Doc WT/DS8/R, WT/DS10/ R, WT/DS11/R (adopted 1 November 1996) [6.22].
[290] Sifonios (n 168) 99.

displaced a purely objective analysis (see **Chapter 2.4.2**).[291] In adopting an economic framework to define the concept of 'likeness', a WTO adjudicative body can stretch and squeeze the accordion of 'likeness' on a case-by-case basis.

The general prohibition against domestic protection in Article III GATT imposes a strict obligation for WTO Members to ensure that there is an 'equality of competitive conditions for imported products in relation to domestic products.'[292] Under the contemporary competitive relationship analysis model, it is *theoretically* possible for two identical products produced with differing NPR-PPMs to be deemed as 'unlike' if consumers perceive the products as being in a competitive relationship in the marketplace and treat the products as alternatives.[293] In *EC – Asbestos*, the Appellate Body did not rely on econometric studies or quantitative data to analyse consumer behaviour. Rather, after considering the entirety of the factual matrix and the characteristics that the products shared, the Appellate Body provided their subjective judgment on how consumers would likely respond.[294] In other words, the determination of 'likeness' is primarily a qualitative assessment after examining the relevant evidence.[295]

To summarise, the economic approach has implicit consequences for the interrelationship between 'likeness' and the relevance of differences in NPR-PPMs. With a greater focus on consumer behaviour, two identical products with different PPMs, *in theory*, can be deemed as 'unlike', which would provide greater regulatory autonomy for WTO Members to impose a unilateral trade-based environmental measure. However, it is conceded amongst academic commentators that there may be very few situations where consumer preferences, *in practice*,

[291] Ibid 93.
[292] *Japan – Alcoholic Beverages II AB Report* (n 192) 16; *EC Asbestos AB Report* (n 185) [98].
[293] *EC Asbestos AB Report* (n 185) [101].
[294] Ibid [109]-[113].
[295] Sifonios (n 168) 116.

would distinguish identical products with different PPMs to render them 'unlike' within the meaning of the GATT.[296]

3.3.4 Applying the Concept of Likeness to the CBAM

By applying the economic approach to compare Annex I Goods produced in the EU and in a third country that employs GHG intensive NPR-PPMs, an argument can be made to support the position that differences in the NPR-PPMs can render the goods 'unlike.' This argument is supported by a steady increase in the number of environmentally conscious consumers who are generally concerned with how their consumer habits contribute to their carbon footprint.[297] Therefore, a greater proportion of consumers in the 21st century may perceive the products as being in a competitive relationship in the marketplace and treat the products as alternatives, notwithstanding their identical composition. However, a counter-argument by Sifonios raises an important issue with the preceding position; if market intervention is required in the first place (i.e. through an EU-ETS and CBAM), this suggests that the market does not differentiate the products concerned, causing a market failure to exist.[298] The perceived difficulty in arguing that the products *are* in a competitive relationship that renders them 'unlike' stems from the Regulation targeting goods most at risk of carbon leakage, essentially raw materials. Consumers in this context are construction companies, farmers and product manufacturers operating under tight financial constraints. As price-sensitive consumers, they may not necessarily differentiate between products with different NPR-PPMs and pay a premium price whilst other consumers 'freeride' and purchase the cheaper product.[299]

[296] Ibid 115.
[297] PwC, *December 2021 Global Consumer Insights Pulse Survey* (Web Page) <https://www.pwc.com/gx/en/industries/consumer-markets/consumer-insights-survey.html>.
[298] Sifonios (n 168) 150.
[299] Ibid.

As previously stated, the CBAM, in targeting the 'embedded emissions', attempts to provide the 'energy inputs' a form of physical presence in the final product. This semantic strategy may operate to avoid the applicability of GATT non-discrimination obligations in the event of a trade dispute, potentially through an argument that the products are 'unlike.' However, it is difficult to reconcile the idea that emissions can be embedded in the product when they leave no physical trace in the finished product. A more likely outcome is that the Annex I Goods produced in the EU and in a third country that employs GHG intensive NPR-PPMs may be deemed as 'directly competitive or substitutable' under Article III(2) GATT second sentence, which imposes a less stringent non-discrimination obligation (See **Chapter 3.3.5**).

In conclusion, it is likely that Annex I Goods imported from third countries will be deemed as 'like' or 'directly competitive or substitutable' within the meaning of Article III GATT when compared to the domestic EU product. As such, the design and practical operation of the CBAM must conform to the cornerstone National Treatment principle.

3.3.5 Substantive Issues of the CBAM in Relation to Articles II and III GATT

Proceeding under the assumption that the differences in NPR-PPMs do not render the Annex I Goods produced in the EU and a third country as 'unlike', the issue is whether the treatment accorded imported products under the CBAM amounts to *de jure* or *de facto* discrimination when compared to the domestic product.

De jure discrimination occurs when a measure differentiates between imported and domestic products on the basis of their national origin. GATT/WTO jurisprudence identifies *de jure* discrimination by applying a 'diagonal test', which states that no imported product can be accorded less favourable treatment due to its foreign origin.[300] In other words, there is zero-tolerance for overt discrimination based on nationality. By setting the product scope of the

[300] Ibid 132.

CBAM to mirror the EU-ETS, the Regulation seeks to ensure that imported products are granted treatment that is no less favourable than that accorded to 'like' products of domestic origin.[301] By doing so, the Regulation attempts to protect the competitive relationship between imported and domestic products, as required by Article III GATT.[302]

The controversy of the CBAM lies in that it may discriminate on a *de facto* basis and violate Article III GATT. *De facto* discrimination occurs when a measure implicitly differentiates between imported and domestic products rather than overtly. The CBAM may be characterised as a fiscal measure under Article III(2) GATT first sentence, as it can be interpreted as imposing a pre-determined price (i.e. a tax) on 'like products.' According to the Appellate Body in *Japan–Alcoholic Beverages II*, 'even the smallest amount'[303] of tax discrimination is prohibited under Article III(2) GATT first sentence. This is because imported products must not be subject to an internal tax 'in excess of those applied, directly or indirectly, to 'like' domestic products.'[304] The design of the CBAM may breach this provision as the price of CBAM certificates are calculated weekly by the EU Commission based on the average closing prices of EU-ETS allowances on the common auction platform to minimise administrative complexities.[305] This may lead to minor price variations when compared to the pricing mechanism under the EU-ETS for domestic producers, which is calculated daily. Following a strict interpretation of Article III(2) GATT first sentence, the CBAM may be deemed as inconsistent with the National Treatment principle.

[301] *CBAM Regulation Proposal* (n 25) recital 22.
[302] Panel Report, *United States – Measures Affecting Alcoholic and Malt Beverages*, DS23/R (adopted 19 June 1992) ('*US – Malt Beverages*') [5.6], [5.30].
[302] *CBAM Regulation Proposal* (n 25) recital 22.
[303] *Japan – Alcoholic Beverages II AB Report* (n 192) 23.
[304] *GATT 1994* (n 21) art III(2).
[305] *CBAM Regulation Proposal* (n 25) art 21(1).

This outcome is heavily criticised for two reasons. Firstly, it imposes an extremely burdensome obligation on a state pursuing its environmental policies as no single imported product could ever be taxed at a higher rate without falling foul of Article III(2) GATT first sentence.[306] Secondly, the imposition of a horizontal test for *de jure* discrimination is regarded in the academic literature to contradict the very nature of the WTO, which is a system premised on negative integration. In other words, WTO Members have only committed to a system of non-discrimination and not to harmonise their measures across markets to ensure that all factors of production circulate without any restriction.[307] If alternatively, the CBAM is characterised as a measure under Article III(2) GATT second sentence, there is a greater degree of regulatory freedom for the EU. The 'directly competitive and substitutable' products must only be 'similarly taxed' in a manner that does not afford protection to domestic production.[308] Minor fluctuations between the prices of the CBAM certificates and the carbon pricing mechanism under the EU-ETS would not necessarily violate Article III(2) GATT second sentence.

Lastly, the CBAM may be characterised as a measure under Article III(4) GATT. To identify *de facto* discriminatory treatment under Article (III)(4) GATT in the sense that the imported product has been accorded less favourable treatment, the jurisprudence of GATT/WTO has adopted a 'disparate impacts' test.[309] The disparate impacts test compares the respective proportions of imported and domestic products that are favoured or disfavoured by domestic regulations.[310]

[306] Sifonios (n 168) 133-134, 141-143.
[307] See Petros C Mavroidis, Like *Products: Some Thoughts at the Positive and Normative Level*, in Thomas Cottier and Petros C. Mavroidis (eds), *Regulatory Barriers and the Principle of Non-Discrimination in World Trade Law* (The University of Michigan Press, 2000).
[308] *GATT 1994* (n 21) art III(2). The second sentence is supplemented by the note 'Ad Article III'.
[309] See Appellate Body Report, *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products*, WTO Doc WT/DS400/R, WT/DS401/R (adopted 18 June 2014) ('*EC – Seal Products AB Report*').
[310] Sifonios (n 168) 142.

As stated by the Appellate Body in the *EC – Asbestos*:

> '[A] complaining Member must … establish that the measure accords to the *group*[311] of 'like' imported products 'less favourable treatment' than it accords to the *group*[312] of 'like' domestic products. The term 'less favourable treatment' expresses the general principle, in Article III:1… If there is 'less favourable treatment' of the group of 'like' imported products, there is, conversely, 'protection' of the group of 'like' domestic products. However, a Member may draw distinctions between products which have been found to be 'like', without, for this reason alone, according to the group of 'like' imported products 'less favourable treatment' than that accorded to the group of 'like' domestic products.'[313]

Under Article III(4) GATT, the fundamental question is whether the measure and any accompanying regulatory distinctions distort the conditions of competition to the detriment of the *group* of imported products in the internal market.[314] Notably, the regulatory intentions of the WTO Member in implementing the measure are irrelevant in the examination of whether there was less favourable treatment accorded to the group of imported products.[315]

In *US – Gasoline*, a domestic US regulation imposed cleanliness standards for gasoline sold throughout the country, which required the establishment of baselines as part of the compliance assessment. [316] Domestic entities were permitted to establish individual baselines, whereas foreign entities were required to use statutorily determined baselines due to seemingly incurable

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[311] Emphasis added.
[312] Emphasis added.
[313] *EC Asbestos AB Report* (n 185) [100] (original emphasis).
[314] See *EC – Seal Products AB Report* (n 309) [5.117], which was referred to in the Panel Report, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WTO Doc WT/DS381/R (adopted 13 June 2012) ('*US – Tuna II (Mexico) Panel Report*') [7.479].
[315] Sifonios (n 168) 142.
[316] Panel Report, *United States – Standards for Reformulated and Conventional Gasoline*, WTO Doc WT/DS2/R (adopted 20 May 1996) ('*US – Gasoline Panel Report*'); Appellate Body Report, *United States – Standards for Reformulated and Conventional Gasoline*, WTO Doc WT/DS2/AB/R (adopted 20 May 1996) ('*US – Gasoline AB Report*').

administrative difficulties the EPA would face in verifying the data. As the data from foreign producers were, in practice, not verifiable, the importers were assigned less favourable statutory baselines. [317] The measure was held to violate Article III(4) GATT as the provisions provided less favourable treatment to imported products as a group when compared to the domestic products as a group based on the 'characteristics of the producer and the nature of the data held by it.'[318]

Using the *US – Gasoline* decision as a point of reference, comparing the domestic EU-ETS and the CBAM targeting imports leads to some noticeable differences. Firstly, the Regulation prevents authorised declarants from carrying forward all the unused CBAM certificates beyond their two-year validity,[319] from trading the certificates, or from reselling a quantity greater than one-third of the total CBAM certificates purchased during the previous calendar year to the competent authority of each EU Member State.[320] According to the Regulation, these restrictions are justified as they prevent the CBAM from distorting the price of carbon pollution or undermining the effectiveness of the CBAM in meeting the EU's climate objectives. However, these restrictions are not found in the EU-ETS regulating domestic producers, especially as allowances under this regulatory scheme remain valid throughout its fourth phase till 2030. This may lead to the hoarding of EU-ETS certificates at favourable prices without a countermeasure supporting importers.[321] The CBAM partially addresses this discrepancy by reducing the total number of CBAM certificates surrendered by an authorised declarant to reflect the allocation of free EU-ETS allowances to domestic producers in the transition period, which lasts until the 1st of January 2026.[322] Hence, the differential treatment accorded to

[317] *US – Gasoline Panel Report* (n 316) [2.4].
[318] Ibid [6.11].
[319] *CBAM Regulation Proposal* (n 25) recital 44.
[320] Ibid art 23(2).
[321] Cheon-Kee Le, *EU CBAM: Legal Issues and Implications for Korea* (Korea Institute for International Economic Policy Opinions Paper, 29 September 2021) 5.
[322] *CBAM Regulation Proposal* (n 25) arts 6(2)(C), 36(3).

domestic producers under the EU-ETS between 2026 and 2030 may amount to discrimination within the meaning of Article III(4) GATT.

As discussed in **Chapter 3.1.3**, the total number of CBAM certificates surrendered by an authorised declarant would be reduced in the event a carbon price was paid in the country of origin outside the EU. A second issue arises if an authorised declarant fails to ensure that an accredited person can verify the total 'embedded emissions' stated in the CBAM declaration.[323] This is because the number of CBAM certificates to be surrendered by the authorised declarant is determined using 'default values'[324] prescribed for goods and electricity by Annex III 4.1 and 4.2 of the Regulation, respectively.[325] Specifically, the default values are to be set at the 'average emission intensity of each exporting country'[326] for all Annex I goods except for electricity. In addition, the values are to be increased by a mark-up to account for the administrative burden of calculating the emissions (except for electricity). Whilst this does not point toward discrimination, the issue arises when there is no reliable data for the exporting country. In this scenario, 'default values' would be set as the emissions corresponding to the 'average emission intensity of the 10 per cent *worst-performing*[327] EU installations for that type of good.'[328] A WTO adjudicative body may hold this as differential treatment as the default system is based on an adverse inference principle, which is non-existent under the EU-ETS.[329]

Developing countries with limited financial and technical means will likely be disproportionately impacted by the cascading effect of the default mechanisms. Hence, an obligation for an authorised declarant to possess a quantity of CBAM certificates that

[323] The verifier is accredited pursuant to Article 18 of the CBAM Regulation Proposal (n 25), which is requires one to consider the verification principles set out in Annex V.
[324] Ibid art 7(2).
[325] There is a cascading mechanism used to determine the default values.
[326] *CBAM Regulation Proposal* (n 25) Annex III (4.1).
[327] Emphasis added.
[328] *CBAM Regulation Proposal* (n 25) Annex III (4).
[329] Le (n 321) 5.

correspond to at least 80 per cent of the 'embedded emissions' based on default values,[330] which are calculated by referring to the worst technologies in the EU, may lead to non-trivial price differences between imported and domestic products. This discrepancy can cause downstream producers in the EU internal market to favour EU made goods subject to the EU-ETS compared to imported goods subject to the CBAM from countries with unverifiable exporting data and lead to a finding of less favourable treatment.[331]

Poorly designed measures analogous to the CBAM are likely to breach Article III GATT in some form. This is because the National Treatment principle operates under a very formal yet comprehensive definition of discriminatory treatment in the jurisprudence of the GATT/WTO. Specifically, discrimination within the meaning of Article III GATT requires a measure to have a detrimental impact on competition, which could occur without a WTO Member observing any actual trade effects.[332] In other words, the jurisprudence on National Treatment suggests that the default position under international trade law is unrestricted market access for imported products unless the measure can be justified under the Article XX GATT general exceptions.

3.4 The Compatibility of the CBAM with Article I GATT

3.4.1 Interpretation of Article I GATT

The Most Favoured Nation ('MFN') principle in Article I GATT has been described as pervasive and 'one of the pillars of the WTO trading system.'[333] It prohibits *de jure* or *de facto* discrimination between 'like' products originating from different trading partners.[334] Article I(1) GATT provides that 'any advantage, favour, privilege or immunity'[335] granted by a WTO

[330] *CBAM Regulation Proposal* (n 25) art 22(2).
[331] Le (n 321) 5-6.
[332] *EC – Seal Products AB Report* (n 309) [5.82].
[333] Ibid [5.86].
[334] *Trade and Climate Change* (n 83) 106.
[335] *GATT 1994* (n 21) art I(1).

Member must be automatically, immediately and unconditionally accorded to 'like' products originating in or destined for the territories of all other WTO Member States.[336]

The scope of the MFN principle covers customs duties and charges of any kind. Furthermore, it extends to all matters referred to in Articles III(2) and III(4) of the GATT, namely internal taxes and domestic regulations affecting importation and exportation.[337] Thus, the MFN principle 'protects expectations of equal competitive opportunities for 'like' imported products from all [WTO] Members.'[338] To summarise, *any* advantage granted by the Regulation to *any* product originating in the territory of *any* WTO Member must be accorded without prejudice to all 'like' products originating from all other WTO Member States.[339]

3.4.2 Substantive Issues of the CBAM in Relation to Article I GATT

Proceeding under the assumption that the underlying NPR-PPMs cannot be used to distinguish products, Annex I Goods produced in the EU and a third country would be characterised as 'like' within the meaning of Article I(1) GATT for the reasons outlined in **Chapter 3.3.4.** As a result, the design and operation of the CBAM may be inconsistent with the MFN principle.

Firstly, the CBAM would violate the MFN principle if it were to apply differential treatment to products on a country-specific basis. In this scenario, it would amount to *de jure* discrimination if the Regulation would be more restrictive for 'like' products produced in countries employing carbon-intensive production processes compared to other countries with cleaner production technologies.[340] However, in principle, such forms of *de jure* discrimination may be justified under Article XX GATT. The Regulation, however, is designed to differentiate between imported products on a product-specific basis through their designated classification in the

[336] Ibid.
[337] Vranes (n 138) 97.
[338] *EC – Seal Products AB Report* (n 309) [5.87].
[339] Ibid [5.86].
[340] Vranes (n 138) 97.

combined nomenclature (CN) codes listed in Annex I. In adopting this regulatory approach, the EU may still face allegations of *de facto* discriminatory treatment due to the administrative and practical complexities that arise from implementing a CBAM. Specifically, an importer's obligation to calculate and verify the embedded GHG emissions according to the Regulation may have unintended, geographically disparate effects in developing countries compared to advanced economies. Developing countries may lack the technical expertise to calculate and verify the carbon content of their export products. In pre-empting this issue, the Regulation implements a transition period in which the CBAM applies as a simplified reporting obligation for importers of Annex I Goods.[341] It is paramount that the EU provides support to countries disproportionately impacted by the administrative and technical facets of the Regulation during this transition period. This support would ensure that affected WTO Members can accurately verify the embedded GHG emissions in their products and reap the benefits of transitioning to a low-carbon economy.[342] In such a case, diminished forms of *de facto* discrimination that nonetheless persist after the expiration of the transition period would be easier to justify under Article XX GATT when compared to *de jure* discriminatory measures.[343]

[341] *CBAM Regulation Proposal* (n 25) art 32.
[342] WTO, *Trade and Climate Change Information Brief No.6, WHAT YARDSTICK FOR NET-ZERO? HOW WTO TBT DISCIPLINES CAN CONTRIBUTE TO EFFECTIVE POLICIES ON CARBON EMISSION STANDARDS AND CLIMATE CHANGE MITIGATION* (WTO Publications, 2022) ('*What Yardstick for Net-Zero WTO Information Brief*') 3.
[343] Vranes (n 138) 98.

Secondly, the CBAM may violate the MFN principle when determining what constitutes a 'carbon price' paid in a country of origin outside the EU. The Regulation ostensibly confers selective advantages to comparable regulatory systems in third countries. The Regulation defines a carbon price as:

> '[T]he monetary amount paid in a third country in the form of a tax or emission allowances under a greenhouse gas emissions trading system, calculated on greenhouse gases covered by such a measure and released during the production of goods.'[344]

Evidently, the Regulation permits a pricing adjustment for countries with a similarly designed domestic carbon tax scheme or an emissions trading system. However, it fails to recognise a myriad of other effective policy instruments such as Renewable Portfolio Standards (RPS), Feed-In Tariffs (FITs) or other direct emission regulations, which may have a comparable regulatory effect to the domestic EU-ETS.[345] In the first phase of the *US – Shrimp/Turtle* dispute, a domestic US regulation imposed an embargo on WTO Members who failed to implement what was effectively an identical regulatory program concerning the conservation of sea turtles. The Appellate Body criticised the measure for failing to consider the different conditions which existed in the affected WTO Member States.[346] In this light, the Regulation may be seen as favouring imports from third countries that have adopted the same comprehensive regulatory scheme whilst ignoring the effectiveness of other regulatory instruments in combatting the climate crisis. The EU is advised to engage in serious negotiations with affected WTO Members across the economic and political spectrum to understand how their regulatory schemes contribute to meeting shared environmental policy objectives.

[344] *CBAM Regulation Proposal* (n 25) art 3(23).
[345] Le (n 321) 4.
[346] *US Shrimp/Turtle AB Report* (n 169) [164].

3.5 The Compatibility of the CBAM with Article XI GATT

3.5.1 Interpretation of Article XI GATT

Article XI(1) GATT prohibits WTO Members from instituting or maintaining quantitative restrictions other than duties, taxes or charges on the importation of any product from another contracting state party.[347] A quantitative restriction captures quotas, import licences or 'other measures.'[348] In *Argentina – Measures Affecting the Export of Bovine Hides*,[349] the Panel held that to determine whether a restriction qualifies as an 'other measure', one must turn to the substance of the provision and not to the legal form used or the specific word attributed to the measure.[350] In this light, a quantitative restriction may be *de facto* in nature. The Panel re-asserted that Article XI(1), analogous to Articles I, II and III of the GATT 'protects competitive opportunities of imported products [and] not trade flows.'[351]

3.5.2 Potential Issues of the CBAM in Relation to Article XI GATT

The EU-ETS applies the 'polluter pays' principle and places an overall limit on the volume of GHG emissions that 'installations' can emit in the sectors regulated by the system.[352] However, the EU-ETS allows for the tradability of emission allowances between installations under its 'cap and trade system.'[353] By way of contrast to the EU-ETS, the CBAM does not place an absolute cap on GHG emissions. According to recital 18 of the Regulation, the CBAM 'should not establish quantitative limits to import, so as to ensure that trade flows are not restricted.'[354] As the Regulation does not seek to limit or prevent imports, there are no *de jure* restrictions on trade in a quantitative form. If there are allegations of a *de facto* restriction by a WTO Member,

[347] *GATT 1994* (n 21) art XI(1).
[348] Ibid.
[349] *Argentina – Bovine Hides and Leather Panel Report* (n 261).
[350] Ibid [4.5], [11.15]-[11.21].
[351] Ibid [11.20].
[352] European Commission, *EU Emissions Trading System (EU ETS)* (Web Page) <https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets_en#ecl-inpage-683>.
[353] *CBAM Regulation Proposal* (n 25) recital 18.
[354] Ibid.

an analysis of whether the Regulation jeopardises the competitive opportunities of imported products would require one to place greater weight on the 'actual trade impact of a measure.'[355] In such a case, the complaining party must establish a 'causal link'[356] between the contested aspect of the Regulation and the low level of imports to the EU. This is because trade statistics evidencing a low level of imports do not prove that the measure constitutes a *de facto* quantitative restriction.[357]

On its face, the Regulation is designed in a manner that does not explicitly breach this GATT provision. However, to prevent accusations of the Regulation constituting a *de facto* quantitative restriction on trade, the EU Commission must ensure that the CBAM protects the competitive opportunities of importers through an open, fair and accessible system. This would probably necessitate the extensive involvement of the EU Commission in supporting importers in meeting their underlying obligations well beyond the transition period.[358]

[355] *Argentina – Bovine Hides and Leather Panel Report* (n 261) [11.20].
[356] Ibid [11.21].
[357] Ibid.
[358] *CBAM Regulation Proposal* (n 25) art 35.

3.6 The Compatibility of the CBAM with Article XX GATT General Exceptions

3.6.1 Interpretation of Article XX GATT Exceptions

Suppose the CBAM is found to be inconsistent with the EU's international trade commitments concerning non-discrimination. The measure may still be justified under one or more of the general exceptions contained in Article XX GATT. The EU, as the defending WTO Member, must prove that the measure is both:

I. Provisionally justified under one of the paragraphs of Article XX GATT; and

II. Compliant with the Chapeau of Article XX GATT in that it does not constitute a means of 'arbitrary or unjustifiable discrimination between countries where the same conditions prevail'[359] or a 'disguised restriction on international trade.'[360]

In the jurisprudence of the WTO, environmental measures aimed at protecting animals[361] and clean air[362] have previously been found to be provisionally justified under paragraphs (b) and (g) of Article XX GATT. As such, WTO Members may implement measures 'necessary to protect human, animal or plant life or health'[363] or measures 'relating to the conservation of exhaustible natural resources.'[364] Notably, the legitimacy of the declared policy objective is irrelevant when conducting the analysis under Article XX GATT, which instead focuses on whether the *measure* itself is provisionally justified by one of the general exceptions.[365]

[359] *GATT 1994* (n 21) art XX.
[360] Ibid.
[361] For example, see *US Shrimp/Turtle Appellate Body Recourse Report* (n 284).
[362] For example, see *US – Gasoline AB Report* (n 316).
[363] *GATT 1994* (n 21) art XX(b).
[364] Ibid art XX(g).
[365] *US Shrimp/Turtle Appellate Body Recourse Report* (n 284) [124]-[125].

To determine whether the CBAM is a measure 'necessary' to protect human, animal or plant life or health under Article XX(b) GATT, the WTO adjudicative body must consider the:

I. Contribution of the environmental measure to the stated policy objective(s);[366]
II. The importance of any common interests and values protected by the measure, based on all scientific evidence available;[367] and
III. The impact of the measure on international trade.[368]

As poignantly stated by the UN Secretary-General Antonio Guterres, the IPCC literature is an 'atlas of human suffering.'[369] In light of the deteriorating environmental conditions outlined in **Chapter 2.1**, the argument for implementing trade-based climate change measures becomes increasingly valid. With respect to paragraph (b) of Article XX GATT, the CBAM can be positioned as a 'necessary measure' to protect human beings, animals and plant life from the underlying cause of the climate crisis – anthropogenic GHG emissions. Arguably, there is a clear nexus between the climate change policy goals of the CBAM, which include preventing carbon leakage and meeting the Paris Agreement targets on the one hand, and the measure's design in targeting the GHG emissions embedded in imported products with a high polluting capacity on the other. Given the administrative complexity of implementing the CBAM, it may impact international trade in the shorter term by reducing the volume of Annex I Goods entering the EU. Therefore, the WTO adjudicative body may compare the CBAM to other measures, which are less trade-restrictive but provide an equally effective means to achieve the climate change policy goals of the CBAM. For example, some academics believe the most effective way to design a WTO compatible BTA would be to impose a product-based tax that is set as a

[366] *Trade and Climate Change* (n 83) 108.
[367] Ibid 108; Sifonios (n 168) 159 referring to *EC Asbestos AB Report* (n 185) [178].
[368] *Trade and Climate Change* (n 83) 108.
[369] Jonathan Web, *'An atlas of human suffering' - UN report issues stark warning on climate change* (Web Page, 28 February 2022) <https://eandt.theiet.org/content/articles/2022/02/an-atlas-of-human-suffering-stark-warning-on-climate-change-in-un-report/>.

fixed rate for specified categories of products such as those identified by the CN codes listed in Annex I instead of a product-based tax that varies by reference to the carbon intensity of production processes.[370]

However, the Appellate Body in *Brazil – Retreaded Tyres* recognised that complex transboundary environmental concerns such as climate change might only be addressed through a multiplicity of policy measures. The corresponding effectiveness of measures can only be adequately evaluated through the passage of time.[371] This liberal position provides policymakers with a higher degree of regulatory freedom when shaping their trade measures, which may not necessarily have universal support in the academic literature. To conclude, the CBAM is likely to be provisionally justified under Article XX(b) GATT in light of the deteriorating climate crisis and its corresponding impact on human, animal or plant life or health.

Article XX(g) GATT contains a less stringent 'relating to' test when compared to the 'necessity' test prescribed by Article XX(b) GATT.[372] To determine whether the CBAM is a measure 'relating to' the conservation of an exhaustible natural resource, the defending WTO Member must prove a substantial relationship between the measure and the resource it seeks to conserve.[373] It is generally accepted that air quality and atmospheric conditions qualify as non-renewable natural resources that can be depleted through economic activity.[374] In *US – Gasoline*, it was held that a unilateral measure designed to reduce air pollution resulting from

[370] Joel Trachtman, *WTO Law Constraints on Border Tax Adjustment and Tax Credit Mechanisms to Reduce the Competitiveness Effects of Carbon Taxes* (Resources for the Future Discussion Paper, 2016) 16-03.
[371] Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, WTO Doc WT/DS332/AB/R (adopted 17 December 2007) ('*Brazil – Retreaded Tyres AB Report*') [151].
[372] Sifonios (n 168) 211.
[373] *Trade and Climate Change* (n 83) 108.
[374] Cottier and Payosova (n 86) 28; *US – Gasoline Panel Report* (n 316) [6.37].

the combustion of gasoline was a policy designed to conserve natural resources within the meaning of Article XX(g) GATT.[375]

In the first phase of the *US – Shrimp/Turtle* dispute, the Appellate Body determined whether a US measure prohibiting the importation of shrimp harvested through technologies that would adversely affect sea turtles was provisionally justified under paragraph (g) of Article XX GATT by invoking the principle of sustainable development under international environmental law.[376] This approach was to remedy the Panel's 'flawed and abhorrent'[377] reasoning, which had failed to consider the 'customary rules of interpretation of public international law'[378] – as required by Article 3(2) of the Dispute Settlement Understanding (the 'DSU').[379] The Appellate Body held that Article XX(g) GATT, being part of an international treaty, needed to be read 'in the light of contemporary concerns of the community of nations about the protection and conservation of the environment.'[380] An intertextual interpretation of the GATT was reinforced by the wording of the Preamble of the WTO Agreement, which 'explicitly acknowledges the objective of sustainable development.'[381] By invoking the environmental principles of sustainable development together with those outlined in **Chapter 2.2**, it can be argued that the CBAM is a measure designed to conserve the atmosphere and clean air by reducing the concentration of atmospheric GHGs. A failure to conserve the atmosphere will alter intricate ecological balances and endanger other exhaustible natural resources, including particular plant and animal species, which face extinction due to the climate crisis.

[375] *US – Gasoline Panel Report* (n 316) [6.21].
[376] *US Shrimp/Turtle AB Report* (n 169) [129].
[377] Ibid [112]–[124].
[378] Ibid [114].
[379] *DSU Agreement* (n 20) art 3(2).
[380] *US Shrimp/Turtle AB Report* (n 169) [129].
[381] Ibid.

Additionally, for a measure affecting imports to be justified under Article XX(g) GATT, it must be applied in 'conjunction with restrictions on domestic production or consumption',[382] referred to as the 'even-handedness' requirement. In this regard, the CBAM as a measure affecting imports is in response to a domestic measure, namely, the EU-ETS. The CBAM places an equivalent carbon price for imports when compared to identical domestic products and commodities subject to the EU-ETS.[383] To summarise, the CBAM is more likely to be provisionally justified under Article XX(g) GATT as the pollution of natural resources such as air, water and soil due to the emission of GHGs would undoubtedly meet the less stringent 'relating to' test.

The Chapeau is concerned with *how* a measure is applied instead of its content.[384] Importantly, the burden of proof to justify a measure under the Chapeau lies with the advancing party.[385] The Appellate Body in *US – Gasoline* affirmed that the Chapeau was designed to prevent the abuse of the Article XX GATT exceptions, given their restrictive effects on the flow of international trade.[386] As a result, a delicate balance must be struck between a WTO Member's right to invoke Article XX GATT and their duty to respect their treaty obligations towards other WTO Members.[387]

[382] *US – Gasoline AB Report* (n 316) 20-21.
[383] *CBAM Regulation Proposal* (n 25) recital 13.
[384] Sands et al (n 4) 858.
[385] Ibid.
[386] *US – Gasoline AB Report* (n 316) 22.
[387] *US Shrimp/Turtle AB Report* (n 169) [156].

In the *US – Shrimp/Turtle* dispute, the Appellate Body held that three elements must exist for a measure to violate the Chapeau:[388]

I. The measure must result in discrimination;
II. Which is arbitrary or unjustifiable in character; and
III. Occurs between countries where the same conditions prevail.

To determine whether the CBAM complies with the Chapeau test, the WTO adjudicative body will consider the following 'Chapeau Factors':

I. The coordination activities that are undertaken by the member imposing the unilateral measure at the international level;[389]
II. The flexibility of the measure to consider socio-economic differences between WTO Members;[390]
III. The rationale put forward to justify any discrimination (if any); and[391]
IV. The protectionist nature of the policy.

3.6.2 Substantive Issues of the CBAM in Relation to Article XX GATT Exceptions

Whilst the CBAM is likely to be provisionally justified under Article XX GATT, the CBAM may not be compatible with the Chapeau. WTO adjudicating bodies have since held that the nature and quality of discrimination within the meaning of the Chapeau is different to that in Articles I and III GATT.[392] According to the Panel in the *EC – Asbestos* case, the complaining party could not allege that there was discrimination under the Chapeau based on the less favourable treatment accorded to imports under Article III(4) GATT.[393] Moreover, the

[388] Ibid [150].
[389] *Trade and Climate Change* (n 83) 109.
[390] Ibid.
[391] Ibid.
[392] *US Shrimp/Turtle AB Report* (n 169) [150].
[393] Panel Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WTO Doc WT/DS135/R and Add.1 (adopted 5 April 2001) ('*EC Asbestos Panel Report*') [8.227].

Appellate Body in the *US – Gasoline* report held that the discriminatory nature of the US measure was not merely incidental to its operation but was, in fact, intentional.[394] This suggests that a measure must possess *additional* discriminatory characteristics to conflict with the Chapeau.[395] In the *US – Shrimp/Turtle* dispute, another form of discrimination was identified as inconsistent with the Chapeau. The US government's decision to negotiate international agreements with a selected number of WTO Members that would have otherwise mitigated the trade effects of the unilateral trade measure for all affected WTO Members was a form of discrimination within the meaning of the Chapeau.[396] In light of this jurisprudence, some aspects of the CBAM may be considered as resulting in discrimination within the meaning of the Chapeau, which then requires one to assess the measure against the Chapeau Factors to determine if the discrimination is unjustifiable or arbitrary in nature.

The Chapeau imposes a duty on the EU to negotiate and undertake cooperation activities with WTO Members affected by the CBAM before a unilateral measure with a significant extraterritorial reach can be lawfully adopted and implemented.[397] That is, the EU must make serious good faith efforts to reach a bilateral or multilateral agreement with the affected parties.[398] In the *US – Shrimp/Turtle* dispute, the US government in adopting a more cooperative approach with *some* WTO Members was interpreted by the Appellate Body to amount to a form of unjustified discrimination.[399] This is because the US had failed to engage in 'serious, across-the-board negotiations' that were directed towards concluding bilateral or multilateral agreements for the protection and conservation of sea turtles before enforcing the import prohibition.[400] In failing to negotiate with all affected WTO Members seriously, the measure

[394] *US – Gasoline AB Report* (n 316) 28-29.
[395] Sifonios (n 168) 213.
[396] *US Shrimp/Turtle AB Report* (n 169) [164], [167].
[397] Cottier and Payosova (n 86) 28.
[398] *US Shrimp/Turtle Appellate Body Recourse Report* (n 284) [153].
[399] *US Shrimp/Turtle AB Report* (n 169) [166]; *US Shrimp/Turtle Appellate Body Recourse Report* (n 284) [149].
[400] *US Shrimp/Turtle AB Report* (n 169) [164], [166].

was 'plainly discriminatory and unjustifiable.'[401] In light of this report, the revised regulations permitted shrimp certification from countries with 'comparably effective' regulatory programs to protect sea turtles.

In the second phase of the *US – Shrimp/Turtle* dispute, Malaysia challenged the revised guidelines. Malaysia argued that the Chapeau required the US to negotiate and *conclude* an international agreement on the protection and conservation of sea turtles before imposing a unilateral import prohibition.[402] The Appellate Body rejected this argument and held that the requirement to conduct 'serious, across-the-board negotiations' did not mean an agreement needed to be concluded between the parties, as this would effectively grant a veto right to individual WTO Members.[403] Instead, the Appellate Body held that the Chapeau required negotiation efforts in different trade fora to be comparable. In this regard, the subsequent efforts of the US to negotiate with Malaysia had met the requirements under the Chapeau.[404]

At present, the Regulation reiterates that there *should* be 'dialogue' between the EU Commission and affected third parties to assist the latter in implementing specific elements of the CBAM as well as to establish a means of communication for the parties to propose solutions for issues that may arise during the implementation of the CBAM, particularly during the transition period.[405] The Regulation further reiterates that the EU Commission *should* 'explore possibilities for concluding agreements [with third countries] to consider their carbon pricing mechanism.'[406] On one interpretation, the modal verb 'should' conveys that the EU Commission's commitment to negotiations is an aspiration at best. This language leads one to deduce that the Regulation has failed to recognise that the Chapeau imposes a stringent duty to

[401] Ibid [164], [167].
[402] *US Shrimp/Turtle Appellate Body Recourse Report* (n 284) [115].
[403] Ibid [122]-[124].
[404] Ibid.
[405] *CBAM Regulation Proposal* (n 25) recital 53.
[406] Ibid recital 54.

negotiate under international trade law. In light of this jurisprudence, the EU must understand that they are obligated to do more than *consider* consultation activities with other WTO Members to comply with the Chapeau. Instead, the EU must actively engage in multilateral discussions that discuss strategies and programs that WTO Members can adopt to mitigate the administrative costs and burdens associated with verifying the embedded GHG emissions in goods governed by the Regulation. A failure to do so may be seen as a form of unjustified discrimination.

However, in the second phase of the *US – Shrimp/Turtle* dispute, the Appellate Body reinforced that countries implementing unilateral trade measures for environmental purposes did not need to consider the particular conditions in every affected member before imposing the measure as this would transform into an extremely burdensome obligation.[407] However, what is required is a sufficient degree of flexibility in applying the regulatory scheme where the same conditions prevail or for the conditions prevailing in those exporting countries. In the first phase of the *US – Shrimp/Turtle* dispute, the US measure forced other WTO Members to adopt the same comprehensive regulatory scheme protecting turtles, which was deemed rigid and inflexible for failing to consider the conditions prevailing in those exporting countries.[408] Therefore, flexibility in the operation of the CBAM is critical to its legality under the Chapeau.

As stated in the third Chapeau Factor, the WTO adjudicative body will consider the rationale put forward by the WTO Member to justify any discrimination. In the *Brazil – Retreaded Tyres* and *EC – Seal Products* reports, the Appellate Bodies examined the policy goal of the measure and the rationale advanced by the defending WTO Member to determine if the discrimination was arbitrary or unjustifiable.[409] In the event of a trade dispute, it may be the case that the EU

[407] Sands et al (n 4) 865.
[408] *US Shrimp/Turtle AB Report* (n 169) [164]-[165].
[409] *Brazil – Retreaded Tyres AB Report* (n 371) [225]; *EC – Seal Products AB Report* (n 309) [5.306].

needs to justify why the Regulation permits a pricing adjustment for countries with a similarly designed domestic carbon tax scheme or an emissions trading system but fails to recognise a myriad of other effective policy instruments such as Renewable Portfolio Standards (RPS), Feed-In Tariffs (FITs) or other direct emission regulations, which may have a comparable regulatory effect to the domestic EU-ETS. The international community may see this restriction as an attempt to force all WTO Members to adopt the same comprehensive regulatory regime as the EU.[410]

A counterargument may lie in that if the EU was to recognise all possible mechanisms with a comparable regulatory effect, the administrative complexity associated with doing so would be too burdensome for the EU to regulate and accurately enforce. This counterargument can be distinguished from that raised by the US in *US – Gasoline*. That particular domestic measure required importers to apply statutorily determined baselines in *all* cases due to seemingly incurable administrative difficulties the EPA would face in verifying *any* data provided. Such a hardline rule gave rise to unjustifiable discrimination and amounted to a disguised restriction on international trade.[411]

Lastly, a trade measure or a part thereof may be viewed as a 'disguised restriction on international trade' and inconsistent with the Chapeau. It is recognised that the scope of what constitutes a disguised restriction on international trade has not been clearly defined in the jurisprudence of the WTO.[412] Case law, however, has brought about two precisions to the concept. Firstly, there may be some overlap between what is deemed 'arbitrary or unjustifiable discrimination' and a 'disguised restriction on international trade.' Secondly, the latter

[410] Sifonios (n 168) 216.
[411] *US – Gasoline AB Report* (n 316) 28-29.
[412] *EC Asbestos Panel Report* (n 393) [8.233].

prohibition may be evidenced through an intention to pursue trade-restrictive objectives or objectives beyond the scope of the measure.[413]

More recently, many delegations of WTO Members within the Committee on Trade and Environment ('the CTE') brought forward their concerns with the EU's EGD strategy, particularly with respect to the operation of the CBAM.[414] They expressed concern about the EU's intention to use the revenues generated from the CBAM as a new budgetary source for driving the bloc's economic recovery after the COVID-19 pandemic.[415] The delegations argued that this was evidence for the proposition that the CBAM was not a measure directed to purely environmental objectives but one tied to fiscal and economic objectives that were protectionist in nature.[416]

To defend the integrity of the CBAM as a necessary trade-based climate change measure, the EU must clarify its position on how the CBAM revenues would be allocated. [417] For example, in the *US – Shrimp (Article 21.5)* dispute, the fact that the US had offered technical assistance to exporting countries to develop turtle excluder devices (TEDs) was evidence of the fact that the measure was not applied in a manner that constituted a disguised restriction on international trade.[418] The CBAM's legality under the Chapeau will bolster if it produces beneficial 'indirect effects'[419], namely by channelling the fiscal revenues generated from the measure into technical assistance programs and the low emissions technologies it purports to support.[420]

[413] Sifonios (n 168) 229.
[414] WTO, *Brexit, EU's carbon border adjustment mechanism take centre stage at Market Access Committee* (Web Page, 16 November 2020) <https://www.wto.org/english/news_e/news20_e/mark_16nov20_e.htm>.
[415] Ibid.
[416] Ibid.
[417] Le (n 321) 6.
[418] *US Shrimp/Turtle Panel Recourse Report* (n 10) [5.142].
[419] *Trade and Climate Change* (n 83) 95.
[420] Ibid.

3.7 Miscellaneous Compatibility Issues

3.7.1 A Technical Barrier to International Trade?

The Technical Barriers to Trade Agreement[421] (the 'TBT Agreement') is becoming increasingly relevant under the WTO umbrella when assessing the legality of unilateral environmental measures with complex technical standards.

The TBT Agreement in Annex I defines a technical regulation as a:

> '[D]ocument which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.'[422]

The first sentence refers to technical requirements, whereas the second sentence concerns mandatory labelling requirements imposed by domestic regulations. The explicit reference to 'related processes and production methods' confirms that PPMs are relevant to defining the subject matter of a technical regulation.[423] However, there is extensive debate as to whether the TBT Agreement covers NPR-PPMs that leave no trace in the final product, as successive WTO Appellate Bodies have failed to clarify this issue beyond a reasonable doubt.[424] Despite this uncertainty, the Appellate Body in *EC – Seal Products* held that the TBT Agreement applies when a measure places PPMs with a 'sufficient nexus' with the 'characteristics of a product', which suggests that the nexus need not be physical.[425]

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[421] *Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 1A ('*Agreement on Technical Barriers to Trade'*) ('*TBT Agreement*').
[422] Ibid Annex I: 'Terms and their Definitions for the Purpose of this Agreement'.
[423] *EC – Seal Products AB Report* (n 309) [5.12].
[424] Sifonios (n 168) 255-259.
[425] *EC – Seal Products AB Report* (n 309) [5.12].

Like the GATT, the TBT Agreement is premised on the pervasiveness of the National Treatment and MFN non-discrimination principles to discipline technical regulations.[426] Imported products are to be accorded treatment that is 'no less favourable than that accorded to 'like' products of national origin and to 'like' products originating in any other country.'[427] Moreover, a principle of proportionality is woven into the TBT Agreement as the technical regulations underpinning the CBAM must not be 'more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create.'[428] Unlike the GATT, the environment is explicitly recognised as a 'legitimate objective.'[429] In assessing the environmental risks, the relevant factors to consider, inter alia, are the 'available scientific and technical information, related *processing*[430] technology or intended end-uses of products.'[431] An explicit reference to *processing* technologies confirms that NPR-PPMs are relevant when assessing the environmental risks posed by a product.

In relation to the CBAM, the TBT Agreement is designed to ensure that methods of certifying and quantifying carbon emissions 'do not create an unnecessary obstacle to international trade.'[432] Thus, the mandatory administrative provisions of the CBAM, viz., an obligation for an authorised declarant to calculate the total amount of 'embedded emissions' in accordance with the complex methods outlined in Annex III of the Regulation, could be interpreted as a technical barrier to trade if they become prohibitively difficult to compute. Aligning accounting methodologies on the international plane to decarbonise supply chains is necessary to reach global net-zero emissions. A difference in methodologies across a myriad of regulatory systems

[426] *TBT Agreement* (n 421) art 2.1.
[427] Ibid.
[428] Ibid art 2.2.
[429] Ibid.
[430] Emphasis added.
[431] *TBT Agreement* (n 421) art 2.2.
[432] Ibid.

only creates a 'deficit of credibility and a surplus of confusion'[433] and raises high compliance costs for importers.[434] Therefore, the TBT Agreement strongly encourages the Member States to adopt relevant international standards when developing technical regulations where they exist. By doing so, the TBT Agreement grants a presumption of conformity of the measures with international trade principles in that the measure is not considered to create 'unnecessary obstacles to international trade.'[435]

At present, some international standards do exist and provide guidance on how the carbon footprint of a given product could be calculated.[436] For example, the Greenhouse Gas Protocol establishes comprehensive standards for public and private sector enterprises to measure and report their GHG emissions.[437] This includes an accounting and reporting standard for corporations to assess their GHG emissions impact across the entirety of the value chain.[438] However, in the absence of an international standard, dialogue and cooperation on the regional and international levels are both essential to mitigate trade obstacles arising from technical barriers.[439]

To summarise, a convergence of methodologies for certifying and quantifying carbon emissions is the preferred avenue to mitigate technical trade barriers. This being said, there is no internationalised standard covering all the technical aspects underpinning the CBAM. Nonetheless, the EU, in implementing the world's first CBAM, should strive to become a

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[433] United Nations, *Secretary-General's remarks to the World Leaders Summit - COP 26* (Web Page, 1 November 2021) <https://www.un.org/sg/en/content/sg/statement/2021-11-01/secretary-generals-remarks-the-world-leaders-summit-cop-26-delivered-scroll-down-for-french-version>.
United Nations Secretary General António Guterres stated that 'there is a deficit of credibility and a surplus of confusion over emissions reductions and net-zero targets, with different meanings and different metrics.'
[434] *What Yardstick for Net-Zero WTO Information Brief* (n 342) 5.
[435] *TBT Agreement* (n 421) art 2.5.
[436] *What Yardstick for Net-Zero WTO Information Brief* (n 342) 6-7.
[437] See Greenhouse Gas Protocol, *GHG Protocol Corporate Standard* (Web Page) <https://ghgprotocol.org/corporate-standard>.
[438] See Greenhouse Gas Protocol, *Corporate Value Chain (Scope 3) Standard* (Web Page) <https://ghgprotocol.org/standards/scope-3-standard>.
[439] *What Yardstick for Net-Zero WTO Information Brief* (n 342) 8.

regulatory regime that is premised on internationalised standards to bring much-needed clarity on how to quantify emissions whilst helping producers across the globe integrate into green global value chains.[440]

In this light, the TBT Agreement imposes an obligation on the EU to set up 'enquiry points' so that all information and enquiries from the other WTO Members regarding the nature of the technical regulations, standards and assessment procedures can be clarified.[441] Furthermore, the CBAM's conformity with the TBT Agreement would be more likely if the EU commits to regulatory cooperation with the WTO in the transition period of the Regulation to ensure that international standards relating to carbon emissions quantification can be developed on a sector-by-sector basis in a manner that is equitable for developing economies.[442]

If the EU is to encourage foreign and domestic producers to reduce their carbon footprint, then confidence in the data they collect about the carbon content of Annex I Goods, as they cross borders and move through the supply chain is essential for the effectiveness of the CBAM.[443] The EU's unilateral climate change mitigation efforts will be significantly strengthened and deemed legal under international trade law by adopting this multilateral approach.

3.7.2 Differential Treatment under the Enabling Clause

Notwithstanding the pervasiveness of the MFN principle stated in Article I GATT, the Enabling Clause (1979) permits the Regulation to accord special and differential treatment to developing countries concerning the operation of the CBAM.[444] Differential treatment in this context would evidence the EU's commitment to undertake cooperation activities with WTO Members that are disproportionately affected by the operation of the CBAM. Regulatory assistance would

[440] Ibid 15.
[441] *TBT Agreement* (n 421) art 10.
[442] *What Yardstick for Net-Zero WTO Information Brief* (n 342) 6, 8.
[443] Ibid 9.
[444] *Differential and more favourable treatment reciprocity and fuller participation of developing countries*, WTO Doc WT/ L/4903 (Decision of 28 November 1979) paras 2-3.

ensure that the EU meets its obligations under the CBDR Principle as an advanced economic entity (see **Chapter 2.2.2**). Differential treatment would also promote sustainable development in third countries in an equitable manner that does not create unnecessary difficulties for trade.[445] This approach is consistent with the architecture of the TIR, wherein each economy devises an appropriate decarbonisation pathway to reach net-zero, considering their comparative advantages and constraints.

Forms of differential treatment could vary from an 'across-the-board' discount for authorised declarants purchasing CBAM certificates from disadvantaged developing third countries, an extension to the transition period of the CBAM or through the EU providing special regulatory assistance for developing countries in relevant international or bilateral fora to assist them in meeting the administrative requirements of the Regulation, particularly with respect to calculating the amount of 'embedded emissions' in Annex I Goods. The latter forms of differential treatment are preferable as they do not distort the price paid on carbon pollution and remain consistent with Regulation's core objective of preventing carbon leakage. The EU is urged to initiate these negotiations as developing countries often lack the economic and political power to exercise their rights.

[445] Ibid para 3(a).

Chapter 4: The International Response to the CBAM and its Implications on International Trade

4.1 The CBAM and International Trade

The international response to the CBAM is mixed and largely reflects the economic conditions that separate advanced economies from their developing counterparts. Moreover, economies that are most at *risk* from the CBAM have consistently opposed the implementation of any unilateral trade measures that impede international trade flows.[446] Mapping the relative risks of each country from the CBAM is a complicated analytical exercise. It necessitates a multifactorial analysis that would consider their:[447]

I. Trade relationship with the EU, in particular, their exports to the bloc;

II. Emissions intensity;

III. Emissions reduction targets,

IV. Climate policies; and

V. Institutional capacities to effectively monitor and report GHG emissions.

The second stage of the analysis would determine a country's *vulnerability* to carbon pricing mechanisms. According to Eicke *et al.*, vulnerability is the inability to adapt to meet the Regulation's requirements, such as verifying the 'embedded emissions' of Annex I Goods, shifting trade flows and decarbonising affected sectors and industries.[448]

[446] Committee on Market Access, *MINUTES OF THE COMMITTEE ON MARKET ACCESS 8 JUNE 2020*, WTO Doc G/MA/M/72 (30 October 2020) 28-29 ; Committee on Trade and Environment, *REPORT OF THE MEETING HELD ON 16 AND 20 NOVEMBER 2020*, WTO Doc WT/CTE/M/70 (17 March 2021) 18-21.
[447] Laime Eicke et al, 'Pulling up the carbon ladder? Decarbonization, dependence, and third-country risks from the European carbon border adjustment mechanism' (2021) 80 *Energy Research & Social Science* 102240, 1.
[448] Ibid.

4.1.1 International Support for the CBAM

The United Kingdom (the 'UK') following Brexit, is arguably pursuing the most ambitious set of GHG reduction targets in the 21st century. The UK has enshrined a 2050 net-zero target in law, which is supported by a legally binding obligation for the nation to reduce its GHG emissions by 78% compared to emission levels in 1990 by 2035.[449] In addition, the UK implemented its own 'cap and trade' Emissions Trading Scheme ('ETS') in 2021, covering energy-intensive industries, power generation plants, and the aviation sector to catalyse this transformation.[450] These sectors and industries account for 30 to 40 per cent of UK emissions.[451] Given the UK's climate ambition, its support for the EU CBAM is unsurprising. Notably, the UK's Environmental Audit Committee has launched a public inquiry into the feasibility of a UK CBAM as an alternative means to address the phenomenon of carbon leakage.[452]

The US position concerning the CBAM is generally supportive, as long as the measure remains compatible with WTO rules and does not constitute a barrier to trade.[453] As remarked by President Biden, the US can 'no longer separate trade policy from [its] climate objectives.'[454] In recognising the utility of employing trade-based measures to combat the climate crisis, the Biden Administration will bolster support for the CBAM in the multilateral arena in the coming months and years. Moreover, the US and the EU have committed to aligning and coordinating their respective trade policies to reward clean manufacturing.[455] Specifically, both jurisdictions

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[449] Government of the United Kingdom, *UK enshrines new target in law to slash emissions by 78% by 2035* (Web Page, 20 April 2021) <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>.
[450] *The Greenhouse Gas Emissions Trading Scheme Order 2020* (UK) pts 3- 4.
[451] Frank Muller, Hugh Saddler and Hannah Melville-Rea, *Carbon Border Adjustments What are they and how will they impact Australia?* (The Australia Institute Research Paper, June 2021) ('*Australia Institute CBAM Research Paper*') 11.
[452] Parliament of the United Kingdom, Carbon border adjustment mechanisms (Web Page) <https://committees.parliament.uk/work/1535/carbon-border-adjustment-mechanism/>.
[453] Committee on Market Access (n 446) 29.
[454] Joe Biden, *THE BIDEN PLAN FOR A CLEAN ENERGY REVOLUTION AND ENVIRONMENTAL JUSTICE* (Web Page) <https://joebiden.com/climate-plan/>.
[455] The White House, *New Pro-Climate, Pro-Worker Actions Create Jobs and Harness the Bipartisan Infrastructure Law, Federal Purchasing Power, and Trade Policy* (Web Page, 14 February 2022)

are working in tandem to restrict market access for aluminium and steel products produced through GHG-intensive processes, which are subsequently dumped into their domestic markets.[456]

Whilst Turkey welcomed the EU's efforts to combat climate change, the nation's trade representative stressed that other WTO Members could not pursue the same level of ambition due to 'different levels of capabilities and industrialisation.'[457] Turkey stressed the importance of designing the CBAM to consider, as best as possible, the different 'social and economic conditions and capabilities' of each country to comply with the CBDR Principle adopted by the UNFCCC.[458] As an advanced economy, this may require the EU to take responsibility for producing and diffusing technologies to developing economies to catalyse the transformation of their carbon-intensive industries in the TIR.[459]

4.1.2 International Opposition to the CBAM

In the aftermath of the CBAM announcement, the Russian Federation's position was that the import BTA 'appeared to be inconsistent with WTO rules.'[460] Firstly, the Russian Federation questioned the legality of the EU directing the revenues generated from the CBAM towards the EU Budget. Although problematic under Article XX GATT (see **Chapter 3.6.2**), the EU can quickly clarify its position on how the bloc intends to allocate the revenues. Secondly, the Russian Federation was concerned with whether the EU's hidden objective was to improve the competitiveness of domestic industries under the 'pretext of mitigating [the] consequences of climate change.'[461] This argument would be premised on the CBAM constituting a disguised

< https://www.whitehouse.gov/briefing-room/statements-releases/2022/02/15/fact-sheet-biden-harris-administration-advances-cleaner-industrial-sector-to-reduce-emissions-and-reinvigorate-american-manufacturing/>.
[456] Ibid.
[457] Committee on Trade and Environment (n 446) 20.
[458] Ibid.
[459] Eicke et al (n 447) 3.
[460] Committee on Market Access (n 446) 28.
[461] Ibid.

restriction on international trade in some form. However, it is difficult to analyse this line of argument when canvassed by the Russian Federation in the broadest terms. Lastly, the Russian Federation sought a legal justification of the CBAM with respect to its compatibility with Articles II or III GATT, which the EU has not provided at the time of writing.[462] Providing the legal justification to affected WTO Members would increase the transparency and legitimacy of what has become a complex and politically divisive regulatory proposal.

As a developing economy, India is heavily opposed to the implementation of the CBAM and would likely challenge the measure as a non-WTO compliant.[463] India is primarily concerned with the CBAM acting as a significant trade barrier for its exports to the EU. Initial analysis suggests that Indian iron and steel exports to the EU are the most impacted commodities on a percentage volume.[464] To mitigate some unnecessary administrative complexities and the corresponding impact on international trade flows, the Council of the EU (the 'Council') 'foresees' the final rendition of the CBAM including a minimum threshold, which would exempt importers from their obligations for 'consignments with a value less than €150.'[465] Although a third of consignments entering the EU fall into this category, their aggregate value and quantity represent only a 'negligible' amount of the GHG emissions entering the EU through imported goods.[466]

As the world's largest GHG polluter,[467] China is of genuine interest when analysing the international response to the CBAM. An expert survey conducted by Konrad-Adenauer-Stiftung (the 'Expert Survey') speculates that the CBAM will generally be viewed negatively

[462] Ibid.
[463] Ibid.
[464] Maksym, Chepeliev, 'Possible Implications of the European Carbon Border Adjustment Mechanism for Ukraine and Other EU Trading Partners' (2021) 2(1) *Energy Research Letters* 21527, 4.
[465] Council of the EU (n 26).
[466] Ibid.
[467] 'Not-so-cold comfort: China is surprisingly carbon-efficient—but still the world's biggest emitter', *The Economist*, (Online at 25 May 2019) < https://www.economist.com/graphic-detail/2019/05/25/china-is-surprisingly-carbon-efficient-but-still-the-worlds-biggest-emitter>.

by the Chinese Government and the private sector, being perceived as a tax on goods.[468] However, the prevailing view is that China will not be significantly affected by the CBAM in the long term if its national ETS,[469] implemented in 2021, extends beyond the power generation sector[470] and is deemed an equivalent carbon pricing mechanism under the Regulation.[471] On the other hand, if China does not extend its national ETS to cover all Annex I Goods before the CBAM is scheduled to move beyond a reporting obligation, the EU measure will naturally have a more significant impact on these Chinese exports.

However, there is a possibility that the Chinese ETS may not be deemed an equivalent carbon pricing mechanism under the Regulation. Firstly, unlike the EU-ETS, the Chinese ETS does not operate under a 'cap and trade system', nor does it create a clear incentive for its economy to switch from coal to renewable energy sources.[472] Secondly, the carbon price imposed in China on sectors covered by the Regulation may be considerably lower than that imposed on domestic EU producers under the EU-ETS. Notably, these price differences would still trigger the application of the CBAM to prevent carbon leakage from the EU to China. Non-standardised carbon pricing mechanisms between countries at different stages of the economic development spectrum raise additional concerns. For example, an inherent tension arises when the equivalence in carbon pricing between the EU and China is measured in absolute terms and not on relative terms.

[468] *CBAM Expert Survey* (n 32) 25.
[469] Ibid 26.
[470] Renato Roldao, *Carbon trading the Chinese way* (Web Page, 5 January 2022) < https://www.energymonitor.ai/policy/carbon-markets/carbon-trading-the-chinese-way>.
[471] *CBAM Regulation Proposal* (n 25) art 3(23).
[472] Roldao (n 470).

As noted by a Chinese Chief Representative in the Expert Survey, this may conflict with the CBDR Principle:

> '[I]f the carbon price is €50 in the EU and is €5 in China that could be perceived as problematic for carbon leakage but in the context of the UNFCCC, with common but differentiated responsibilities, the EU will have to interpret what is a fair equivalent price. I don't think it would be fair for Chinese producers to have to pay the full cost that's applicable on carbon emissions in the EU.'[473]

The EU can diffuse this tension to an appreciable extent by actively engaging with China at every stage of the process prior to implementing the Regulation. This would be in the best interests of both parties, given their far-reaching trade relationship and the fact that China remains the bloc's largest trading partner for importing goods into the EU.[474] Moreover, through targeted bilateral discussions at the highest echelons of government, China would be precluded from claiming that the EU did not engage in 'serious across-the-board negotiations' that gave genuine thought to how the CBDR Principle could moderate the concept of 'equivalence' in relation to carbon pricing between the jurisdictions. In essence, transforming the Chinese economy into one that embraces low-carbon technologies will require open dialogue and cooperation with its central government, which will follow its decarbonisation pathway to net-zero with or without EU cooperation.

The preceding analysis is by no means complete for each abovementioned economy. That would require one to map each country's relative risks from the CBAM and their vulnerability to carbon pricing mechanisms.[475] What the analysis provides, however, is an overview of the

[473] *CBAM Expert Survey* (n 32) 27.
[474] European Commission, *China-EU – international trade in goods statistics* (Web Page, February 2022) < https://ec.europa.eu/eurostat/statistics-explained/index.php?title=China-EU_-_international_trade_in_goods_statistics#EU_and_China_in_world_trade_in_goods>.
[475] Eicke et al (n 447) 3.

variation in the international response towards unilateral trade-based climate measures that pursue ambitious climate mitigation policies linked to the Paris Agreement and the GCP. In this light, the Expert Survey predicts that the Russian Federation., India and China may collectively oppose the CBAM and challenge its legality under international trade law.[476]

This being said, Jean-Marie Paugam, the Deputy Director-General of the WTO, recently stated the following in response to the CBAM:

> '[I]t should be clear that nothing in the WTO rules prevents the adoption of such a mechanism by a Member if it does not constitute unjustifiable discrimination or disguised protection.'[477]

In other words, the CBAM, as a unilateral measure, is not incompatible with WTO rules *per se*. Rather, specific elements of the proposal may be incompatible with WTO rules, as analysed in this dissertation in **Chapter 3**. However, the Deputy Director-General reasserted that the most economically and environmentally effective approach would be implementing a multilateral agreement for standardising carbon pricing, given the transboundary nature of climate change.[478] Given the contentious nature of the CBAM, the EU is advised to partake in extensive bilateral and multilateral discussions with its trade partners to clarify the legal position of the Regulation. The EU should then consider implementing a series of concessions after better understanding its trade partners' patterns of exposure and vulnerability that have a 'developing economy' status to avoid a multiplicity of legal conflicts in international trade fora.[479]

[476] *CBAM Expert Survey* (n 32) 26.
[477] Jean-Marie Paugam, *DDG Paugam: WTO rules no barrier to ambitious environmental policies* (Web Page, 16 September 2021)
< https://www.wto.org/english/news_e/news21_e/ddgjp_16sep21_e.htm>.
[478] Ibid.
[479] Eicke et al (n 447) 9.

4.1.3 The Implications on International Trade – Green vs Brown Trading Blocs

The EU CBAM, the first of its kind to move beyond academia, may catalyse a multilateral carbon pricing movement amongst a coalition of like-minded states who have prioritised the mitigation of the climate crisis through trade policy.[480] Coordinated carbon pricing mechanisms in the multilateral sphere may lead to what Nobel-prize winning economist William Nordhaus describes as 'climate clubs' or a Green Trading Bloc ('GTB').[481] Within a GTB, member states ideally would agree to implement harmonised pricing mechanisms to target the GHG footprint associated with its trade activities with non-member states.[482] An essential feature of an effective GTB would require its member states to impose coordinated penalties in the form of harmonised trade sanctions for GHG intensive imports entering the bloc's internal market from third countries that refuse to join.[483] Trade sanctions could take the form of an import BTA, which taxes imports at the GTB's border to an amount equal to the domestic price of carbon (like the CBAM) or through a uniform percentage tariff.[484] The latter, according to Nordhaus, is the preferred approach for its inherent simplicity as the GTB would impose a uniform percentage levy on all GHG-intensive imports from non-participant countries.[485] If this percentage levy were to be formulated by a GTB containing the world's largest polluters, the price signal would become an essential strategic factor for non-member states to consider when acting in their economic self-interest.[486] This is because an exporting country outside the GTB would choose between imposing their own carbon or energy tax and collecting the revenues or

[480] *Australia Institute CBAM Research Paper* (n 451) 16.
[481] William Nordhaus, 'Climate clubs: Overcoming free-riding in international climate policy.' (2015) 105(4) *American Economic Review* 1339, 1341.
[482] Ibid.
[483] Ibid.
[484] Ibid 1348.
[485] Ibid.
[486] Ibid 1341.

risk facing their exports being taxed by their trading partners under the harmonised GTB carbon pricing mechanism.[487]

As Nordhaus recognises, the legality of a GTB under international trade law would require a new MEA to complement existing agreements such as the Kyoto Protocol and legislative reforms to instruments of international trade law annexed to the WTO Agreement.[488] Nevertheless, the core advantage of the GTB is that it is premised on multilateralism and would reduce the likelihood of trade disputes as the size of the trading bloc increases. Assuming the necessary reforms to international trade law treaties are implemented, states wishing to form a GTB would need to: [489]

I. Align their methodologies for certifying and quantifying carbon emissions;
II. Agree upon which decarbonisation policies and regulatory mechanisms qualify as acceptable for the GTB; and
III. Implement a rules-based arbitration system in the event of a dispute, preferably modelled on the WTO's DSU.

Over time, the GTB would radically reshape the international trade landscape. Trade flows would gradually divide between economies within the GTB and those that choose to remain outside the bloc. By default, non-members would form a 'Brown Trading Bloc' ('BTB').[490] In a GTB, goods would be produced through PPMs powered by renewable sources of energy and technologies that are not GHG emissions-intensive. In contrast, goods produced in the BTB would remain powered by the technologies and fuel sources of the First Industrial and Second Industrial Revolutions and taxed accordingly.

[487] *Australia Institute CBAM Research Paper* (n 451) 16.
[488] Nordhaus (n 481) 1341.
[489] Simone Tagliapietra and Guntram B. Wolff, 'Form a climate club: United States, European Union and China' (2021) 591 *Nature* 526, 528.
[490] *CBAM Expert Survey* (n 32) 10.

It is widely recognised that implementing a carbon market may not be technically or politically feasible for all developing economies.[491] With limited financial means, these economies would become disproportionately impacted by a GTB and may face heightened regulatory barriers when attempting to access the sophisticated markets of their advanced counterparts.[492] A GTB, when viewed through the lens of international environmental law, should not undermine the CBDR Principle, which necessitates that advanced economies, which have been historically responsible for the acceleration of anthropogenic climate change, must take on a greater degree of responsibility to mitigate its drivers.[493] It is envisioned that a GTB conscious of the CBDR Principle would allow its members to accord special and differential treatment to developing economies analogous to the WTO Enabling Clause. These concessions would assist developing economies in transforming their economy in line with the TIR architecture and in formulating an appropriate decarbonisation pathway to reach net-zero, considering their comparative advantages and constraints.

4.2 The CBAM and Australia – A Case Study

4.2.1 The Australian Carbon Landscape

The Australian carbon landscape is unnecessarily convoluted and amorphous, a desolate space divided by the politicisation of climate change on the Commonwealth (or Federal) plane. On the one hand, Australia has an abundance of solar, wind and geothermal energy resources, estimated to be 75% greater than the country's combined coal, gas, oil and uranium reserves.[494] It comes as no surprise that the International Renewable Energy Agency (the 'IRENA') regards Australia as having the potential to transform into a renewable energy superpower and develop a comparative advantage based on factors such as technology, relative price, and cost of

[491] Tagliapietra and Wolff (n 489) 528.
[492] *CBAM Expert Survey* (n 32) 10.
[493] Tagliapietra and Wolff (n 489) 527.
[494] International Renewable Energy, *A New World: The Geopolitics of the Energy Transformation* (IRENA Report, 2019) ('*The Geopolitics of the Energy Transformation*') 39.

transport.[495] This transformation would be consistent with diversifying Australia's resource-heavy trade profile and implementing Rifkin's five-pillar TIR infrastructure strategy.[496] On the other hand, the issue of carbon pricing to reduce GHG emissions from 'dirty' industrial processes has become highly politicised and remains deeply bipartisan.[497] This division is contrasted with the political climate of the preceding 10 – 15 years, where both major political parties (the Liberal and Labor parties) supported a domestic carbon pricing mechanism in the form of taxes and through an ETS.[498]

In 2011, the Labor Gillard Government implemented a domestic carbon tax through the *Clean Energy Act 2011* (the 'CEA'),[499] which began on 1 July 2012.[500] Under this regulatory scheme, liable entities were required to pay a fixed charge by surrendering emissions allowance units corresponding to their atmospheric GHG emissions.[501] An emission allowance unit represented one tonne of a carbon dioxide equivalent GHG.[502] The CEA covered 60% of Australia's GHG emissions and applied to approximately 500 liable entities.[503] Notably, Australia's GHG emissions decreased by 1.4% in the second year of the CEA's operation, corresponding to the largest recorded annual decrease in GHG emissions for the previous decade.[504] From July 2015, the CEA would have transitioned to a 'floating price', allowing market forces to determine the price of an emission allowance unit.[505] Despite the CEA's initial effectiveness, the carbon tax faced significant opposition from the public and was a sentiment the opposition Liberal party

[495] Ibid 47.
[496] Rifkin (n 81) see A New Narrative.
[497] *CBAM Expert Survey* (n 32) 19.
[498] Ibid 16.
[499] *Clean Energy Act 2011* (Cth).
[500] Oliver Milman, 'Australia records biggest emissions drop in a decade as carbon tax kicks in', *The Guardian* (online at 24 December 2014) < https://www.theguardian.com/environment/2014/dec/24/australia-records-biggest-emissions-drop-in-a-decade-as-carbon-tax-kicks-in>.
[501] See *Clean Energy Act 2011* (Cth) s 4; pt 3.
[502] Lee Godden, Jacqueline Peel and Jan McDonald, *Environmental Law* (Oxford University Press, 2nd ed, 2019) 432.
[503] Ibid.
[504] Milman (n 500).
[505] Godden, Peel and McDonald (n 502) 432.

capitalised upon during the following election cycle. As a result, the CEA was formally repealed by the Liberal Abbott Government in 2014.[506] In all, the CEA has been described as 'one of the best-designed yet shortest-lived policies for climate change mitigation' in Australia's history.[507]

The CEA was subsequently replaced with an 'Emissions Reduction Fund'[508] (the 'ERF'), a mechanism that continues to provide financial incentives to entities across various sectors that seek to reduce their GHG emissions *voluntarily*.[509] The ERF is complemented by a 'safeguard mechanism', which imposes baselines on installations producing high quantities of GHG emissions, which, if exceeded, must be offset by purchasing credits.[510] The ERF is widely criticised for its limited effectiveness in reducing GHG pollution owing to its voluntary nature. Likewise, the baseline thresholds in the 'safeguard mechanism' are scrutinised as they are regarded as generously high, with a small proportion of companies being materially affected by the mechanism.[511] The ineffectiveness of the Liberal Government's climate policies is statistically evidenced by Australia's ranking amongst the economies with the highest CO_2 emissions per capita.[512] More recently, Australia was ranked 58th in the 2022 Climate Change Performance Index, a global monitoring tool for tracking the climate protection efforts of the 60 countries in addition to the EU.[513] The insurmountable evidence points to the economy's

[506] *Clean Energy Act 2011* (Cth), as repealed by *Clean Energy Legislation (Carbon Tax Repeal) Act 2011* (Cth).
[507] Frank Jotzo, 'Australia's Carbon Price' (2012) 2 *Nature Climate Change* 475, 476.
[508] It is enacted through the *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth), the *Carbon Credits (Carbon Farming Initiative) Regulations 2011*(Cth) and the *Carbon Credits (Carbon Farming Initiative) Rule 2015* (Cth).
[509] Godden, Peel and McDonald (n 502) 433.
[510] *CBAM Expert Survey* (n 32) 16; Godden, Peel and McDonald (n 502) 433-434: 'This mechanism covers facilities with direct emissions of more than 100000 tonnes of carbon dioxide equivalent a year (around 140 businesses or approximately half of Australia's emissions). Covered facilities must ensure their emissions do not exceed their individual 'baseline'—the highest level of reported emissions for a facility over the historical period 2009–10 to 2013–14.'
[511] *CBAM Expert Survey* (n 32) 16.
[512] In 2021, Australia's CO_2 emissions per capita was estimated to be 19.2 tonnes. See Department of Industry, Energy, Science and Resources, *National Greenhouse Gas Inventory Quarterly Update: March 2021* (Web Page, 3 August 2021)
< https://www.industry.gov.au/data-and-publications/national-greenhouse-gas-inventory-quarterly-update-march-2021>.
[513] Jan Burck et al, *Monitoring Climate Mitigation Efforts of 60 Countries plus the EU – covering 92% of the Global Greenhouse Gas Emission* (CCPI Report, 2022) 3, 7.

addiction to fossil fuels for energy and cement production and one that is seemingly impossible to break.

Prior to the 2022 Federal election returning Labor to power, the Commonwealth Government was led by a Liberal-National Coalition (the 'Coalition'). A decade of Coalition rule had gradually transformed Australia into a climate pariah on the international stage, notwithstanding Australia's commitment to net-zero by 2050 during the COP 26 Glasgow Summit.[514] CAT analysis places Australia's net-zero design as 'poor', [515] as it lacks critical details on scope, target architecture, and transparency when measured against predefined net-zero target design elements.[516] The Coalition's mantra was 'technology' to meet the specific target dates and temperature trajectories linked to the Paris Agreement. However, the Coalition's central policy document, the Technology Investment Roadmap, is on some levels and somewhat ironically incognizant of the limits of technology in mitigating human-induced climate change. The range of technologies that Australia purports to implement to reach net-zero by 2050 have not been proven at scale.[517] The Commonwealth's own modelling and analysis confirm that the current technological landscape will only lead to an 85% emissions reduction compared to 2005 levels in 2050 without 'further technology breakthroughs.'[518]

The problem is further exacerbated by the fact that the Coalition remained in strong support of fossil fuel extraction, with no actual policy on phasing out the consumption of coal or gas nor a national plan for transitioning the Australian economy into a renewable energy superpower.[519]

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[514] *CBAM Expert Survey* (n 32) 16.
[515] *CAT Climate Report* (n 50) 10.
[516] Ibid.
[517] Clean Energy Council, *Clean Energy Fact Checker* (Web Page, 2022) < https://www.cleanenergycouncil.org.au/advocacy-initiatives/federal-election-2022/federal-election-clean-energy-fact-checker>.
[518] Department of Industry, Energy, Science and Resources, *AUSTRALIA'S LONG-TERM EMISSIONS REDUCTION PLAN: Modelling and Analysis* (Report) <https://www.industry.gov.au/sites/default/files/November%202021/document/australias-long-term-emissions-reduction-plan-modelling.pdf> 7.
[519] Burck et al (n 513) 21.

After a decade of Coalition rule, the renewable energy transition remains a somewhat nebulous aspiration and inconsistent with Australia's international obligations without substantive policies to support Australia's net-zero commitments.

On the other hand, Australia's states and territory jurisdictions have circumvented much of the politicisation of climate change that persists on the Commonwealth plane. For example, Victoria and South Australia have introduced state-based climate change legislation with ambitious renewable energy and emission reduction targets.[520] As a result of Australia's state-based climate change mitigation policies, renewable energy is growing ten times faster than the global average per capita.[521]

The Coalition's paralysis when responding to the exigencies of the climate crisis was irrational and counterproductive to the renewable energy transformation that is globally underway. Australia's commitment to cut GHG emissions by a mere 26% below 2005 levels by 2030 reflected the Coalition's inertia to modernising climate change and energy policy. Australia's inhibition is magnified when compared to the climate ambition of the EU, which seeks to reduce emissions by a minimum of 55% when compared to emission levels in 1990 by 2030.[522] Given these disparate ambitions in climate change policy, Australia's trade and economic profile is subsequently analysed to understand how it may be affected by the implementation of the CBAM.

4.2.2 Australia's Trade and Economic Profile

Australia's resource-driven economy is complemented by a sophisticated service sector filled with a highly educated workforce.[523] The Department of Foreign Affairs and Trade (the

[520] Godden, Peel and McDonald (n 502) 436-438.
[521] Ibid.
[522] *An Open, Sustainable and Assertive Trade Policy* (n 98) 1-3.
[523] Department of Foreign Affairs and Trade, *About Australia* (Web Page) <https://www.dfat.gov.au/about-australia#economy>.

'DFAT') estimates that one in five Australian jobs is trade-related. [524] According to DFAT, the Australian position on trade focuses on securing open markets for domestic industries.[525] Australia's export industry primarily consists of processing minerals such as iron ore, gold, copper, zinc and aluminium.[526] Australia is also a significant exporter of fossil fuel energy in the form of coal and natural gas.[527] As a result, the Australian economy depends on 'export-oriented and import exposed emissions-intensive industries'[528] and is regarded as one of the most 'emissions-intensive economies of all economically developed countries.'[529] Australia's top export markets are situated in the Asia Pacific region. Currently, China is Australia's largest trading partner and accounts for purchasing approximately 36.7% of all Australian exports.[530] In contrast, no European countries feature in Australia's top export destinations since Brexit. The UK is Australia's fifth-largest market for Australian exports, compromising approximately 4.3% of the total share.[531]

4.2.3 Direct Implications of the CBAM on Australian Exports to the EU

Australia's trade and investment relationship with the EU is asymmetrical. Australian merchandise trade exports with the EU during 2019 – 2020 had compromised 3.1% of the total share,[532] whereas EU exports entering Australia consisted of 15.1% of the total share.[533] Concerning the EU's global merchandise trade relationship, the bloc's principal import sources

[524] Ibid.
[525] Ibid.
[526] Department of Foreign Affairs and Trade, *Australia's goods and services by top 25 exports 2020* (Web Page) ('*DFAT: Australia's Top 25 Export Statistics*')
< https://www.dfat.gov.au/sites/default/files/australias-goods-and-services-by-top-25-exports-2020.pdf>.
[527] Ibid.
[528] *Australia Institute CBAM Research Paper* (n 451) 7.
[529] Ibid.
[530] Department of Foreign Affairs and Trade, *Australia's goods and services by top 15 partners 2020* (Web Page) ('*DFAT: Australia's Top Trading Partners Statistics*')
< https://www.dfat.gov.au/sites/default/files/australias-goods-and-services-by-top-15-partners-2020.pdf>.
[531] Ibid.
[532] Department of Foreign Affairs and Trade, *European Union Country Fact Sheet* (Web Page) <https://www.dfat.gov.au/sites/default/files/eu-cef.pdf>.
[533] Ibid.

in 2019 were China (18.7%), the US (11.9%) and the UK (9.99%), whereas Australia ranked 35th with approximately 0.4% of the share.[534]

Preliminary economic analysis suggests that Australia will be largely unaffected by the CBAM in the shorter term. Only a small proportion of Australian goods falling into the Annex I Goods category are imported into the EU and will compete with domestic EU industries that the EU-ETS covers.[535] Furthermore, Annex I Goods, if exported to the EU, are not exported in large quantities, leading trade experts to conclude that the CBAM will have minimal impact on Australian producers.[536] At present, most of Australia's carbon-intensive exports are destined for Asian markets in China and Japan.[537]

The Clean Energy Regulator (the 'CER'),[538] an independent government body responsible for administering Australian energy and GHG legislation, identified 43 manufacturing processes as 'Emissions-Intensive and Trade Exposed' ('EITE') in Australia.[539] Notably, 83% of alumina and 92% of the aluminium produced in Australia is exported, which make up over half of the EITE exports by value.[540] In addition, economic analysis by the Australia Institute highlights that Australia's three largest aluminium smelters are amongst the most emissions-intensive globally (excluding China), given that electricity is primarily produced by the combustion of coal.[541] Consequently, Australian aluminium exports may be affected by the CBAM and

[534] Ibid.
[535] The Australian Industry Group, *Swings and Roundabouts: the unexpected effects of Carbon Border Adjustments on Australia* (Report, August 2021) < https://www.aigroup.com.au/globalassets/news/reports/2021/carbon_border_adjustments_policy_paper.pdf> 57.
[536] *CBAM Expert Survey* (n 32) 18.
[537] Ibid.
[538] Clean Energy Regulator, *About the Clean Energy Regulator* (Web Page, 13 September 2021) <http://www.cleanenergyregulator.gov.au/About/About-the-Clean-Energy-Regulator>.
[539] See Clean Energy Regulator, *Emissions-intensive trade-exposed published information* (Web Page, 24 September 2020) < http://www.cleanenergyregulator.gov.au/RET/Scheme-participants-and-industry/emissions-intensive-trade-exposed-activity-information-for-companies/emissions-intensive-trade-exposed-published-information>.
[540] *Australia Institute CBAM Research Paper* (n 451) 21.
[541] Ibid.

potentially by other carbon pricing mechanisms that Australia's trading partners may implement in the near future. In 2019 – 2020, approximately 1% of Australian alumina and primary metals export were destined for the EU, highlighting that the CBAM exposure for domestic producers is minimal.[542] However, it is noted that approximately 64% of aluminium and 40% of steel exports by value are destined for industrialised economies where a carbon pricing mechanism is in force or under consideration, which will substantially increase exposure for domestic producers.[543]

The preceding analysis assumes that the CBAM will only prevent the risk of carbon leakage by placing a price on the 'direct emissions' associated with the production of Annex I Goods. If, however, the CBAM were to expand to account for the 'indirect emissions' associated with the production of Annex I Goods,[544] Australia's exposure to the CBAM would amplify. The Regulation defines 'indirect emissions' as the emissions arising from the 'production of electricity, heating and cooling, which are consumed during the production processes of goods.'[545] This would have significant implications on all Australian Annex I Goods exports entering the EU, as 74% of Australia's electricity generation mix is based on the combustion of fossil fuels.[546] The inclusion of 'indirect emissions' into the scope of the Regulation would reduce the profitability of Australian steel and aluminium exports, as these industries remain heavily reliant on coal for the production of electricity. The Australian Industry Group[547] holds that primary metal exports' profitability would reduce even further if default values are imposed on importers. [548] As discussed in **Chapter 3.1.3**, default values would be imposed if the

[542] Ibid.
[543] Ibid.
[544] As stated in Article 30 of the Regulation, the EU Commission will collate information as to whether the CBAM should extend its scope to 'indirect emissions and goods other than those listed in Annex I, and develop methods of calculating embedded emissions based on environmental footprint methods.
[545] *CBAM Regulation Proposal* (n 25) art 3(28).
[546]Department of Industry, Energy, Science and Resources, *Australian electricity generation - fuel mix* (Web Page) < https://www.energy.gov.au/data/australian-electricity-generation-fuel-mix>.
[547] The Australian Industry Group (n 535) 59, 61.
[548] Ibid, measured at 9.1 % for aluminium and 5.8 % for steel.

emissions cannot be adequately verified. Moreover, if the EU carbon price remained at the recent average of €50 per tonne of carbon, the price per tonne of aluminium upon the EU implementing the CBAM could range from €60 to as high as €700. The upper limit represents the scenario for aluminium produced by coal-intensive aluminium smelters when all free allocations granted to EU producers under the EU-ETS are phased out.[549] In other words, the unhindered operation of the CBAM, targeting both 'direct' and 'indirect' emissions, would significantly impact Australian primary metal exports.

Since 2018, Australia and the EU have been negotiating a comprehensive FTA to provide new opportunities for exports from both markets.[550] The FTA went through its twelfth round of negotiations in February 2022, which included a discussion on the Trade and Sustainable Development Chapter.[551] The contents of this FTA chapter may discuss the CBAM and its implications on Australia should it fail to implement an equivalent carbon pricing mechanism in some regulatory form.

4.2.4 Indirect Implications of the CBAM on Australian Exports

The CBAM may produce indirect effects on the flow of international trade. Firstly, the CBAM may affect Australian exports to the Asia Pacific region if the Annex I Goods manufactured from GHG-intensive PPMs are then used to manufacture products that are exported to the EU. For example, Australian iron ore that is exported to China for steel production, which is subsequently exported to the EU, may indirectly affect Australia.[552] The nature of the indirect

[549] Rhiana Whitson, 'European carbon border tax is a warning to Australia to clean up or pay the price', *ABC News* (online at 16 August 2021) <https://www.abc.net.au/news/2021-08-17/australian-exporters-pay-the-price-with-european-carbon-tax/100379998>.
[550] Department of Foreign Affairs and Trade, *Australia-European Union Free Trade Agreement* (Web Page) < https://www.dfat.gov.au/trade/agreements/negotiations/aeufta/default#footnote-reference-1>.
[551] Department of Foreign Affairs and Trade, *Australia-EU FTA – Report on Negotiating Round Twelve, 7-18 February 2022* (Web Page) <https://www.dfat.gov.au/trade-and-investment/australia-eu-fta-report-negotiating-round-twelve-7-18-february-2022>.
[552] *CBAM Expert Survey* (n 32) 18-19.

effects produced by the CBAM would depend on its scope (i.e. targeting 'direct emissions' or 'indirect emissions') and the rules of origin between trading partners. In most cases, Australia would be sufficiently separated in the supply chain to experience non-negligible indirect effects.[553]

Secondly, Australia may be seen as a climate 'free-rider', a contemporary form of protectionism.[554] This stems from Australia's less than modest climate action, which may see the economy stand to gain through the ambitious efforts of its trading partners in the short term.[555] Suppose, however, that global trade in the long term was to split between a GTB (containing Australia's largest trading partners) and a BTB. In that case, Australia's current opposition to carbon pricing coupled with its disproportionate GHG footprint places Australia as a member of the latter default bloc. Australia's position outside the GTB could limit future growth opportunities for Australia's exports, particularly concerning Australia's primary metal exports.[556]

4.2.5 Australia's Response to the CBAM and Concluding Remarks

The Commonwealth of Australia was led by a government of inertia when formulating energy and climate policy to address the climate crisis. Consequently, the prevailing attitude towards the CBAM is negative, undoubtedly shaped by Australia's highly politicised carbon landscape.[557]The CBAM, in general, is perceived as a cost for Australian exporters rather than an opportunity to decarbonise their supply chains.[558] More recently, Australia's former Minister for Trade ventilated the Coalition's opposition to carbon pricing, claiming that the CBAM 'runs the risk of enhancing protectionism… [which]… would be detrimental to global growth and to

[553] Ibid.
[554] *Australia Institute CBAM Research Paper* (n 451) 25.
[555] Steve Hatfield-Dodds et al, *Leader, follower or free rider? The economic impacts of different Australian emission targets* (The Climate Institute Report, 2007) 3.
[556] *CBAM Expert Survey* (n 32) 18-19.
[557] Ibid 17.
[558] Ibid.

free trade globally.'[559] Australia's unsubstantiated claim of protectionism under the former Coalition had attempted to circumscribe the role of trade policy in preventing irreversible climate change, a phenomenon the Australian continent is not immune from experiencing. In recent years, unprecedented floods and bushfires have failed to break the fossil fuel industry's stranglehold on the Australian economy. The former Coalition's reluctance to impose any domestic carbon pricing system runs contrary to movements in the EU, UK, US, China, Japan and Canada. With carbon border adjustments on the horizon for several economies across the development spectrum, Australia's most energy-intensive exports will face some external carbon prices in some shape or form. In this likely scenario, it would be counterproductive for third countries to reap the economic benefits and revenues associated with carbon taxation at Australia's expense.[560]

[559] Sarah Anne Aarup and Barbara Moens, 'Australia attacks EU carbon border levy plans', *POLITICO* (online at 29 June 2021) <https://www.politico.eu/article/cbam-detrimental-to-growth-australian-trade-minister-says/>.
[560] *Australia Institute CBAM Research Paper* (n 451) 19.

Chapter 5: Conclusions

The CBAM is a multifaceted regulatory proposal designed to protect the EU's growing climate ambitions in the Anthropocene, eradicate carbon leakage and propel the global economy well into the depths of the Third Industrial Revolution. In other words, it is a unilateral trade-based climate change measure designed to counteract a growing disparity between environmental protection standards and climate change mitigation ambitions across the economic and political spectrum. When viewed through a different lens, the CBAM's unilateral design is an expression of the bloc's 'deep concern over the erosion of the multilateral trading system'[561] and its inability to swiftly respond to the exigencies of the climate crisis. Inconsistent net-zero commitments from the international community at the COP 26 UN Climate Conference have done little to assuage the EU's scepticism of the multilateralism trading system and its ability to produce timely results.

Whilst the underlying objectives of the CBAM are admirable, this dissertation has exposed a multitude of defects associated with implementing the measure in its current permutation. Instead, the analysis runs contrary to the EU's unsubstantiated claim that the measure was designed to be compatible with the GATT/WTO regime underpinning international trade law. As explored in **Chapter 2**, the purported legality of the CBAM hinges on its ability to traverse a complex environmental law landscape moderated through the prism of international trade law. Several findings emerge when embarking through this contentious legal terrain.

Firstly, the principles of international environmental law, coupled with the legal regime of the WTO, provide sovereign states with a *legal basis* to unilaterally implement trade-based climate change reduction measures such as a carbon-tax-related BTA with extraterritorial effects. However, this right is heavily qualified when the competitiveness of a 'like' or 'directly

[561] *European Parliament CBAM Proposal Resolution* (n 79) 8.

competitive and substitutable' imported product is jeopardised in the internal market of the WTO Member State pursuing such measures. Therefore, the CBAM's purported legality lies in analysing the finer details of the regulatory proposal against the GATT principles of non-discrimination and engaging with the academic debate shrouding the legality of NPR-PPM measures.

Frustratingly, WTO case law has failed to explicitly clarify the interrelationship between 'likeness' on the one hand and the relevance of differences in NPR-PPMs in complying with the conditions of Articles I and III GATT on the other. To some avail, recent WTO Appellate Bodies have endorsed an 'economic approach' to the definition of 'likeness', which has implicit consequences for the resolution of the debate. As discussed in **Chapter 3.3**, it is theoretically possible for consumers to characterise two identical products with different NPR-PPMs as 'unlike' under the economic approach. Thus, the extent to which a WTO Member State can adopt NPR-PPM measures is contingent on a multifactorial analysis that considers *all* characteristics the two products may share.[562] In other words, the product-process distinction is implicitly rejected in favour of a more holistic analysis of the measure in its context.

With respect to the CBAM, the concept of 'likenesses' does not hinge upon consumers distinguishing certain emissions-intensive products by their underlying NPR-PPMs. A contrary conclusion would be inconsistent with the EU's market intervention measures designed to correct a systemic market failure, namely, the economic exploitation associated with unsustainable levels of anthropogenic GHG pollution into the biosphere. Expressed differently, price-sensitive consumers in CBAM-impacted sectors may not necessarily differentiate between products with different NPR-PPMs and pay a premium price when other consumers can 'freeride' and purchase Annex I Goods from cheaper sources. Whilst the economic

[562] *EC Asbestos AB Report* (n 185) [101].

approach has implicitly displaced much of the haze surrounding the use of NPR-PPM measures, it remains preferable for a WTO adjudicative body to provide a definitive answer as to their legality.

Secondly, the CBAM, in targeting the 'embedded emissions,' attempts to provide the energy inputs with some form of physical presence in the final product for the purposes of product differentiation. However, it remains difficult to reconcile the idea that emissions can be embedded when they leave no physical trace in the finished product. More likely than not, this semantic strategy does not operate to avoid the applicability of GATT non-discrimination obligations in the event of a trade dispute.

Proceeding under the assumption that the differences in NPR-PPMs do not render the Annex I Goods produced in the EU and a third country as 'unlike', the issue is whether the treatment accorded to imported products under the CBAM violates the MFN and National Treatment principles. In these circumstances, the measure cannot constitute a form of unjustifiable discrimination or disguised protection as interpreted in the jurisprudence of the WTO.[563] As discussed in **Chapter 3.3 – 3.5**, the Regulation does not discriminate on a *de jure* basis but may do so on a *de facto* basis. The scope of discrimination under the GATT is far-reaching, and contemporary WTO jurisprudence suggests that the default position under international trade law is unrestricted market access for imported products unless the measure can be justified under the Article XX GATT general exceptions.

Thirdly, it is recognised that no WTO adjudicative body has definitively answered whether a unilateral trade measure in the form of a CBAM can eventually be justified under Article XX GATT.[564] Despite this jurisprudential lacuna, the analysis conducted in **Chapter 3.6** supports the conclusion that the CBAM would likely be provisionally justified under paragraphs (b) and

[563] Paugam (n 477).
[564] *Trade and Climate Change* (n 83) 99.

(g) of Article XX GATT. The provisional justification is supported by the deteriorating state of the climate crisis outlined in **Chapter 2.1** and the Appellate Body's commitment to an intertextual interpretation of the GATT, including consideration of multilateral environmental treaties and international principles of environmental law. However, the purported legality of the CBAM will come under immense scrutiny when considered against the Chapeau, which inherently seeks to prevent protectionist abuse of any Article XX GATT exception.

Specifically, the Chapeau imposes a duty on the EU to negotiate and undertake cooperation activities with WTO Members affected by the CBAM before a unilateral measure with a significant extraterritorial reach can be lawfully adopted and implemented.[565] Of concern is the EU's seemingly lax position on this international obligation, which places the bloc at significant risk of engaging in a bitter trade dispute with countries that may be disproportionately affected by the Regulation. This tension would run counterproductive to the environmental aims of the CBAM. Moreover, a WTO adjudicative body may interpret non-cooperative behaviour as a fatal error when analysed against the stringent requirements of the Chapeau. Therefore, the EU must engage in 'serious across-the-board' negotiations with its trading partners across the economic and political spectrum to understand how their regulatory schemes meet shared environmental policy objectives. The mitigation of transboundary environmental externalities would accelerate further if advanced economies were to transfer the necessary technologies to those nations most in need of administrative assistance

Lastly, the CBAM's legality may be assessed under TBT Agreement. To comply with the international obligations therein, the EU must ensure that the underlying technical requirements of the Regulation, namely the methods of certifying and quantifying carbon emissions, do not create an unnecessary obstacle to international trade. The EU should strive to harmonise the

[565] Cottier and Payosova (n 86) 28.

methods of quantification and certification to assist producers across the globe in integrating into green global value chains.

Combating the climate crisis requires domestic policymakers to recognise the role of multilateralism in shaping trade-based measures seeking to preserve the global commons. Given that most contemporary strategies toward net-zero employ trade-related policies and tools, an overhaul of the international trade law framework is required to clarify when a sovereign state is justified in pursuing unilateral measures with extraterritorial effects. Particular attention must be given to promoting an intertextual interpretation of the GATT/WTO regime in light of established and emerging principles of international environmental law.

To conclude, the EU's unilateral climate change mitigation efforts would be significantly strengthened and likely meet the Chapeau's stringent requirements should the bloc adopt a multilateral approach at every stage of the CBAM's implementation. Thus, the immediate priority for the EU Commission would be to revise the Regulation and incorporate the recommendations outlined in this dissertation. Doing so would increase the CBAM's compatibility under the GATT/WTO regime. However, in the absence of a functioning Appellate Body, the legality of such unilateral trade-based climate measures will arguably remain contentious for the foreseeable future.

In any case, the legality of the CBAM is not the only obstacle the bloc will face when embarking on this contentious unilateral path. A WTO-compliant CBAM may nonetheless spark a heavy political backlash from affected WTO Members, leading to the potential imposition of retaliatory trade measures and a breakdown of multilateral climate change negotiations. It comes as no surprise that the international response to the CBAM has captured a miasma of diverse attitudes and perceptions toward the policy. Generally speaking, advanced economies

have expressed their support for implementing domestic carbon pricing mechanisms in some regulatory form. Their support is contingent on the measure complying with the rules-based international trade law regime that encompasses a dispute resolution system. This, however, would necessitate a swift solution to the Appellate Body crisis, which has wholly paralysed the dispute resolution function of the WTO since December 2019.[566]

In any regard, the CBAM may catalyse a multilateral carbon pricing movement amongst a coalition of like-minded states who have prioritised the mitigation of the climate crisis through trade policy. In the TIR, global trade may divide between a GTB regulated by a plurality of carbon pricing mechanisms and a default BTB consisting of climate laggards. This transformation will undoubtedly bring about a new generation of trade opportunities and disputes at the WTO. The challenge for the GTB members would be threefold; aligning their methodologies for certifying and quantifying carbon emissions, standardising what constitutes an acceptable carbon pricing mechanism, and implementing a new rules-based arbitration system. The most effective GTB would consider the prevailing conditions in countries at different stages of the economic development spectrum.

However, developing economies with large populations are reluctant to support trade-based climate change measures that have the potential to cripple their export industries. Moreover, due to their lower capabilities and industrialisation capacity, developing economies are likely to be forcibly placed into the default BTB. In this case, they may face heightened regulatory barriers when attempting to access the sophisticated markets of their advanced counterparts. In this regard, it must be recognised that the institutions of the EU have not remained oblivious to the concerns raised by its international trade partners concerning the architectural design of the CBAM. In reaching a general agreement on the necessity of the Regulation, the Council noted

[566] Henry Gao, 'Finding a Rule-Based Solution to the Appellate Body Crisis: Looking Beyond the Multiparty Interim Appeal Arbitration Arrangement' (2021) 24(3) *Journal of International Economic Law* 534, 542.

the ‘importance of greater international cooperation with third countries, including through the establishment, in parallel to the CBAM, of a climate club where carbon pricing policies can be discussed and encouraged.’[567] For the Council, multilateralism is the preferred approach to implementing a complex scheme such as the CBAM.

Lastly, this dissertation has exposed Australia as an outlier and a growing climate pariah, owing to a mix of incoherent policies coupled with a limited political appetite for carbon pricing mechanisms. In hindsight, the repeal of the CEA in 2014 was emblematic of an increasingly turbulent political climate. Its loss has brought about a decade of uncertainty in the climate policy landscape, which remains ‘littered with the remains of policy proposals seeking to address the need for a more integrated climate and energy policy.’[568] Under this backdrop, the prevailing attitude towards the CBAM is negative, and the measure is perceived as a cost for Australian exporters rather than an opportunity to decarbonise their supply chains.[569]

With respect to the CBAM, Australia’s impact from the Regulation is negligible in the shorter term as only 0.25% of Australia's trade by value is exported to the EU.[570] An even smaller proportion of Australia’s trade by value falls into the Annex I Goods category. However, the risks posed to Australian exports exacerbate should the CBAM target the ‘indirect emissions’ associated with the production of Annex I Goods or if the methods by which default emissions are calculated under the Regulation are to apply to Australian exports to the EU. Furthermore, Australia’s trade exposure magnifies if a GTB including Australia’s largest trading partners was to form in the near future. A Commonwealth Government led by Labor’s Anthony Albanese is an opportunity for Australia to reset its climate reputation on the international stage and join an

[567] Council of the EU (n 26).
[568] Godden, Peel and McDonald (n 502) 433.
[569] *CBAM Expert Survey* (n 32) 17.
[570] See the Australian Industry Group (n 535) executive summary.

EU-led movement that seeks to decarbonise the global economy and bring an end to the Anthropocene.

Bibliography

A. *Articles/Books/Papers/Reports*

Allen, Myles R et al, 'Warming caused by cumulative carbon emissions towards the trillionth tonne' (2009) 458 *Nature* 1163

Bergin, Daniel et al, *Perception of the Planned EU Carbon Border Adjustment Mechanism in Asia Pacific — An Expert Survey* (March 2021)

Bossche, Peter Van den and Werner Zdouc, *The Law and Policy of the World Trade Organization Text, Cases and Materials* (Cambridge University Press, 4th ed, 2017)

Burck, Jan, et al, *Monitoring Climate Mitigation Efforts of 60 Countries plus the EU – covering 92% of the Global Greenhouse Gas Emission* (CCPI Report, 2022)

Burniaux, Jean-Marc, Jean Chateau and Romain Duval, 'Is there a case for carbon-based border tax adjustment? An applied general equilibrium analysis' (2013) 45(16) *Applied Economics* 2231

Carvalho, Laurence et al, 'Protecting and restoring Europe's Waters: An Analysis of the Future Development Needs of the Water Framework Directive' (2019) 658 *Science of the Total Environment* 1228

Chepeliev, Maksym, 'Possible Implications of the European Carbon Border Adjustment Mechanism for Ukraine and Other EU Trading Partners' (2021) 2(1) *Energy Research Letters* 21527

Climate Action Tracker, *Glasgow's 2030 credibility gap: net zero's lip service to climate action Wave of net zero emission goals not matched by action on the ground* (Warming Projections Global Update, November 2021)

Cottier, Thomas and Tetyana Payosova, *Common concern and the legitimacy of the WTO in dealing with climate change*; in Panagiotis Delimatsis (Ed), *Research Handbook on Climate Change and Trade Law* (Edward Elgar Publishing, 2016)

Department of Industry, Energy, Science and Resources, *AUSTRALIA'S LONG-TERM EMISSIONS REDUCTION PLAN: Modelling and Analysis* (Report)

Eicke, Laime et al, 'Pulling up the carbon ladder? Decarbonization, dependence, and third-country risks from the European carbon border adjustment mechanism' (2021) 80 *Energy Research & Social Science* 102240

European Commission, '*Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality* (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 14 July 2021)

European Commission, *Trade Policy Review - An Open, Sustainable and Assertive Trade Policy* (Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 18 February 2021)

Fankhauser, Sam et al, 'The meaning of net zero and how to get it right' (2022) 12(2) *Nature Climate Change* 15

Fezzigna, Paola, Simone Borghesi and Dario Caro, 'Revising Emission Responsibilities through Consumption-Based Accounting: A European and Post-Brexit Perspective' (2019) 11(2) *Sustainability* 488

Gao, Henry, 'Finding a Rule-Based Solution to the Appellate Body Crisis: Looking Beyond the Multiparty Interim Appeal Arbitration Arrangement' (2021) 24(3) *Journal of International Economic Law* 534, 542

Godden, Lee, Jacqueline Peel and Jan McDonald, *Environmental Law* (Oxford University Press, 2nd ed, 2019)

Gourgourinis, Anastasios, *Common but differentiated responsibilities in transnational climate change governance and the WTO: A tale of two 'interconnected worlds' or a tale of two 'crossing swords'*; in Panagiotis Delimatsis (Ed), *Research Handbook on Climate Change and Trade Law* (Edward Elgar Publishing, 2016)

Hand, Eric, 'Fossil leaves bear witness to ancient carbon dioxide levels' (2017) 355 *Science* 14

Hatfield-Dodds, Steve et al, *Leader, follower or free rider? The economic impacts of different Australian emission targets* (The Climate Institute Report, 2007)

Holzer, Kateryna and Nashina Shariff, 'The inclusion of border carbon adjustments in preferential trade agreements: Policy implications' (2012) 6(3) *Carbon & Climate Law Review* 246

Horowitz, Cara A, 'Paris Agreement' (2016) 55(4) *International Legal Materials* 740

Intergovernmental Panel on Climate Change, *Climate Change 2021- The Physical Science Basis: Summary for Policymakers* (WGI Contribution to the Sixth Assessment Report)

Intergovernmental Panel on Climate Change, *Climate Change 2022 - Impacts, Adaptation and Vulnerability: Summary for Policymakers* (WGII Sixth Assessment Report, 28 February 2022)

Intergovernmental Panel on Climate Change, *Climate Change 2022 – Mitigation of Climate Change: Summary for Policymakers* (WGIII Contribution to the Sixth Assessment Report, 4 April 2022)

Intergovernmental Panel on Climate Change, *Global warming of 1.5° C: an IPCC special report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty: Summary for Policymakers* (2018)

International Renewable Energy, *A New World: The Geopolitics of the Energy Transformation* (IRENA Report, 2019)

International Energy Agency, *Net Zero by 2050 A Roadmap for the Global Energy Sector* (October 2021)

Jotzo, Frank, 'Australia's Carbon Price' (2012) 2 *Nature Climate Change* 475

Le, Cheon-Kee, *EU CBAM: Legal Issues and Implications for Korea* (Korea Institute for International Economic Policy Opinions Paper, 29 September 2021)

Mavroidis, Petros C, *Like Products: Some Thoughts at the Positive and Normative Level*, in Thomas Cottier and Petros C. Mavroidis (eds), *Regulatory Barriers and the Principle of Non-Discrimination in World Trade Law* (The University of Michigan Press, 2000)

Muller, Frank, Hugh Saddler and Hannah Melville-Rea, *Carbon Border Adjustments What are they and how will they impact Australia?* (The Australia Institute Research Paper, June 2021)

Nadakavukaren Schefer, Krista and Pablo Arnaiz, *Duty to protect, climate change and trade*; in Panagiotis Delimatsis (Ed), *Research Handbook on Climate Change and Trade Law* (Edward Elgar Publishing, 2016)

Nordhaus, William, 'Climate clubs: Overcoming free-riding in international climate policy.' (2015) 105(4) *American Economic Review* 1339

Ramos, Daniel, et al, *Trade and Climate Change Information Brief No.1, MAPPING PAPER: TRADE POLICIES ADOPTED TO ADDRESS CLIMATE CHANGE* (WTO Publications, 2021)

Rifkin, Jeremy, *The Third Industrial Revolution: How lateral power is transforming energy, the economy and the world* (Palgrave Macmillan, 1st ed, 2011)

Sands, Philippe, et al, *Principles of International Environmental Law* (Cambridge University Press, 4th ed, 2018)

Sifonios, David, *Environmental Process and Production Methods (PPMs) in WTO Law* (Springer International Publishing, 2018)

Stockholm Declaration on the Human Environment, *Report of the United Nations Conference on the Human Environment* (UN Doc.A/CONF.48/14)

Tagliapietra, Simone and Guntram B. Wolff, 'Form a climate club: United States, European Union and China' (2021) 591 *Nature* 526

The Australian Industry Group, *Swings and Roundabouts: the unexpected effects of Carbon Border Adjustments on Australia* (Report, August 2021)

Thompson, Helen, 'The geopolitics of fossil fuels and renewables reshape the world' (2022) 603 *Nature* 364

Trachtman, Joel, *WTO Law Constraints on Border Tax Adjustment and Tax Credit Mechanisms to Reduce the Competitiveness Effects of Carbon Taxes* (Resources for the Future Discussion Paper, 2016)

Trebilcock, Michael J and Joel Trachtman, *Advanced Introduction to International Trade Law* (Edward Elgar Publishing, 2nd ed, 2020)

Tsao, Jeffrey Y et al, 'The electrification of energy: Long-term trends and opportunities' (2018) 5 *MRS Energy & Sustainability* 1

United Nations Climate Change Conference, *COP 26 The Glasgow Climate Pact* (November 2021)

United Nations Division for Sustainable Development, *Agenda 21*. (United Nations Conference on Environment & Development 3 – 14 June 1992)

United Nations Environment Programme and the World Trade Organisation, *Trade and Climate Change* (WTO Publications, 2009)

United Nations Framework Convention on Climate Change, *Decision 27/CMP.1, Procedures and Mechanisms Relating to Compliance under the Kyoto Protocol* (Report of the Conference of the Parties serving as the Meeting of the Parties on its first session) UN Doc FCCC/KP/CMP/2005/8/Add. (28 November –10 December 2005)

Vranes, Erich, *Carbon taxes, PPMs and the GATT*; in Panagiotis Delimatsis (Ed), *Research Handbook on Climate Change and Trade Law* (Edward Elgar Publishing, 2016)

1970 report of the GATT Working Party on Border Tax Adjustments, GATT Doc L/3464 (20 November 1970)

B. *Cases*

Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, WTO Doc WT/DS332/AB/ R (adopted 17 December 2007)

Appellate Body Report, *Canada – Certain Measures Concerning Periodicals*, WTO Doc WT/DS31/AB/R (adopted 30 July 1997)

Appellate Body Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WTO Doc WT/DS135/AB/R (adopted 5 April 2001)

Appellate Body Report, *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products*, WTO Doc WT/DS400/R, WT/DS401/R (adopted 18 June 2014)

Appellate Body Report, *Japan – Taxes on Alcoholic Beverages*, WTO Doc WT/DS11/AB/R (4 October 1996 adopted 1 November 1996)

Appellate Body Report, *United States – Certain Country of Origin Labelling (COOL) Requirements*, WTO Doc WT/DS384/AB/R / WT/DS386/AB/R (adopted 23 July 2012)

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

Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products – Recourse to Article 21.5 of the DSU by Malaysia*, WTO Doc WT/DS58/AB/RW (adopted 21 November 2001)

Appellate Body Report, *United States – Measures Affecting the Production and Sale of Clove Cigarettes*, WTO Doc WT/DS406/AB/R (adopted 24 April 2012)

Appellate Body Report, *United States – Standards for Reformulated and Conventional Gasoline*, WTO Doc WT/DS2/AB/R (adopted 20 May 1996)

Panel Report, *Argentina – Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, WTO Doc WT/DS155/R (adopted 16 February 2001)

Panel Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WTO Doc WT/DS135/R and Add.1 (adopted 5 April 2001)

Panel Report, *India – Measures Affecting the Automotive Sector*, WTO Doc WT/DS146/R, WT/DS175/R and Corr.1 (adopted 5 April 2002)

Panel Report, *Japan – Taxes on Alcoholic Beverages*, WTO Doc WT/DS8/R, WT/DS10/ R, WT/DS11/R (adopted 1 November 1996)

Panel Report, *United States – Import Prohibition on Certain Shrimp and Shrimp Products, Recourse to Article 21.5 of the DSU by Malaysia*, WTO Doc WT/DS58/RW (15 June 2001)

Panel Report, *United States – Measures Affecting Alcoholic and Malt Beverages*, DS23/R (adopted 19 June 1992)

Panel Report, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WTO Doc WT/DS381/R (adopted 13 June 2012)

Panel Report, *United States – Restrictions on Imports of Tuna*, DS21/R (3 September 1991, unadopted)

Panel Report, *United States – Restrictions on Imports of Tuna*, DS29/R (16 June 1994, unadopted)

Panel Report, *United States – Standards for Reformulated and Conventional Gasoline*, WTO Doc WT/DS2/R (adopted 20 May 1996)

Panel Report, *United States – Taxes on Petroleum and Certain Imported Substances*, L/6175 (adopted 17 June 1987)

The Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion) [1996] ICJ Rep 679

C. *European Union Directives/Regulations*

European Commission, *Proposal for a Regulation of the European Parliament and of the Council of 14 July 2021 establishing a Carbon Border Adjustment Mechanism*, 564 final, 2021/0214

Parliament and Council Directive 2003/87/EC of 13 October 2003 Establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC [2003] OJ L 275

Parliament and Council Regulation EU 2021/1119 of 30 June 2021 on Establishing the Framework for achieving Climate Neutrality and Amending Regulation (EU) 2018/1999 ('European Climate Law') OJ L 243

D. *Foreign Legislative Materials*

Carbon Credits (Carbon Farming Initiative) Act 2011 (Cth)

Carbon Credits (Carbon Farming Initiative) Regulations 2011(Cth)

Carbon Credits (Carbon Farming Initiative) Rule 2015 (Cth)

Clean Energy Act 2011 (Cth)

Clean Energy Legislation (Carbon Tax Repeal) Act 2011 (Cth)

The Greenhouse Gas Emissions Trading Scheme Order 2020 (UK)

E. *Treaties*

Kyoto Protocol, opened for signature on 11 December 1997, 2303 UNTS 162 (entered into force 16 February 2005)

Marrakesh Agreement Establishing the World Trade Organization, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995)

Marrakesh Agreement Establishing the World Trade Organization, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 1A ('*Agreement on Technical Barriers to Trade'*)

Marrakesh Agreement Establishing the World Trade Organization, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 1A ('*General Agreement on Tariffs and Trade 1994*')

Marrakesh Agreement Establishing the World Trade Organization, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 2 ('*Understanding on rules and procedures governing the settlement of disputes*')

The Montreal Protocol on Substances that Deplete the Ozone Layer, opened for signature on 6 September 1987, 1152 UNTS 3 (entered into force 1 January 1989)

United Nations Framework Convention on Climate Change, opened for signature on 4 June 1992, UNTS (entered into force 21 March 1994)

Vienna Convention on the Law of Treaties, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980)

E. *Other*

Anne Aarup, Sarah and Barbara Moens, 'Australia attacks EU carbon border levy plans', *POLITICO* (online at 29 June 2021) <https://www.politico.eu/article/cbam-detrimental-to-growth-australian-trade-minister-says/>

Biden, Joe, *THE BIDEN PLAN FOR A CLEAN ENERGY REVOLUTION AND ENVIRONMENTAL JUSTICE* (Web Page) <https://joebiden.com/climate-plan/>

Clean Energy Council, *Clean Energy Fact Checker* (Web Page, 2022) <https://www.cleanenergycouncil.org.au/advocacy-initiatives/federal-election-2022/federal-election>

Clean Energy Regulator, *About the Clean Energy Regulator* (Web Page, 13 September 2021) <http://www.cleanenergyregulator.gov.au/About/About-the-Clean-Energy-Regulator>n-clean-energy-fact-checker>

Clean Energy Regulator, *Emissions-intensive trade-exposed published information* (Web Page, 24 September 2020) <http://www.cleanenergyregulator.gov.au/RET/Scheme-participants-and-industry/emissions-intensive-trade-exposed-activity-information-for-companies/emissions-intensive-trade-exposed-published-information>

Clifford Chance, *10 QUESTIONS ON THE PROPOSED CARBON BORDER ADJUSTMENT MECHANISM* (Web Page, July 2021) <https://www.cliffordchance.com/content/dam/cliffordchance/briefings/2021/07/10-questions-on-the-proposed-carbon-border-adjustment-mechanism.pdf>

Climate Action Tracker, *What is CAT* (Web Page)

<https://climateactiontracker.org/about/>

Committee on Market Access, *MINUTES OF THE COMMITTEE ON MARKET ACCESS 8 JUNE 2020*, WTO Doc G/MA/M/72 (30 October 2020)

Committee on Trade and Environment, *REPORT OF THE MEETING HELD ON 16 AND 20 NOVEMBER 2020*, WTO Doc WT/CTE/M/70 (17 March 2021)

Council of the EU, *Council agrees on the Carbon Border Adjustment Mechanism (CBAM)* (Web Page, 15 March 2022) <https://www.consilium.europa.eu/en/press/press-releases/2022/03/15/carbon-border-adjustment-mechanism-cbam-council-agrees-its-negotiating-mandate/>

Department of Foreign Affairs and Trade, *About Australia* (Web Page) <https://www.dfat.gov.au/about-australia#economy>

Department of Foreign Affairs and Trade, *Australia-European Union Free Trade Agreement* (Web Page) <https://www.dfat.gov.au/trade/agreements/negotiations/aeufta/default#footnote-reference-1>

Department of Foreign Affairs and Trade, *Australia-EU FTA – Report on Negotiating Round Twelve, 7-18 February 2022* (Web Page) <https://www.dfat.gov.au/trade-and-investment/australia-eu-fta-report-negotiating-round-twelve-7-18-february-2022>

Department of Foreign Affairs and Trade, *Australia's goods and services by top 15 partners 2020* (Web Page) ('*DFAT: Australia's Top Trading Partners Statistics*') <https://www.dfat.gov.au/sites/default/files/australias-goods-and-services-by-top-15-partners-2020.pdf>

Department of Foreign Affairs and Trade, *Australia's goods and services by top 25 exports 2020* (Web Page) <https://www.dfat.gov.au/sites/default/files/australias-goods-and-services-by-top-25-exports-2020.pdf>

Department of Foreign Affairs and Trade, *Australia's Trade Through Time* (Web Page) <https://www.dfat.gov.au/publications/minisite/tradethroughtimegovau/site/index.html>

Department of Foreign Affairs and Trade, *European Union Country Fact Sheet* (Web Page) <https://www.dfat.gov.au/sites/default/files/eu-cef.pdf>

Department of Industry, Energy, Science and Resources, *Australian electricity generation - fuel mix* (Web Page) <https://www.energy.gov.au/data/australian-electricity-generation-fuel-mix>

Department of Industry, Energy, Science and Resources, *National Greenhouse Gas Inventory Quarterly Update: March 2021* (Web Page, 13 August 2021) <https://www.industry.gov.au/data-and-publications/national-greenhouse-gas-inventory-quarterly-update-march-2021>

Differential and more favourable treatment reciprocity and fuller participation of developing countries, WTO Doc WT/ L/4903 (Decision of 28 November 1979)

European Commission, *A European Green Deal* (Web Page) <https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en#relatedlinks>

European Commission, *Carbon Border Adjustment Mechanism* (14 July 2021) <https://data.europa.eu/doi/10.2778/584899>

European Commission, *China-EU – international trade in goods statistics* (Web Page, February 2022) <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=China-EU_-_international_trade_in_goods_statistics#EU_and_China_in_world_trade_in_goods>

European Commission, *EU Emissions Trading System (EU ETS)* (Web Page) <https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets_en#ecl-inpage-683>

European Parliament, *A WTO-compatible EU carbon border adjustment mechanism* (European Parliament resolution of 10 March 2021)

Government of the United Kingdom, *UK enshrines new target in law to slash emissions by 78% by 2035* (Web Page, 20 April 2021) <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>

Greenhouse Gas Protocol, *Corporate Value Chain (Scope 3) Standard* (Web Page) <https://ghgprotocol.org/standards/scope-3-standard>

Greenhouse Gas Protocol, *GHG Protocol Corporate Standard* (Web Page) <https://ghgprotocol.org/corporate-standard>

Harvey, Fiona, Damian Carrington and Libby Brooks, 'Cop26 ends in climate agreement despite India watering down coal resolution' *The Guardian* (online at 13 November 2021) <https://www.theguardian.com/environment/2021/nov/13/cop26-countries-agree-to-accept-imperfect-climate-agreement>

Ison, Nicky 'Australia can swiftly end the climate wars and become a renewable superpower', *The Guardian* (online at 24 May 2022)

<https://www.theguardian.com/australia-news/commentisfree/2022/may/25/australia-can-swiftly-end-the-climate-wars-and-become-a-renewable-superpower-heres-how>.

Milman, Oliver, 'Australia records biggest emissions drop in a decade as carbon tax kicks in', *The Guardian* (online at 24 December 2014) <https://www.theguardian.com/environment/2014/dec/24/australia-records-biggest-emissions-drop-in-a-decade-as-carbon-tax-kicks-in>

'Not-so-cold comfort: China is surprisingly carbon-efficient—but still the world's biggest emitter', *The Economist*, (Online at 25 May 2019) <https://www.economist.com/graphic-detail/2019/05/25/china-is-surprisingly-carbon-efficient-but-still-the-worlds-biggest-emitter>

Parliament of the United Kingdom, Carbon border adjustment mechanisms (Web Page) <https://committees.parliament.uk/work/1535/carbon-border-adjustment-mechanism/>

Paugam, Jean-Marie, *DDG Paugam: WTO rules no barrier to ambitious environmental policies* (Web Page, 16 September 2021 <https://www.wto.org/english/news_e/news21_e/ddgjp_16sep21_e.htm>

PwC, *December 2021 Global Consumer Insights Pulse Survey* (Web Page) <https://www.pwc.com/gx/en/industries/consumer-markets/consumer-insights-survey.html>

Roldao, Renato, *Carbon trading the Chinese way* (Web Page, 5 January 2022) <https://www.energymonitor.ai/policy/carbon-markets/carbon-trading-the-chinese-way>.

The White House, *New Pro-Climate, Pro-Worker Actions Create Jobs and Harness the Bipartisan Infrastructure Law, Federal Purchasing Power, and Trade Policy* (Web Page, 14 February 2022)

<https://www.whitehouse.gov/briefing-room/statements-releases/2022/02/15/fact-sheet-biden-harris-administration-advances-cleaner-industrial-sector-to-reduce-emissions-and-reinvigorate-american-manufacturing/>

United Nations, *Secretary-General's remarks to the World Leaders Summit - COP 26* (Web Page, 1 November 2021) <https://www.un.org/sg/en/content/sg/statement/2021-11-01/secretary-generals-remarks-the-world-leaders-summit-cop-26-delivered-scroll-down-for-french-version>

Web, Jonathan, *'An atlas of human suffering' - UN report issues stark warning on climate change* (Web Page, 28 February 2022) <https://eandt.theiet.org/content/articles/2022/02/an-atlas-of-human-suffering-stark-warning-on-climate-change-in-un-report/>

Whitson, Rhiana 'European carbon border tax is a warning to Australia to clean up or pay the price', *ABC News* (online at 16 August 2021) <https://www.abc.net.au/news/2021-08-17/australian-exporters-pay-the-price-with-european-carbon-tax/100379998>

WTO, *Brexit, EU's carbon border adjustment mechanism take centre stage at Market Access Committee* (Web Page, 16 November 2020) <https://www.wto.org/english/news_e/news20_e/mark_16nov20_e.htm>

WTO, *Trade and Climate Change Information Brief No.6, WHAT YARDSTICK FOR NET-ZERO? HOW WTO TBT DISCIPLINES CAN CONTRIBUTE TO EFFECTIVE POLICIES ON CARBON EMISSION STANDARDS AND CLIMATE CHANGE MITIGATION* (WTO Publications, 2022)