

## CLIMATE NEUTRALITY AND SUSTAINABILITY IN INTERNATIONAL TRADE

RAFAEL LEAL-ARCAS,\* LUIS ULLOA MARTINEZ,† VICTORY ABANG,‡  
KRISHMA KAPUR,§ SAFFRON GREENWOOD,¶ KONSTANTINOS  
CHATZOPOULOS,¶ ARCHANA NAIR,\*\* LISA SCHOETTMER††

### ABSTRACT

This Article explores the links between climate neutrality and sustainability in the context of international trade. For that, it tackles seven main concerns: First, what do industry leaders now need from policymakers to make them the frontrunners in the global transition to climate neutrality? Second, what coalitions are necessary to build and who are the partners and networks to support an ambitious and meaningful business dialogue on the transition to climate-neutral industries? Third, what is the sustainability agenda in the international trading system and what is the path forward for furthering sustainability in trade policy? Fourth, how will countries reach sustainable global integration? Fifth, what will be the role of

---

\* Professor of Law, Vice-Dean for Research Grants & Director of Graduate Studies and Research, College of Law & International Relations, Alfaisal University (Riyadh, Kingdom of Saudi Arabia). Jean Monnet Chaired Professor in EU International Economic Law, awarded by the European Union. Member, Madrid Bar. Ph.D., European University Institute; M. Res., European University Institute; J.S.M., Stanford Law School; LL.M., Columbia Law School; M.Phil., London School of Economics and Political Science; J.D., Granada University; B.A., Granada University. Email: r.leal-arcas@outlook.com.

† Queen Mary University of London.

‡ Queen Mary University of London.

§ Queen Mary University of London.

¶ Queen Mary University of London.

¶ Queen Mary University of London.

\*\* Queen Mary University of London.

†† Queen Mary University of London.

climate change in the future global trading system? Sixth, what are the possible impacts of climate change on international trade and investment? And seventh, what is the European Union's approach to environmental concerns in trade agreements?

**Keywords:** sustainability, climate neutrality, international trade, climate clubs, WTO, border tax adjustments, plurilateralism, free trade agreements

## TABLE OF CONTENTS

Introduction.....	623
I. What Do Industry Leaders Now Need from Policymakers to Make Them Frontrunners in the Global Transition to Climate Neutrality? .....	626
<i>a. The Notion of Common Good</i> .....	626
<i>b. Climate Neutrality</i> .....	628
<i>c. Sustainability and Climate Neutrality in the Trade Context</i> .....	630
<i>d. Public-Private Cooperation such as Public Policy to Achieve Climate Neutrality</i> .....	633
II. Necessary Coalitions, Partners, and Networks to Support an Ambitious and Meaningful Business Dialogue on the Transition to Climate-Neutral Industries.....	635
<i>a. Conceptualization of the Problems Necessitating a Transition to Climate Neutrality</i> .....	636
<i>b. Current Framework for a Transition to Climate-Neutral Industries</i> .....	637
<i>c. Partners, Networks, and Coalitions Necessary for a Transition to Climate Neutral Industries</i> .....	639
<i>i. Climate Clubs</i> .....	639
<i>ii. Solution-Driven Network of Key Industry Players</i> .....	641
<i>iii. Sub-National Government Action</i> .....	642
<i>iv. Individual Actions</i> .....	643
III. The Sustainability Agenda in the International Trading System and a Path Forward for Furthering Sustainability in Trade Policy .....	644
<i>a. The Sustainability Agenda and Its Importance in International Trade</i> .....	644
<i>i. The Importance of Sustainability</i> .....	644
<i>ii. The Development of Trade and Climate Change</i> .....	645
<i>b. Carbon Pricing</i> .....	646
<i>c. A Path Forward for the Future: A Climate Club with a Carbon Market</i> .....	652
IV. Sustainable Global Integration: How Will Countries Get There? .....	654
<i>a. Sustainable Global Integration Through Multilateralism and Regionalism</i> .....	654
<i>b. How Can Sustainable Global Integration Be Achieved in Trade Agreements?</i> .....	656

	<i>c. The Future of Multilateralism Within the WTO</i> .....	662
V.	What Role Will Climate Change Play in the Future Global Trading System?.....	664
	<i>a. The Role of Climate Change-Induced Measures</i> .....	665
	<i>i. Trade Restrictions on Carbon-Intensive Products</i> ...	665
	<i>ii. Border Tax Adjustments for Carbon Taxes</i> .....	668
	<i>iii. Liberalization of Trade for Low-Carbon Products</i> ..	669
	<i>b. Shift to Plurilateralism</i> .....	671
	<i>c. The Role of Climate Migration</i> .....	673
	<i>i. Linking Climate Migration to Trade</i> .....	674
	<i>ii. The Role of Climate Migration in the Future Global         Trading System</i> .....	674
VI.	What Are the Possible Impacts of Climate Change on International Trade and Investment?.....	675
	<i>a. Impacts</i> .....	676
	<i>i. Direct Impacts</i> .....	676
	<i>ii. Indirect Impacts</i> .....	677
	<i>b. Reform</i> .....	678
	<i>i. Free Trade Agreements</i> .....	679
	<i>ii. Carbon Taxes and the Emissions Trading System</i> ..	682
	<i>iii. Carbon Border Tax Adjustments</i> .....	684
VII.	The European Union's Approach to Environmental Concerns in Trade Agreements .....	686
	<i>a. The European Union's Approach to Trade Agreements</i> ..	687
	<i>i. Why Not the WTO?</i> .....	687
	<i>ii. The European Union's Approach to the         Implementation of Environmental Concerns in         Trade Agreements</i> .....	688
	<i>iii. E.U.-U.K. Trade Agreement</i> .....	690
	<i>b. Implementation of Dispute Resolution Measures</i> .....	693
	<i>c. The Effectiveness of Climate Change Action in European         FTAs</i> .....	695
	Conclusion .....	697

## INTRODUCTION

Climate neutrality is one of the most urgent goals for countries today and industries must seek solutions of all kinds that contribute to this goal. In this sense, corporate social responsibility has been an instrument used by way of trade-offs, but it has not been used to its full extent. The World Trade Organization (WTO) has been involved in the same objective, as international trade law would be an effective instrument to promote carbon neutrality in traded products. Various international agreements and WTO principles have made climate neutrality one of their priorities, and the Paris Agreement has endorsed this. In this regard, trade appears to be an important ally in achieving climate neutrality.

With all this in mind, what does the business world need from policymakers to contribute effectively to climate neutrality? Public-private cooperation has proven to be successful in some parts of the world. The essential reason is that climate neutrality is a matter of the common good, which is beyond the particular interests of one person or a group of people. The results of carbon neutrality will impact third parties and future generations. Due to the importance of climate neutrality, policymakers should design public policy based on science and encourage its realization through all available tools, such as legal reforms and the use of the WTO legal framework for trade in carbon offset products. The circular economy plays a key role in climate neutrality, as it avoids the production of new inputs and can involve products already in use that have a longer lifespan, thus contributing to the reduction of carbon emissions.

The circular economy, in conjunction with philanthropy, corporate social responsibility, and public-private partnerships, is an effective tool for achieving carbon neutrality. As examples of success, we review some cases of environmental restoration and wetland generation as successful examples of public-private partnerships. Consequently, industry leaders need legal and tax incentives for the implementation of environmental restoration projects under the public-private partnership modality with the purpose of achieving carbon neutrality in the shortest possible time, since we must always keep in mind that this issue is a matter of common good which is important for everyone.

With the rise of industrialization, many technologies were invented to provide ease of business in various industries like manufacturing, transportation, agriculture, etc. Countries that were

industrialized earlier, like the United States of America, took advantage of these inventions and have made huge financial profits over the years. Unfortunately, much of these technological feats placed heavy reliance on unclean energy sources like coal and natural gas, also known as fossil fuels, which emit greenhouse gases into the atmosphere. Studies have shown that these emissions from fossil fuels are causing global warming of the Earth's atmosphere. This indicates that continued emissions of greenhouse gases will have a long-term effect of climate change and extreme weather with a threat of extinction.<sup>1</sup>

Due to this situation, countries around the world have come to realize that alternative energy sources can achieve the same output as fossil fuels and are more sustainable to the Earth. Under the auspices of the United Nations, countries have come together to produce legal instruments that show their resolution to transition from fossil fuels to sources of energy that are more neutral to the climate and by emitting a lot less greenhouse gases and not causing global warming. This is known as climate neutrality. The United Nations Framework Convention on Climate Change (UNFCCC) laid down the groundwork for the implementation of the Kyoto Protocol, Copenhagen Accord, and the Paris Agreement, which are all largely unsuccessful attempts to achieve a transition to cleaner sources of energy. It is clear that a different approach is urgently needed to ensure that countries actually uphold their obligations to the global community under these climate agreements.

Recently, some of the economic powerhouses and largest emitters of greenhouse gases, such as China, the United States, and the European Union, have set out their commitments to achieve net zero within a given period. However, this transition to clean energy cannot be successful without the active participation of the various industries that are responsible for large percentages of global greenhouse gas emissions. Attempts have also been made by provisions of the WTO Agreement and plurilateral agreements among countries to facilitate the transition of these industries. However, as we will examine, some of these well-meaning provisions have been rendered ineffective by other provisions in the same agreements. There is thus a need to re-examine the strategy for a transition to climate-neutral industries.

---

<sup>1</sup> INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC), GLOBAL WARMING OF 1.5°C., 4-5 (2019), [https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15\\_Full\\_Report\\_High\\_Res.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf) [<https://perma.cc/G2DC-5PCN>].

As a path forward to furthering sustainability in trade policy, we argue that multilateral negotiations have largely failed within the WTO framework to create an overarching trade regime inclusive of strong provisions on climate change mitigation. Due to this failure, regional trade agreements (RTAs) have become crucial in achieving sustainable global integration on climate change. To further this end, RTAs must incorporate strong and enforceable provisions on the liberalization of environmental goods and services (EGS) and the abolition of fossil fuel subsidies. However, sustainable global integration cannot be achieved through regionalism alone; significant reform of the WTO framework is necessary to ensure the success of multilateralism in achieving sustainable global integration on climate change.

Moreover, climate change is the most significant and impactful challenge of the present and future. It is almost universally accepted that climate change will affect us socially, politically, economically, directly and indirectly, in every aspect of our lives and, as an indiscriminate phenomenon, its impact will be global. The UNFCCC defines climate change as the “change in climate which is attributed directly or indirectly to human activity . . . .”<sup>2</sup> As such, certain regions will face extreme weather events, rising sea levels, and even disappearance. Other regions might face more dire economic consequences, stemming from expensive late-mitigation efforts and measures to alleviate the impact of climate change. Moreover, others will come to face the political effect, as climate change will certainly create future conflicts between and within states. From a decrease in production to product shortages and from carbon import taxes to climate migration, climate change will shake and shift trade as we know it.

This Article explores the links between climate neutrality and sustainability in international trade.<sup>3</sup> For that, it tackles seven main concerns, presented in each of the seven Parts below: First, what do industry leaders now need from policymakers to make them the frontrunners in the global transition to climate neutrality? Second, what coalitions are necessary to build and who are the partners and networks to support an ambitious and meaningful business

---

<sup>2</sup> United Nations Framework Convention on Climate Change art. 1(2), May 9, 1992, 1771 U.N.T.S. 107 [hereinafter UNFCCC].

<sup>3</sup> See generally RAFAEL LEAL-ARCAS, INTERNATIONAL TRADE AND SUSTAINABILITY: PERSPECTIVES FROM DEVELOPING AND DEVELOPED COUNTRIES (2022) (providing a detailed analysis of international trade and sustainability from different perspectives).

dialogue on the transition to climate-neutral industries? Third, what is the sustainability agenda in the international trading system and what is the path forward for furthering sustainability in trade policy? Fourth, how will countries reach sustainable global integration? Fifth, what will be the role of climate change in the future global trading system? Sixth, what are the possible impacts of climate change on international trade and investment? And seventh, what is the European Union's approach to environmental concerns in trade agreements? Part VIII concludes.

## I. WHAT DO INDUSTRY LEADERS NOW NEED FROM POLICYMAKERS TO MAKE THEM FRONTRUNNERS IN THE GLOBAL TRANSITION TO CLIMATE NEUTRALITY?

### *a. The Notion of Common Good*

The notion of the common good derives from the characteristics of the human race. Humanity is a social entity, and it is in our nature to live in a society with our fellow human beings. Philosophers have studied the concept of the common good<sup>4</sup> since ancient Greece because humans have always needed to engage in behavior that benefits the collective over the individual. Thus, throughout history, there has been a consensus that the common good is a state of well-being that benefits the whole community over a particular person or group. In this regard, modern states<sup>5</sup> are organized to promote the common good among their citizens. The common good points to a relational obligation to care about everyday things for all people.<sup>6</sup> Then, the human being is embedded in society. Each person exercises public and private functions in all areas of their social life; for instance, when a person votes in popular elections, she exercises

---

<sup>4</sup> The concept of the common good, in its social dimension, is understood as "the good that can be participated in by each and every member of a community." ANTONIO MILLÁN-PUELLES, BIEN COMÚN 225 (1981).

<sup>5</sup> Thus, for example, CONSTITUCIÓN POLÍTICA DE LA REPÚBLICA DE CHILE [C.P.] art. 1 ¶ 4, states that, "El Estado está al servicio de la persona humana y su finalidad es promover el bien comun [The State is at the service of the human person and its purpose is to promote the common good]."

<sup>6</sup> Waheed Hussain, The Common Good, STANFORD ENCYCLOPEDIA PHIL. § 2 (Feb. 26, 2018), <https://plato.stanford.edu/entries/common-good/> [<https://perma.cc/ME8F-698E>].



general activities. Public activities may often have no direct impact on her private affairs or those of her family.

Consequently, she is performing an act for the good of the community.<sup>7</sup> In this sense, it is essential to distinguish between the concepts of public good and the common good. These concepts are often confused and it is helpful to differentiate between them. The doctrine<sup>8</sup> has been clear in defining them because the utilities that make up the common good are conceptually different from public goods, given that these utilities may not be of net benefit to every member of the community. Specifically, the elements that make up the common good serve a particular class of interests that all citizens have in common: the interests common to all who are the subject of the civic relationship. In contrast, the claims that make up the public good serve certain citizens, who, at a given moment, make use of it. For example, the environmental conservation of a national park is considered a common good insofar as the environmental heritage is protected, preventing global warming. This action has direct consequences for humanity.

On the other hand, the same national park is considered a public good for those who visit it at certain times of the year and enjoy its natural wonders. In this sense, investments to reduce CO<sub>2</sub> levels aim to achieve a greater global good as all human beings will benefit from such actions.<sup>9</sup> Countries' efforts have been ineffective in slowing global warming. International treaties on the subject have not been strong enough to achieve their aims. In this scenario, countries have not collaborated in obtaining a global common good, as they have taken advantage of the benefits of their laws to achieve better production rates without attending to the climate crisis.

Against this backdrop, trade seems to be an effective tool for introducing measures to achieve climate action as well as private action by business groups or individual entrepreneurs. So what is the benefit of investing in carbon abatement for an individual entrepreneur? An investment in this area will not directly benefit their wealth. For instance, an entrepreneur who invests large sums of money in decarbonization would only increase production costs.

---

<sup>7</sup> *Id.* § 3.

<sup>8</sup> *Id.* § 2.

<sup>9</sup> William D. Nordhaus, *A New Solution: The Climate Club*, N.Y. REV. BOOKS, June 4, 2015, [https://www.nybooks.com/articles/2015/06/04/new-solution-climate-club/?lp\\_txn\\_id=1321000](https://www.nybooks.com/articles/2015/06/04/new-solution-climate-club/?lp_txn_id=1321000) [<https://perma.cc/55NW-2G7N>] (reviewing GERNOT WAGNER & MARTIN L. WEITZMAN, *CLIMATE SHOCK: THE ECONOMIC CONSEQUENCES OF A HOTTER PLANET* (2015)).

Still, she would help obtain a superior good, such as reducing CO<sub>2</sub> levels, which would directly affect her and her family. This is the notion and vision of the common good that should prevail in business relations, since it is about taking care of “everyone’s home.” In this regard, the Catholic Church has a similar view and argues that “[c]limate change is a global problem with grave implications: environmental, social, economic, political and for the distribution of goods. It represents one of the principal challenges facing humanity in our day. Developing countries will probably feel its worst impact in the coming decade.”<sup>10</sup> Regarding the social consequences of not achieving carbon neutrality, the effects on the climate are dire. Essential human rights such as access to water are altered, while the right to drinking water and sanitation is an essential human right “for the full enjoyment of life and all human rights.”<sup>11</sup> It is the moral duty of various institutions, such as the Church, factories, universities, private agencies, and research centers to contribute to climate neutrality for the benefit of the common good and the care of the planet.

The concept of the common good transcends all public and private policies to achieve climate neutrality. Such policies may not necessarily be economically profitable, but their implementation and expected outcome are based on the realization of a common good that benefits humanity.

#### *b. Climate Neutrality*

Climate neutrality is about bringing net carbon emissions to zero or below, balancing the amount of CO<sub>2</sub> released into the atmosphere with the same amount released in other ways. This is called “zero balance.” We will not detail the measures taken or the negotiations already undertaken by countries in the WTO framework due to the length of this Article. However, we will set out proposals for decisionmaking by the actors involved, contributing to climate neutrality.

---

<sup>10</sup> Pope Francis, *Encyclical Letter Laudeato Si’ of the Holy Father Francis on Care for Our Common Home*, VATICAN (May 24, 2015), [https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html) [<https://perma.cc/M4G7-LWCG>].

<sup>11</sup> G.A. Res. 64/292, *The Human Right to Water and Sanitation*, at 2 (July 28, 2010).

In the international context, many countries have tried to agree on formulas to achieve zero carbon through a series of international instruments, including the Kyoto Protocol, in force until 2012, the Paris Agreement, and the WTO Principles, among others. However, these measures have not borne fruit. We can even see that, since 2000, after the climate summits in Kyoto, Copenhagen, Durban and elsewhere, there has been no reduction in carbon emissions.<sup>12</sup>

The research on the use of trade as a tool to combat climate change is of crucial importance,<sup>13</sup> as the concerns in this regard are trade, energy generation, climate change, and sustainability. It is interesting to apply the concept of *in dubio pro natura*,<sup>14</sup> defended by the Brazilian High Court,<sup>15</sup> because, in the economic activities of public policymakers, this concept must be present, as it is the only way in which public policies will achieve the fundamental objective of climate neutrality.

Governments have not been efficient in achieving carbon neutrality policies. Today, clean energy technologies such as green hydrogen are being developed and the option of rewarding companies that use clean energy through taxation appears popular. Given the failure of government policies to achieve zero carbon neutrality, international trade seems to be a valuable tool for such incentives. Some blame the market as the leading cause of the climate crisis. According to some authors,<sup>16</sup> it should be the market itself, through the collection of climate taxes, that proposes the solution to the climate crisis. A counter-argument is that creating climate taxes will only contribute to an unlevel playing field among

---

<sup>12</sup> Nordhaus, *supra* note 9.

<sup>13</sup> Rafael Leal-Arcas, *Connection Between Climate Change and International Trade*, HOUSE OF COMMONS INT'L TRADE COMM. (Aug. 15, 2021), <https://committees.parliament.uk/writtenevidence/38010/pdf/> [<https://perma.cc/DSY4-HMBC>].

<sup>14</sup> In the field of environmental law, there are the above-mentioned theoretical-dogmatic foundations of the dynamic burden. But that is not all. The very unavailable nature of the protected legal good (the environment), of intergenerational projection, certainly favors a more incisive and proactive action of the judge to safeguard the interests of the countless subjects-users, humanity in its entirety, and future generations. Lastly, the incidence of the precautionary principle, itself the transmitter par excellence of evidence reversal, the basis of the *in dubio pro natura* principle, induces the same result in the dynamics of evidence, as expressly recognized by the STJ, according to precedents *infra* note 15.

<sup>15</sup> S.T.J., Recurso Especial No. 883.656-RS (2006/0145139-9), Relator: Minster Herman Benjamin, 09.03.2010, 239 Revista do Superior Tribunal de Justiça [R.S.T.J.], 28.02.2012, 1141 (Braz.).

<sup>16</sup> Leal-Arcas, *supra* note 13, ¶¶ 10-19.

poorer countries – many of which already pay carbon taxes within their tax laws – making international trade even more unfair.

The production of green energy goods must distinguish the type of green energy and the whole process from the components that enable the generation of that energy. For example, lithium<sup>17</sup> has been promoted as an essential factor in electromobility. However, lithium production contributes significantly to carbon emissions and wetland destruction.<sup>18</sup> The UNFCCC parties also “agree to sustainably manage carbon sinks (such as forests and oceans) that absorb greenhouse gases and to cooperate in preparing to cope with the effects of climate change,” with a particular focus on coastal zone preparedness and water resource management.<sup>19</sup> In our view, this commitment has specific relevance to achieving climate neutrality as environmental restoration, aided by the WTO framework, could be a perfect combination for these purposes.

### *c. Sustainability and Climate Neutrality in the Trade Context*

Since the 1990s, it has been recognized that a multilateral trading system could have an impact on sustainable development and on reducing carbon emissions. This principle was recognized at the 1992 United Nations Conference on Environment and Development (UNCED or Earth Summit) in Rio de Janeiro.<sup>20</sup> At that time, the trading system had the legal framework determined by the General Agreement on Tariffs and Trade (GATT), the predecessor of the

---

<sup>17</sup> Patricia Jiménez Angulo, *Las Víctimas del Litio: Los Flamencos Andinos* [The Victims of Lithium: the Andean Flamingos], DEUTSCHE WELLE (Sept. 27, 2018), <https://www.dw.com/es/las-v%C3%ADctimas-del-litio-los-flamencos-andinos/a-45630408> [<https://perma.cc/BXM3-5RJJ>].

<sup>18</sup> The production of lithium salts contributes significantly to the disappearance of brackish basins in South America because lithium is present in the water of these lagoons. The process of lithium extraction involves the evaporation of large portions of water through the construction of evaporation ponds, which seriously affects the ecosystems of the wetlands where these extractive operations are carried out, such as a decrease in the population of Andean flamingos. Water extraction contributes directly to the disappearance of wetlands, which are necessary ecosystems for the reduction of CO<sub>2</sub> levels.

<sup>19</sup> U.N. ENV'T PROGRAMME & WORLD TRADE ORG., TRADE AND CLIMATE CHANGE 70 (2009).

<sup>20</sup> U.N. Conference on Environment and Development, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I), annex I (Aug. 12, 1992) [hereinafter *Rio Declaration*].

WTO.<sup>21</sup> These principles were later taken up in the Doha Declaration after the WTO was created, and again, sustainable development was incorporated as one of the principles of this organization.<sup>22</sup> Subsequently, at the 2005 symposium, the WTO's sustainable development and labor principles were discussed again, confirming the idea that trade is an effective instrument for achieving sustainable development and climate neutrality.<sup>23</sup> In this context, climate change and carbon neutrality have been a recurring theme in several international instruments and attempts have been made to find solutions through international trade, such as the creation of green taxes or incentives to reduce carbon emissions.<sup>24</sup>

States have also made their best efforts to create regulations such as the European Green Deal, which has the target of achieving a 55% reduction in emissions from 1990 to 2030. This pact promotes the generation of measures such as fresh air, clean water, healthy soil and biodiversity; renovated, energy-efficient buildings; healthy and affordable food; more public transport; cleaner energy and cutting-edge clean technological innovation; longer-lasting products that can be repaired, recycled, and reused; future-proof jobs and skills training for the transition; and a globally competitive and resilient industry.<sup>25</sup> In other latitudes, the U.S.A.-Chile Free Trade Agreement (U.S.A.-Chile FTA) enshrines an environmental chapter where both countries must “ensure that trade and environmental

---

<sup>21</sup> General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT].

<sup>22</sup> World Trade Organization, Ministerial Declaration of 14 November 2001, WTO Doc. WT/MIN(01)/DEC/W/1 ¶ 6, 41 I.L.M. 746 (2002) [hereinafter Doha Declaration].

<sup>23</sup> See generally Dr. Supachai Panitchpakdi, Secretary-General, United Nations Conference on Trade and Development (UNCTAD), Statement to the WTO Symposium on Trade and Sustainable Development within the Framework of Paragraph 51 of the Doha Ministerial Declaration (Oct. 10, 2005), [https://www.wto.org/english/tratop\\_e/envir\\_e/sym\\_oct05\\_e/supachai\\_e.doc](https://www.wto.org/english/tratop_e/envir_e/sym_oct05_e/supachai_e.doc) [<https://perma.cc/FHZ2-2VGS>] (noting that the liberalization of trade can have sustainable development benefits).

<sup>24</sup> See generally Rafael Leal-Arcas, Teemu Alex Hast, Lucas Sperka, Aarushi Mittal, Hannah Kasak-Gliboff & Kaushal Prakash, *Green Bills for Green Earth: How the International Trade and Climate Regimes Work Together to Save the Planet*, 31 EUR. ENERGY & ENV'T L. REV. 19 (2022) (discussing synergies between international trade structures and the climate regime and how these synergies may help contribute to resolving pressing environmental issues that threaten the well-being of our planet).

<sup>25</sup> A European Green Deal, EUR. COMM'N, <https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal> [<https://perma.cc/G25T-VZQY>] (last visited Jan. 31, 2023).

policies are mutually supportive and collaborate in promoting the optimal use of resources in accordance with the objective of sustainable development.”<sup>26</sup>

However, the treaty is clear that non-discriminatory measures should be promoted and is emphatic that disguised barriers to trade and trade distortions based on environmental concerns should be eliminated.<sup>27</sup> Furthermore, Article 19.9 of the U.S.A.-Chile FTA is respectful of existing WTO environmental agreements, and both countries recognize the importance of these, including the appropriate use of trade measures contemplated in such agreements aimed at achieving specific environmental objectives. With particular recognition “regarding paragraph 31(i) of the Ministerial Declaration, adopted in Doha on 14 November 2001, WTO Members have agreed to conduct negotiations on the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements,”<sup>28</sup> and establishing the obligation of reciprocal consultation on the extent to which the results of the negotiations are applicable to the US-Chile FTA.

In the context of a desperate race by countries to achieve climate neutrality, the Paris Agreement, in its Article 5, mandates countries to, in any way, accelerate this goal through carbon sinks, providing that: “Parties should take measures to conserve and enhance, as appropriate, the greenhouse gas sinks and reservoirs referred to in Article 4, paragraph 1(d), of the Convention, including forests,”<sup>29</sup> applying to this the regulatory framework of free trade agreements and all those covered by the WTO, as countries also have a duty to invest in research and in any type of measure that contributes to this end.

We have analyzed that the use of inputs that can be reused avoids the generation of CO<sub>2</sub> and in this way the circular economy must start to become a more common activity among countries, possibly by freeing tax burdens on the import of these inputs with the aim of promoting circular trade. In this context, the positive environmental impacts generated by a project, or an industrial activity should be favored with tax treatments, and in relation to the question posed in this Article, public policies should encourage

---

<sup>26</sup> United States - Chile Free Trade Agreement, U.S. - Chile art. 19, June 6, 2003, 42 I.L.M. 1026.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.* art. 19.9.

<sup>29</sup> Paris Agreement to the United Nations Framework Convention on Climate Change art. 5, Dec. 12, 2015, 3156 U.N.T.S. 54113 [hereinafter Paris Agreement].

public-private cooperation in obtaining zero neutrality. International experience has shown that obtaining zero neutrality is not possible with the sole action of public agents, and the collaboration of private agents is necessary for this purpose. In this regard, public policies should aim to encourage private initiatives that promote the removal of CO<sub>2</sub> from the atmosphere in the most efficient ways and in harmony with local environments and communities.

*d. Public-Private Cooperation such as Public Policy to Achieve Climate Neutrality*

Public policies must be based on science and evidence. Studies show that wetlands and restored environments contribute significantly to climate neutrality.<sup>30</sup> It is important to consider the private sector's strategic view on the environmental impacts it produces. States should bear in mind that companies have studies on the environmental damage caused by their activities, and these studies are useful in terms of how to mitigate these impacts. In public-private partnerships, there are certain axes recommended by the United Nations that should always be considered, such as human rights, labor rights, environment, and anti-corruption policies. In addition, six basic principles are established by United Nations: Principle I: Alignment with the U.N. Environment Programme's Objectives, Mandate and Mission; Principle II: Impact-Oriented and Results-Based Engagement; Principle III: Transparency and Disclosure; Principle IV: Adding Value by Working Together; Principle V: Standard-Raising Collaboration; and Principle VI: Integrity, Impartiality and Independence.<sup>31</sup>

Wetland restoration projects have borne fruit at different latitudes around the world; the rate of carbon offsetting is extremely high and produces positive effects on communities and wildlife. The European Union has sponsored such projects in Europe, the results

---

<sup>30</sup> *Actions, WETLANDS4CLIMATE*, <https://fundacionglobalnature.org/wetlands4climate/en/actions/> [<https://perma.cc/J72B-9B9D>] (last visited Jan. 31, 2023).

<sup>31</sup> *Strategy for Private Sector Engagement*, U.N. ENV'T. PROGRAMME 4-5 (Oct. 11, 2019), <https://wedocs.unep.org/bitstream/handle/20.500.11822/31107/Strategy%20for%20Private%20Sector%20Engagement-2.pdf?sequence=1&isAllowed=y> [<https://perma.cc/8968-3DLF>].

of which are already visible.<sup>32</sup> In other latitudes, environmental restoration projects have been implemented for decades, such as the “Esteros del Iberá” project in the Province of Corrientes in Argentina, run by the Tompkins Conservation Foundation and today transferred to the National Parks Administration of the Argentine Republic.<sup>33</sup>

This is the best evidence that public-private partnerships are effective in reducing carbon emissions into the atmosphere. The principles set out in the United Nations “Strategy for Private Sector Engagement” have been fully realized in these examples of public-private cooperation and should be encouraged in industry leaders.

Considering these experiences, carbon neutrality can be achieved by stimulating environmental restoration of wetlands. This activity can be carried out, in particular, by extractive companies, whose CO<sub>2</sub> emissions are high. In this way, they could compensate for their CO<sub>2</sub> emissions and this compensation could be recognized through tax or customs incentives in the countries receiving these goods. The reuse of equipment will contribute significantly to reducing carbon emissions in the manufacture of equipment and public policies in this area should be replicated as trade plays an essential role in this area. Research supports the move to reuse components with extended lifetimes.

The circular economy aims to minimize the production of items that have already been produced, encouraging reuse and reducing carbon emissions. Also, in the agricultural industry there must be incentives to use nature’s regenerative capacities, such as composting practices, biofertilizers, and especially the promotion of water reuse<sup>34</sup> and wetlands. In this regard, the function of trade treaties is to regulate and enforce the provisions of Article 5 of the Paris Agreement<sup>35</sup> in order to reduce carbon emissions.

---

<sup>32</sup> *Id.*

<sup>33</sup> *Iberá National Park Corrientes Province*, ARGENTINA.GOB.AR. <https://www.argentina.gob.ar/parquesnacionales/ibera> (last visited Mar. 26, 2022).

<sup>34</sup> See FOOD & AGRIC. ORG. OF THE U.N., *THE WEALTH OF WASTE: THE ECONOMICS OF WASTEWATER USE IN AGRICULTURE* 47-110 (2010).

<sup>35</sup> Article 5, Paragraph 2 of the Paris Agreement states: “Parties are encouraged to take action to implement and support, including through results-based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention for: policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and



Currently, a reform of the water code is being processed in the National Congress of Chile, and within the new articles, Article 129 bis 1-A<sup>36</sup> is being established, which recognizes the rights of water use for environmental conservation, a public policy that is in harmony with public-private cooperation, whose purpose is to reduce carbon emissions by promoting the creation of new conservation areas. Similarly, the reuse of equipment will contribute significantly to reducing the emission of carbon gases in manufacturing equipment, so public policies in this area should be replicated. Experience has shown that industry leaders, especially in polluting industries, need greater social, legal, and tax incentives for the creation of areas that favor the development of biodiversity since biodiversity is the most powerful tool for achieving climate neutrality. In this way, trade can be a great ally in this purpose through its international regulation.

## II. NECESSARY COALITIONS, PARTNERS, AND NETWORKS TO SUPPORT AN AMBITIOUS AND MEANINGFUL BUSINESS DIALOGUE ON THE TRANSITION TO CLIMATE-NEUTRAL INDUSTRIES

This Part first conceptualizes the problem of major emitting industries which necessitate a transition to climate neutral processes. This Part then examines the framework of laws that are available to facilitate the transition to climate neutral industries. Finally, this Part considers all the coalitions, networks, and partners that are relevant for a meaningful dialogue on the transition to climate neutral industries.

---

sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches.” Paris Agreement, *supra* note 24, art. 5.

<sup>36</sup> Article 29 bis 1-A of the Chilean Water Code Project states: “When applying for a water use right or while such an application is being processed, the holder may declare that the water will be used at its source without the need for abstraction, either for environmental conservation purposes or for the development of a sustainable tourism, recreational or sporting project.” DEL CODIGO DE AGUAS [THE WATER CODE] art. 29 (Chile).

a. *Conceptualization of the Problems Necessitating a Transition to Climate Neutrality*

The need to amass profit has led businesses in various industries around the world to look for new, easier ways to produce more products in shorter periods of time. Therefore, while these industries are flourishing in terms of output and income, the atmosphere suffers from emissions of unhealthy gases.

A sector-by-sector analysis of global emissions shows that the manufacturing sector is responsible for about 12% of global emissions.<sup>37</sup> This is caused by the amount of heat required to produce materials like steel, aluminium, plastic, and glass. But the material that contributes the most greenhouse gas emissions when being produced is cement. This creates a problem because cement is a very crucial ingredient for concrete, which itself is the most widely used building material. The problem with cement is that it is derived from limestone, and the process of converting limestone to the final product useful for construction requires a lot of heat which is released as unclean air into the atmosphere,<sup>38</sup> thus releasing one ton of carbon per ton of cement produced. Because cement and other materials are heavily relied upon, countries need to transition to a climate neutral alternative process.

Beef, pork, and chicken production and consumption contribute immensely to the global emissions of greenhouse gases. Rearing cows uses large areas of land, making animal rearing one of the leading causes of deforestation.<sup>39</sup> The transportation sector also heavily contributes to global climate emissions, accounting for about 16%.<sup>40</sup> Increased mobility via cars, aeroplanes, ships, and other means of transportation powered by fossil fuels accounts for greater rates of greenhouse gas emissions. The aviation industry is the leading polluter in the transportation sector due to the carbon emissions caused by the consumption of aviation fuel.<sup>41</sup> There is

---

<sup>37</sup> INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC), *supra* note 1.

<sup>38</sup> NowThis News, *Here's How the Cement Industry can Lower its Carbon Footprint*, YOUTUBE (Mar. 19, 2020), <https://www.youtube.com/watch?v=ySrgGLZM0Vw> [<https://perma.cc/YL5P-9Y2G>].

<sup>39</sup> *Id.*

<sup>40</sup> INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC), *supra* note 1.

<sup>41</sup> *Cutting Aviation Pollution: Overview*, WWF, <https://www.worldwildlife.org/initiatives/cutting-aviation-pollution> [<https://perma.cc/H6JT-HQ4M>] (last visited Mar. 26, 2022).

thus an increasing need to transition from the reliance upon fossil fuels to a cleaner process that is more sustainable.

*b. Current Framework for a Transition to Climate-Neutral Industries*

International communities have taken various steps to ensure a speedy transition to climate neutrality, but each of these steps has become less effective due to the lack of enforceability of their provisions. Of all the previous agreements on climate change, the Paris Agreement is the most recent step taken by countries to achieve that goal. Its 195 signatories agree to undertake measures aimed at reducing global average temperatures to well below 2°C above pre-industrial levels and to limit the increase to 1.5°C above pre-industrial levels.<sup>42</sup> Because parties were free to decide whether to opt into this agreement, and the uncooperative attitude of countries towards issues of climate change, the Paris Agreement lacks any enforceability clauses to avoid dissuading countries from entering into the agreement. For instance, the only reason the United States entered the agreement was because it was presented as a “non-binding political commitment.”<sup>43</sup> This sentiment is both understandable and unfortunate because while it is important for the parties to come to agreement, it is equally important that there be some form of enforcement mechanism in place to guarantee observance of the agreement’s terms. The importance of this point is easily expressed by the current state of compliance with the Paris Agreement. Amongst the ten biggest climate polluters, 2021 research shows that only India’s national determined contribution (NDC) complies with the aims under Article 2.1.<sup>44</sup> This outcome hardly suffices because, to achieve the objectives of the Paris Agreement, every party, or at least all the top polluters, would need to comply with their NDCs.

Aside from the Paris Agreement – or other agreements specially enacted to tackle climate change – trade agreements have been used to advance the transition to climate neutral industries. However,

---

<sup>42</sup> Paris Agreement, *supra* note 29, at art. 2.1(a).

<sup>43</sup> Jessica Durney, *Defining the Paris Agreement: A Study of Executive Power and Political Commitments*, 11 CARBON & CLIMATE L. REV. 234, 234 (2017).

<sup>44</sup> TDLR News US, *Is the Paris Climate Agreement Working? Was Biden Right to Rejoin the Agreement?* - TDLR News, YOUTUBE (Feb. 23, 2021), <https://www.youtube.com/watch?v=CpM3fYiPFFE> [<https://perma.cc/M5BM-MHLU>].

save for most of the trade agreements involving the United States, an overwhelming majority of pro-climate neutrality clauses in trade agreements are also watered down by provisions that render them unenforceable. For instance, Article 12.6.3 of the E.U. & Singapore FTA reaffirms the commitment of parties to reach the ultimate objectives of the UNFCCC, Kyoto Protocol, and the Paris Agreement. But instead of establishing some concrete enforceability procedure under its dispute settlement chapter, the parties agreed that any disputes regarding the implementation of the agreement shall only have recourse to their government consultations and panel of experts, which largely performs monitoring functions.<sup>45</sup> RTAs and FTAs generally do not afford enforceability measures and this has largely contributed to the inability to achieve climate neutrality.

Also, in the Preamble to the Marrakesh Agreement, which established the WTO, provides that trade and economics should be conducted in accordance with the objective of sustainable development seeking both to protect and preserve the environment.<sup>46</sup> While there is no specific agreement for the attainment of climate neutrality, members can implement measures that are inconsistent with the provisions of the General Agreement on Tariffs and Trade in protection of the environment, provided that such measures are not a guise to afford protection to domestic products.<sup>47</sup> In addition to climate agreements and plurilateral and multilateral trade agreements, unilateral measures implemented by countries to reduce their quota of global carbon emissions are also a means of achieving climate neutrality, such as the E.U. Green Deal.

While a lot of effort has been expended to get to this stage, it is unfortunately not enough. Apart from the general unenforceability of the laws on climate change, trade is one of the biggest problems for the transition to climate neutrality. This is because if every single individual in the world should end trading in goods and services the achievement of carbon emission peaking would arrive much sooner, but trade cannot stop because the profits that come with trading will also stop, and countries need that profit to develop.

---

<sup>45</sup> Free Trade Agreement Between the European Union and the Republic of Singapore art. 12.11, E.U.-Sing., Nov. 14, 2019, 2019 O.J. (L 294) [hereinafter EUSFTA].

<sup>46</sup> Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, 1867 U.N.T.S. 154 [hereinafter Marrakesh Agreement].

<sup>47</sup> See *Trade and Environment*, WORLD TRADE ORG., [https://www.wto.org/english/tratop\\_e/envir\\_e/envir\\_e.htm](https://www.wto.org/english/tratop_e/envir_e/envir_e.htm) [https://perma.cc/WC5Y-GDZ6] (last visited Jan. 29, 2023).

Therefore, rather than putting an end to trade, it should be utilized, alongside other means, to enable a swifter transition to climate neutral industries.

*c. Partners, Networks, and Coalitions Necessary for a Transition to Climate Neutral Industries*

*i. Climate Clubs*<sup>48</sup>

According to the 1648 Treaty of Westphalia, there are three characteristics of a state under modern international law: sovereignty, equality, and the freedom to manage their internal affairs without interference from other states.<sup>49</sup> Due to these characteristics, a country has the power to decide whether they wish to become parties to treaties or agreements.<sup>50</sup> Whether this principle should be abated on certain issues of global importance is a relevant debate, however with regards to the Paris Agreement and other previous multilateral agreements on climate change, this principle has made it possible for countries to become free riders on the fulfilment of the agreement's obligations by other countries. Freeriding occurs when a party benefits from a public good without contributing to the costs; thus, in this case free riding could mean making profits from unclean goods and services and damaging the environment while future generations pay the price by having to endure an unbearable environment.<sup>51</sup>

Climate clubs can serve as a solution to the free riding problem that has plagued previous climate agreements. A climate club is a coalition of countries with the main purpose of transitioning to climate neutral industries. For these clubs to function effectively, they need to have the following elements:

---

<sup>48</sup> See generally Rafael Leal-Arcas & Andrew Filis, *International Cooperation on Climate Change Mitigation: The role of climate clubs*, 30 EUR. ENERGY & ENV'T L. REV. 195 (2021) (arguing for the creation of climate clubs, i.e., coalitions of willing states within the international trading system).

<sup>49</sup> Treaty of Westphalia, Oct. 24, 1648, [https://avalon.law.yale.edu/17th\\_century/westphal.asp](https://avalon.law.yale.edu/17th_century/westphal.asp) [<https://perma.cc/M6TW-AVC2>].

<sup>50</sup> See William Nordhaus, *Climate Clubs: Overcoming Free-Riding in International Climate Policy*, 105 AM. ECON. REV. 1339, 1340 (2015).

<sup>51</sup> *Id.* at 1339.

- That there is a public good
- That there is some benefit accruing to club members
- That non-members are penalized for non-participation
- That it is more profitable to be a member of the club than not<sup>52</sup>

The public good in this case would be the attainment of climate neutrality of each industry by a given date. The aims of Article 2.1 of the Paris Agreement would suffice as the public good. The benefit that would accrue to the members could be general tariff reductions, while the penalty to non-members could be in the form of carbon duties. Carbon duties could be charged at a rate wherein the carbon content of goods imported to a member country would be multiplied by the current price of carbon. An alternative penalty could be a uniform tariff mechanism where in an agreed percentage of the imports would be charged to non-member countries.<sup>53</sup> When this climate club is set up in a way that it would be more desirable to be a member than not, many countries will seek membership, leading to a swifter transition to climate neutrality. Examples of organizations that operate with these basic principles of rules and sanctions include the European Union, the North Atlantic Treaty Organization, and the WTO. The rules for joining a climate club could include:

- Implementation of measures limiting or eradicating carbon emission in certain industries
- Granting preferential treatments to products produced using clean energy
- Engaging only the services of companies that manufacture using alternative sources of energy

For this coalition to work, not all members of the United Nations need to be members of this climate club, but a few of the major polluters like the European Union, United States, China, or India would be necessary. If the top ten carbon emitters are regulated by some form of sanction in this climate club, it may expedite the transition to climate neutrality.

---

<sup>52</sup> *Id.* at 1340.

<sup>53</sup> *Id.* at 1348.

*ii. Solution-Driven Network of Key Industry Players*

Because climate change is a global issue that affects every individual on the planet, all the key players of each industry, even though they are competitors, need to network to find a solution to their own quota of carbon emission. Such networking will facilitate a rapid transition to climate neutrality in their industry. This can only be achieved if the key players are prepared to forego some profit in this transition phase.

With the growing awareness of climate change, a few cement manufacturing companies have been able to develop technologies that can trap carbon emissions and use that same trapped carbon to produce more cement.<sup>54</sup> While some carbon might still be emitted into the atmosphere, this process drastically reduces the amount. While these are not an absolute solution to the emissions from this industry, they are among the worthwhile innovations to aid a speedy transition to climate neutrality. Also, if there are no technologies invented that produce zero emissions within the immediate future, the cement industry may need to consider other climate-friendly alternatives to cement like silica fume, which was used in the building of the Burj Khalifa,<sup>55</sup> or fly ash, which was used to construct the St. Anthony Falls Bridge.<sup>56</sup>

Beef production in the agricultural industry is harmful to the climate in four major ways: methane emissions, deforestation, degradation of soil, and water waste. Since the demand for beef is still very high, each animal farming company needs to use available climate-friendly alternatives. The key players in this industry might need to reduce animal production by between a quarter to half because the amount of animal products that go to waste is sometimes more than is consumed. Finally, there have been some scientific discoveries in the laboratory production of meat.<sup>57</sup> If this breakthrough can lead to greener outcomes, then it is worth exploring by the meat industry.

---

<sup>54</sup> See NowThis News, *supra* note 38.

<sup>55</sup> Minute Earth, *Problem with Concrete*, YOUTUBE (Mar. 1, 2019), <https://www.youtube.com/watch?v=GSc9hu917OU> [<https://perma.cc/C5L4-UKL4>].

<sup>56</sup> *Id.*

<sup>57</sup> Kurzgesagt – In a Nutshell, *Why Meat Is the Best Worst Thing in the World*, YOUTUBE (Sep. 30, 2018), <https://www.youtube.com/watch?v=NxvQPzrg2Wg> [<https://perma.cc/RF5N-79BN>].

In the transport industry, the leading polluters of the atmosphere are the airplanes. According to the International Energy Agency, the aviation industry will likely be the most difficult to decarbonize because of its cost and scale.<sup>58</sup> Instead of the regular aviation fuel that emits carbon, a sustainable aviation fuel can be used to power the aviation industry. Key players should invest in more research and the advancement of sustainable aviation fuels.

Industry leaders have a responsibility to facilitate a transition to climate neutrality and options are already available. These companies need to come together and decide to undertake the financial loss that will come from the transition to cleaner energy source, facilitating a swifter transition to climate neutrality in each industry.

### *iii. Sub-National Government Action*

Apart from their relationship with other countries through climate clubs, each government has a role to play within their respective countries to achieve climate neutrality. The first way that this can be done is by engaging only companies that manufacture their products through sustainable means for large scale government products. By taking this action they are not only reducing the global emissions from the manufacturing industry, but also leading by example and deterring producers that rely solely on unsustainable means. For example, the New York Assembly recently enacted a law that requires only low-carbon concrete to be used in state projects; another bill still at the committee stage would amend the transportation law to allow the purchase of only zero emission buses.<sup>59</sup> Actions like these can speed up the transition to climate neutrality in these industries.

---

<sup>58</sup> Aviation, IEA, <https://www.iea.org/reports/aviation> [<https://perma.cc/FJ3K-KTKK>] (last visited Apr. 24, 2023); CNBC International, *Are Eco-friendly Flights Impossible?*, YOUTUBE (Feb. 14, 2020), <https://www.youtube.com/watch?v=gJ1t993-vw0&t=1s> [<https://perma.cc/9TBU-UPJF>].

<sup>59</sup> See N.Y. A02591, 2021-2022 Gen. Assembly, Reg. Sess. (N.Y. 2021) (enacted); N.Y. A03090, 2021-2022 Gen. Assembly, Reg. Session (N.Y. 2021).



Another way that governments can facilitate the transition to climate neutrality is by carbon markets.<sup>60</sup> Carbon marketing involves monetizing the carbon emissions of companies. If a company exceeds its carbon emissions limit, it is fined or required to offset the excess carbon emitted. The problem with this system in practice is that the international price for carbon credit, which often remains between \$10 to \$20 per ton, and fines for violations are too low. For carbon markets to succeed, the price of carbon credits will need to be between \$50 and \$100.<sup>61</sup>

Therefore, carbon markets can still be utilized by governments on a national level to reduce the emissions of their companies. It is however important that the process of obtaining carbon credits is sufficiently difficult. Higher prices of carbon credit, higher fines, and lower carbon emissions limit will make it more difficult for companies that do not transition climate neutral sources to compete with compliant companies. The government of each country thus has a huge role to play in the advancement of a transition to climate neutral industries.

#### *iv. Individual Actions*

The transition to climate neutral industries also requires participation from citizens. Individuals are the final consumers of goods and services and have the power to influence how goods and services are made through the types of goods and services that they choose. In 2019 the international campaign #flyskam was trending among citizens to boycott the patronage of airlines that were not climate neutral.<sup>62</sup> While many airlines were undisturbed by this movement, it did have an effect of developing increased awareness of greenhouse gas emissions by aeroplanes. Thus, such movements at the level of the individual can cause a meaningful dialogue on the transition to climate neutral industries.

---

<sup>60</sup> See generally Rafael Leal-Arcas, Ellis Malle, Marion Kerestedjian & Gluce Budak, *The World Trade Organization and Carbon Market Clubs*, 52 GEO. J. INT'L L. 895 (2022) (discussing the practicality of global carbon markets).

<sup>61</sup> Phillip Inman, *Sky-High Carbon Tax Needed to Avoid Climate Catastrophe, Says Expert*, GUARDIAN (May 29, 2017), <https://www.theguardian.com/environment/2017/may/29/sky-high-carbon-tax-needed-to-avoid-catastrophic-global-warming-say-experts> [https://perma.cc/9BVY-75SM].

<sup>62</sup> CNBC International, *supra* note 58.

But more needs to be done. Consumers should consider avoiding beef, non-electrical cars, cement, and other products produced via processes detrimental to the environment as much as possible. If there is not demand for unclean products, there will eventually cease to be a supply. Moreover, funding for the transition to climate neutrality can be burdensome for the government or companies. Therefore, wealthy individuals can support the transition with financial assistance which can be used for the procurement of solar panels, electric vehicles, and other sustainable technologies.

### III. THE SUSTAINABILITY AGENDA IN THE INTERNATIONAL TRADING SYSTEM AND A PATH FORWARD FOR FURTHERING SUSTAINABILITY IN TRADE POLICY

#### *a. The Sustainability Agenda and Its Importance in International Trade*

##### *i. The Importance of Sustainability*

It is no epiphany that climate change is rapidly becoming the largest threat that our population has faced.<sup>63</sup> This problem continues to increasingly threaten our planet and we are now in an imperative stage where nations must prioritize the sustainability agenda to the greatest extent.

In recent years, academics have identified clear disparities between the cataclysmic threat of climate change and the standard of international environmental law that is in place.<sup>64</sup> The underlying theme of treaties that have arisen from environmental cooperation demonstrate underwhelming procedural obligations and a general lack of legal enforcement, which is simply not good enough in the face of environmental urgency. For example, the Paris Agreement, which is supposedly a landmark in the multilateral climate change progress,<sup>65</sup> exercises voluntary efforts and weak enforcement

---

<sup>63</sup> WORLD ECON. FORUM, THE GLOBAL RISKS REPORT 2020, at 6-7 (15th ed. 2020).

<sup>64</sup> Daniel Bodansky, *The Paris Climate Change Agreement: A New Hope?*, 110 AM. J. INT'L L. 288, 289 (2016).

<sup>65</sup> Paris Agreement, *supra* note 29.

mechanisms.<sup>66</sup> For this reason, legal academics criticize the landscape of international environmental law as being incapable of securing meaningful sustainable development across nations.<sup>67</sup>

Thus, there has been an array of literature from academics, WTO members, and environmental lawyers which now points to utilizing the functions of the international trading system in order to create a meaningful impact on climate mitigation.<sup>68</sup>

### *ii. The Development of Trade and Climate Change*

At first glance, one could argue that it is almost a juxtaposition to pair trade and climate mitigation together,<sup>69</sup> as the assumption is that trade has a naturally damaging effect on the environment. The Working Group on Trade, Investment and Climate Policy acknowledges that “the prevailing model of trade and investment treaties is largely incompatible with the world’s broader climate goals.”<sup>70</sup> This fear is based on the principle that the liberalization of trade and output will also increase pollution and resource depletion.<sup>71</sup>

However, this is not necessarily the case, and an abundance of literature points to the notion that trade law can be effectively used to promote the sustainability agenda for two key reasons. One key reason is that trade agreements are legally binding, unlike traditional environmental agreements<sup>72</sup> and so can be more effective

---

<sup>66</sup> Rafael Leal-Arcas, Samuel Balzano, Jakkrit Deethae, Tanvir Singh & Kristina Skybova, *Of International Trade, Climate Change, Investment and a Prosperous Future*, 12 *TRADE L. & DEV.* 405, 417 (2020).

<sup>67</sup> THE ECONOMIST INTEL. UNIT, *CLIMATE CHANGE AND TRADE AGREEMENTS: FRIENDS OR FOES?* 7-8 (2019).

<sup>68</sup> Leal-Arcas & Filis, *supra* note 48, at 197.

<sup>69</sup> Rafael Leal-Arcas, Teemu Alex Hast, Lucas Sperka, Aarushi Mittal, Hannah Kasak-Gliboff & Kaushal Prakash, *Green Bills for Green Earth: How the International Trade and Climate Regimes Work Together to Save the Planet*, 31 *EUR. ENERGY & ENV’T L. REV.* 19, 20-21 (2022).

<sup>70</sup> Kevin P. Gallagher, *Trade, Investment and Climate Policy: The Need for Coherence*, in *TRADE IN THE BALANCE: RECONCILING TRADE AND CLIMATE POLICY* 5, 5 (Kevin P. Gallagher ed., 2016).

<sup>71</sup> *Id.* at 7.

<sup>72</sup> Rafael Leal-Arcas, *New Frontiers of International Economic Law: The Quest for Sustainable Development*, 40 *U. PA. J. INT’L L.* 83, 88 (2018).

legal instruments for environmental-protection purposes<sup>73</sup> and enforcement. Second, and arguably the most prominent reason that can lead to meaningful participation, trade is a great wealth generator for states.<sup>74</sup> This indicates that trade agreements can potentially be utilized in a way that promotes state participation while also protecting the environment—which sounds almost too good to be true. The next Section assesses whether in fact the international trading system can be utilized in such a way, through the mechanism of carbon pricing.

*b. Carbon Pricing*

“Carbon must have its price – because nature cannot pay the price anymore.”<sup>75</sup>

Climate change can be described as the greatest market failure that the world has ever seen.<sup>76</sup> This results from years of abusing carbon emissions, the price of which has not been reflective of its social costs.<sup>77</sup> In our opinion, this situation should be rectified within the trade system through the mechanism of carbon pricing to decarbonize the economy. There are experts who praise the concept of carbon pricing for its ability to raise revenue, stimulate research and development for new technologies, and control carbon rebound, all while still offering emitters flexibility and autonomy of choice.<sup>78</sup> Essentially, there are two key mechanisms through the trading system that can be adopted to explicitly price carbon: carbon taxes and emission trading systems (ETS).

---

<sup>73</sup> Rafael Leal-Arcas & Antonio Morelli, *The Resilience of the Paris Agreement: Negotiating and Implementing the Climate Regime*, 31 GEO. ENV'T L. REV. 1, 63 (2018).

<sup>74</sup> RAFAEL LEAL-ARCAS, CLIMATE CLUBS FOR A SUSTAINABLE FUTURE: THE ROLE OF INTERNATIONAL TRADE AND INVESTMENT LAW 63 (2021).

<sup>75</sup> Ursula von der Leyen, President, European Commission, State of the Union Address at the European Parliament Plenary (Sep. 16, 2020).

<sup>76</sup> Alison Benjamin, *Stern: Climate Change a 'Market Failure'*, GUARDIAN (Nov. 29, 2007), <https://www.theguardian.com/environment/2007/nov/29/climate-change.carbonemissions> [<https://perma.cc/QH2Y-USPN>].

<sup>77</sup> Martin L. Weitzman, *Can Negotiating a Uniform Carbon Price Help to Internalize the Global Warming Externality?*, 1 J. ASS'N ENV'T & RES. ECONOMISTS 29, 29 (2014).

<sup>78</sup> Andrea Baranzini, Jeroen C.J.M. van den Bergh, Stefano Carattini, Richard B. Howarth, Emilio Padilla & Jordi Roca, *Carbon Pricing in Climate Policy: Seven Reasons, Complementary Instruments, and Political Economy Considerations*, 8 WIRES CLIMATE CHANGE, July-Aug. 2017, at 1, 5.

Carbon tax is an instrument that captures the external costs of greenhouse gas emissions and shifts such cost upon the emitters themselves. This encourages emitters to transform their activities and lower their emissions or face the financial responsibility of their activity.<sup>79</sup> Meanwhile cap-and-trade imposes a cap on overall emissions and allocates allowances per ton of greenhouse gas, which participants can trade amongst themselves within the overall threshold of the cap.<sup>80</sup>

It can be argued that the general preference of NGOs, climate activists, and ultimately the answer to the market-based problem that humans have created, would lie within the form of a carbon tax<sup>81</sup> in order to reflect the externality of emissions. However, the purpose of this Article is not to merely discuss the difference between carbon taxes and cap-and-trade, as both approaches can be subject to arguments in favor and overwhelming criticism.<sup>82</sup> This chapter will instead criticize the generally favorable properties of carbon pricing overall to assess whether effective climate mitigation can be achieved through this trade-based approach.

The introduction of carbon pricing is not a novel concept. At present, the E.U. ETS constitutes the largest carbon market.<sup>83</sup> The E.U. ETS was designed to ensure that states fulfill their Paris commitment<sup>84</sup> to reducing greenhouse gases cost-effectively. Through creating transferable units, the ETS established a system where parties have an economic incentive to buy and sell emissions allowances.<sup>85</sup> The E.U. ETS creates a general model for Member States to establish a carbon market while still offering flexibility to factor in the economic circumstances and the priorities of the different jurisdictions.<sup>86</sup>

---

<sup>79</sup> *Carbon Pricing Dashboard*, WORLD BANK, <https://carbonpricingdashboard.worldbank.org/what-carbon-pricing> [https://perma.cc/S9AY-BSHN] (last visited Mar. 13, 2023).

<sup>80</sup> SONJA HAWKINS, CARBON MARKET CLUBS UNDER THE PARIS CLIMATE REGIME: CLIMATE AND TRADE POLICY CONSIDERATIONS 4 (2016).

<sup>81</sup> Ian W.H. Parry, Victor Mylonas & Nate Vernon, *Mitigation Policies for the Paris Agreement: An Assessment for G20 Countries 12-14* (Int'l Monetary Fund (IMF), Working Paper No. 2018/193, 2018).

<sup>82</sup> Baranzini et al., *supra* note 78, at 11.

<sup>83</sup> Peter Yeoh, *Is Carbon Finance the Answer to Climate Control?*, 50 INT'L J.L. & MGMT. 189, 191 (2008).

<sup>84</sup> Paris Agreement, *supra* note 29, art. 4(2).

<sup>85</sup> LEAL-ARCAS, *supra* note 74, at 96.

<sup>86</sup> *Id.* at 116.

However, despite the potential of promoting the sustainability agenda through ETS and carbon taxes, which restricts carbon emissions and reflects the cost of carbon, there are several weaknesses in carbon pricing which questions whether the international trading system should be used as a legal instrument for climate change mitigation.<sup>87</sup>

First, it can be argued that the issue of free-riding can occur, particularly in regard to the quantity-based emissions system which offers no incentive for each state to address the externality of carbon emissions.<sup>88</sup> The mechanism of an ETS, as exemplified through the Kyoto Protocol,<sup>89</sup> sets an overall carbon goal without introducing a standard of accountability and target for each individual country.

This issue could potentially be avoided in a future mechanism by opting for the uniform carbon tax approach which applies an equal tax to every state, thus negating the ability to free ride. However, carbon tax comes with its own weaknesses when it comes to enticing states. This method requires a collective commitment of states to enforce a binding restriction on their sovereign right to freely emit as much CO<sub>2</sub> as they wish.<sup>90</sup> This is problematic because it remains unlikely that *all* states of the WTO will appreciate climate change as being so important that they should agree to charges on their polluting.

The effectiveness of a uniform carbon tax approach would thus be dependent on an environmental appreciation that must be understood by all WTO members in order to truly avoid the same reoccurring theme of lackluster efforts. There are critics who argue that even if states all collectively agree to such measures, they will be inclined to negotiate for a very low cap on emissions or tax – much lower than would be socially optimal and effective.<sup>91</sup> Thus, the reality of carbon pricing almost completely contradicts its potential power to regulate emissions.

Another issue with a carbon pricing mechanism is that it is prone to carbon leakages. Carbon leakage indicates a shift in CO<sub>2</sub> emissions from a region with emission constraints to an unregulated

---

<sup>87</sup> Gary Clyde Hufbauer, Jisun Kim & Jeffrey J. Schott, *Can EU Carbon Border Adjustment Measures Propel Climate Talks?*, PETERSON INST. FOR INT'L ECON. 2 (Nov. 2021).

<sup>88</sup> Weitzman, *supra* note 77, at 34.

<sup>89</sup> UNFCCC, *supra* note 2, art. 17.

<sup>90</sup> Weitzman, *supra* note 77, at 46.

<sup>91</sup> *Id.* at 31.

area,<sup>92</sup> due to asymmetrical carbon policies. This loophole is the case in the E.U. ETS,<sup>93</sup> which allows emitters to move their production from the European Union to countries that have a looser climate policy.<sup>94</sup> This paints a very unattractive picture of carbon pricing in the European Union, as this framework allows for states to simply produce high emissions elsewhere.

Furthermore, carbon pricing can also impact competitiveness, as national industries may fear being uncompetitive vis-a-vis companies with lower carbon prices.<sup>95</sup> This fear could discourage the implementation of stringent emission caps or encourage states to implement protection measures which could be trade restrictive. This suggests that carbon pricing mechanism could actually induce a race to the bottom<sup>96</sup> in terms of environmental standards, which is far from what it intends to achieve.

On the other hand, it has been argued that, even though there has been some emissions abatement, there is no causal link between carbon pricing in the E.U. ETS and carbon leakage.<sup>97</sup> There are academics who suggest that the allocation of free allowances, which the European Union has implemented to shield competitive industries from carbon leakage, have essentially dampened the effects of emission reductions.<sup>98</sup> This further highlights a critical flaw of carbon pricing which suggests that states can either adopt stringent measures and face carbon leakage and competition issues *or* implement at an unambitious level in order to avoid such problems.

Thus, it can be assumed that these issues of emissions leakages, competitiveness, and free riding will always exist, unless full international participation is undertaken to synchronize carbon pricing policies. These unavoidable problems thus suggest that, despite attempts to bring climate change into the legal framework of

---

<sup>92</sup> Helene Naegele & Aleksandar Zaklan, *Does the EU ETS Cause Carbon Leakage in European Manufacturing?*, 93 J. ENV'T ECON. & MGMT. 125, 125 (2019).

<sup>93</sup> Leal-Arcas et al., *supra* note 66, at 420.

<sup>94</sup> Frédéric Branger & Philippe Quirion, *Climate Policy and the 'Carbon Haven' Effect*, 5 WIREs CLIMATE CHANGE 53, 53 (2014).

<sup>95</sup> HAWKINS, *supra* note 80, at 5.

<sup>96</sup> Branger & Quirion, *supra* note 94, at 54.

<sup>97</sup> Andrew Prag, *Trade and Climate Change*, in WIN-WIN: HOW INTERNATIONAL TRADE CAN HELP MEET THE SUSTAINABLE DEVELOPMENT GOALS 252, 255 (Matthias Helble & Ben Shepherd eds., 2017).

<sup>98</sup> *Id.*

trade, there can never be successful carbon pricing that states are incentivised to undertake.

Border carbon adjustments (BCAs) can be perceived as a solution for states to minimise the loss of economic competitiveness and to avoid carbon leakage.<sup>99</sup> This would essentially allow the European Union to keep stringent environmental regulation through their own national carbon pricing, without fearing that this would create carbon leakage, deplete their competitiveness, or allow other states to free ride.<sup>100</sup>

BCAs attempt to reflect the different speeds at which countries are moving towards decarbonizing their economies and attempts to level the carbon playing field.<sup>101</sup> However, this can be an inimical issue in the sphere of trade, as the adjustment “relies on a country’s unilateral judgement that other countries’ measures are not comparable to its own and imports/exports should therefore be adjusted to reflect the differing climate costs.”<sup>102</sup> It is unlikely that countries would be accepting of other countries infringing tax upon them. In fact, some academics contend that “any attempt to regulate emissions outside a country’s jurisdiction is extremely problematic”<sup>103</sup> for this very reason.

Above this, developing countries are fearful that BCAs are essentially a pretext for protectionism aimed at their exports.<sup>104</sup> In the legal literature there is still no consensus as to whether such measures are legal under the WTO Agreement.<sup>105</sup> Article II.2 of the General Agreement on Tariffs and Trade requires that any border tax must be implemented on like products to those taxed domestically, and that the border tax cannot exceed the domestic tax rate. The similarity of products is typically assessed “by examining their end use, consumer tastes and habits, and their physical

---

<sup>99</sup> RAFAEL LEAL-ARCAS, SOLUTIONS FOR SUSTAINABILITY: HOW THE INTERNATIONAL TRADE, ENERGY AND CLIMATE CHANGE REGIMES CAN HELP 91 (2019).

<sup>100</sup> Branger & Quirion, *supra* note 94, at 61-62.

<sup>101</sup> *Id.*

<sup>102</sup> HAWKINS, *supra* note 80, at 5.

<sup>103</sup> Branger & Quirion, *supra* note 94, at 54.

<sup>104</sup> “Trade Plays an Important Role in Climate Change Adaptation and Mitigation” – DDG Ellard, WORLD TRADE ORG. (Oct. 26, 2021), [https://www.wto.org/english/news\\_e/news21\\_e/ddgae\\_26oct21\\_e.htm](https://www.wto.org/english/news_e/news21_e/ddgae_26oct21_e.htm) [<https://perma.cc/HN7M-TKMG>].

<sup>105</sup> Henrik Horn & Petros C. Mavroidis, *Border Carbon Adjustments and the WTO*, RSCH. INST. INDUS. ECON. 2 (Mar. 14, 2010).



characteristics.”<sup>106</sup> This indicates that a tax on carbon products would require a shift in this framework as goods would require assessment by comparing production methods.

Should the WTO still find no room in Article II.2 for tax adjustments, there is an exception where tariffs can be applied to “protect human, animal or plant life or health,”<sup>107</sup> or where they are linked to the “conservation of exhaustible natural resources.”<sup>108</sup> However, legal academics still contend that, despite this exception, explicit measures would need to be taken to prove that the tariff is in place for environmental purposes rather than to merely protect the economic competitiveness of E.U. firms.<sup>109</sup> It can further be argued that, even if introduced with the best of intentions, border carbon measures will nonetheless be misused for protectionist reasons in many instances and this will make acceptance difficult under WTO case law.<sup>110</sup>

Overall, the implementation of BCAs can inflict on countries sovereignty, but could also be perceived as a protectionist measure and this would be hard to reconcile with fundamental WTO principles. Meanwhile, in the absence of BCAs, carbon pricing is left exposed to carbon leakage, free riding, a negative impact of competitiveness, and an overall reluctance of states to submit to such infringement for the sake of the environment.

Thus, despite pre-existing models of ETSs and a prominent space in the law for trade and climate mitigation to work together, we are left at the conclusion that there is no effective and long-term solution for introducing carbon pricing.

---

<sup>106</sup> Jennifer Hillman, *Changing Climate for Carbon Taxes: Who's Afraid of the WTO?*, in CLIMATE & ENERGY PAPER SERIES 2013, at 1, 8-9 (Ger. Marshall Fund Paper Ser., 2013) <https://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=3048&context=facpub> [<https://perma.cc/SQR9-9QDR>].

<sup>107</sup> GATT, *supra* note 21, art. XX.b.

<sup>108</sup> *Id.* art. XX.g.

<sup>109</sup> Joel P. Trachman, *WTO Law Constraints on Border Tax Adjustment and Tax Credit Mechanisms to Reduce the Competitive Effects of Carbon Taxes*, 70 NAT'L TAX J. 469, 480 (2017).

<sup>110</sup> Patrick A. Messerlin, *Climate and Trade Policies: From Mutual Destruction to Mutual Support*, 11 WORLD TRADE REV. 53, 74 (2012).

*c. A Path Forward for the Future: A Climate Club with a Carbon Market*

While the preamble of the WTO stipulates that free trade should be pursued in the context of sustainable development,<sup>111</sup> the potential trade concerns that have been discussed above prevent meaningful collaboration between trade and climate change mitigation. A multitude of academics have recognized the shortcomings of multilateral binding obligations, and due to such complications, they argue that it is naïve to suggest that multilateral trade agreements for climate change are at the forefront of the WTO's priorities.<sup>112</sup>

A way forward would be to move away from multilateral WTO collaboration and deal instead with the more feasible alternative of plurilateral agreements to implement carbon pricing. This would involve a group of like-minded countries coming together to create a "climate club." This Section discusses climate clubs and outlines how they offer a long-term, purposeful solution to promote the sustainable agenda in international trade.

A climate club essentially creates a carbon market with unilateral climate-mitigation policies between a group of jurisdictions. This market could potentially take a similar form to the E.U. ETS, however, in our opinion, it would be beneficial to open the climate club beyond the E.U. market to promote trade and expand the carbon market on a global scale. There are academics who contend that a climate club should involve a small group but be made of the largest emitters such as the United States, to maximise the extent to which emissions could be reduced<sup>113</sup> while keeping the size of the club manageable for negotiations.

Above this, it is also the viewpoint of many academics that a carbon price, rather than an ETS, should be the core element of this climate-club approach because this is likely to trigger more state involvement and less opportunity for free-riding.<sup>114</sup> This deals with the naivety of the E.U. ETS, which leaves each nation with discretion as to the climate action that it undertakes. William Nordhaus agrees that the formation of a climate club "should be viewed as an

---

<sup>111</sup> Marrakesh Agreement, *supra* note 46.

<sup>112</sup> Leal-Arcas et al., *supra* note 66, at 416.

<sup>113</sup> Rafael Leal-Arcas, *Climate Clubs and International Trade Across the European and International Landscape*, 29 EUR. ENERGY & ENV'T L. REV. 72, 87 (2020).

<sup>114</sup> Leal-Arcas, *supra* note 72, at 117.

idealized solution of the free-riding problem” that prevents the sustainable utilization of global public goods.<sup>115</sup>

A key element to climate clubs is that there are incentives to encourage states to submit to the regulations and carbon taxes that are attached to membership. The club should have “palpable member benefits in areas such as investment, technology sharing, and/or trade, which should not otherwise be available to those outside the club.”<sup>116</sup> These incentives effectively deal with the issues that have been discussed above, as members are thus encouraged keep to the agreed targets and taxes in order to reap the rewards. Thus, trade is used in a method that promotes the sustainability agenda but importantly also encourages top-down participation from states.

There are criticisms that the climate clubs will lead to the same inconsistencies that have been discussed above with low or no enforcement mechanisms.<sup>117</sup> However, standardizing carbon pricing would reduce the possibilities for companies to seek lower carbon prices outside of the club, thus preventing carbon leakage and a loss of competitiveness<sup>118</sup> that arises from asymmetric policies. The incentives of being in the club and the enhanced trade opportunities between members also effectively outweigh the uniform carbon price and compliance that they are subject to.

It is important to ensure that the creation of a climate club is consistent with the WTO. The case of *US-Shrimp*<sup>119</sup> arguably demonstrates a pivotal moment towards recognising that trade should not prevent the adoption of environmental measures between nations. In this case, the Appellate Body outlined that they “have not decided that sovereign states should not act together bilaterally, plurilaterally or multilaterally . . . to protect the environment. Clearly, they should.”<sup>120</sup> So, while this case did in fact identify the U.S. measure as being protectionist and discriminatory, the WTO outlined that “[m]embers are free to adopt their own policies aimed at protecting the environment as long as . . . they . . . respect the rights of other Members under the WTO agreement.”<sup>121</sup>

---

<sup>115</sup> Nordhaus, *supra* note 50, at 1341.

<sup>116</sup> Leal-Arcas & Filis, *supra* note 48, at 209.

<sup>117</sup> Leal-Arcas et al., *supra* note 66, at 419.

<sup>118</sup> *Id.* at 433.

<sup>119</sup> Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 154, WTO Doc. WT/DS58/AB/R (adopted Nov. 6, 1998).

<sup>120</sup> *Id.* ¶ 185.

<sup>121</sup> *Id.* ¶ 186.

In order to do so, it is important that the climate club focuses on incentives between members rather than sanctions to non-members, which is prohibited by WTO law.

Overall, while measures can still be perceived as discriminatory in WTO case law,<sup>122</sup> there is an increasing and unwavering urgency felt across the world indicating that climate-related trade measures that can make meaningful contribution will be accepted. This theme has been increasingly accepted by WTO case law, which acknowledges that “few interests are more ‘vital’ and ‘important’ than protecting human beings... and that protecting the environment is no less important.”<sup>123</sup> This further supports the notion that climate clubs can be WTO-compatible and resolve the issues discussed above in order to release trade-agreements from the climate stalemate.<sup>124</sup>

#### IV. SUSTAINABLE GLOBAL INTEGRATION: HOW WILL COUNTRIES GET THERE?

##### *a. Sustainable Global Integration Through Multilateralism and Regionalism*

Due to the “ineffectiveness” of international climate regimes, the role of trade agreements in combatting climate change has gained more traction in recent years.<sup>125</sup> Of particular interest is how sustainable global integration on climate change can be achieved within the framework of the WTO. The WTO has long recognized the importance of sustainable development and the protection of the environment.<sup>126</sup> It can, therefore, be argued that it is the most appropriate institution in which sustainable global integration on

---

<sup>122</sup> See generally, Appellate Body Report, *Unites States – Standards for Reformulated and Conventional Gasoline*, ¶ 14, WTO Doc. WT/DS2/AB/R (adopted May 20, 1996) (reviewing complaints that a measure was applied in a discriminatory manner).

<sup>123</sup> Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, ¶ 144, WTO Doc. WT/DS332/AB/R (adopted Dec. 17, 2007).

<sup>124</sup> See LEAL-ARCAS, *supra* note 64, at 98.

<sup>125</sup> Rafael Leal-Arcas, *Using Preferential Trade Agreements to Promote Climate Change Mitigation*, in *FRONTIERS OF INTERNATIONAL ECONOMIC LAW: LEGAL TOOLS TO CONFRONT INTERDISCIPLINARY CHALLENGES* 87, 88 (Freya Baetens & José Caiado eds., 2014).

<sup>126</sup> Marrakesh Agreement, *supra* note 46.

climate action can be achieved. It also reflects the international community through its vast membership of states which has the means to create a “global partnership” that furthers climate action through trade agreements. Yet the WTO has faced significant obstacles within its negotiations, highlighting the remarkable difficulties present when states try to facilitate global integration within multilateral agreements.

The diverse composition of the WTO membership has led to diverging views on how to integrate sustainability, with some member states believing sustainable development to only have domestic relevance.<sup>127</sup> It is thus hardly surprising that the WTO negotiations have reached a stalemate when sustainable global integration is not an agenda being pursued by some states. Due to these conflicting opinions on how to integrate sustainable development into multilateral trade agreements, minimal progress has been made. Ultimately, the Doha Round of negotiations have stagnated, resulting in multilateral trade negotiations within the WTO becoming redundant.<sup>128</sup> Following such issues, it must be questioned whether sustainable global integration can ever be achieved through multilateralism within the WTO. As previously alluded to, the creation of a multilateral trade agreement that includes provisions to tackle climate change is much more challenging in practice than in theory. Therefore, achieving sustainable global integration on an issue as complex and multifaceted as climate change is incredibly ambitious and the sheer difficulties in this must be given sufficient weight when assessing the deficiencies of the WTO.

So, while WTO negotiations remain deadlocked, states have shifted away from multilateralism and moved towards regionalism to facilitate global integration on climate action with great success.<sup>129</sup> States have thus surpassed the WTO negotiations and delved into a new realm of securing climate change provisions within RTAs.<sup>130</sup> It can thus be argued that states have recognized the current failures of the WTO system and as a result, are ceasing to rely on the WTO

---

<sup>127</sup> MARIE-CLAIRE CORDONIER SEGGER, *CRAFTING TRADE AND INVESTMENT ACCORDS FOR SUSTAINABLE DEVELOPMENT: ATHENA’S TREATIES* 160-61 (2021).

<sup>128</sup> Rafael Leal-Arcas, *Climate Change Mitigation from the Bottom Up: Using Preferential Trade Agreements to Promote Climate Change Mitigation*, 7 *CARBON & CLIMATE L. REV.* 34, 35 (2013).

<sup>129</sup> Rafael Leal-Arcas, *Towards Sustainability in Trade, Energy and Climate*, 6 *MOD. ENV’T SCI. & ENG’G* 1, 5 (2020).

<sup>130</sup> CORDONIER SEGGER, *supra* note 127, at 318.

as a means of achieving sustainable global integration in its present form. Regionalism, therefore, has opened a new avenue for states to tackle climate change and further global integration on their terms by omitting multilateralism within the WTO from the equation. However, the success of regionalism must not be used to negate the potential of multilateralism under a reformed WTO framework in ultimately achieving sustainable global integration in the future. But the role of regionalism must be considered as a vital gateway in pursuing the climate agenda within trade agreements.

*b. How Can Sustainable Global Integration Be Achieved in Trade Agreements?*

Where international agreements have previously failed, RTAs can deliver on climate action through the inclusion of legally binding obligations on climate change with an enforceability mechanism if these obligations are breached. The potential for sanctions to be imposed by a dispute settlement mechanism will result in RTAs leading the fight against climate change in a way that is yet to be seen by the international community.<sup>131</sup> But while the United States operates in favor of enforceable obligations on parties to RTAs, such obligations have been met with some resistance when negotiating dispute settlement mechanisms.<sup>132</sup> The most notable differences, however, on how to manage climate change are evident between the European Union and the United States.<sup>133</sup> RTAs concluded by the European Union rarely include enforceable obligations on climate change. This can be seen within the E.U.-Canada Comprehensive Economic and Trade Agreement, in which the chapters on the environment are not subject to the dispute settlement mechanism.<sup>134</sup> Therefore, the RTAs negotiated by the

---

<sup>131</sup> Rafael Leal-Arcas, Marek Anderle, Filipa da Silva Santos, Luuk Uilenbroek & Hannah Schragmann, *The Contribution of Free Trade Agreements and Bilateral Investment Treaties to a Sustainable Future*, 23 ZEITSCHRIFT FÜR EUROPARECHTLICHE STUDIEN [EUR. STUDY MAG.] 3, 12 (2020).

<sup>132</sup> Leal-Arcas, *supra* note 128, at 41.

<sup>133</sup> Abhishek Rana & Shreya Singh, *Bolstering the Nexus Between Climate Change Mitigation and Energy Security by Exploring the Corridors of International Trade Agreements: Facilitating Sustainable Development for All*, 4 ENV'T L. & SOC'Y J. 1, 19 (2018).

<sup>134</sup> Comprehensive Economic and Trade Agreement (CETA) art. 7.9, Jan. 14, 2017, 2017 O.J. (L 11) [hereinafter CETA].

European Union at present do not make solid commitments on climate change mitigation and lack teeth, which arguably provides a diluted version of sustainable global integration.<sup>135</sup> If sustainable global integration is to be achieved through regionalism, RTAs must incorporate enforceable provisions to create effective agreements on climate change.<sup>136</sup>

Most RTAs have only a “cursory nod” to climate change and so these agreements tend to fall flat on how integration on climate change will operate.<sup>137</sup> This is evident within the Chile-Malaysia Free Trade Agreement which only expresses the importance of cooperation to promote sustainable development within their environmental chapters.<sup>138</sup> Provisions on climate change and its mitigation are not included within this RTA and thus commitments are not made on these matters. Therefore, to assert sustainable global integration on climate change, RTAs must include strong environmental provisions that go beyond an expression of cooperation. On the other hand, several RTAs do contain successful chapters that address climate change and promote sustainable global integration through the liberalization of EGS and the removal of non-tariff barriers, which includes the phasing out fossil fuel subsidies.<sup>139</sup>

To begin assessing how RTAs are liberalizing EGS, consideration must first be given to multilateral negotiations on this issue. The trade liberalization of EGS was called for in the Doha Ministerial Declaration through the “reduction or . . . elimination of tariff and non-tariff barriers to” EGS.<sup>140</sup> However, negotiations came to a halt as conflict emerged when considering whether a list-based approach, advocated for by OECD countries, or a project-based approach, advocated for by developing countries, was better

---

<sup>135</sup> Christopher Frey, *Mega-Regional Trade Agreements and Post-2015 Climate Protection: Bridging the Gap*, 12 J. EUR. ENV'T & PLAN. L. 264, 283 (2015).

<sup>136</sup> Leal-Arcas et al., *supra* note 131, at 23.

<sup>137</sup> Leal-Arcas, *supra* note 128, at 37.

<sup>138</sup> Malaysia-Chile Free Trade Agreement, Malay-Chile, art. 9.5., Nov. 13, 2010, <https://fta.miti.gov.my/index.php/pages/view/malaysia-chile?mid=43#:~:text=Malaysia%2DChile%20Free%20Trade%20Agreement,November%202010%20in%20Yokohama%2C%20Japan> [https://perma.cc/W9YU-QSYR].

<sup>139</sup> Harro Van Asselt, *Climate Change and Trade Policy Integration: Implications of Regionalism* 8 (OECD, Working Paper No. 2017/03, 2017).

<sup>140</sup> World Trade Organization, Ministerial Declaration of 14 November 2001, ¶ 31(iii), WTO Doc. WT/MIN(01)/DEC/1, 41 I.L.M. 746 (2002).

equipped to liberalize EGS.<sup>141</sup> Additionally, the absence of a definition for EGS raised significant issues,<sup>142</sup> and many EGS have been coined a double-edged sword in that they are not purely for environmental means and thus have multiple uses extending beyond their environmental benefits. Some states were thus understandably reluctant to liberalize these EGS if it involved removing high tariffs on products that could be used to cause environmental harm.<sup>143</sup> Therefore, if EGS are to be liberalized through multilateralism, EGS must be defined to ensure that barriers to liberalization are removed only when EGS are used to benefit the environment.

In response to the stagnation of multilateral negotiations, states are pursuing the liberalization of EGS through RTAs as opposed to multilateralism. But a differing level of commitment can be seen when liberating EGS within these RTAs. The E.U.-Singapore RTA includes a detailed provision aimed at removing “obstacles to trade or investment concerning climate-friendly goods and services,”<sup>144</sup> whereas the U.S.-Morocco RTA only acknowledges the need for cooperation to “increase bilateral trade and investment in” EGS.<sup>145</sup> It has also been recognized that there are some differences as to the type of EGS noted across some RTAs, which further supports the need to develop a consensus on the definition of EGS.<sup>146</sup> However, the variation between the chapters pursuing the liberalization of EGS within these RTAs and the soft language used has not gone unnoticed, with the Institute for European Environmental Policy arguing that the weak language used “does not guarantee the implementation of measures in practice.”<sup>147</sup> It is beyond the scope of

---

<sup>141</sup> Richard G. Tarasofsky, *Heating Up International Trade Law: Challenges and Opportunities Posed by Efforts to Combat Climate Change*, 2 CARBON & CLIMATE L. REV. 7, 12 (2008).

<sup>142</sup> Markus W. Gehring, Marie-Claire Cordonier Segger, Fabiano de Andrade Correa, Patrick Reynaud, Alexandra Harrington & Rodrigo Mella, *Climate Change and Sustainable Energy Measures in Regional Trade Agreements (RTAs)* 21-22 (ICTSD Global Platform on Climate Change, Trade and Sustainable Energy, Issue Paper No. 3, 2012).

<sup>143</sup> Ronald Steenblik, *Liberalising Trade in “Environmental Goods”: Some Practical Considerations* 7-8 (OECD 2005-5, 2005).

<sup>144</sup> EUSFTA, *supra* note 45, art. 12.11.

<sup>145</sup> United States-Morocco Free Trade Agreement art. 17.2.7, June 15, 2004, 118 Stat. 1103 (entered into force Jan. 1, 2006).

<sup>146</sup> INST. FOR EUR. ENV'T POL'Y (IEEP), ENVIRONMENTAL CREDENTIALS OF EU TRADE POLICY: A COMPARATIVE ANALYSIS OF EU FREE TRADE AGREEMENTS 21 (2021).

<sup>147</sup> *Id.*



this Article, but this issue would be cause for further research to determine how parties to such RTAs are executing their commitments to removing barriers to EGS and whether such efforts have been successful. So, the inclusion of provisions aimed at liberating EGS in RTAs is a positive step towards achieving sustainable global integration on climate change despite the failures of multilateral negotiations on such issues. But to further achieve sustainable global integration through the removal of barriers to EGS, states must reach a consensus on the definition of EGS and RTAs must be negotiated to include stronger commitments to the trade liberalization of EGS.

A further way to pursue sustainable global integration would be to remove fossil fuel subsidies within trade agreements. Fossil fuel subsidies completely undermine the process of climate change mitigation and thus must be eliminated to reduce greenhouse gas emissions and further the use of clean energy sources. The need to eliminate fossil fuel subsidies has since been recognized across several international forums. The G20 in 2009 committed to “rationalize and phase out . . . inefficient fossil fuel subsidies that encourage wasteful consumption,”<sup>148</sup> while the G7 in 2016 committed to the “elimination of inefficient fossil fuel subsidies . . . by 2025” and encouraged other countries to follow suit.<sup>149</sup>

To engage with this commitment, G20 Finance Ministers developed a method of peer review between the countries to ensure they were complying with their commitment to eliminating fossil fuel subsidies.<sup>150</sup> But it has since been argued that a more stringent peer review process is necessary to encompass transparency and that enforcement mechanisms are vital to hold countries accountable for their actions, or lack thereof.<sup>151</sup> These issues have thus been attributed to the slow progress made by the G20 in eliminating fossil fuel subsidies, and regionalism has once again been pursued as an avenue to mitigate climate change.

---

<sup>148</sup> Press Release, Leaders’ Statement: The Pittsburgh Summit 14 (Sept. 24-25, 2009), [https://www.mofa.go.jp/policy/economy/g20\\_summit/2009-2/statement.pdf](https://www.mofa.go.jp/policy/economy/g20_summit/2009-2/statement.pdf) [<https://perma.cc/Q58Z-4TT3>].

<sup>149</sup> Press Release, G7 Ise-Shima Leaders’ Declaration 28 (May 26-27, 2016), <https://www.mofa.go.jp/files/000160266.pdf> [<https://perma.cc/Z7J9-H2JT>].

<sup>150</sup> *OECD-IEA Analysis of Fossil Fuels Support*, OECD, <https://www.oecd.org/fossil-fuels/publication/> [<https://perma.cc/4E9U-ALWX>] (last visited Mar. 18, 2023).

<sup>151</sup> Constanze Adolf, Jacqueline Cottrell, Amani Joas, Claudia Schulz, *TTIP and Fossil Fuel Subsidies: Using International Policy Processes as Entry Points for Reform in the EU and the USA*, HEINRICH BÖLL STIFTUNG TTIP SERIES 12 (Mar. 2014).

Commitments to eliminating fossil fuel subsidies have thus been included within RTAs. Of note is the E.U.-Singapore FTA which solidifies the goal of the parties in “reducing subsidies for fossil fuels.”<sup>152</sup> This demonstrates that eliminating fossil fuel subsidies is possible through RTAs. However, the E.U.-Singapore RTA uses disappointingly soft language, promoting only a reduction of fossil fuel subsidies rather than an outright elimination. But it must also be noted that the E.U.-Singapore RTA does not specify that the commitment is only made to reduce inefficient fossil fuel subsidies. Therefore, this trade agreement arguably goes beyond the commitments made by the G20 and the G7 by encompassing all fossil fuel subsidies, rather than those that are merely inefficient.

A further argument can be developed here as to whether fossil fuel subsidies can ever be efficient given that they promote the use of fossil fuels as opposed to renewable energy alternatives. As such, to better achieve sustainable global integration, future RTAs must contain a stronger commitment to eliminating fossil fuel subsidies than the one included in the E.U.-Singapore FTA. However, future RTAs must mirror the E.U.-Singapore FTA by omitting the term “inefficient” from the text, to avoid creating loopholes through which fossil fuel subsidies can continue to be used if they are categorized as efficient by any parties to the agreement.

Additionally, lessons can be learned from the G20 peer review mechanism and incorporated within RTAs. RTAs must contain a peer review mechanism like that established by the G20 to ensure that the parties to these RTAs can hold each other accountable to their commitments of eliminating fossil fuel subsidies. RTAs must thus include targets for eliminating fossil fuel subsidies and include an enforcement mechanism in which parties are sanctioned for failing to meet such targets. Further, RTAs must also include a reporting mechanism in which parties can detail the progress being made in respect of the agreed targets to increase transparency between the parties and to further global integration.

Most of the current RTAs being negotiated are between the largest global greenhouse gas emitters.<sup>153</sup> Securing provisions on climate change mitigation within these RTAs is a vital step in fulfilling climate action, with several scholars arguing that the inclusion of such provisions can exert influence over the actions of

---

<sup>152</sup> EUSFTA, *supra* note 45, art. 12.11.3.

<sup>153</sup> Frey, *supra* note 135, at 272.

other states.<sup>154</sup> Observing state compliance with environmental provisions within RTAs could create a domino effect in which non-party states will create future RTAs containing environmental provisions. Additionally, states with RTAs already in force could be further influenced to renegotiate the RTA to include provisions on climate change.<sup>155</sup>

Regionalism, therefore, has the potential to become a crucial mechanism in tackling climate change due to its ability to create partnerships between states and its influence over climate change provisions in current and future RTAs. However, it must be noted that RTAs are only negotiated and agreed upon between a handful of states, and thus many of the largest global greenhouse gas emitters are not included in such agreements. This is evident through the absence of the United States and China in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP),<sup>156</sup> and the failed negotiations of the Transatlantic Trade and Investment Partnership (TTIP).<sup>157</sup> Therefore, states still have “fragmented perspectives” on how to combat climate change, and these perspectives are particularly evident between the world’s largest greenhouse gas emitters.<sup>158</sup>

But as Cordonier Segger correctly argues, “there is no one size fits all solution” to achieving sustainable global integration.<sup>159</sup> Therefore, while some of the world’s largest greenhouse gas emitters notably remain absent from trade negotiations and agreements, the creation of such agreements that are inclusive of environmental provisions must be made as attractive as possible to these states if emissions are to be reduced.<sup>160</sup> It is evident that neither multilateralism within the WTO framework nor regionalism are flawless systems in achieving sustainable global integration. Therefore, the question is not whether multilateralism or regionalism should prevail as the best option on how states can reach global integration, but rather how the two can work

---

<sup>154</sup> Leal-Arcas et al., *supra* note 131, at 12.

<sup>155</sup> Rana & Singh, *supra* note 133, at 21.

<sup>156</sup> Comprehensive and Progressive Agreement for Trans-Pacific Partnership, Mar. 8, 2018, 6.08.20 NZTS 2018.

<sup>157</sup> *Commission Recommendation for a Decision Authorising the Opening of Negotiations of an Agreement with the United States of America on the Elimination of Tariffs for Industrial Goods*, COM (2019) 16 final (Jan. 18, 2019).

<sup>158</sup> Leal-Arcas et al., *supra* note 131, at 12.

<sup>159</sup> CORDONIER SEGGER, *supra* note 127, at 313.

<sup>160</sup> Leal-Arcas, *supra* note 128, at 35.

harmoniously in meeting the same aim. Giving states the option to create multilateral or regional trade agreements with solid provisions on climate change gives states the best chance of achieving sustainable global integration.

*c. The Future of Multilateralism Within the WTO*

Although RTAs provide much promise by way of achieving sustainable integration, regionalism has been criticized for enabling the creation of hundreds of RTAs that contain different provisions on climate change.<sup>161</sup> Therefore, the inconsistencies within each RTA and each state's agenda on how climate change should be mitigated have the potential to lead to "regulatory fragmentation" of the climate change provisions within these RTAs.<sup>162</sup> The excess of RTAs can also lead to uncertainty on how climate change should be managed within trade agreements.<sup>163</sup> Off the back of these criticisms, recent attention has turned towards multilateralizing RTAs within the WTO framework.<sup>164</sup> The creation of RTAs between states has often been coined the "building blocks" towards sustainable global integration on climate change.<sup>165</sup> There is an argument for the multilateralization of these RTAs to better align the climate change provisions within these agreements and to create an overarching framework. RTAs, therefore, can be established with the view to them eventually operating multilaterally within the WTO framework.<sup>166</sup>

But we argue that before these RTAs can be multilateralized, significant reform of the WTO is necessary. With the success of regionalism outside of WTO negotiations, the relevance of the WTO as a mechanism for furthering sustainable global integration is eroding. The attraction of bringing regionalism within the WTO framework in its present form is rapidly dwindling due to the

---

<sup>161</sup> Cross-Cutting Effects of the EU's Preferential Trade Agreements (PTAs) on Developing Economies, EUR. PARL. DOC. EXPO/B/INTA/FWC/2013-08/ 1, 8-10 (2015).

<sup>162</sup> Rana & Singh, *supra* note 133, at 21.

<sup>163</sup> Leal-Arcas, *supra* note 128, at 39.

<sup>164</sup> RICHARD BALDWIN, OECD, MULTILATERALISING 21ST CENTURY REGIONALISM 37 (2014), <https://repository.graduateinstitute.ch/record/286980?ln=en> [<https://perma.cc/RYG4-4DBS>].

<sup>165</sup> Leal-Arcas, *supra* note 128, at 39.

<sup>166</sup> *Id.* at 36.

inability to negotiate agreements successfully. Therefore, the WTO in its current state is ill-equipped to facilitate sustainable global integration on climate change through multilateralism.<sup>167</sup> RTAs cannot be multilateralized under the framework of an ineffective institution which would consequently damage international efforts on tackling climate change within trade agreements.

The main function of the WTO in dire need of reform is, therefore, its negotiation function. As identified by Schneider-Petsinger, multilateral negotiations are often met with difficulties because the WTO operates under the single undertaking principle and decisions must reach a consensus between the member states.<sup>168</sup> But as Schott and Watal correctly note, this process of decisionmaking has “broken down.”<sup>169</sup> In response to this issues, the two authors argue for the creation of a small committee responsible for creating consensus among WTO member states that would not undermine the process of decisionmaking by consensus.<sup>170</sup> Yet we argue that this process of decisionmaking is exactly why WTO multilateral negotiations have been stagnant for so long, and so creating a subcommittee in pursuant of consensus does not address the issues posed by requiring WTO member states to reach it. Therefore, to propose a successful reform strategy of the WTO requires an evaluation of its processes and requires member states to accept a shift away from traditional norms that are causing negotiations to fail.

Under Article IX of the Marrakesh Agreement, the WTO reserves the right to vote on a matter if member states cannot reach a consensus on the issue.<sup>171</sup> Such vote can take place in four situations, including the interpretation of a multilateral trade agreement and decisions to waive an obligation on a state in which the WTO would accept a three-quarter majority, and amendments to multilateral agreements and decisions to admit new members

---

<sup>167</sup> Frey, *supra* note 135, at 270.

<sup>168</sup> MARIANNE SCHNEIDER-PETSINGER, CHATHAM HOUSE, REFORMING THE WORLD TRADE ORGANISATION: PROSPECTS FOR TRANSATLANTIC COOPERATION AND THE GLOBAL TRADE SYSTEM 24 (2020).

<sup>169</sup> Jeffrey J. Schott & Jayashree Watal, *Decision-Making in the WTO*, PETERSON INST. INT’L ECON. (Mar. 2000), <https://www.piie.com/publications/policy-briefs/decision-making-wto#note2> [<https://perma.cc/997C-3VWL>].

<sup>170</sup> *Id.*

<sup>171</sup> Marrakesh Agreement, *supra* note 46, art. IX.

which would be accepted with a two-thirds majority.<sup>172</sup> But scarcely has such process ever been used as the WTO is so wedded to the notion of consensus that the voting system is seen as “taboo” among member states.<sup>173</sup> But the stagnation of WTO negotiations will inevitably continue without proper use of the reserve voting system. We, therefore, argue that states must welcome the use of the voting system when consensus cannot be reached and propose the introduction of a super-majority voting system in which a multilateral agreement enters into force when a three-quarter majority is reached in its favor among WTO member states. This would enable states to enact more multilateral trade agreements with a majority consensus among most member states without constantly being defeated by the requirement to reach full consensus on the decision.

The WTO cannot continue on its current trajectory and must leave its current system behind to reinvigorate the organization and allow progress to be made within multilateral trade agreements. While some may argue that the consensus principle was adopted to “level the playing field” between WTO member states and to ensure wide acceptance of WTO decisions,<sup>174</sup> we argue that reaching a super-majority on multilateral agreements is arguably a better scenario than never reaching agreement at all. Therefore, the WTO must be reformed to make negotiations easier to conclude, and only then will multilateralism make any progress in achieving sustainable global integration.

## V. WHAT ROLE WILL CLIMATE CHANGE PLAY IN THE FUTURE GLOBAL TRADING SYSTEM?

This Part explores and analyzes the role that climate change will have in the future global trading system. While there are vast ways through which this can be carried out, for the purposes of clarity and understanding, this Part aims to do so by exploring three main areas.

---

<sup>172</sup> *Whose WTO Is It Anyway?*, WORLD TRADE ORG., [https://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/org1\\_e.htm](https://www.wto.org/english/thewto_e/whatis_e/tif_e/org1_e.htm) [<https://perma.cc/FK4V-544N>].

<sup>173</sup> WORLD TRADE ORG., PART III: RULES, NORMS AND ENFORCEMENT 213, [https://www.wto.org/english/res\\_e/booksp\\_e/historywto\\_06\\_e.pdf](https://www.wto.org/english/res_e/booksp_e/historywto_06_e.pdf) [<https://perma.cc/3S9L-PCRN>].

<sup>174</sup> Wenwei Guan, *Consensus Yet Not Consented: A Critique of the WTO Decision-Making by Consensus*, 17 J. INT'L ECON. L. 77, 79 (2014).

First, it focuses on climate induced government measures which aim at reducing carbon emissions. Second, it turns to climate change's holistic effect of shifting trade's multilateral character into a plurilateral forum due to the former's failure to manage the impact and effect change. Lastly, it provides an analysis of climate migration, climate change's most consequential and unexplored product, and its role in changing the global trading system.

*a. The Role of Climate Change-Induced Measures*

As climate change progresses, the need for stronger and bolder government climate-related actions becomes increasingly apparent and overdue. Those actions are mostly centred around decreasing carbon emissions. While some measures do not directly impact the trading system, several can severely do so, creating a new global trade order. This Section examines the ways in which certain climate-related measures which intend to create incentives for low-carbon goods and safeguard the competitive position of those executing them will shape the future global trading system. Such measures will be analyzed to ensure that they are compatible with WTO regulations and that they will prove beneficial to the end-goals of reducing carbon emissions and mitigating climate change. Governments have been and will be implementing a plethora of like measures through goods and services, such as implementing product standards and providing subsidies for low-carbon products. However, for the purpose of clearly understanding the role of climate change on the trading system through such measures, this Section focuses on three: trade restrictions, border tax adjustments, and trade liberalization incentives.

*i. Trade Restrictions on Carbon-Intensive Products*

Throughout the implementation of the UNFCCC, Kyoto Protocol, and Paris Agreement, there have been numerous calls to introduce measures that would punitively limit trade with states not meeting Agreement obligations or their NDCs.<sup>175</sup> Limiting trade as such would, however, be against GATT rules and thus experts have

---

<sup>175</sup> *NDC Registry*, U.N. CLIMATE CHANGE, <https://unfccc.int/NDCREG> (last visited Mar. 26, 2023).

focused on the idea of placing restrictions against import product criteria, rather than their country of origin.<sup>176</sup> Climate-related trade restrictions can have outputs which limit trade altogether, coming against WTO rules, and thus before enabling them we must ensure that they are permitted under GATT so as to be able to foresee if they indeed will have an impact on the future trading system.

Under Articles XI and III of GATT, trade limiting measures must not restrict quantitative exports and imports and discriminate against a product once it has entered the national marketplace, respectively.<sup>177</sup> This is in line with Article 3.5 of UNFCCC which provides that measures combatting climate change should not constitute unjustifiable discrimination and restriction to trade.<sup>178</sup> The measure must fall under one of the two articles, so as to be compatible with GATT and have an impact on trade. The WTO Appellate Body in *EC-Asbestos* determined that if the measure applies to both imported and domestic products then it should fall under Article III, while if it only applies to imported products it falls under Article XI.<sup>179</sup> However, according to Tarasofsky, a ban on imported products would mirror a domestic ban,<sup>180</sup> and thus would fall under Article III. This article intends to prohibit internal taxes and measures from being applied to protect domestic products. Under its fourth provision, it states that imported products should be given “no less favourable”<sup>181</sup> treatment than the one given to “like” domestic products. The legal question which arises is what constitutes a “like” product. The Appellate Body laid out a four-criterion test for understanding “likeness” in *EC-Asbestos*, which included measuring the quality of the product, its end-use, consumer perception, and tariff classification.<sup>182</sup> On the other hand, even if a measure is neutral towards domestic and imported products, it can still breach Article III if it amounts to de facto

---

<sup>176</sup> GATT, *supra* note 21.

<sup>177</sup> GATT, *supra* note 21, arts. III(3), XI(11).

<sup>178</sup> UNFCCC, *supra* note 2, art. 3.5.

<sup>179</sup> Appellate Body Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, ¶ 93, WTO Doc. WT/DS135/AB/R (adopted Apr. 5, 2001).

<sup>180</sup> Tarasofsky, *supra* note 141, at 8.

<sup>181</sup> GATT, *supra* note 21, art. I.

<sup>182</sup> *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, *supra* note 179, at 85.



discrimination against the latter.<sup>183</sup> After the Appellate Body's ruling in the case involving the Dominican Republic,<sup>184</sup> which limited de facto discrimination to less favorable treatment, it is unclear whether climate change related trade restrictions, which de facto disadvantage importers, are consistent with GATT Article III.

If such a measure is deemed incompatible with Article III, or in fact any GATT provision, we must determine if it comes under the scope of Article XX. This article has two subparagraphs related to climate change, entailing protections for trade restrictive measures.<sup>185</sup> Subparagraph (b) includes measures deemed necessary to protect human, animal, and plant health and life, while subparagraph (g) includes measures related to the conservation of natural resources. A measure must be significantly related to the conservation of resources and impose restrictions on both imported and domestic products so as to be under the scope of the latter.<sup>186</sup>

For the former, it is possible for a climate related measure to be considered "necessary,"<sup>187</sup> taking into consideration the severity of climate change and the need for that measure at this point in time. This has been affirmed in *EC-Asbestos* which found that preserving human life and health was "important in the highest degree,"<sup>188</sup> implying that no other less trade-restrictive available measure could be applied to achieve the same level of protection.<sup>189</sup> Once a measure falls under the scope of either subparagraph, the Appellate Body has found that it must also fall under the scope its chapeau, and thus determine whether it causes arbitrary or unjustifiable discrimination. In *Brazil-Tyres*, it found that for a measure to cause such discrimination, we must analyze its rationale.<sup>190</sup> It stated that it had "difficulty understanding how discrimination might be viewed

---

<sup>183</sup> Panel Report, *Canada – Import, Distribution and Sale of Certain Alcoholic Drinks by Provincial Marketing Agencies*, ¶ 32, WTO Doc. DS17/R - 39S/27 (adopted Feb. 18, 1992).

<sup>184</sup> See generally Appellate Body Report, *Dominican Republic – Measures Affecting the Importation and Internal Sale of Cigarettes*, WTO Doc. WT/DS302/AB/R (adopted May 19, 2005) (limiting de facto discrimination to less favourable treatment).

<sup>185</sup> GATT, *supra* note 21, art. XX.

<sup>186</sup> *United States – Standards for Reformulated and Conventional Gasoline*, *supra* note 122.

<sup>187</sup> GATT, *supra* note 21, art. XX(b).

<sup>188</sup> *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, *supra* note 179, at 172.

<sup>189</sup> *Tarasofsky*, *supra* note 141, at 10.

<sup>190</sup> *Brazil – Measures Affecting Imports of Retreaded Tyres*, *supra* note 123.

as complying with the chapeau of Article XX when the alleged rationale for discriminating” goes against the “objective that was provisionally found to justify a measure under a paragraph of Article XX.”<sup>191</sup> This implies that climate change trade-restrictive measures can be justified, within limits, under GATT Article XX.

It has been necessary to establish that trade restrictions aiming at reducing carbon emissions can be compatible with GATT. Otherwise, such restrictions cannot be implemented and take effect, thereby obliterating any potential impact they can have on trade. Trade restrictions aim at reducing a state’s carbon emissions. Induced by climate change, such measures will, at least initially, disrupt current trade flows and patterns by either creating severe shortages on certain vulnerable products or significantly increasing their prices, naturally prompting consumers to avoid them. As the world reaches its deadline to meet the Paris Agreement objective of limiting global warming below 2°C, and as governments panic to meet their NDCs, it is predicted that trade restrictions will gain increasing popularity.<sup>192</sup> Having established that, it is also congruently established that climate change is leading a shift in the global trading system. It is possible that the success and compatibility of such restrictions will result in their global proliferation and thus that a new, more environmentally orientated trading order will emerge. Such climate change induced restrictions will lead to increasing competitiveness of climate-friendly products, which in turn will incentivise greater innovation in shifting goods and services towards a sustainable future.

#### *ii. Border Tax Adjustments for Carbon Taxes*

Moving forward, another measure aiming at reducing carbon emissions is the imposition of carbon taxes. Such are taxes placed on carbon emissions required to produce goods and services and while they have been rejected by many jurisdictions, they remain measures of interest for other countries.<sup>193</sup> A climate change induced

---

<sup>191</sup> *Id.* ¶ 225.

<sup>192</sup> See generally Rafael Leal-Arcas, Manuzila Faktaufon, & Anna Kyprianou, *A Legal Exploration of the European Union’s Carbon Border Adjustment Mechanism*, 31 EUR. ENERGY & ENV’T L. REV. 223 (2022) (analyzing the Carbon Border Adjustment Mechanism (CBAM) proposed by the EU to address carbon leakage).

<sup>193</sup> Tarasofsky, *supra* note 141, at 11.

measure, carbon taxes can potentially threaten the competitiveness of domestic industries, and in order to avoid that, governments have been introducing border tax adjustments (BTAs). These are “taxes imposed on imports or tax-relief granted to exports, used to level the playing field between taxed domestic industries and untaxed foreign competitors.”<sup>194</sup> However, it is unclear if BTAs are allowed when they are imposed indirectly, and placed on products such as energy, where the input, in this case carbon, has been fully consumed once production is finalized. Limited jurisprudence (the *Superfund* case<sup>195</sup>) has found that process-based BTAs are legal, however it does not clear the uncertainty as the case dealt with chemicals which were still present in the end product. It is still an open question whether taxes can be imposed on imports based on inputs which have been fully consumed and are not present in the final product.

This creates a severe difficulty towards implementing carbon taxes. While it might be deemed necessary to do so, if BTAs are deemed illegal and as carbon taxes gain popularity, they will disrupt current trade flows, harming the competitiveness of domestic industries and lowering domestic production. If, however, BTAs end up being legal and compatible with regulation, carbon taxes and other climate-related energy taxes can stir the global trading system towards sustainability, disincentivizing carbon fueled energy and gradually removing it from the market. This prospect is already on track, with multiple states having set goals to reduce their carbon emissions and switch to carbon-free energy. However, carbon will be the fuel of energy for a long time to come, and measures such as carbon taxes alone, with the assistance of BTAs, will not suffice. This means that while climate change will incentivize carbon neutrality, it will probably delay it at first and gradually push towards it.

### *iii. Liberalization of Trade for Low-Carbon Products*

Aside from restrictive measures, climate change can prompt a limited, yet fruitful, liberalization of trading products with low

---

<sup>194</sup> *Id.*

<sup>195</sup> See generally Panel Report, *United States – Taxes on Petroleum and Certain Imported Substances*, ¶ 3.2.6, WTO Doc. L/6175-34S/136 (adopted June 17, 1987) (finding that the tax on certain imported substances, and the exaction of the penalty rate provisions, were not illegal).

carbon intensity. Currently, the trading system provides an opportunity to amplify such liberalization. This would enable low-carbon, climate-friendly products to be traded with lower or even non-existent tariffs, making them more competitive than non-EGS products. However, there are certain goods which are traded for a dual purpose. And that raises the legal question of how to justify preferential market access of EGSs with dual purpose, when one of the two could be leading to more emissions. Hence, if the multilateral approach does not satisfy trade obligations, states can move plurilaterally or even unilaterally. WTO members are permitted to unilaterally lower tariffs for low-carbon goods, always respecting the WTO cornerstone of the most-favoured nation principle.<sup>196</sup> Bilaterally, developing countries can be exempt from the aforementioned principle and form bilateral FTAs for lowering tariffs in low-carbon goods and services, so long as the reasoning is based on "objective criteria."<sup>197</sup> Hence, since tariff reduction is legally possible in certain scenarios, effects of climate change can also contribute to induce a liberalization of the global trading system rather than just restrict it with limiting access to carbon-intensive products. This, in turn, could lead to a rapid increase of low-carbon good production and heavy innovation to alter and reduce carbon intensity and relieve products of expensive future tariffs. It is crucial to ensure that liberalization of trade takes place only within the scope of removing tariffs for EGSs and like goods. If trade is liberalized on a wider scope, it will most likely lower environmental standards which in turn will lead to an increase in climate risk. In addition, while it might succeed in reducing carbon emissions in rich, developed countries, as Matthew Cole has found, it might have the reverse effect in developing countries,<sup>198</sup> obliterating the success and impact it could have on shifting the global trading system.

It is evident that through those three climate-induced measures, climate change will significantly affect the future global trading system. The effort to reduce emissions will lead to a transition of climate friendly product domination in the market, to the extent of even gradually changing the energy trade system. Placing trade restrictions on carbon intensive products or incentivizing carbon-free products will restrict a polluting trading system and enable a

---

<sup>196</sup> GATT, *supra* note 21, art. 1.

<sup>197</sup> Appellate Body Report, *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries*, ¶ 183, WTO Doc. WT/DS246/AB/R (Apr. 20, 2004).

<sup>198</sup> RAFAEL LEAL-ARCAS, CLIMATE CHANGE AND INTERNATIONAL TRADE 9 (2013).

more sustainable one. Thus, while there might be initial shortages and substantial changes in what is traded, innovation, pushed by such measures, will come to fill the gap and replace carbon-intense products with carbon-free equivalent ones.

*b. Shift to Plurilateralism*

As already explained, climate change will have devastating effects on society, economic and non-economic activity around the world. The consequences will not be spread equally, with certain regions being unfairly vulnerable. Yet, all people and all countries will come to face some sort of effect. However, most climate-related multilateral treaties have not met the current need for reform. As Rafael Leal-Arcas and Andrew Filis argue, they lack a binding character, making their rules less enforceable and the states less accountable.<sup>199</sup> Academics like Nordhaus have postulated that multilateralism has failed the planet and that climate change, through the regulations that will come in place, will potentially abandon multilateralism and move towards some sort of regionalism and “minilateralism.”<sup>200</sup> For the purposes of clarity, we group these concepts under the umbrella term of “plurilateral.” In congruence, the international trading system should and will be used to work in parallel with climate policies and measures in order to bring down carbon emissions and push and achieve sustainability goals.

As catastrophic climatic events will keep taking place and as multilateral agreements will keep failing, plurilateral agreements with strong environmental chapters will gain ground. They will not necessarily replace multilateralism, but rather will work in parallel, aligned with WTO regulations. This move towards plurilateralism will lead to the formation of so-called “climate clubs.” Such clubs will take the shape of Preferential Trade Agreements (PTAs), FTAs, RTAs, Bilateral Investment Treaties (BITs) and so on and will be used to integrate climate change policy into trade.<sup>201</sup>

---

<sup>199</sup> Leal-Arcas & Filis, *supra* note 48, at 30.

<sup>200</sup> *Id.* at 8.

<sup>201</sup> It is worth noting that an RTA would not be against GATT rules. Under GATT Article XXIV, regional trading is permitted as long as it does not set any obstacles for trade by third parties. *See* GATT, *supra* note 21, art. XXIV.

As Nordhaus argues, smaller clubs where countries harmonize their climate policies and enhance trade connections will help combine trade instruments and policy action to achieve what multilateral agreements are supposed to have been doing for the past two decades.<sup>202</sup> The Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union<sup>203</sup> is a fine example of an FTA which encompasses firm environmental chapters while enabling free trade between the parties. It thus creates a climate club where the state parties enjoy tariff-free trade; however, they must strive to meet certain strict climate-related requirements. In essence, climate clubs are formed by a few states, offering trade benefits which outweigh their environmental obligations.

However, such obligations must be in fact bold and challenging so as to steer change. They must also possess a punitive character without hindering their appeal to states. That is, apart from the benefits the trade agreement will offer, there is a need for more enforceable accountability. Clear sanctions add onto the already-existing incentives and motivate member states of the club to lower carbon emissions. If carbon obligations are not met, trade can be limited and the agreement cannot take effect. In the same way, this can apply to non-members who wish to trade with members. Smaller economies depend on their trade connections with financially powerful and influential states. If such states form clubs, they can establish condition requirements for other states to meet in order to be able to trade with them and thus sustain their trade flows and economies. While a very tricky and challenging position to be in, it is a straightforward way to ensure and impose climate policy action, including significantly lowering carbon emissions.

It is evident that climate change will play an imperative role in shifting the global trading system. The dire consequences of extreme climatic events and their alarmingly increasing frequency will continue to prompt further and more stringent global climate change rules. As mentioned above, climate change will potentially shift the multilateral character of today's trading system to a

---

<sup>202</sup> Nordhaus, *supra* note 50, at 1368.

<sup>203</sup> For an overview of the European Union in the international trading system, see generally RAFAEL LEAL-ARCAS, INTERNATIONAL TRADE RELATIONS OF THE EUROPEAN UNION: A LEGAL AND POLICY ANALYSIS (2022) (providing an overview of the European Union and its external trade relations); RAFAEL LEAL-ARCAS, EU TRADE LAW (2019) (providing an overview of the European Union's existing law and policy in the field of international trade).

“minilateral” character, emphasizing plurilateral, rather than global, agreements. The formation of climate clubs will facilitate this transition and achieve what multilateral agreements have not. By shifting the system’s character, climate change will shift even more influence to large economies, as they are the ones which will form the influential clubs. It will permit club members to set their own strict requirements to allow non-member states to trade with them, thus enabling, or more accurately, imposing, strict climate policy action. Given the nature of the plurilateral system, this will enforce real state accountability.

*c. The Role of Climate Migration*

Climate migration is one of the most alarming consequences of climate change. It is not directly connected to reducing carbon emissions, yet it provides a clear example of the extremely impactful role of climate change in the trading system despite government efforts to reduce emissions. Certain regions will be affected by extreme temperatures and others will disappear as sea levels will rise to cover them. People will necessarily need to migrate, creating the so-called concept of climate migration. A kind of forced movement, it will most likely take place within the most immediate and neighbouring regions affected by climate change. Predictions as to how many people will be forced to take this action during this century range from 250 million to 1 billion.<sup>204</sup>

Migration of such a scale will have worldwide consequences. Naturally, climate migration, as labor migration, will affect the global trading system. Charles B. Keely asks whether people themselves are not key elements of trade in that they are a factor of production,<sup>205</sup> and given the predicted numbers of future climate migrants, it is certain that trade will be gravely affected on a global level. Climate migration is not the sole effect of climate change. However, it is considerably unexplored in relation to its impacts on trade and the world economy. Hence, it is worth using existing literature to investigate it in brief and attempting to understand how this future event will affect trade flows, as well as recommend

---

<sup>204</sup> Rafael Leal-Arcas, *On Climate Migration and International Trade*, 6 VIENNA J. ON INT’L CONST. L. 410, 412 (2012).

<sup>205</sup> Charles B. Keely, *Globalization Transforms Trade-Migration Equation*, 41 INT’L MIGRATION 87, 88 (2003).

possible ways with which states can prepare and mitigate trade repercussions.

*i. Linking Climate Migration to Trade*

Charles B. Keely stated that "increased trade capacity, competitiveness, and employment policy are inextricably tied into migration."<sup>206</sup> Thus, climate change, which induces migration, has an imperative role to play. Before exploring how climate induced migration is linked to trade, we must understand how labor migration connects to it. From a legal perspective, immigration law has rarely taken advantage of the possible trade benefits migration can offer.<sup>207</sup> On the contrary, it has mostly ignored trade. The World Bank supports that migration can offer immense benefits to both the origin and destination countries. To the former, it relieves the unemployment rate, while it increases its financial flows through remittances. To the latter, it helps cover labor shortages and thus increases production. However, the current case is that most governments close their borders to migrants, and only open them to capital and trade of goods and services.<sup>208</sup>

*ii. The Role of Climate Migration in the Future Global Trading System*

Climate migration will have a significant role in shaping the future global trading system. A 2008 U.N. Development Programme report, however, does not expect climate migration to necessarily have identical effects on the trading system as labor migration does.<sup>209</sup> As people will move in alarming numbers, demand of products will change, and so will consumption. However, as populations of other countries will naturally increase and demand for certain products will consequently increase as well, it will

---

<sup>206</sup> *Id.* at 91-92.

<sup>207</sup> See generally Leal-Arcas, *supra* note 204.

<sup>208</sup> *Id.* at 420.

<sup>209</sup> *Human Development Report 2007/2008: Fighting Climate Change: Human Solidarity in a Divided World*, U.N. DEVELOPMENT PROGRAMME (UNDP) 94, <https://hdr.undp.org/system/files/documents/human-development-report-20072008-english.2008-english> [<https://perma.cc/RRN4-QBPJ>].



prompt a rapid growth in production and increased trade flows with other trade partners. There needs to be a nexus between immigration and trade law for a state to take advantage of migration's possible benefits. States around the world will need to prepare and focus on the humanitarian, not only the financial, effect of climate migration. States in close proximity to small island nations, or nations which will definitely be affected more gravely than others, should construct infrastructure and devise contingency plans to assist when needed.<sup>210</sup> States lucky not to experience as-dire consequences should provide assistance to states receiving climate migrants either by transfer of technology or building capacity. The need to thoroughly prepare and engage the global community to mitigate the effects of climate migration reflects the severity of its impact on a trade, financial, but mostly, humanitarian level.

#### VI. WHAT ARE THE POSSIBLE IMPACTS OF CLIMATE CHANGE ON INTERNATIONAL TRADE AND INVESTMENT?

Climate change is considered one of the most significant global environmental concerns today and has grown to supersede other traditional ecological agendas.<sup>211</sup> There has been a steady movement from the perception of climate change as a scientific phenomenon to more of an economic, social, and political issue with knock-on effects ranging from human security to stakeholder instability.<sup>212</sup> In order to address such effects, the UNFCCC was established at the international level, which was further qualified by the Kyoto Protocol.<sup>213</sup> Despite climate change being at the forefront today,

---

<sup>210</sup> See generally Rafael Leal-Arcas, Manuliza Faktaufon, Raphael Ribeaud, Rojae Brown & Kaushal Prakash, *International Trade, Energy Transition and Climate Change Obligations: The Perspective of Small Pacific Islands and the Caribbean Community*, 13 *TRADE L. & DEV.* 198 (2021) (emphasizing the importance of trade agreements for island states that are vulnerable to negative economic impacts resulting from climate change).

<sup>211</sup> Michael Ziser & Julie Sze, *Climate Change, Environmental Aesthetics, and Global Environmental Justice Cultural Studies*, 29 *DISCOURSE* 384, 384 (2007).

<sup>212</sup> See generally John D. Post, *The Impact of Climate Change on Political, Social, and Economic Change: A Comment*, 10 *J. INTERDISC. HIST.* 719 (1980) (discussing research on climate change and its effects on demographics and economic activity in different time periods).

<sup>213</sup> UNFCCC, *supra* note 2, art. 2. See generally Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 11, 1997, 2303 U.N.T.S. 162 [hereinafter Kyoto Protocol] (further qualifying the UNFCCC).

Trade and Investment Agreements (TIAs) continue to be the linchpin of international relations that drive economic growth.<sup>214</sup> Furthermore, liberalization also ensures that TIAs align with many of the sustainable development goals established by the United Nations General Assembly while reinforcing the comparative advantage theory.<sup>215</sup> According to this theory, trade and investments allow countries to specialize in the production of certain goods and services due to enhanced efficiency, thereby contributing to maximized output from a given input of resources.<sup>216</sup>

The context established demonstrates that both climate change and trade and investment are pivotal to the international community. Therefore, the interrelationship between the two is much more far-reaching than anticipated. Correspondingly, a modern prospect would view international trade and investment as a catalyst that can help minimize the impacts of climate change if implemented effectively. It is with this in mind that this Part aims to provide a brief discussion of the impacts of climate change on trade and investment with a specific focus on energy markets. It will then focus on reforms by accepting the view that trade and investment can provide synergistic solutions to mitigate climate change.

*a. Impacts*

*i. Direct Impacts*

Put simply, the direct impacts of climate change are related to structural changes in supply and distribution chains of energy owing to disruption of transport due to adverse weather conditions and rising sea levels. According to the Intergovernmental Panel on Climate Change (IPCC), climate change is likely to affect all forms of transport that are crucial for international trade.<sup>217</sup> Around 80%

---

<sup>214</sup> The rate of growth due to trade and investment has grown at an average of around 8% per year since the signing of the Marrakesh Agreement in 1994. DUNCAN BRACK, MICHAEL GRUBB & CRAIG WINDRAM, *INTERNATIONAL TRADE AND CLIMATE CHANGE POLICIES* 1 (2000).

<sup>215</sup> U.N. INTER-AGENCY TASK FORCE ON FINANCING FOR DEVELOPMENT, *FINANCING FOR SUSTAINABLE DEVELOPMENT REPORT 2021* ch.1 (2021).

<sup>216</sup> BRACK ET AL., *supra* note 214, at 8.

<sup>217</sup> INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE WORKING GROUP III, *CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE* 642-46 (2014).

of international trade (by volume) is reliant on maritime shipping, which is predicted to suffer the most with prolonged port closures coupled with the inability of inland navigation.<sup>218</sup>

While the literature on the direct impacts of climate change on trade and investment is limited, the loss of the arctic ice caps could potentially open up further new international trading routes.<sup>219</sup> As transportation remains one of the most important elements when it comes to international trade and investment, the possibility of new routes would not only reduce the so-called “distance decay” but would also contribute to time and cost savings.<sup>220</sup> A hypothetical study by Bekkers confirmed that if this were successful, around two-thirds of international trade could be carried out via the Arctic Route if it becomes permanently available.<sup>221</sup> Despite this potential advantage, concerns have been raised over other technical difficulties such as underdeveloped communication systems and scattered weather forecasts with increased noise disturbances and waste production.<sup>222</sup> Effectively, the practicability of this new trading route would require further analysis until which the direct impacts of climate change on trade and investment will continue to exist.

#### *ii. Indirect Impacts*

The indirect impacts of climate change are focused on the effects on the production of goods and services, owing to the fact that the reduction of CO<sub>2</sub> emissions will affect various sectors of the economy.<sup>223</sup> Currently, fossil fuels such as coal and natural gas contribute to the generation of electricity and heating in most industrialized countries, thereby leading to the release of large

<sup>218</sup> *Id.* at 608, 622.

<sup>219</sup> Malte Humpert & Andreas Raspotnik, *The Future of Arctic Shipping Along the Transpolar Sea Route*, ARCTIC Y.B. 281, 281-82 (2012).

<sup>220</sup> Daniel J. Graham, Stephen Gibbons & Ralf Martin, *Transport Investment and the Distance Decay of Agglomeration Benefits 2* (Jan. 2009) (unpublished manuscript) (available at <https://personal.lse.ac.uk/gibbons/Papers/Agglomeration%20and%20Distance%20Decay%20Jan%202009.pdf>).

<sup>221</sup> Eddy Bekkers, Joseph F. Francois & Hugo Rojas-Romagosa, *Melting Ice Caps and the Economic Impact of Opening the Northern Sea Route*, 128 ECON. J. 1095, 1098 (2016).

<sup>222</sup> Humpert & Raspotnik, *supra* note 219, at 287, 293.

<sup>223</sup> BRACK ET AL., *supra* note 214, at 25.

amounts of CO<sub>2</sub>.<sup>224</sup> However, countries have also found it easier and cheaper to reduce CO<sub>2</sub> emissions from electricity and heating, which gives rise to a complex lacuna as the demand for such fossil fuels will reduce, and so too international trade and investment in them.<sup>225</sup> Furthermore, the global drive towards net-zero emissions is likely to reduce trade and investment in such energy-intensive goods.

As demonstrated, climate change will not only have domestic consequences but will also affect international trade and investment patterns. Although the qualitative impacts can be demonstrated with reasonable confidence, the quantitative damages are much harder to establish due to uncertainty within the energy sector.<sup>226</sup> Predominantly, these indirect impacts are exacerbated on developing countries that are most likely to be affected negatively in aggregate by reduced trade and investments.<sup>227</sup> Moreover, methods of financial compensation for the losses suffered are neither technically viable nor politically feasible.<sup>228</sup> Notwithstanding these shortcomings, other mechanisms need to be explored wherein trade and investment can be used for climate change mitigation, consequently having dual benefits.

#### *b. Reform*

International trade and investment play an increasingly important role in resolving climate change concerns, which have also been previously used to tackle other adversities such as the protection of the ozone layer.<sup>229</sup> Likewise, in the lack of a specific international climate change agreement that binds all countries

---

<sup>224</sup> *Id.* at 25-27.

<sup>225</sup> *Id.*

<sup>226</sup> Torben K. Mideksa & Steffen Kallbekken, *The Impact of Climate Change on the Electricity Market: A Review*, 38 ENERGY POL'Y 3579, 3581 (2010).

<sup>227</sup> Michael Gasiorek, Julia Magntorn Garrett & Ilona Serwicka, *Winners and Losers from International Trade: What We Know and What Are the Implications for Policy?*, UK TRADE POL'Y OBSERVATORY 10 (July 2019), <https://blogs.sussex.ac.uk/uktpo/files/2019/07/BP33.pdf> [<https://perma.cc/838D-69PB>].

<sup>228</sup> BRACK ET AL., *supra* note 214, at 41.

<sup>229</sup> OECD, *Experience with the Use of Trade Measures in the Montreal Protocol on Substances that Deplete the Ozone Layer*, U.N. Doc. COM/ENV/TD(97)107 (Nov. 06, 1997).

(including the United States), the introduction of specific reforms would have to be considered.

*i. Free Trade Agreements*

FTAs within the energy sector have become an essential tool through which diplomatic relations are maintained. In practice, however, this leads to a de facto responsibility for fossil fuel emissions mainly because anthropogenic activity is responsible for more than half of all greenhouse gas emissions.<sup>230</sup> Despite this, it is safe to assume that the connections between FTAs and climate change are becoming increasingly relevant in the global world economy system.<sup>231</sup> Moving forward, FTAs will have to make specific climate change provisions so that protection by means of cooperation and effective interaction between countries is guaranteed. Moreover, since several countries are disposed towards including a pro-climate agenda in their FTAs, the potential for growth is immense.

The aim of FTAs is to assist partner countries to enter and compete more easily in the global marketplace through reduced trade barriers.<sup>232</sup> When it comes to climate change within the context of FTAs, this aim is easier to achieve since global trade multilateralism has seriously weakened over the last two decades.<sup>233</sup> The comprehensive and in-depth scope of FTAs also makes it more flexible with heightened bottom-up policies.<sup>234</sup> As FTAs currently cover around two-thirds of world trade, the scope for climate change policies to be achieved via the same is enhanced.<sup>235</sup>

In order to bring down global temperatures to well below 1.5°C, carbon neutrality by the mid-twenty-first century is essential. As

---

<sup>230</sup> Yue Xi-Lue & Gao Qing-Xian, *Contributions of Natural Systems and Human Activity to Greenhouse Gas Emissions*, 9 *ADVANCES IN CLIMATE CHANGE RSCH.* 243, 250 (2018).

<sup>231</sup> Christopher M. Dent, *Trade, Climate and Energy: A New Study on Climate Action Through Free Trade Agreements*, *ENERGIES* 1 (July 20, 2021).

<sup>232</sup> *Free Trade Agreement Overview*, INT'L TRADE ADMIN., <https://www.trade.gov/free-trade-agreement-overview> [<https://perma.cc/6UTY-U7QR>] (last visited Mar. 18, 2023).

<sup>233</sup> Dent, *supra* note 231, at 4.

<sup>234</sup> *Id.* at 26.

<sup>235</sup> *Regional Trade Agreements Database*, WTO OMC, <https://rtais.wto.org/UI/PublicMaintainRTAHome.aspx> [<https://perma.cc/D8RT-HPVQ>] (last visited Mar. 18, 2023).

this goal has been laid down in the Paris Agreement, the European Commission has also presented the European Green Deal that aims at making Europe carbon neutral by 2050.<sup>236</sup> Green technology innovations (GTIs) for clean energy and energy efficiency via FTAs are mechanisms via which this can be achieved.<sup>237</sup>

The potential for technology to mitigate climate change mainly by the extraction of energy from renewable sources has been prominent. FTAs can be used to eliminate tariffs on green technologies so that the trade and investment in them become much more liberalized.<sup>238</sup> In doing so, developing countries can also have access to such technologies, thereby ensuring equal ingress.<sup>239</sup> The result would be that trade and investment are protected while climate change is also focused upon. Although this has already been put into practice, there is room for expansion. For example, most regional African FTAs have mentioned the promotion of renewable energy. Despite being mentioned in the context of energy security, rather than from an environmental perspective,<sup>240</sup> the fact that these FTAs are being changed to focus on climate change denotes progress.<sup>241</sup> However, the liberalization of FTAs would not be the only factor that would achieve carbon neutrality via the use of GTIs. The other tier is based on the principle of cooperation that aims at collaboration and mutual commitments to achieve realistic and transformative outcomes.<sup>242</sup> The European Union has served as a good example of this by incorporating both elements in their FTAs with Singapore in 2018 and Vietnam in 2019, which include chapters on “Non-barrier Tariffs to Trade” and “Investment in Renewable

---

<sup>236</sup> A *European Green Deal*, *supra* note 25.

<sup>237</sup> See generally Shan Shan, Sema Yılmaz Genç, Hafız Waqas Kamran & Gheorghita Dinca, *Role of Green Technology Innovation and Renewable Energy in Carbon Neutrality: A Sustainable Investigation from Turkey*, 294 J. ENV'T MGMT. 1, 1 (2021).

<sup>238</sup> James Bacchus & Inu Manak, *Free Trade in Environmental Goods Will Increase Access to Green Tech*, 80 FREE TRADE BULL., Jun 8, 2021, at 1, 4-5.

<sup>239</sup> *Id.* at 1.

<sup>240</sup> For further details on the links between energy security and international trade, see RAFAEL LEAL-ARCAS, COSTANTINO GRASSO & JUAN ALEMANY RIOS, *ENERGY SECURITY, TRADE AND THE EU* (1st ed. 2016); RAFAEL LEAL-ARCAS, ANDREW FILIS & EHAD S. ABU GOSH, *INTERNATIONAL ENERGY GOVERNANCE: SELECTED LEGAL ISSUES* (2014).

<sup>241</sup> Roy Andrew Partain, *Climate Change, Green Paradox Models and International Trade Law*, in RESEARCH HANDBOOK ON CLIMATE CHANGE AND TRADE LAW 302, 322-25 (Panagiotis Delimatsis ed., 2016).

<sup>242</sup> Dent, *supra* note 231, at 11.

Energy Generation,” the aim of which is to cooperate and achieve multiple interlinked objectives.<sup>243</sup>

Energy efficiency has also been an important goal in several FTAs in order to promote both sustainability and carbon neutrality. The link between energy efficiency and FTAs is related to harmonization of product minimum energy-efficiency performance standards (MEPS) and is an issue that is being actively considered by policymakers who argue that it is best achieved at the international level via dialogue and cooperation.<sup>244</sup> MEPS set out a mandatory requirement for the amount of energy that can be consumed by a device for a certain task. It is estimated that the harmonization of MEPS would generate global energy savings of 13-14% (7,600 TWh) in 2030 if implemented effectively.<sup>245</sup> Shepherd claims that harmonization via FTAs could also have wider benefits in terms of reducing barriers and encouraging the free flow of goods while strengthening market competition and trade and technology transfer.<sup>246</sup> These benefits currently are considered technical barriers to trade (TBT) under current WTO rules and so are limited.<sup>247</sup>

Despite the benefits afforded, there is a lack of awareness around such harmonization coupled with policymakers existing in the “energy efficiency bubble.”<sup>248</sup> This gap results in a divergence of aims between climate change and trade agreements. While a potential solution would be to increase dialogue and international collaboration commitments, the extent to which energy efficiency will actually be achieved by FTAs remains dubious until implemented.

---

<sup>243</sup> *Id.* at 16.

<sup>244</sup> Jurei Yada, Benoit Lebot, Zoe Lagarde, Ailin Huang & Enrui Zhang, *Harmonization of Product Energy Efficiency Standards and Free Trade Agreements: The Role of International Cooperation*, 2017 ECÉE SUMMER STUDY PROCEEDINGS 493, 495-98.

<sup>245</sup> EDITH MOLENBROEK, MATTHEW SMITH, NESEN SURMELI, SVEN SCHIMSCHAR, PAUL WAIDE, JEREMY TAIT & CATRIONA MCALLISTER, SAVINGS AND BENEFITS OF GLOBAL REGULATIONS FOR ENERGY EFFICIENT PRODUCTS 22 (2015).

<sup>246</sup> Ben Shepherd, *Product Standards Harmonization and Trade: Evidence from the Extensive Margin* (World Bank, Working No. Paper 4390, 2007).

<sup>247</sup> Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1, 1186 U.N.T.S. 276 [hereinafter ATBTA].

<sup>248</sup> Yada et al., *supra* note 244, at 495.

*ii. Carbon Taxes and the Emissions Trading System*

It is the price of a resource that ultimately establishes the use of the same.<sup>249</sup> Governments can introduce policies that affect the price of various commodities by increasing competition through liberalization, providing or removing subsidies, and applying taxation.<sup>250</sup> A key method to mitigate climate change would be to implement carbon taxes and is increasingly being considered by many countries. Effectively, Article 2 of the Kyoto Protocol encourages the adoption of such taxes to reduce the emission of greenhouse gases, which also fits well within the polluter pays principle under the Rio Declaration.<sup>251</sup> Within the European Union, approximately eighteen countries have now implemented carbon taxes following Finland, which was credited for primary execution.<sup>252</sup> In doing so, further emphasis is placed on the use and investment of renewables that have lower impacts on the environment, thereby reducing the dependence on carbon-based resources.<sup>253</sup> However, it would also be important to consider the natural limitations of such renewable sources.

Despite the benefits furnished through the use of carbon taxes, the manner in which such taxes interact with the multilateral trading system, thereby affecting international competitiveness, needs to be considered. While carbon taxes can help raise revenue for governments by reducing other taxes, the impact on overall economic growth would have to be reviewed.<sup>254</sup> A negative outcome could be increased trading and investment centered in countries that are "pollution havens" as factored by no or low carbon taxes.<sup>255</sup> This could also be in Non-Annex 1 countries under the Kyoto Protocol which do not have any limits on emissions, thereby failing to reduce

---

<sup>249</sup> BRACK ET AL., *supra* note 214, at 59.

<sup>250</sup> *Id.*

<sup>251</sup> Kyoto Protocol, *supra* note 197, art. 2(1)(a)(V); *Rio Declaration*, *supra* note 20, (Vol. I), annex I, principle 16.

<sup>252</sup> Elke Asen, *Carbon Taxes in Europe*, TAX FOUND. (Jun. 3, 2021), <https://taxfoundation.org/carbon-taxes-in-europe-2021/> [<https://perma.cc/CLB4-9LKR>].

<sup>253</sup> Leal-Arcas, *supra* note 13.

<sup>254</sup> Michael Waggoner, *Why and How to Tax Carbon*, 20 COLO. J. INT'L ENV'T L. & POL'Y 1, 1-2 (2008).

<sup>255</sup> Grégoire Garsous & Tomasz Koźluk, *Foreign Direct Investment and the Pollution Haven Hypothesis - Evidence from Listed Firms 6* (OECD, Working Paper No. 1379, 2017).



overall emissions (although beneficial from a developmental perspective). Furthermore, political realities make the introduction of such taxes unpopular and cumbersome. For these reasons, it may be worth considering other policy measures that offset these negative impacts from carbon taxes, such as an ETS.

Under an ETS, the government sets a cap on the maximum level of greenhouse gas emissions or allocates permits within which businesses are allowed to operate.<sup>256</sup> Under an international ETS, permits provided can be traded with both domestic and foreign companies, thereby extending to the private sector.<sup>257</sup> This system is preferred because of the advantages it offers in terms of the creation of markets and yielding efficiency in terms of trading.<sup>258</sup> The E.U. ETS is testament to the success of such a policy which resulted in reduced carbon emissions despite low prices.<sup>259</sup>

Nonetheless, this system also faces limitations. First, the ambiguity surrounding what emissions are allowed to be traded under the WTO will remain because not every aspect of international commerce is governed under the multilateral trading system (for example, trade in electricity is prohibited due to international security concerns).<sup>260</sup> Second, there is also a lack of consensus on whether the trading system and, in particular, the emissions unit fall under the ambit of the definition of financial services under the General Agreement on Trade in Services (GATS) despite being transferrable securities with derivative instruments characteristic.<sup>261</sup> Nonetheless, the scope of GATS is likely to be expanded to include emissions and so demonstrates a positive output. Third, restrictions also arise from a lack of clarity on the size of the cap and possible enforcement via other less stringent climate change regulatory mechanisms.<sup>262</sup>

---

<sup>256</sup> Arwa Mahdawi, *What is the Emissions Trading Scheme and Does It Work?*, GUARDIAN (June 7, 2011), <https://www.theguardian.com/environment/2011/jun/07/ets-emissions-trading> [<https://perma.cc/B59Z-5ZR7>].

<sup>257</sup> BRACK ET AL., *supra* note 214, at 117.

<sup>258</sup> Leal-Arcas, *supra* note 13.

<sup>259</sup> Patrick Bayer & Michaël Aklin, *The European Union Emissions Trading System Reduced CO<sub>2</sub> Emissions Despite Low Prices*, 117 PNAS 8804, 8804-12 (2020).

<sup>260</sup> General Agreement on Trade in Services and Annexes, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1B, 1869 U.N.T.S. 183 [hereinafter GATS]; BRACK ET AL., *supra* note 214, at 117.

<sup>261</sup> BRACK ET AL., *supra* note 214, at 120.

<sup>262</sup> Leal-Arcas, *supra* note 13.

*iii. Carbon Border Tax Adjustments*

BTA mechanisms are quite complex in practice, but generally a BTA is a process wherein countries tax their imports domestically while allowing rebates on exports in the international market, thereby preserving competitiveness.<sup>263</sup> BTAs fall within WTO rules mainly by ensuring that the internal tax on imports is not higher than what would be imposed on a "like domestic product" and that the tax is borne by a "product," not direct.<sup>264</sup> Since direct taxes apply to income, profits, and factors of distribution, BTAs do not apply to the same.<sup>265</sup>

When applying BTAs to carbon or energy taxes, this complexity is heightened. The main difficulties stem from the impact of taxation on energy-intensive industries and whether the BTAs applied to products is based on the taxes paid to the inputs of energy or carbon during production, i.e. the process or the product.<sup>266</sup> Furthermore, since taxes on imports (or rebated on exports) are barriers to trade, they fall within the scope of multilateral trading and need to conform to GATT. In particular, Articles II(2)(a) and III(2) of GATT require the tax on imports to be the same if applied to a like domestic product produced in whole or part.<sup>267</sup> While a crucial term like "product" is not defined under GATT, the exception under Article II(2) applies to substances from which a product is made.<sup>268</sup> However, it is unlikely that carbon border tax adjustments (CBTAs) fall under the exception mainly because carbon may not be an aspect from which the product is made but only released during the consumption of the product, and so a process that contributes to climate change.

The agreement on whether such processes could fall under the exceptions of GATT would normally be resolved through case law wherein appellate bodies and dispute panels strive to reach a conclusion. The only limitation is that there has been no GATT

---

<sup>263</sup> BRACK ET AL., *supra* note 214, at 75.

<sup>264</sup> Richard Eglin & Scott Lincicome, *Border-Adjustable Taxes under the WTO Agreements*, JD SUPRA (Jan. 19, 2017), <https://www.jdsupra.com/legalnews/border-adjustable-taxes-under-the-wto-20855/> [<https://perma.cc/Z5ZG-HNSF>].

<sup>265</sup> *Id.*

<sup>266</sup> BRACK ET AL., *supra* note 214, at 83.

<sup>267</sup> GATT, *supra* note 21, arts. II(2)(a), III(2), at 4, 6.

<sup>268</sup> *Id.* art. II(2), at 4.

dispute involving energy or carbon taxes.<sup>269</sup> In the same vein, the 1970 GATT Working Party tried to provide some limited guidance, with the only unchallenged conclusion being that CBTAs are indirect taxes and so are eligible for adjustment at the border.<sup>270</sup> Applying this conclusion to climate change and viewing it as exceptional also means that BTAs can be applied to carbon. Further, there have been instances in the past where BTAs have been applied to processes rather than products. One such example would be the ozone depleting chemicals (ODC) tax used in the United States.<sup>271</sup> Despite this being a rare case for the application of BTAs to a process, important lessons can be drawn for future potential BTAs applied to carbon and or energy taxes.

It would be erroneous to conclude that CBTAs have not developed since the Working Party's guidance. CBTAs have encouraged production to be greener and are a measure that would support climate change mitigation while also ensuring compatibility with WTO rules. By equalizing the price of imports to the same level as if it were produced domestically, CBTAs would ensure that there is no advantage to shift abroad to make use of lax standards while simultaneously reiterating the urgency to reduce greenhouse gas emissions.<sup>272</sup> The recently adopted E.U. CBTA is an example of such a measure wherein the aim is to foster active climate change mitigation while avoiding the risks posed by "carbon leakage."<sup>273</sup>

Yet, caution is required in how this level playing field via CBTAs is administered since it raises important practical challenges, such as calculating carbon content in products. This can be a barrier in countries that do not have the expertise due to factors such as market failure, lack of knowledge, and mistaken perceptions.<sup>274</sup> Even if Article XX of GATT were to be quoted to leverage the principle, it could be quite discriminatory, mainly because the adjustment

---

<sup>269</sup> BRACK ET AL., *supra* note 214, at 82.

<sup>270</sup> Working Party, *Report of the Working Party on Border Tax Adjustments*, WTO Doc. L/3464 (Dec. 2, 1970).

<sup>271</sup> See generally U.S. INTERNAL REVENUE SERV., ENVIRONMENTAL EXCISE TAXES, FOCUSING ON OZONE-DEPLETING CHEMICALS (1993).

<sup>272</sup> *Carbon Border Adjustment Mechanism*, EUROPEAN COMM'N, [https://ec.europa.eu/taxation\\_customs/green-taxation-0/carbon-border-adjustment-mechanism\\_en](https://ec.europa.eu/taxation_customs/green-taxation-0/carbon-border-adjustment-mechanism_en) [perma.cc/TZ4S-RMDE] (last visited Jan. 5, 2022); see also Rafael Leal-Arcas et al., *supra* note 192, at 226.

<sup>273</sup> *Carbon Border Adjustment Mechanism*, *supra* note 272.

<sup>274</sup> BRACK ET AL., *supra* note 214, at 71.

would not be for climate change mitigation but to ensure protection from the competitiveness of the tax, whether actual or perceived.<sup>275</sup>

#### VII. THE EUROPEAN UNION'S APPROACH TO ENVIRONMENTAL CONCERNS IN TRADE AGREEMENTS

Climate change was one of the most discussed topics in the world in 2021 and interest in implementing action against it is only rising moving forward. However, the COP26 Summit<sup>276</sup> in Glasgow in November 2021 only showed that states are extremely reluctant to bind themselves to enforceable climate mitigation goals and obligations.<sup>277</sup> All major international efforts to tackle climate change, such as the U.N. sustainable development goals set out by the General Assembly in 2015<sup>278</sup> or the Paris Agreement<sup>279</sup> lack one essential thing: an enforcement mechanism that can hold states responsible to their promises to tackle climate change. Therefore, to effectively implement the goals set out in those agreements, states have to find alternative means. One possibility can be trade agreements, as climate change is deeply interconnected with trade and all that it entails.<sup>280</sup>

While the WTO system occupies a privileged position, there is a wide range of different policies and treaties governing international trade and economies. The European Union has been very active in recent years in concluding and implementing regional trade agreements, such as the CETA, the E.U.-Japan free trade agreement, and most recently the E.U.-U.K. trade agreement.

There is a long history of climate change provisions in FTAs, and in recent years FTAs have become a tool for states to interconnect

---

<sup>275</sup> GATT, *supra* note 21, art. XX.

<sup>276</sup> For an analysis of the aftermath of COP26, see Rafael Leal-Arcas, Manuliza Faktaufon, Hannah Kasak-Gliboff, Cindy Li, Lee Guantai & Ervin Smajic, *Three Steps in the Aftermath of COP26: Trade, Key Players, and Decarbonization*, 31 EUR. ENERGY & ENV'T L. REV. 298, 298-99 (2022).

<sup>277</sup> *COP26: What Was Agreed at the Glasgow Climate Conference?*, BBC NEWS (Nov. 15, 2021), <https://www.bbc.co.uk/news/science-environment-56901261> [<https://perma.cc/U664-GMGH>].

<sup>278</sup> See generally G.A. Res. 70/1, *Transforming Our World: The 2030 Agenda for Sustainable Development* (Oct. 21, 2015) (setting the creation of enforcement mechanisms as a future goal).

<sup>279</sup> See generally Paris Agreement, *supra* note 29 (encouraging parties to reduce emissions but allowing them to set and modify their own goals).

<sup>280</sup> LEAL-ARCAS, *supra* note 99, at 4.

trade and energy policy more closely and to implement climate action goals more effectively.<sup>281</sup> This Part analyzes the European approach to implementing provisions related to climate change mitigation and to reaching the U.N. sustainable development goals. In doing so, we argue that, while the European Union may put forward one of the most comprehensive and forward-thinking strategies of implementing climate action into their FTA, this approach still lacks effectiveness and the amount of commitment needed to tackle the climate crisis ahead. Focusing both on the substantial obligations as well as the dispute settlement and enforcement mechanisms, the European approach to FTAs will be examined first. Following this, the practical implications of those provisions will be scrutinized. Lastly, this Part provides an analysis of the effectiveness of climate change action in European FTAs.

*a. The European Union's Approach to Trade Agreements*

Before looking at the European FTAs in general and the specific example of the E.U.-U.K. trade agreement, it is important to understand why FTAs, instead of the WTO, require examination.

*i. Why Not the WTO?*

The first question is why not to use the comprehensive system of the WTO, which reaches further than most FTAs not only in the area of trade, but also in regard to related areas like labor rights and sustainable development. As the lack of enforcement mechanisms in international conventions and treaties on climate change and environmental protection show,<sup>282</sup> consent to amend the WTO system to enhance climate change action is unlikely.<sup>283</sup> Rather, it is easier to create consent between a few big players, such as the European Union and Canada, or the European Union and the United Kingdom. It is therefore more effective to bind the big players to climate goals in implementing such obligations into FTAs.<sup>284</sup> Notably, the WTO still has no climate action section or

---

<sup>281</sup> Dent, *supra* note 231, at 1.

<sup>282</sup> See Paris Agreement, *supra* note 29, art. 4(2).

<sup>283</sup> LEAL-ARCAS, *supra* note 99, at 68.

<sup>284</sup> *Id.* at 80-82.

disciplines,<sup>285</sup> while the UNFCCC as the counterpart of the United Nations gives surprising little guidance on trade.<sup>286</sup>

More profound than those considerations is the fact that the WTO dispute settlement mechanism has been practically non-existence since the Trump Administration first blocked the appointment of appeal-adjudicators in 2017.<sup>287</sup> With this obstruction to the appeal mechanism, the biggest advantage of WTO proceedings, compared to proceedings under FTAs without such a mechanism, is no longer an advantage but a reason to move away from WTO dispute resolution.<sup>288</sup> This is evidenced by the number of FTAs implemented in the last twenty years, going up from 22 in 1990 to over 305 to date.<sup>289</sup> In conclusion, FTAs can very well be the way forward to implement climate change action into the current trade regime.

*ii. The European Union's Approach to the Implementation of Environmental Concerns in Trade Agreements*

One actor that increasingly uses FTAs is the European Union. As the recent decisions of tribunals show, these FTAs are even enforced in practice and the dispute resolution mechanism is seen as having some effect on the parties.<sup>290</sup> The European Union has made a point

---

<sup>285</sup> Dent, *supra* note 231.

<sup>286</sup> HARRO VAN ASSELT, THE FRAGMENTATION OF GLOBAL CLIMATE GOVERNANCE: CONSEQUENCES AND MANAGEMENT OF REGIME INTERACTIONS 165 (2014); CLARA BRANDI, TRADE ELEMENTS IN COUNTRIES' CLIMATE CONTRIBUTIONS UNDER THE PARIS AGREEMENT 28 (2017); see Thomas Brewer, *Trade Policies and Climate Change Policies: A Rapidly Expanding Joint Agenda*, 33 WORLD ECON. 799, 804 n.3 (2010).

<sup>287</sup> Cornelia Furculita, *FTA Dispute Settlement Mechanisms: Alternative I for Trade Disputes – The Case of CETA and EUJEP*, in GLOBAL POLITICS AND EU TRADE POLICY: FACING THE CHALLENGES TO A MULTILATERAL APPROACH 89, 89 (Wolfgang Weiß & Cornelia Furculita eds., 2020).

<sup>288</sup> *Id.* at 90.

<sup>289</sup> Dent, *supra* note 231, at 4.

<sup>290</sup> See generally Final Report of the Arbitration Panel Established Pursuant to Article 307 of the Association Agreement Between Ukraine and the European Union on *Restrictions Applied by Ukraine on Exports of Certain Wood Products to the European Union* (Dec. 11 2020), [https://jsumundi.com/en/document/decision/european-union-v-ukraine-ukraine-wood-exports-ban-establishment-of-the-panel-tuesday-28th-january-2020#decision\\_14064](https://jsumundi.com/en/document/decision/european-union-v-ukraine-ukraine-wood-exports-ban-establishment-of-the-panel-tuesday-28th-january-2020#decision_14064) [<https://perma.cc/M5CY-YJQJ>] (resolving dispute on wood exports); see also *Panel of Experts Confirms Korea Is in Breach of Labour Commitments Under Our Trade Agreement*, EUR. STING (Jan. 25, 2021), <https://europeansting.com/2021/01/25/panel-of-experts-confirms-korea-is-in-breach-of-labour-commitments-under-our-trade-agreement/>

of including environmental as well as climate change concerns in all recent trade agreements. Article 11 of the Treaty of Lisbon binds the European Commission to integrate environmental protection requirements in all activities, especially in promoting sustainable development.<sup>291</sup> As already shown in the CETA or the E.U.-Japan Agreement, the European Union negotiated a cooperative approach to enforce compliance with environmental and climate protection norms. Not only was the European Union one of the first to implement climate action provisions in their FTA, but it has also been a great influence on introducing new aspects of climate action in recent FTAs.<sup>292</sup> While it has been a great influence, the provisions even in the recent FTAs concluded by the European Union still all contain very soft language that is aspirational, not mandatory, and which has led to great difficulties in enforcing such obligations.<sup>293</sup>

Although the approach is similar in all FTAs, the negotiation partner to each FTA gives an indication on the level of importance of such climate change concerns. This can for example be seen in the preliminary provisions published for the E.U.-China Comprehensive Agreement on Investment.<sup>294</sup>

The cornerstone of the European approach that sets it apart from other FTAs traditionally was the “soft judicial” approach chosen to enforce the provisions of the treaty, also known as a cooperative approach.<sup>295</sup> According to this approach, the European Union in their FTAs relied solely on dialogical measures between all parties involved to resolve disputes arising. This means that there is cooperation between relevant administrative bodies to ensure compliance with the treaty. The newest FTA with the United Kingdom shows a slightly different approach. Although the

---

[<https://perma.cc/7ADS-8DFB>] (reporting that a joint panel appointed by the EU and South Korea found that South Korea had violated certain portions of the EU-Korea Free Trade Agreement).

<sup>291</sup> Wybe Th. Douma, *The Promotion of Sustainable Development through EU Trade Instruments*, 28 EUR. BUS. L. REV. 197, 198 (2017).

<sup>292</sup> Dent, *supra* note 231, at 22.

<sup>293</sup> Giulia Claudia Leonelli, *From Extra-Territorial Leverage and Transnational Environmental Protection to Distortions of Competition: The Level Playing Field in the EU-UK Trade and Cooperation Agreement*, 33 J. ENV'T L. 611, 624 (2021).

<sup>294</sup> European Commission Press Release, EU and China Reach Agreement in Principle on Investment (Dec. 30, 2020), [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_2541](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2541) [<https://perma.cc/J9GQ-F3UQ>] (discussing how both sides are embedding sustainability into the investment relationship).

<sup>295</sup> Ida Bastiaens & Evgeny Postnikov, *Greening Up: The Effects of Environmental Standards in EU and US Trade Agreements*, 26 ENV'T POL. 847, 852 (2017).

European Commission reiterated that a sanction-based approach to dispute settlement was incompatible with the European Union's objective for a broad partnership on trade and sustainable development and further argued that to be effective, a sanction-based approach would have to include more narrow definitions of the proposed areas of cooperation,<sup>296</sup> it implemented a possibility of sanctions through rebalancing measures.<sup>297</sup>

### *iii. E.U.-U.K. Trade Agreement*

The most recent, and most comprehensive, example of this approach is the Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, and the United Kingdom (TCA). This agreement is a good example of environmental and climate change concerns at the core of trade considerations. It even has been recognized as one of the strongest wordings found in trade agreements concerning climate change.<sup>298</sup> The parties' commitment to reaching net zero by 2050 in Article 355(3) makes it the first trade agreement that elevates climate action to a make-or-break issue for the trade deal itself.<sup>299</sup>

In Article 764, the parties recognize climate changes as an existential threat and recommit to strengthen the response to it.<sup>300</sup> This, combined with Art. 771, which declares these commitments as "essential elements of the partnership established by this Agreement,"<sup>301</sup> shows the deep commitment of all parties to climate change action, which is further shown in Art. 772.<sup>302</sup> Failure to

---

<sup>296</sup> Commission Press Release, Commission Unveils New Approach to Trade Agreements to Promote Green and Just Growth (June 22, 2022), [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_3921](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_3921) [<https://perma.cc/9G9B-8PQG>].

<sup>297</sup> Trade and Cooperation Agreement, E.U.-U.K., art. 411, Dec. 30, 2020, 2021 O.J. (L 149) [hereinafter TCA].

<sup>298</sup> Markus Gerhing, *The EU-UK Agreement Is the First to Make Climate Change a Make-or-Break Issue*, UK IN A CHANGING EUR. (Jan. 25, 2021), <https://ukandeu.ac.uk/the-eu-uk-agreement-is-the-first-to-make-climate-a-make-or-break-issue/> [<https://perma.cc/BA66-43HH>].

<sup>299</sup> See Jess Ralston, *Brexit: Implications for Energy and Climate Change*, ENERGY & CLIMATE (Oct. 25, 2021), <https://eciu.net/analysis/briefings/brexit/brexit-implications-for-energy-and-climate-change> [<https://perma.cc/33HK-YRRX>].

<sup>300</sup> TCA, *supra* note 297, art. 764.

<sup>301</sup> *Id.* art. 771.

<sup>302</sup> *Id.* art. 764.



comply with such essential elements of the partnership can even lead to termination of the agreement.<sup>303</sup>

With this in mind, it is worth examining the substantial provisions concerning climate change and the environment as well as sustainable development, namely Chapter 7 and 8 of the Agreement.

Article 391 encompasses the core of the substantive provisions on climate action as it provides for non-regression from the levels of protection of the environment and climate action plans at the time of the end of the transition period.<sup>304</sup> Article 392 complements this by binding the parties to a carbon pricing system that includes all major carbon emission sectors of the economy.<sup>305</sup> Finally, Article 393 integrates the leading treaties on environmental protection like the Rio Declaration and the UNFCCC into the objections of the trade agreement.<sup>306</sup> In implementing those treaties that do not provide any enforcement mechanisms,<sup>307</sup> the objectives of those treaties become more tangible. It also reaffirms recognized principles of public international law to be applicable here; for example, the polluter pays principle.<sup>308</sup>

Similar to the first Article in Chapter 7, Article 397 reaffirms the parties' commitment to international conventions on sustainable development, specifically the U.N. sustainable development goals, among others.<sup>309</sup> Interesting in this regard is Article 401. It pertains to the recognition of the UNFCCC and the goals set out by the Paris Agreement. Here, the parties commit to implementing both effectively, even reciting the goal of a global average temperature well below 2°C.<sup>310</sup>

These substantial provisions go further than similar provisions in previous E.U. FTAs. More important than the substantial protection standards are the provisions on enforcement. After all, non-enforceable climate action measures can be found in international climate change treaties and do not have to be implemented in trade agreements. According to Article 494,

---

<sup>303</sup> *Id.* art. 764(1).

<sup>304</sup> *Id.* art. 391.

<sup>305</sup> *Id.* art. 392.

<sup>306</sup> *Id.* art. 393.

<sup>307</sup> Daniel Bodansky, *The United Nations Framework Convention on Climate Change: A Commentary*, 18 *YALE J. INT'L L.* 451, 555 (1993).

<sup>308</sup> TCA, *supra* note 297, art. 393(1)(e).

<sup>309</sup> *Id.* art. 397.

<sup>310</sup> *Id.* art. 401(2)(a).

enforcement of those rules is mainly to be sought in national courts and only obliges the parties to ensure enforcement of their obligations under this section under national laws.<sup>311</sup> Further, Article 495 follows the same principal as the other recent E.U. FTAs.<sup>312</sup> A first step in dispute resolution has to be the consultation between parties. Only in the event of a dispute that cannot be resolved by consultation, Article 396(2) refers to dispute resolution on the basis of Article 408, 409, and 410.<sup>313</sup>

Article 410(3) refers to Article 749, which permits temporary remedies if the other party does not conform with the report of the panel of experts constituted under Article 409.<sup>314</sup> Therefore, the main focus of dispute resolution lies in a joint effort of implementation with a panel of experts assessing the effort taken by the parties. Only in the case where the respondent party does not comply with the findings and obligations set forth by this panel of experts can parties rely on other remedies according to Article 749. Even those remedies are limited to temporary measures, though.<sup>315</sup>

In addition to the joint committee of experts and temporary measures, according to Article 411(2), the parties are able to take measures to rebalance significant divergences between the parties.<sup>316</sup> These rebalancing measures constitute the great novelty in the TCA compared to other recent FTAs that the European Union has concluded.<sup>317</sup> As they have the character of sanctions, these rebalancing measures create a new enforcement possibility and move away from a strictly cooperational character. Those measures are restricted in their scope "to what is strictly necessary and proportionate in order to remedy the situation."<sup>318</sup> Such rebalancing measures have to be announced to the other party so that it can react

---

<sup>311</sup> *Id.* art. 494.

<sup>312</sup> *Id.* art. 495.

<sup>313</sup> *Id.* art. 396(2).

<sup>314</sup> *Id.* art. 410(3).

<sup>315</sup> *Id.* art. 749.

<sup>316</sup> *Id.* art. 411(2).

<sup>317</sup> European Union Committee, *Tuesday 2 February 2021 Meeting Started at 4.00pm, ended 5.43pm*, PARLIAMENTLIVE.TV (Feb. 2, 2021), <https://parliamentlive.tv/event/index/14e51037-48ff-48ec-a995-dbc9dce26d4e?in=16:00:37>; Dr. Holger Hestermeyer, HL Select Committee on the European Union, *Uncorrected Oral Evidence: Future UK-EU Relations: Governance Q8* (Feb. 2, 2021), [https://committees.parliament.uk/oralevidence/1656/pdf/\[https://perma.cc/QFE8-SW7I\]](https://committees.parliament.uk/oralevidence/1656/pdf/[https://perma.cc/QFE8-SW7I]).

<sup>318</sup> TCA, *supra* note 297, art. 411(2).

by either reaching a mutual resolution to the dispute or by opening proceedings in front of an arbitral tribunal.<sup>319</sup>

*b. Implementation of Dispute Resolution Measures*

As the approach in the TCA is different from that of other E.U. FTAs, let us examine how it will be implemented in practice in order to determine whether it is in fact more effective than the previous purely cooperational approach of the European Union. Since the dispute resolution mechanism has not been used in the TCA as of April 2023, it can only be speculated how effective it will be. However, there are a couple of indications in the provision text as to problems that might arise in the case of a dispute.

First, as mentioned above, the non-regression obligations only apply “in a manner affecting trade or investment between the Parties.”<sup>320</sup> Therefore, in order to establish a breach according to the TCA, it does not suffice for one party to lower its environmental or climate action standards, but the other party has to prove that this lowering of standards also affected the trade between the parties.<sup>321</sup> This poses a high threshold for the complaining party. An example of this can be found in the arbitral proceeding *United States v. Guatemala* under the Dominican Republic-Central America-U.S. Free Trade Agreement from 2010.<sup>322</sup> Crucial in this decision was the deliberations of the tribunal on the clause “in a manner affecting trade between the parties.”<sup>323</sup> The tribunal decided that violations of relevant provisions can only be considered if there is evidence of a systematic failure of enforcement that leads to a disadvantage of foreign trade competitors.<sup>324</sup> Further, it developed a three-step process to determine the link to trade: (1) whether there was actual

<sup>319</sup> *Id.* art. 411(3)(b).

<sup>320</sup> *Id.* Art. 391(2).

<sup>321</sup> *Id.*

<sup>322</sup> *In re Guatemala – Issues Relating to the Obligations Under Article 16.2.1(a) of the CAFTA-DR*, ¶ 108 (CAFTA-DR Arb. Panel Final Report June 14, 2017), <https://ustr.gov/sites/default/files/files/agreements/FTA/CAFTA-DR/Guatemala%20Final%20Report%20of%20the%20Panel.pdf> [<https://perma.cc/A8VU-FS5J>] [hereinafter *In re Guatemala*].

<sup>323</sup> Dominican Republic-Central America-United States Free Trade Agreement, Aug. 5, 2004, ¶¶ 455-450, 119 Stat. 462, 43 I.L.M. 514.

<sup>324</sup> Tequila J. Brooks, *U.S.-Guatemala Arbitration Panel Clarifies Effective Enforcement Under Labor Provisions of Free Trade Agreement*, 4 INT’L LAB. RTS. CASE L. 45, 48 (2018).

trade between the company in question and other FTA parties; (2) showing of the effects of the lowering of standards; and (3) whether these effects were substantial enough to imply a disadvantage on the company.<sup>325</sup> As the complaining party has to prove all of these requirements to substantiate a claim, this poses significant legal hurdles on the enforcement of such non-regression clauses. One could even go as far as saying that this connection of lowering standards to effects on trade even renders the clause completely ineffective.<sup>326</sup>

The second significant hurdle arising out of the text of the TCA is the wording regarding the rebalancing measures. Article 411(2) stipulates:

If *material impacts* on trade or investment between the Parties are arising as a result of *significant divergences* between the Parties in the areas referred to in paragraph 1, either Party may take appropriate rebalancing measures to address the situation. Such measures shall be restricted with respect to their scope and duration to what is *strictly necessary and proportionate* in order to remedy the situation . . . . A Party's assessment of those impacts shall be based on *reliable evidence* and not merely on conjecture or remote possibility.<sup>327</sup>

Accordingly, only situations where one party does not comply with the articles of Chapters 7 or 8 of the TCA in a significant manner and therefore causes a "material impact" on trade and investment of the other party, can that party implement rebalancing measures as part of the dispute resolution mechanism. While those rebalancing measures might be a new and revolutionary step towards enforcement of climate action provisions,<sup>328</sup> it again poses a high threshold for the complaining party to prove. This threshold is heightened even more by the need for reliable evidence. As Collins explains in his commentary, it would seem almost impossible to prove the interconnection of lowering standards to the impacts on

---

<sup>325</sup> *In re Guatemala*, *supra* note 322, ¶¶ 190-92.

<sup>326</sup> Marco Bronckers & Giovanni Gruni, *Retooling the Sustainability Standards in EU Free Trade Agreements*, 24 J. INT'L ECON. L. 25, 31 (2021).

<sup>327</sup> TCA, *supra* note 297, art. 411(2) (emphasis added).

<sup>328</sup> Gerhing, *supra* note 298. This was also recognized by the E.U. Commission President Ursula von der Leyen in European Commission Press Release IP/20/2531, EU-UK Trade and Cooperation Agreement: Protecting European Interests, Ensuring Fair Competition, and Continued Cooperation in Areas of Mutual Interest (Dec. 24, 2020).

trade as those could be only one of several different factors.<sup>329</sup> Even harder for the complaining party to prove would be the fact that an investor did not invest in a party's territory because of a lower standard of protection in the other party.<sup>330</sup> More generally, the wording of Article 411(2) is ambiguous in every respect, leaving to interpretation what will fall under the definition of "material impact," "significant divergences," or "reliable evidence."<sup>331</sup> This weakens the provision even further, resulting in very little impact of the measures on future regulatory decisions of the parties.<sup>332</sup> While the parties to the agreement can implement rebalancing measures subject to review of a panel of experts, this is not an indefinite measure, but rather an interim fix to entice the other party to comply.<sup>333</sup>

*c. The Effectiveness of Climate Change Action in European FTAs*

As seen in our analysis of the E.U.-U.K. trade agreement, the European Union gave up their strictly cooperational approach and opened up to a combined approach, allowing for sanctions as a last resort in the form of rebalancing measures where there is a substantial breach. In this new approach, the European Union created an FTA that is more comprehensive in implementing environmental and climate change provisions and combines this comprehensive framework with an enforcement mechanism that allows parties to implement sanctions. It moved away from strictly aspirational language that rendered previous FTAs by the European

---

<sup>329</sup> David Collins, *Standing the Test of Time: The Level Playing Field and Rebalancing Mechanism in the UK-EU Trade and Cooperation Agreement (TCA)*, 12 J. INT'L DISP. SETTLEMENT 617, 627 (2021).

<sup>330</sup> *Id.*

<sup>331</sup> See TCA, *supra* note 297, art. 411(2).

<sup>332</sup> Simon Lester, *Will the Post-Brexit EU-UK Trade Agreement Limit Regulatory Competition?*, CATO AT LIBERTY (Dec. 28, 2020), <https://www.cato.org/blog/will-post-brexit-eu-uk-trade-agreement-limit-regulatory-competition> [<https://perma.cc/XFN3-HTS7>].

<sup>333</sup> Chris Papanicolaou, *Climate Change Provisions of the EU-UK Trade and Cooperation Agreement*, JONES DAY (Feb. 2021), <https://www.jonesday.com/en/insights/2021/02/climate-change-provisions-of-the-euuk-trade-and-cooperation-agreement> [<https://perma.cc/BU92-PYL9>].

Union ineffective.<sup>334</sup> At first glance, this sounds like the ultimate tool to ensure climate action.

Looking at the background of the TCA consultations taking place as part of the Brexit negotiations, this only makes sense. Not only do the European Union and United Kingdom share similar values in their climate change policies and goals, they share a close proximity and intertwined economies. One cannot implement climate action without affecting the other. This makes it even more important for the European Union to impose its extraterritorial leverage and ensure a high level of protection standards for its own environment.<sup>335</sup>

After a closer look, however, those provisions become more problematic. With the impressions on practical implementation of the TCA in mind, it becomes clear that, while the approach to enforceable climate action provisions might be a solution in theory, it lacks practical enforceability. In other words, the enforcement provisions in the TCA represent another “tiger with no teeth.”

Further, the close geographical connection between the United Kingdom and European Union, which should in theory strengthen the joint efforts on climate change action, pose another threat to the practical implementation of the protection standards. In linking the non-regression provision to an impact on trade, the parties neglected the fact that any lowering of environmental protection standards or climate change action will affect the other party directly regardless of the trade impact.<sup>336</sup>

Not only did the European Union therefore fail to create a practically enforceable protection standard, it has already failed in protecting its own environmental standards in the substantial provisions.<sup>337</sup> Seeing as this agreement is one negotiated with the United Kingdom as a state that has very similar positions regarding climate change action, the implications for further agreements with other states such as China, with very different standards and higher leveraging power, seem bleak.

In fact, the TCA, as a highly inspirational FTA encouraging climate change action and the implementation of the U.N. sustainable development goals like no other trade agreement, turns

---

<sup>334</sup> For a further analysis on the approach in other E.U. FTAs, see Leonelli, *supra* note 293, at 624.

<sup>335</sup> *Id.*

<sup>336</sup> *Id.* at 626.

<sup>337</sup> *Id.*

out to have a surprisingly low protection standard that will not be enough to effectively safeguard climate change goals.

## CONCLUSION

The common good, understood in the right sense, implies the execution of actions that benefit the whole collectivity, as compared to a particular person or group of people. Actions for the common good generally go beyond any economic profitability or benefit for a certain group of people, as they specially benefit humanity. Climate neutrality is a clear goal for the common good and countries and international organizations have been working towards this goal for decades, without having achieved it to date. Although the goals have not been fully achieved, the sustainability principles applied by countries have contributed to improving energy, water, and soil efficiency and have helped to reduce the amount of CO<sub>2</sub> emitted into the atmosphere.

Trade and its regulation have been proposed as an effective instrument for the imposition and control of public policies aimed at achieving climate neutrality. However, several international treaties, such as the U.S.A.-Chile FTA, have put in place safeguards to prevent environmental standards from causing competitiveness problems for goods or being used in a different sense. It is for this reason that public policies should promote the circular economy, through which it would be possible to reduce carbon emissions by reusing inputs that conserve their useful life. In the same sense, the principle contained in the Doha Declaration<sup>338</sup> indicates that the parties maintain their obligation to consult in accordance with the rules established by the WTO on environmental matters. Industry leaders need public policies that allow them to innovate in delivering climate-neutral solutions.

We believe that rather than a legal trade structure relating to taxation, policymakers should encourage public-private cooperation in environmental restoration. Carbon offsets should be recognized in the international price of products or in the purchasing priority of products. For example, by ranking carbon offsets for those companies that have offset their emissions through real action, whether through philanthropy or public-private partnerships. We have discussed the case of the Tompkins

---

<sup>338</sup> Doha Declaration, *supra* note 22, ¶ 31(i).

Conservation projects in Chile and Argentina, where the current legal framework has allowed the restoration of ecosystems by private agents, whose parks have been donated to the states. In the same vein, the Chilean Government has recognized this experience, and policymakers have included in the latest reform of the water code the possibility of holding water rights for environmental conservation purposes. This rule should incentivize the creation of areas that contribute to carbon neutrality in the coming years.

Indeed, industry leaders have a great opportunity to work together with the public sector, and through dialogue with science, it is possible to achieve climate neutrality through public-private partnerships, and to use the WTO framework to reward the development of products where these CO<sub>2</sub> emission reduction techniques are applied, which also have a positive impact on communities, as this is simply serving the common good.

The transition to climate neutrality is a global concern. Therefore, it ought not to be seen as a win or lose situation for particular countries. It is either we all win, or we all lose.<sup>339</sup> Much effort has been put into the reduction of global emissions, but as is evident from the steady increase of global warming, those efforts are not yet enough. There is a substantial number of resources, networks, and coalitions that can be used to achieve climate neutral industries, but what is necessary for this transition is enforceability of climate neutral agreements, the right attitude by all the key players in various industries, and the cooperation of all relevant stakeholders.

Climate clubs can offer a solution to effectively implement carbon pricing into the current trade system. As demonstrated above, the climate club would involve participation from the highest emitting countries to maximize the significance in the reduction of carbon pollution. There would also be trade incentives attached to membership to ensure compliance and participation. Moreover, a plurilateral trade agreement deals with the issues that can arise with regard to carbon leakages, competitiveness, and free riding, while still ensuring that measures do not infringe or discriminate under the WTO framework. We think this route offers an effective long-term solution to promote sustainability through the framework of international trade law.

---

<sup>339</sup> Christiana Figueres, *The Inside Story of the Paris Climate Agreement*, YOUTUBE (May 11, 2016), [https://www.youtube.com/watch?v=MIA\\_1xQc7x8](https://www.youtube.com/watch?v=MIA_1xQc7x8) [<https://perma.cc/4PC2-5HMY>].



Moreover, both regionalism and multilateralism must ultimately be pursued by states and include strong commitments on climate change and the environment to ensure sustainable global integration is achieved. But while multilateralism within the WTO may be achievable in the future, it is not achievable in the current WTO climate. Although multilateralism within the WTO is favored by many so as not to erode the WTO principle of non-discrimination,<sup>340</sup> it is not the only means of achieving sustainable global integration. Regionalism has successfully led to the inclusion of strong provisions on climate change within trade agreements on matters such as the liberalization of EGS and the elimination of fossil fuel subsidies. Improving the negotiating function of the WTO is on the global agenda,<sup>341</sup> but until significant reform is made and multilateralism within the WTO can advance, regionalism provides a clear route forward in achieving sustainable global integration.

Furthermore, it has become evident that climate change is already playing an imperative role in shaping the future global trading system. At the current terrifying speed of climate change, governments are increasingly taking measures aiming at reducing carbon emissions. After examining their compatibility with WTO regulations, measures aim at restricting carbon-intensive trade while simultaneously incentivizing and enabling carbon-free trade. This has a dual effect of creating a restrictive trading system, where certain products are banned or heavily taxed, while simultaneously permitting a liberalized system where others are tariff-free and significantly promoted. In this respect, climate change can push towards ultimately creating a sustainable and carbon-free global trading system. However, the failures of implementing initiatives and measures on a multilateral forum and the absence of clear and efficient efforts to tackle climate change have also precipitated the creation of smaller treaties and climate clubs, shifting the multilateral system to a plurilateral one. Lastly, climate migration, one of the most consequential effects of climate change will significantly influence the system by reducing and increasing state production, demand, and consumption, ultimately eliminating established trade flows and creating new ones. Climate change will affect every aspect of trade, from production shortages and heavy

---

<sup>340</sup> Leal-Arcas, *supra* note 128, at 42.

<sup>341</sup> *Climate, Pandemic, E-commerce, Inclusivity – Public Forum Addresses Priorities for Reform*, WORLD TRADE ORG. (Sept. 29, 2021), [https://www.wto.org/english/news\\_e/news21\\_e/pf21\\_29sep21\\_e.htm](https://www.wto.org/english/news_e/news21_e/pf21_29sep21_e.htm) [https://perma.cc/N8GB-B459].

taxations to product innovation and liberalization. However, with the effects of climate change not yet fully revealed, the future of trade is only to be speculated.

It is well-founded that the impacts of climate change on trade and investment are likely to be exacerbated as the current situation worsens. However, unfurling reforms, as discussed, are better suited to addressing climate change mitigation, rather than having specific environmental reforms. In doing so, the benefits are twofold, wherein different sustainability goals, including climate change, are protected while also ensuring that economic development and competitiveness are not hindered. Nonetheless, a constant balance through cooperation at the international level will be crucial to maintaining its long-term success.