

International Trade Law: A Driver of Climate Action or a Roadblock?

SHIVANI SAGAR KALRA*

Abstract

Much has been written about changing the world's perception of international trade—from an area of development that will accelerate climate change to a powerful tool that can drive climate action. This article elaborates on four mechanisms of international trade law developed and honed by the World Trade Organization (WTO) that can play a pivotal role in accelerating climate action. The four mechanisms are the WTO's dispute resolution system, the Agreement on Technical Barriers to Trade (TBT), the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), and the regional trade agreements (RTAs) negotiated under the WTO framework. Elucidating the WTO's role, this article supports the proposition that every multilateral institution can rise to the occasion and spearhead climate action in its own unique capacity.

Keywords: International Trade Law, Climate Change, Climate Club, World Trade Organization, Regional Trade Agreements

INTRODUCTION

International trade has long been seen as a contributor to climate change. Increases in trade and consumption have led to a heightened use of fossil fuels to meet increased demand and facilitate enhanced lifestyles.¹ However, in recent years, various scholars have attempted to change this understanding of international trade and highlight the potential of international trade to serve as a powerful tool to facilitate and accelerate climate action.²

The upsurge in climate ambition after the Paris Agreement led to scholars analyzing the impact of climate action on international trade. As more countries set ambitious targets under the Paris Agreement, the need for appropriate climate action to achieve those targets has also escalated. Achieving these ambitious targets requires a change in domestic policies, and some of these changes are expected to impact international trade. Some of the national climate pledges include domestic trade regulations based on climate change, such as labeling requirements that restrict the importation of goods, fossil fuel subsidy reforms, etc.³

James Bacchus, founding member of the Appellate Body of the World Trade Organization (WTO), reported that trade-related elements feature prominently in climate contributions under the Paris Agreement.⁴ The WTO is a key player in this overlap between international trade and climate change.

The WTO is a multilateral organization that was formed to ensure cooperation among various member countries in the area of international trade. The WTO aims to reduce restrictive trade practices and prohibits

* Assistant Professor, O.P. Jindal Global University, Jindal Global Law School.

¹ Rafael Leal-Arcas, "Climate Clubs and International Trade," *European Energy and Environmental Law Review* 29, no. 3 (2020): 72–88, 83, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3547513.

² Ibid.

³ Ibid.

⁴ James Bacchus, *What Is a Climate Response Measure?: Breaking the Trade Taboo in Confronting Climate Change* (Waterloo, Canada: Centre for International Governance Innovation, 2019), 3–4, <https://www.cigionline.org/static/documents/documents/Paper%20no.220.pdf>.

discrimination among different trading partners. Although the WTO essentially contends with violations of international trade rules, various climate action measures have also become relevant to the WTO in the recent past. This is because some climate action measures violate international trade rules and make trade restrictive, thereby falling within the WTO's purview. Taking the example of labeling requirements mentioned above, if a WTO member country imposes different eco-labeling requirements on goods originating from different countries owing to the regulatory environment in those countries, such discrimination may be considered violative of trade rules under the WTO framework.

This article enumerates five areas in which international trade can play a key role in supporting climate action, thus changing the view that international trade can only accelerate climate change. The five areas are the following:

- i. The role of the WTO in climate action-related dispute resolution;
- ii. The role of regional trade agreements (RTAs) negotiated under the WTO framework in setting ambitious climate-action goals;
- iii. The potential role of the WTO's Agreement on Technical Barriers to Trade (TBT) in developing universal efficiency standards for products;
- iv. The role of the WTO's dispute settlement mechanism in the operationalization of the provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) that facilitate technology transfer to and financial assistance for developing countries; and
- v. The role of RTAs in facilitating the smooth implementation of Carbon Border Adjustment Mechanisms (CBAMs), thus facilitating the creation of a global carbon market.

Further, this article briefly addresses the problem of the WTO's non-functioning Dispute Settlement Body (DSB) and how this circumstance diminishes the WTO's potential to serve the climate agenda.

ALL HANDS ON DECK: THE ROLE OF INTERNATIONAL INSTITUTIONS IN ACCELERATING CLIMATE CHANGE

There is a tendency to associate specific international issues with dedicated multilateral institutions—a penchant that fails to consider the reality of mammoth problems like climate change.⁵ For example, the International Civil Aviation Organization (ICAO) coordinates all matters that relate to international air transport and navigation, but this same mechanism of institutionalization has not worked for solving climate change. The inclusion of various non-State actors as participants and frontliners in negotiating and operationalizing the Paris Agreement attests to the need to have all hands on deck.⁶ In other words, it is well established that the institutional capacities and expertise of different multilateral organizations, including an organization like the ICAO, are needed to drive climate action.

Katherine Michonski and Michael A. Levi conducted a study that analyzed different international institutions and their potential roles in climate action.⁷ The WTO emerges from the study as a key organization that will determine global responses to climate change by facilitating the smooth resolution of potential climate-related trade disputes. Michonski and Levi acknowledge that adopting new regulations aimed at reducing greenhouse gas emissions will be uneven across countries and that different national pressures will dictate how individual member States take action in this regard.

THE WTO'S ROLE IN SUPPORTING CLIMATE ACTION

A. The WTO's Role in Climate Action-Related Dispute Resolution

1) Dispute Resolution under the Paris Agreement and the WTO: A Double Whammy

The United Nations Framework Convention on Climate Change (UNFCCC), which is the parent treaty of the Paris Agreement, has a dispute settlement mechanism that takes a “non-punitive” and “facilitative” approach to

⁵ Katherine Michonski and Michael A. Levi, “Harnessing International Institutions to Address Climate Change,” Council on Foreign Relations (Mar. 25, 2010), 2, <https://www.cfr.org/report/harnessing-international-institutions-address-climate-change>.

⁶ Thomas Hale, “All Hands on Deck: The Paris Agreement and Nonstate Climate Action,” *Global Environmental Politics* 16, no. 3 (2016): 12–22, https://doi.org/10.1162/GLEP_a_00362.

⁷ *Ibid.*

resolving disputes.⁸ The Paris Agreement also adopts the same dispute resolution mechanism as the UNFCCC. James Bacchus describes the Paris regime as “lightly legalized.”⁹ He further posits that the Paris Agreement has adopted a managerial rather than an enforcement approach to compliance.¹⁰ This understanding derives from two articles in the UNFCCC and the Paris Agreement that allow for dispute resolution between two parties concerning the interpretation or application of the Paris Agreement by way of “negotiation or any other peaceful means of their choice.”¹¹ In other words, no single authority has been assigned the task of hearing and resolving disputes among parties to the Paris Agreement, thereby making the dispute resolution “non-punitive.”

This “non-punitive” nature implies that countries do not fear the legal repercussions of noncompliance with commitments made under the Paris Agreement. On the other hand, countries that take climate action that impacts international trade fear that the WTO may penalize their actions. In other words, not only do countries have little incentive to comply with the commitments made under the Paris Agreement but they are also unlikely to take steps to meet these commitments if such measures violate international trade rules.

2) *How Does the WTO Become Relevant for Climate Action Measures?*

The WTO’s DSB adjudicates international trade disputes among the WTO member countries. The WTO does not directly concern itself with climate change issues, but it can claim jurisdiction when a climate action measure violates agreed-upon WTO rules. As mentioned above, many countries’ climate action measures impact international trade and make trade restrictive. For example, increasing import duties on fossil fuel-heavy products or prescribing compulsory environmental standards for products restricts trade in such products. Doing so in a manner that member countries perceive as discriminatory will lead to trade disputes. Such climate action measures that are trade restrictive will lead to international trade disputes lodged in the DSB.¹² This is where the WTO’s role in resolving climate action-related disputes becomes relevant.

3) *Handling Climate-Related Disputes at the WTO*

The main agreement under the WTO that aims to eliminate trade barriers and facilitate free trade among countries is the General Agreement on Tariffs and Trade (GATT). Article XX of the GATT contains an exception wherein countries are allowed to violate international trade rules if a contested action is taken to conserve exhaustible resources.¹³ The DSB decides whether a contested action is meant for the conservation of natural resources. When a country invokes the exception to article XX, the DSB looks at two things:

- i. Whether the trade measure is arbitrarily discriminatory in nature.¹⁴ This is done to ensure that countries do not plead the article XX exception under the guise of a trade measure that has little climate impact and is essentially meant to protect domestic industries; and
- ii. Whether the end goal (in this case conservation of natural resources) could be reached as effectively with a less restrictive trade measure.¹⁵

Per a WTO working paper, the DSB looks at the overall motive of a measure when adjudicating article XX claims.¹⁶ In other words, the DSB looks at whether the contradictory measure is one that was primarily meant for the

⁸ Ibid., 12.

⁹ Ibid.

¹⁰ Ibid.

¹¹ United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107; Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T.I.A.S. no. 16-1104.

¹² Patrick Low, Gabrielle Marceau, and Julia Reinaud, “The Interface Between the Trade and Climate Change Regimes: Scoping the Issues,” World Trade Organization Research and Economic Working Papers, Staff Working Paper ERSD-2011-1 (Jan. 12, 2011): 15, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1742803.

¹³ Margaret Lay, “Can Trade Policy Support the Next Global Climate Agreement?” *Carnegie Papers*, no. 96 (Sep. 2008): 7, <https://carnegieendowment.org/2008/10/22/can-trade-policy-support-next-global-climate-agreement-pub-22310>.

¹⁴ Low, Marceau, and Reinaud, “The Interface Between the Trade and Climate Change Regimes,” 15 (n 12).

¹⁵ Lay, “Can Trade Policy Support the Next Global Climate Agreement?” 7 (n 13).

¹⁶ Low, Marceau, and Reinaud, “The Interface Between the Trade and Climate Change Regimes,” 15 (n 12).

conservation of natural resources and whether a violation of WTO rules is incidental to the primary measure.¹⁷ In those cases, the DSB will adjudicate in favor of the country that may be violating the WTO rules. However, there is no established method of determining the country's overall motive, and the DSB determines the same on a case-by-case basis.

The above paragraphs clearly suggest that the requirement to invoke a legitimate exception to article XX is not easy to fulfill. Even for the DSB, this analysis requires making subjective value judgments on the "motive of the violating country." Even for decisions that rely on empirical data like "availability of alternatives," determining the exact measurement of climate action impact is challenging and time-consuming.

Unfortunately, the DSB's required scrutiny process has led to various cases wherein the DSB accepted the invocation of the article XX exception, but the trade measure itself was later ruled illegal by virtue of being discriminatory.¹⁸ For example, in the US Gasoline Case of 1995,¹⁹ the US Clean Air Act was at issue. This act prohibited gasoline refiners from selling gasoline that was below a certain refinery baseline (unclean) as compared to the gasoline each refiner sold in 1990. However, this rule was slightly different for foreign refiners. Foreign refiners were subject to a refinery baseline that the US Environmental Protection Agency (EPA) set. This baseline was supposed to reflect the average quality of gasoline in 1990, and the importation of gasoline below this baseline was prohibited.²⁰ Foreign refiners were not allowed to set their individual baselines like domestic refiners because the US authorities could not cross-check the authenticity of the baselines set by foreign refiners.

The DSB recognized that clean air is an "exhaustible natural resource" under article XX. However, the DSB opined that setting a refinery baseline was not a measure for conserving clean air and therefore did not fulfill the requirement of article XX. This decision was appealed to the WTO Appellate Body, which is tasked with hearing appeals of DSB decisions. On appeal, the Appellate Body decided that setting a refinery baseline is indeed a measure of clean air conservation, thus fulfilling the article XX requirement. However, the Appellate Body stated that because the measure held domestic refiners and foreign refiners to different standards, the measure did not satisfy article XX's non-discrimination requirement.²¹ In response to this, the United States allowed foreign refiners to set their individual baselines, thereby undermining the positive environmental impact of the original measure.

Although the WTO has not yet heard climate action cases, looking at the US Gasoline Case, it is likely that climate action trade measures will also be considered to conserve exhaustible natural resources. The problem, however, may arise in the context of the impact that such a measure would have in different countries. If the impact is discriminatory in nature, the DSB might deem it to be illegal per WTO rules. The trend of other environmental cases that the DSB has handled also shows that, although the DSB recognizes the invocation of the article XX exception, it strictly applies the non-discrimination standard to such cases and therefore declares most measures to be illegal under international trade law.²²

In many instances, countries have altered the trade measure to comply with article XX of the GATT as happened in the US Gasoline Case. There, after the trade measure was modified to comply with article XX, many environmentalists argued that the impact of the modified trade measure would be significantly less than that of the original trade measure. This may be true for other cases as well, where making a trade measure WTO compliant will mean compromising on the trade measure's climate goal. The solution, therefore, must lie in finding a way to retain the original trade measures while making them WTO compliant.

Here, it is useful to interject that the WTO's primary motive has always been trade liberalization, and climate action measures invariably constitute trade barriers or restrictions. Therefore, the WTO in such cases still focuses on its role of maintaining free trade even though the organization has recognized sustainable development. As the world awakens to the problem of climate change and takes more stringent measures to coordinate with one another, it is not far-fetched to expect that the WTO will change with the times and adjudicate climate action disputes, keeping in mind the imminence of the climate change problem and the effectiveness of the solution.

¹⁷ *Ibid.*, 15–17.

¹⁸ *Ibid.*, 15.

¹⁹ See Lay, "Can Trade Policy Support the Next Global Climate Agreement?" 15 (citing "United States—Standards for Reformulated Gasoline," Report of the Appellate Body, AB-1996-1, WT/DS2/AB/R, Apr. 29, 1996) (n 13).

²⁰ Low, Marceau, and Reinaud, "The Interface Between the Trade and Climate Change Regimes," 15 (n 12).

²¹ *Ibid.*, 15.

²² *Ibid.*, 16.

Despite the WTO's disconnect from the climate change issue, it is important to acknowledge the potential it holds in facilitating climate action as Michonski and Levi have elaborated. These authors' study suggests that the WTO can handle the increase in trade disputes triggered by climate action measures by educating itself on the different types of trade disputes that are anticipated in the wake of climate ambition.²³ In fact, the WTO is already collaborating with organizations like the UNEP (United Nations Environment Programme) to "better understand climate-related trade disputes."²⁴

The Michonski and Levi study goes on to conclude, "Ultimately, though, the potential conflicts are likely to be better managed if countries can agree on high-level rules for what sorts of measures are acceptable to protect competitiveness in the context of climate policy."²⁵ In other words, the study results suggest that negotiating a new set of rules that ensure climate action does not violate trade rules would be a better option than the WTO independently undertaking knowledge gathering and developing a set of judicial rules to tackle such disputes.

The above makes perfect sense since, given that member countries ultimately initiate these trade disputes, they must participate in developing a set of rules that are agreeable to all. If the WTO makes decisions based on its own judicial understanding and rules, many member countries are more likely to question the WTO's authority in adjudicating climate-related disputes in a forum that is meant for trade-related litigation.

4) *Climate Waiver as a Potential Solution*

A climate waiver is a potential mechanism through which new negotiated rules, as suggested above, can be implemented.

Scholars have been exploring the option of a "climate waiver" to ensure that climate action trade measures do not violate international trade rules under the WTO. A climate waiver would allow member countries to violate international trade rules in certain "exceptional circumstances."²⁶ The good news is that the Marrakesh Agreement, which led to the formation of the WTO, explicitly provides for such a waiver; specifically, the agreement states that "[i]n exceptional circumstances, the Ministerial Conference may decide to waive an obligation imposed on a Member by this Agreement or any of the Multilateral Trade Agreements."²⁷ Therefore, a climate waiver offers an easier solution to the violation of international trade rules than amending the WTO's trade regulations.

Although the Marrakesh Agreement's language indicates that waivers may be given to an individual member for an isolated case, this provision is impractical for climate waivers. In the case of climate waivers, a collective waiver should be negotiated that all countries can use. Essentially, such a waiver can serve as an exception to WTO rules and allow countries to violate the article XX non-discrimination requirement for climate action trade measures. A collective waiver can also help countries negotiate and agree upon specific criteria to determine whether a climate action measure is unnecessarily trade restrictive. Therefore, it can help safeguard international trade interests as well.

James Bacchus has posited that such a climate waiver should also be permanent.²⁸ In other words, the negotiated climate waiver should allow countries to freely take climate action trade measures for the foreseeable future. The WTO has issued collective and permanent waivers in the past. In 2003, the WTO waived some rules related to intellectual property to allow compulsory licensing of certain drugs.²⁹ This waiver was to be terminated on the date that the WTO rules were amended to have the same effect as the waiver.³⁰ Bacchus suggests that a similar provision can be placed in the proposed climate waiver to ensure that the waiver is terminated only when the WTO rules are appropriately modified.

²³ Michonski and Levi, "Harnessing International Institutions," 2 (n 5).

²⁴ "The WTO and United Nations Environment Programme," World Trade Organization, accessed Mar. 2, 2024, https://www.wto.org/english/thewto_e/coher_e/wto_unep_e.htm.

²⁵ Michonski and Levi, "Harnessing International Institutions," 2 (n 5).

²⁶ James Bacchus, *The Case for a WTO Climate Waiver: Special Report* (Waterloo, Canada: Centre for International Governance Innovation, Nov. 2, 2017), 1–4, <https://www.cigionline.org/publications/case-wto-climate-waiver/>.

²⁷ *Ibid.*

²⁸ *Ibid.*

²⁹ *Ibid.*

³⁰ *Ibid.*

The DSB's acceptance of climate action exceptions to article XX suggests that the judicial will to support climate action is not absent. However, violation of trade rules precludes the DSB from making a climate-friendly judgment. A successful climate waiver would mean that the DSB can make climate-friendly judgments and allow countries vast freedom to take climate action measures without fearing repercussions from international trade players.

It is relevant to mention here that the WTO's DSB cannot be expected to be a long-term judicial solution to the lack of judicial authorities prescribed under the Paris Agreement. This is because the DSB has been structured to resolve trade issues and not climate issues. An authority formed solely to resolve climate issues will be able to make bolder and more useful judgments needed today. The DSB, for example, will never be able to penalize countries for not taking appropriate climate action because its jurisdiction will remain limited to adjudicating whether a given climate action is legal per the WTO rules. Therefore, reliance on the WTO as a dispute settlement mechanism for climate disputes should be limited.

Unfortunately, the discourse on the DSB's role in climate litigation has diminished in the last couple of years owing to the DSB's current limbo.³¹ The United States has been blocking the appointment of members to the Appellate Body. This has essentially meant that any DSB decisions are appealed "into the void" and cannot be enforced. Member countries have started filing fewer disputes with the DSB and have begun to take trade matters into their own hands. These actions often mean that member countries are freely ignoring WTO trade obligations, knowing that there will be no redress mechanism.³² This has led to various countries forming RTAs on their own that include dispute mechanisms, which in turn has contributed to the decline of multilateralism in the last few years.³³

B. The WTO and the Roles of Climate Clubs and RTAs in Setting Ambitious Climate Action Goals (Failure of Multilateralism and the Resort to Plurilateralism)

1) Solving Free Riding through Climate Clubs

The history of climate change agreements has shown that there is a great divide between the North and South, or the developed and developing nations. The adequacy of funds and financial commitments that the developed world has provided is under debate, even today in the COP 28 (Conference of Parties). Apart from this friction, the free-riding incentives inherent in nationally determined contributions to climate action pose another problem. Climate action taken by one country will benefit all countries because all nations share climate. Therefore, free riding denotes the benefit that non-compliant countries will receive at the cost of compliant countries, with the former not having to take their own climate change mitigation measures.³⁴ In other words, countries have an incentive to rely on the emissions reductions of others without implementing a proportionate domestic abatement.³⁵

This friction and the free-riding potential of national climate action measures have shown that multilateralism may not be the answer to climate change. As a result, scholars have started to explore the viability of plurilateralism to solve the problem. Plurilateralism is a term widely used in international trade parlance and denotes an agreement between three or more parties (member countries) instead of an agreement that all WTO members have signed.

Climate clubs are an example of a plurilateral system created to solve the climate change issue. Climate clubs have been defined as "limited-membership coalitions between [S]tates (with possible participation by non-[S]tate

³¹ Leal-Arcas, "Climate Clubs and International Trade," 84 (n 1).

³² Stephen Kho et al., "The Conundrum of the Essential Security Exception: Can the WTO Resolve the GATT Article XXI Crisis and Save the Dispute Settlement Mechanism?" Geneva Graduate Institute, Centre for Trade and Economic Integration Working Paper (Nov. 2023): 3, https://repository.graduateinstitute.ch/record/301872?_ga=2.218168857.10317134.1708787968-876992720.1708787968.

³³ Ana Cristina Molina and Vira Khoroshavina, "How Regional Trade Agreements Deal with Disputes Concerning their TBT Provisions," World Trade Organization Research and Economic Working Papers, Staff Working Paper ERSO-2018-09 (Sep. 14, 2018): 2.

³⁴ Harro Van Asselt, "Climate Change and Trade Policy Interaction: Implications of Regionalism," OECD Trade and Environment Working Papers no. 2017/03 (May 31, 2017): 15, <https://doi.org/10.1787/c1bb521e-en>.

³⁵ William Nordhaus, "Climate Clubs: Overcoming Free-riding in International Climate Policy," *American Economic Review* 105, no. 4 (Apr. 2015): 1339–70.

actors) that promote co-operation on climate-related activities, that confer exclusive benefits on its members in return for contributions by those members, and that provide for some type of monitoring and review.”³⁶ Although this definition is not universal, it accurately captures the various features of climate clubs. However, climate clubs as defined above, do not exist today. Those that do exist are limited-member coalitions that promote cooperation on specific issues.³⁷ For example, the Carbon Market Platform is a limited-member coalition of G7 countries that aims to strengthen international cooperation in developing effective, sustainable, and ambitious carbon pricing approaches.³⁸

A study conducted by William Nordhaus, Professor of Economics at Yale University, found that the success of such climate clubs cannot be ensured without imposing sanctions on non-participants.³⁹ Nordhaus explored the great potential of international trade sanctions to serve as penalties for non-participants.⁴⁰ The model that Nordhaus proposes is a club of cooperating countries that undertake harmonized emissions reductions.⁴¹

The goal of such a club would be to reach an “international target carbon price.”⁴² Countries may use their mechanism of choice (carbon tax, cap-and-trade, hybrid) to reach an agreed-upon carbon price within their borders. The proposed trade sanction is carbon duties, which include a tariff on the import of goods from non-participating countries, depending on the carbon content of the goods. Alternatively, a uniform percentage tariff could be applied to all imports from non-participating countries.⁴³ However, a major problem with this proposed model is that it overtly violates international trade rules by penalizing non-members. To solve this problem, Nordhaus suggests that international trade rules should simultaneously be amended to allow such penalties to be imposed. Violation of international trade rules also introduces the problem of non-participant retaliation.

Nordhaus’s proposed solution, however, is impractical because current WTO trade rules took years to negotiate and finalize. It would likely take several years to change those rules to accommodate climate action measures. A more viable solution, therefore, would be to utilize existing international trade mechanisms to form a climate club that does not violate international trade rules. This would also make sense when considering the urgency of climate change and the fact that we cannot afford to delay climate action until international trade rules are renegotiated.

2) *Regional Trade Agreements: A More Viable Option*

RTAs offer a good alternative to the above. RTAs are trade agreements made between two or more countries in a region that define trade rules between those nations. Article XXIV of the GATT allows RTAs to liberalize trade among the participating countries without extending the same benefits to all other WTO members.⁴⁴ In other words, article XXIV allows RTAs to function as exceptions to the non-discrimination rule.

RTAs can contain provisions that encourage cooperation on climate-related matters among the participating countries. The provisions can aim to promote or facilitate trade and investment in climate-related sectors.⁴⁵ For example, a provision might require participating countries to liberalize trade in renewable energy goods, reduce energy subsidies, and remove regulatory barriers on renewable energy goods. The EU-Singapore Free Trade Agreement, for example, contains all three types of provisions.⁴⁶

The International Technology Agreement (ITA) was negotiated and signed under the aegis of the WTO as a multilateral agreement wherein countries committed to eventually eliminate tariffs on certain technology goods. A version of such an agreement, implemented first at the plurilateral level (such as an RTA) and subsequently at the multilateral level, could increase trade in renewables and drive down the costs of such goods.

³⁶ Van Asselt, “Climate Change and Trade Policy Interaction,” 15 (n 34).

³⁷ *Ibid.*, 20.

³⁸ “Carbon Market Platform,” OECD, accessed Mar. 2, 2024, <https://www.oecd.org/environment/cc/carbon-market-platform/>.

³⁹ Nordhaus, “Climate Clubs,” 1339–70 (n 35).

⁴⁰ *Ibid.*, 1347.

⁴¹ *Ibid.*, 1341.

⁴² *Ibid.*

⁴³ *Ibid.*

⁴⁴ Rafael Leal-Arcas, *Climate Clubs for a Sustainable Future: The Role of International Trade and Investment Law* (Alphen aan den Rijn, The Netherlands: Kluwer Law International, 2021), 136.

⁴⁵ Van Asselt, “Climate Change and Trade Policy Interaction,” 15 (n 34).

⁴⁶ *Ibid.*

In fact, in 2014, a group of WTO member countries began negotiating an Environmental Goods Agreement (EGA), which would include tariff eliminations on products that improve energy and resource efficiency, generate clean and renewable energy, etc.⁴⁷ It is argued that accounting for the competing interests of the developed and developing countries will be crucial to the success of such an agreement. Melo and Solleder have explained that discourse on such an EGA was first initiated through the Doha Round of the WTO's Ministerial Conference in 2001, but little progress was made in those negotiations over the next twenty years.⁴⁸ The Doha Round of negotiations did not see active participation from developing countries, and the 2014 ESG mentioned above also stalled, owing to the economic slowdown that occurred at that time.⁴⁹

The developing countries' reluctance to participate stems, *inter alia*, from the lack of a developed domestic market for environmental goods. The EGA negotiations have mostly focused on the reduction of tariff barriers, which would benefit developed countries that produce such environmental goods. As a result, the EGA has involved a low-stakes discussion for most developing countries that believe it will generate trade benefits for the developed world and perpetuate an unfavorable balance of trade for developing countries. The unfavorable balance of trade will emanate from increased imports of environmental goods and a lack of exports because of the lack of production of environmental goods in developing countries.⁵⁰

Addressing these concerns will be a prerequisite for negotiating a successful EGA. It is argued that RTAs can be used to make concrete plans for assistance to be provided to developing countries in expanding their domestic markets for environmental goods and building domestic manufacturing capacity for the same. Such measures can address developing countries' skepticism and help negotiate a regional EGA and eventually a global one.

3) *Climate Action Provisions in RTAs: Where Do We Stand?*

A study of various climate action provisions within existing RTAs revealed that 60% of the provisions fell within the domain of clean-energy-sector development.⁵¹ Energy is the fundamental element in the trade-climate relationship. In this study, six interrelated empirical domains in the trade-climate area were discussed, concluding that energy is an element in all six of them. The six domains are the following:

- i. Carbon-related measures that include carbon tariffs, carbon trading, and the creation of carbon sinks;
- ii. Clean-energy-sector development including the development of low-carbon or zero-carbon technologies;
- iii. Promotion and liberalization of trade in climate-relevant products that include lowering or eliminating tariffs on such products and removing non-tariff barriers (like regulation) on trade in such goods;
- iv. Environmental and technical standards, which include the evolution of common standards for trade in climate-related products, thereby facilitating trade in such goods;
- v. Trade transportation that deals with emissions from shipping, aviation industries, and the like; and
- vi. Interaction of trade and climate governance regimes vis-à-vis the roles of the WTO and UNFCCC and their interactions with other intergovernmental bodies to foster a solution to climate change.⁵²

The study further found that most RTAs contain vague provisions like the promotion of "cooperation" among countries instead of specific provisions like the liberalization of trade in low-energy goods through lowering duties on such products.⁵³ The cooperation itself was optional in many cases because the RTAs used words like "may cooperate" and "potential cooperation."

⁴⁷ "Environmental Goods Agreement," World Trade Organization, accessed Mar. 2, 2024, https://www.wto.org/english/tratop_e/envir_e/ega_e.htm.

⁴⁸ Jaime de Melo and Jean-Marc Solleder, "Barriers to Trade in Environmental Goods: How Important They Are and What Should Developing Countries Expect from their Removal," *World Development* 130 (June 2020): 1–30. <https://doi.org/10.1016/j.worlddev.2020.104910>.

⁴⁹ *Ibid.*, 2.

⁵⁰ *Ibid.*

⁵¹ Christopher M. Dent, "Trade, Climate and Energy: A New Study on Climate Action through Free Trade Agreements" *Energies* 14, no. 14 (July 20, 2021): 4363, <https://doi.org/10.3390/en14144363>.

⁵² *Ibid.*

⁵³ *Ibid.*

Needless to say, specific provisions are preferable to vague provisions. Since many RTAs merely replicate the commitments already made under the Paris Agreement, the innovation would lie in making the commitments binding.⁵⁴ In other words, one of the primary benefits of RTAs lies in legalizing various commitments made in the agreements.

In sum, the above can be achieved through RTAs for two reasons:

- i. RTAs can contain their own independent dispute resolution mechanisms. Most RTAs either redirect dispute resolution to the WTO's DSB or agree upon their own dispute resolution mechanism.⁵⁵ Having their own dispute resolution mechanism means they do not need to rely on the WTO's non-functioning DSB.
- ii. RTAs can bind participating countries to comply with specific commitments made under an RTA by using affirmative language and specific provisions like "participating countries *must* reach their net zero targets by 2050" instead of provisions like "participating countries may cooperate to reduce greenhouse gas emissions." Participating countries are bound by these specific provisions because other participating countries can initiate a dispute and hold one another accountable in case the committed climate action is not undertaken.

Even if RTAs continue to have provisions on "cooperation," such cooperation should be action-structured or programmatic. Action-structured cooperation would occur when specific cooperative action is enumerated, but schedules and timelines are loose—for example, conducting workshops, training, information exchanges, etc. Programmatic cooperation would occur when specific cooperative action is enumerated, and the governance structure is also well-defined to meet the specified goals.⁵⁶

Therefore, relying on RTAs to resolve trade-restrictive climate action measures seems to have promise. However, the need of the hour is incorporating ambitious and binding targets under the RTAs. The above paragraphs also show that the primary potential of RTAs lies in resolving the energy problem since that has emerged as the common element in most climate-action provisions. The benefits that RTAs offer include a preexisting relationship of cooperation among countries,⁵⁷ without a need for fresh negotiations. The universality of trade also ensures that countries are more willing to cooperate and match one another's climate ambitions. In addition, RTAs allow speedier decision-making because of the small number of countries involved, and they offer specific benefits to parties in the form of reduced tariffs or agreed-upon standards. Such benefits also offer incentives for non-participating States to join.⁵⁸ Further, RTAs allow proactive States to initiate climate measures without reluctant countries holding them back, and they also allow countries to take on issue-specific actions.

C. The Role of the WTO's Agreement on Technical Barriers to Trade in Developing Universal Efficiency Standards for Products

International trade also plays a key role in encouraging the evolution of efficiency standards or green standards for products. In the context of climate change, this could mean the evolution of green energy products.

Take the example of a global firm that sells products in multiple jurisdictions. If a group of trading countries like the European Union (EU) formulates strict energy efficiency standards for particular products, the global firm in question will have to comply with such standards to sell in a large market like the EU. Instead of producing multiple lines of products, it would be more efficient for the global firm to sell the EU-compliant product in other markets as well. Further, differing standards in different countries cause inconveniences for producers.⁵⁹ Therefore, they are keen to develop uniform standards even if that means that the strictest standard is agreed upon.

This is where the role of the WTO's Agreement on Technical Barriers to Trade (TBT) becomes relevant. The TBT Agreement is meant to facilitate and support technical regulations, standards, and conformity assessment

⁵⁴ Ibid.

⁵⁵ Ana Cristina Molina and Vira Khoroshavina, "How Regional Trade Agreements Deal with Disputes Concerning Their TBT Provisions," World Trade Organization Economic Research and Statistics Division, Staff Working Paper ERS-2018-09 (Sep. 14, 2018): 2, https://www.wto.org/english/res_e/reser_e/ersd201809_e.pdf.

⁵⁶ Ibid., 14.

⁵⁷ Van Asselt, "Climate Change and Trade Policy Interaction," 32 (n 34).

⁵⁸ Ibid., 17.

⁵⁹ Lay, "Can Trade Policy Support the Next Global Climate Agreement?" 5 (n 13).

procedures in such a way that they do not constitute unnecessary barriers to international trade.⁶⁰ Therefore, the agreement essentially supports the evolution of global standards in a WTO-consistent manner. Some climate action measures that may constitute technical trade barriers include eco-labels, energy efficiency standards, and carbon content labeling requirements.

The TBT Agreement is essentially like article XX of the GATT in that it allows the imposition of regulatory barriers on imports provided they serve a legitimate purpose in climate action. Again, similar to article XX, the TBT Agreement sets forth that the regulatory barrier should not be discriminatory towards particular member countries, and the measure should be the least trade-restrictive measure among all available options.⁶¹

Most technical regulations like labeling requirements can be voluntary or mandatory. Mandatory requirements imply that a product cannot enter the regulating country without the necessary label. Voluntary labeling regulations are not discriminatory in nature because every exporter from every country has the freedom to comply or not comply with the regulation. Mandatory regulations are also not discriminatory as long as they are mandatory for exporters from all countries. Therefore, technical regulations covered by the TBT Agreement are not usually discriminatory.

The problem lies in determining whether a regulation was the “least trade restrictive.” In making this determination, the following factors are considered:

- i. The effectiveness of the (alternative) regulation of reaching the objective;
- ii. The importance of meeting the objective and the risks of not meeting it; and
- iii. The availability of few trade-restrictive alternatives.⁶²

Despite some guidance on determining the “least trade-restrictive” measure, substantial subjectivity still exists in determining “effectiveness” or “importance” as mentioned above. Another problem is comparing the climate impact of “all available options.” Different regulations will have different impacts that may not be comparable.⁶³

Another point of contention in the implementation of the principles embodied in the TBT Agreement is the North-South divide. Many developing countries have argued that some import regulations, although non-discriminatory on their face, practically increase the cost of exports from the developing world, thereby creating a barrier to entry. For example, a conformity assessment procedure introduced on the import of certain electronic goods may not be burdensome for a country that already has an identical assessment procedure within its domestic jurisdiction. On the other hand, the same regulation for another country may constitute a huge burden because of the increased costs of compliance. Therefore, a regulation that applies uniformly to all countries may actually have a vastly different impact on different countries. Trade competition today is widely characterized by such ‘technical’ barriers to trade rather than tariff barriers.

Recognizing the unique situations of the developing world, the TBT Agreement included clauses to safeguard the interests of developing countries in the form of articles 11 and 12. Article 11 states that the developed world will provide technical assistance to the developing world in the form of guidance on building infrastructure required to comply with technical regulations. Further, creating an exception to the overarching non-discriminatory rule found in all WTO agreements, article 12 allows developing countries to get “special and differential” treatment in line with the special developmental trade and financial needs of developing countries.⁶⁴

Although article 12 is a welcome relaxation in favor of developing countries, the article should be used cautiously. Relaxations in favor of developing countries that defeat the very purpose of climate regulation and prevent the regulation from achieving its climate goals will result in an unsatisfactory situation. Articles like this are often vaguely worded and fail to mandate support from developed countries. At the same time, they do not clearly articulate the circumstances that would warrant relaxation under article 12, thereby leaving a great deal of room for interpretation and dispute. Understandably, the vagueness of such provisions is meant to balance the interests of the developing and developed countries.

However, RTAs as discussed above offer a viable avenue to negotiate more concrete terms of collaboration between countries and more ambitious climate targets that are not at risk of dilution through article 12 relaxations.

⁶⁰ *Ibid.*, 8.

⁶¹ Low, Marceau, and Reinaud, “The Interface Between the Trade and Climate Change Regimes,” 22 (n 12).

⁶² *Ibid.*

⁶³ *Ibid.*, 23.

⁶⁴ “The WTO Agreement Series: Technical Barriers to Trade,” World Trade Organization (rev. in 2014), accessed Mar. 2, 2024, https://www.wto.org/english/res_e/publications_e/tbttotrade_e.pdf.

RTAs would also take care of other vague provisions that impede the formulation of uniform climate regulations because more concrete rules can be negotiated by participating countries through RTAs.

A collective climate waiver as discussed in part I above would provide another viable solution since a waiver can be negotiated to include climate regulations as an exception to international trade rules, and specific rules governing the application of the climate regulations can be agreed upon. The strictness or flexibility of such rules can be negotiated to balance climate goals with the needs of developing countries, which is in line with the principle embodied in article 12 of the TBT Agreement. Essentially, the subjectivity of various provisions can be removed by agreeing on specific rules and making the legal implications of climate regulations more predictable.

Despite the challenges associated with the implementation of the TBT Agreement, once a regulatory measure passes the TBT Agreement test and in principle finds favor with all member countries, it becomes ready for uniform global adoption, and the WTO can thereafter serve as a tool to bring about such standardization.⁶⁵

D. WTO and TRIPS

1) *The TRIPS Agreement and its Goals*

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) stemmed from the Uruguay Round of negotiations under the WTO framework and applies to all WTO member countries. The preamble of the TRIPS Agreement states that the agreement considers the need “to promote effective and adequate protection of intellectual property rights, and to ensure that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade.”⁶⁶ In other words, the TRIPS Agreement aimed at obliging member countries to implement strict standards of protection for intellectual property, hence augmenting research and development. Concurrently, it intended to maintain the free flow of technology and know-how between countries, with a special focus on developing countries and least developed countries (LDCs). This was meant, *inter alia*, to protect developing countries with lax intellectual property protection that would often see research and development projects move overseas to take advantage of better intellectual property protection. So, even if projects moved overseas, the TRIPS Agreement ensured that developing countries had access to the new technology.

These goals were to be operationalized by member countries in the form of a “minimum standard” of protection.⁶⁷ Member countries were free to implement standards of protection stricter than the “minimum standard” but could not implement a standard that lowered the “minimum standard” threshold. Additionally, developing countries and LDCs were given a concessionary transition period to implement the minimum standard, while developed countries were expected to immediately adopt the minimum standard.⁶⁸ LDCs are exempt from most TRIPS obligations until 2034.

2) *The Relevance of TRIPS in Climate Action*

The role of developing green technology in the fight against climate change cannot be understated. The International Energy Agency (IEA) has stated that “almost half of the cumulative emissions reductions to get to the net zero emissions target of 2050 need to come from technology not yet commercially available.”⁶⁹

The development of such technology is arguably supported by stricter intellectual property protection. In other words, it is argued that stricter protection of intellectual property rights (IPR) will promote innovation and investment in research and development of green technologies because the owner of the IPR will receive assured returns on a successfully developed technology.

Although such strict IPR protection laws are to be implemented by all WTO member countries, thereby promoting the development of climate technologies worldwide, in reality, most climate technologies are developed and

⁶⁵ Ibid.

⁶⁶ TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994).

⁶⁷ Ibid.

⁶⁸ “Frequently Asked Questions about TRIPS in the WTO,” World Trade Organization, accessed Mar. 2, 2024, https://www.wto.org/english/tratop_e/trips_e/tripfq_e.htm#Transition.

⁶⁹ “Nuclear Energy for a Net Zero World,” International Atomic Energy Agency (Sep. 2021), <https://www.iaea.org/sites/default/files/21/10/nuclear-energy-for-a-net-zero-world.pdf>.

patented in developed economies. This creates a problem for developing economies and LDCs that need access to new climate technologies at reasonable prices to tackle climate change.

Foreseeing such a problem, the developing countries agreed to stricter standards of IPR protection under TRIPS in return for technology transfer and financial assistance from developed countries as elaborated in articles 66.2 and 67 of the agreement.⁷⁰ Article 66.2 asks developed member countries to offer incentives to their domestic institutions to promote and encourage technology transfers to LDCs.⁷¹ Further, article 67 specifies that “developed country members must provide, on request and on mutually agreed terms and conditions, technical and financial cooperation in favour of developing and least-developed country members.” It goes on to state that “such cooperation shall include assistance in the preparation of laws and regulations on the protection and enforcement of intellectual property rights as well as on the prevention of their abuse, and shall include support regarding the establishment or reinforcement of domestic offices and agencies relevant to these matters, including the training of personnel.”⁷²

Although the cooperation elaborated in article 67 seems to include assistance on the procedural implementation of the TRIPS provisions, it is noteworthy that such cooperation is elaborated as an “inclusive” clause, thereby clarifying that the cooperation includes technology transfer and financial assistance as well.⁷³

3) *Limited Use of Articles 62 and 67*

LDCs have argued that articles 62 and 67 mandate that developed member countries undertake technology transfer and financial assistance.⁷⁴ However, in line with the view of the developed world, these provisions are predominantly understood as suggestive in nature.⁷⁵ This means, practically, that articles 62 and 67 have been of little use to LDCs in terms of technology transfer and financial assistance, owing to the reluctance of various countries to operationalize the provisions of these articles in the form of a positive set of procedures and practices. In other words, no accountability mechanism has been instituted to monitor the implementation of these articles.

Reading articles 62 and 67 as non-obligatory leaves developing countries and LDCs with little room to address the lack of technological transfer under the TRIPS framework.⁷⁶ It is further argued that technological transfer is only one step in helping LDCs gain access to climate technologies.⁷⁷ Obtaining the technology at a reasonable rate, for example, would be equally important to the developing world.

The text of the TRIPS Agreement and its implementation highlight the fundamental problem of IPR protection—that is, the tug of war between protecting the rights of IPR holders and protecting the users’ right of access. In other words, although it is important to offer strict protection of IPR to incentivize new technology, it is considered equally important (in the TRIPS Agreement as well) to ensure that critical new technology is offered at reasonable rates to the users who need it most.

The latter part is operationalized through articles 62 and 67 as elaborated above. However, although developed countries are required to provide incentives to local institutions to transfer technologies to LDCs, the nature of such incentives or a timeline for such implementation is unclear. Similarly, article 67 is not accompanied by a monitoring mechanism either.

When LDCs have questioned the delay in making benefits available under articles 62 and 67, developed countries have often responded that private corporations cannot be forced as rights holders to accept poor terms for the sake of technology transfer under article 67.⁷⁸ The balance between the needs of the rights holders and that of users is a fundamental one that perhaps justifies the vagueness of provisions in the TRIPS Agreement as

⁷⁰ Monirul Azam, “The TRIPS Agreement Revisited—Time to Open-Up Climate Technologies for Least Developed Countries,” *Journal of Intellectual Property Rights* 27, no. 2 (Mar. 2022): 107–29, <https://doi.org/10.56042/jipr.v27i2.55462>.

⁷¹ Ibid.

⁷² “TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights,” Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994).

⁷³ Azam, “The TRIPS Agreement Revisited,” 107–29 (n 70).

⁷⁴ Ibid.

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ Ibid.

⁷⁸ Ibid.

well (as discussed above in the case of the TBT Agreement). Having stated so, it becomes important to explore what other means developing countries have to obtain access to climate technologies at a reasonable cost and favorable terms.

4) How Else Can Developing Countries and LDCs Take Advantage of Climate Technology Patented in the Developed World?

The TRIPS Agreement offers certain flexibilities to developing countries and LDCs, taking into account the uniqueness of their economic circumstances and social conditions. One such flexibility is that of parallel importation, which allows member countries to import the patented products from another country where the patent holder has exhausted its rights. It also allows the member country to import the patented product at a rate cheaper than that at which the product would have been imported if the import was from the patent holder's original country.⁷⁹ However, this route presumes that the patented technology is available in another country at a reasonable rate and terms, which often may not be true.

Another flexibility offered under article 27 of the TRIPS Agreement comes in the form of the right of WTO members to refuse to grant patents in certain circumstances. Article 27.2 states that member countries may exclude from patentability certain inventions to avoid serious prejudice to the environment.⁸⁰ However, this provision does not benefit developing countries that do not witness the inception of climate technologies within their jurisdictions.

A more viable solution can be seen in article 31, which allows the "compulsory licensing" of certain technologies without the rights holder's authorization. Such compulsory licensing is allowed only after efforts have been made to obtain the license from the rights holder on reasonable commercial terms, and such negotiations have not led to the granting of licenses.⁸¹ However, such a step can be skipped in case of "national emergency or other circumstances of extreme urgency or in cases of public non-commercial use."⁸²

India and South Africa suggested such a "TRIPS waiver" in 2020 in the wake of the COVID-19 pandemic, proposing the compulsory licensing of patents required for the production and supply of COVID-19 vaccines. The waiver was finally granted in 2022 and criticized as a measure that was "too little too late."⁸³ Although article 31 offers a viable solution for the relaxation of TRIPS provisions for climate technologies, it will be necessary to consider the amount of time such a waiver will take to be implemented. Given the imminence of climate change, years spent negotiating a waiver may not bode well for the endeavor of timely climate action.

5) How Can the WTO Help?

The developing world's successful use of the above flexibilities requires clarity on the specific situations that the aforementioned articles contemplate. In other words, member countries should know when they can invoke such flexibilities without starting a conflict. This becomes difficult because the TRIPS Agreement does not elaborate on what constitutes "serious prejudice to the environment" or a "national emergency." Such articles were kept vague to ensure that the IPRs of the holder and user are balanced, and the agreement cannot be read as tilted in favor of one over the other. However, the fact that vague provisions lead to weak implementation is also noteworthy. Since clarity on such articles cannot arise from the agreement itself, it can be argued that a robust dispute settlement mechanism will help obtain needed clarity and lead to better utilization of the provisions.

Article 64 of the TRIPS Agreement states that the DSB will hear disputes under the agreement. To date, the disputes that the DSB has heard pertaining to the TRIPS Agreement mostly relate to specific infringement cases that member countries have raised rather than supportive clauses like article 62 or 67. This is arguably due to the defunct Appellate Body and the resulting use of the DSB as a last resort to resolve disputes. Re-operationalizing the

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 (1994).

⁸³ "TRIPS Council Welcomes MC12 TRIPS waiver decision, discusses possible extension," WTO News, World Trade Organization (July 6, 2022), https://www.wto.org/english/news_e/news22_e/trip_08jul22_e.htm.

Appellate Body will reinstate faith in the system and hopefully see more member countries from the developing world come to the WTO to seek answers, such as those relating to mechanisms under article 62 or 67.

As an alternative, scholars have suggested that developed countries can be asked to comply with a minimum standard under articles 62 and 67, accompanied by a regular review mechanism.⁸⁴ Another suggestion foresees a separate declaration under the UNFCCC framework so that the problems of technology transfer and financial assistance can be dealt with outside the trade context.

It is argued that even if such alternatives are considered, a robust dispute settlement mechanism will support the climate goals of providing easy access to climate technologies and the protection and encouragement of IPR holders. Further, as discussed above, RTAs can be used to negotiate concrete terms of technology transfer and financial assistance and can offer an alternate mechanism for dispute settlement until the WTO's mechanism becomes operational again.

E. WTO and Carbon Border Adjustments

In July 2021, the EU introduced a Carbon Border Adjustment Mechanism (CBAM) to address the problem of carbon leakage.⁸⁵ From the time that the mechanism was proposed, the world has nervously awaited its impact on international trade. This is because many trade analysts have predicted that the CBAM will invite retaliatory measures from WTO member countries that will have negative consequences for international trade and will undermine the climate impact of trade measures taken in good faith.⁸⁶

1) *What is the CBAM, and How Does It Work?*

As mentioned above, the CBAM is a mechanism that was introduced to address the problem of carbon leakage. Carbon leakage is a problem that arose out of the EU's Emissions Trading Scheme (ETS).⁸⁷

The ETS is a system introduced to charge polluters for the carbon they emit.⁸⁸ This is accomplished by setting an industry-wide cap on carbon emissions. Various companies in the industry must purchase emissions allowances or certificates from the EU for every ton of carbon emission. Thereafter, they surrender the allowances for every ton of carbon actually emitted. If a company is left with spare allowances, it can store them for future use or sell them to other companies. The EU reduces the number of emissions allowances sanctioned at the beginning of every year so that the price of emissions allowances rises, and hence there is an incentive for companies to undertake long-term reductions in emissions through innovative technologies.

Carbon leakage, a problem associated with the ETS, occurs when businesses shift to countries with less stringent carbon emission norms to continue production at an earlier capacity. Businesses may also shift when anticipating a competitive disadvantage as compared to companies in countries with no carbon price. Such a shift will reduce economic activity in the EU and may move production to jurisdictions that have lower emissions reduction standards and therefore little climate-positive impact. In other words, carbon leakage potentially leads to a situation where the country implementing an ETS suffers from lower economic activity characterized by companies exiting the region. Accordingly, the ETS achieves no impact on climate change because of lax norms in jurisdictions where companies move.⁸⁹ This would mean the net impact on carbon emissions would be nil. In fact, the net impact could be negative when also considering the transportation emissions involved in moving the business.

The CBAM is one of the mechanisms deployed to prevent carbon leakage by charging duty on imported goods, depending on the production-related emissions of the imported goods.⁹⁰ The mechanism is utilized for imports from countries where similar production-related emissions are not taxed, or emissions are not taxed to

⁸⁴ Azam, "The TRIPS Agreement Revisited," 107–29 (n 70).

⁸⁵ Lionel Fontagne and Cecilia Belora, "EU in Search of a WTO-Compatible Carbon Border Adjustment Mechanism," CEPII, Working paper no. 2022-01 (May 2022): 2.

⁸⁶ *Ibid.*

⁸⁷ *Ibid.*

⁸⁸ "Legal Issues with the European Carbon Border Adjustment Mechanism," CATO Briefing Paper no. 125, CATO Institute (Aug. 9, 2021), <https://www.cato.org/briefing-paper/legal-issues-european-carbon-border-adjustment-mechanism>.

⁸⁹ *Ibid.*

⁹⁰ Fontagne and Belora, "EU in Search of a WTO-Compatible Carbon Border Adjustment Mechanism," 2 (n 85).

the extent they are in the EU. In other words, exporting to the EU requires exporters to purchase emissions allowances or certificates issued by the EU to account for the carbon embedded in the exported products. The price of these emissions allowances is decided based on the price of such emissions allowances internally within the EU.

The expectation is that carbon leakage will be prevented by giving domestic businesses a level playing field. This will be accomplished by charging foreign producers a price that they would have been charged if they were operating within the EU.

2) *Criticism of the CBAM*

Before this article elaborates on the CBAM's trade implications and the WTO's potential role in making it effective for carbon leakage, a discussion ensues on some of the criticisms of the CBAM, which can likely trigger the retaliatory measures discussed below.

First, the CBAM would account only for those embedded emissions that the producer directly owns or controls. In other words, the CBAM does not account for Scope 3 emissions.

To measure a company's carbon footprint, emissions are categorized as Scope 1, 2, or 3. Scope 1 emissions refer to those that a company directly causes through sources it owns. This would include the emissions created during manufacturing processes. Scope 2 emissions are indirect emissions produced by sources the company doesn't own. This would include electricity used in factories for which the company pays the local electricity company but does not generate on its own. Scope 3 emissions are all indirect emissions produced in the company's supply chain that are not included in Scope 2. Scope 3 emissions very often represent a company's largest portion of emissions and are the most difficult to account for.

The above explains why the CBAM does not attempt to account for Scope 3 emissions and hence brings the climate impact of such a measure into question. In fact, the CBAM does not even account for Scope 2 emissions, which are fairly easy to trace. In other words, the CBAM's effectiveness will be compromised because the system does not attribute a large portion of all producers' emissions.

Second, the CBAM would drastically increase the compliance burden for many importers⁹¹ because only 'authorized' importers would be allowed to operate in the EU. To be authorized, importers would have to declare their products' embedded emissions annually. This declaration would also have to comply with the EU's manner of carbon emissions auditing.

In other words, importers will have to measure the emissions of their products in line with the methods adopted by the EU. If the EU finds a deviation, then the EU will independently measure emissions and require the importer to purchase certificates/allowances. This will negatively impact many importers who do not have established mechanisms for carbon accounting, practically making the CBAM a technical barrier to trade per the TBT Agreement as discussed above. Further, incorrect accounting on the importer's or the EU's part will further compromise the climate effectiveness of these measures.

A related consequence might be an increase in the gap between developed and developing countries.⁹² Scholars anticipate that underdeveloped economies will suffer adverse consequences from the CBAM because those nations have relatively limited access to low-carbon financing and technology, and therefore the energy transition will be slower for them. Hence, they will bear the highest costs associated with exporting to the EU.⁹³ Further, countries with greater trade volumes with the EU will be impacted more than others. Moreover, the overall trade impact of the CBAM implementation will be negative in terms of reduced global trade volumes and welfare loss in emerging economies where major industries with carbon emissions are clustered.⁹⁴

3) *Trade implications of the CBAM*

The CBAM is expected to pose problems in the international trade arena because of the potential retaliatory measures that member countries may take. These retaliatory measures would respond to potential trade

⁹¹ Byeongho Lim, et al., "Pitfalls of the EU's Carbon Border Adjustment Mechanism," *Energies* 14, no. 21 (Nov. 2021): 7303, <https://doi.org/10.3390/en14217303>.

⁹² *Ibid.*

⁹³ *Ibid.*

⁹⁴ *Ibid.*

violations prompted by the CBAM implementation. The section below discusses some of these potential trade violations.

The first trade violation that the CBAM could trigger would be a violation of the Most-Favored-Nation (MFN) rule. In international trade law, the MFN rule states that any advantage or benefit granted to imported products from one member country should be granted immediately and unconditionally to like products originating from all other WTO members.⁹⁵ The CBAM potentially violates the MFN rule because it will discriminate among imported goods from different countries based on their carbon content and how carbon emissions have been declared. James Bacchus has stated, “In self-judging other WTO members on the extent and quality of their climate actions, and thus picking and choosing which imported products members will have to buy emissions certificates for, and how many they will have to buy, the EU would be discriminating between and among other WTO members in trade in like products.”⁹⁶

There are various trade implications of the new CBAM that are still being evaluated. One potential roadblock is seemingly that countries exporting products to the EU may lodge a WTO dispute by stating that emissions reductions can be achieved effectively without restricting trade in the manner that the CBAM does.⁹⁷ This argument may become a strong one in the face of the exclusion of Scope 2 and 3 emissions. The exclusion of Scopes 2 and 3 emissions will mean that the CBAM’s climate impact may fall short of expected emissions reduction targets, thus strengthening the argument that alternative measures that did not violate trade rules could have been considered to achieve an equal reduction in emissions.

The question of discrimination per se does not arise here because all exporting countries will be subject to the tax. However, the tax will depend upon the exporting country’s carbon emissions, and that measure will be discriminatory. This has particularly been a point of contention for developing countries because the burden of paying higher taxes will be placed on such countries that already have limited resources to tackle climate change.⁹⁸

4) The Role of the WTO in Preventing Retaliatory Trade Measures

The problems associated with the implementation of the CBAM and ETS can also be solved with a combination of RTAs and climate waivers. A climate waiver can ensure that emissions trading schemes are implemented without having to show they are the least trade-restrictive means of reducing emissions, which would be a time-consuming process without any assurance of positive results for climate action.

RTAs could also be used to introduce provisions that make emissions units tradable among the participating countries. In other words, a national ETS could become a regional ETS through RTAs. In fact, developing countries with similar economic conditions may be more willing to form such a union among themselves rather than with developed countries. The CBAM could then be used to make border adjustments within regions instead of countries. To get developing countries on board, the CBAM could be determined after discounting for historical emissions of developed countries (in line with the principle of common, but differentiated, responsibility and respective capability).

Resolving these issues through mechanisms like RTAs and climate waivers would also pave the way for the evolution of an international ETS. The WTO plays a key role in the negotiation of RTAs, and it will be the issuing authority for a climate waiver. Therefore, the WTO may be instrumental in the evolution of an international ETS.

CONCLUSION

This article shows that tackling climate change without accounting for trade implications will lead to various roadblocks. Similarly, attempting to ensure free trade among countries without understanding and accounting for climate action measures will lead to trade wars.

Many of the problems associated with the trade implications of climate action measures arise because of WTO trade rules. The solution to these problems also lies in WTO instruments, such as climate waivers and RTAs.

⁹⁵ “Legal Issues with the European Carbon Border Adjustment Mechanism,” CATO Institute (n 88).

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Ibid.

Today, trade issues related to climate action measures are addressed in a reactionary manner. In other words, once a country's climate action measure impacts international trade, the WTO is called upon to adjudicate its legality. The problem with this approach is that the relevant climate action measure becomes stalled until the WTO determines how to address it. The WTO's lack of experience in environmental measures also causes delays.

A better approach would be to adopt instruments like climate waivers that would make the trade impact of climate action measures more predictable and encourage countries to implement more ambitious climate action measures without the risk of a temporary suspension of such measures. In other words, the approach should be to preempt new climate action measures and ensure that international trade restrictions do not stand in the way.

Modifying international trade rules would be an ideal solution, but since this would be a long-term project, instruments like climate waivers and RTAs should be used to find solutions that can be implemented immediately.

Significantly, negotiating a climate waiver could be like negotiating a Paris Agreement all over again. The global North and South's opposing interests would likely cause difficulties in finalizing a climate waiver because trade restrictions would impact the global North and South differently as discussed in the case of the CBAM above. To overcome this problem, the WTO should expedite the issuance of climate waivers on a case-by-case basis while a collective climate waiver is negotiated. RTAs would also serve as effective interim measures wherein cooperating countries can agree on rules and targets among themselves and foster climate ambitions within that group.

The WTO has the potential to significantly block the implementation of climate action measures. Conversely, the WTO also has the potential to facilitate and encourage climate action measures. The WTO's acceptance of article XX exceptions related to the conservation of natural resources suggests that the WTO is likely to take a facilitative approach to climate change. Whether the WTO will assume this critical role as a driver of climate action is yet to be seen.