TRADE AND THE ENVIRONMENT AT THE WTO: RECENT DEVELOPMENTS AND CHALLENGES

DOI: 10.61623/cpe.en.v1n2.a03
Submited at: 01/10/2025. Accepted at: 31/10/2025.
ISSN: 3086-2434 | e-ISSN: 3086-3554.

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Abstract

The proliferation of restrictive trade measures with alleged environmental purposes has been accompanied by intense diplomatic and academic activity in favor of partial narratives on environmental sustainability in trade. This scenario, coupled with the resurgence of geopolitical conflicts (and their inflationary impacts), tends to reinforce the defense of relaxing the principle of non-discrimination as a way to overcome some of the main challenges in international trade. The author argues that, even with the paralysis of the Appellate Body, the WTO Dispute Settlement System remains active, and the incorporation of biased perspectives in panel reports may legitimize the adoption of unilateral restrictive measures with extraterritorial reach, influence the establishment of new parameters, and accentuate existing imbalances. The article provides an overview of the topic and argues that the promotion of sustainability in trade must be compatible with the fundamental principles of trade and environmental regimes.

Keywords: International trade. Environment. WTO.

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COMÉRCIO E MEIO AMBIENTE NA OMC: EVOLUÇÃO RECENTE E DESAFIOS

Resumo

A proliferação de medidas comerciais restritivas com alegada finalidade ambiental tem sido acompanhada por intensa atividade diplomática e acadêmica em favor de narrativas parciais sobre a sustentabilidade ambiental no comércio. Tal cenário, somado ao recrudescimento de conflitos geopolíticos (e seus impactos inflacionários) tende a reforçar a defesa da flexibilização do princípio da não discriminação como forma de superar alguns dos principais desafios no comércio internacional. O autor argumenta que, mesmo com a paralisia do Órgão de Apelação, o Sistema de Solução de Controvérsias da OMC continua ativo, e a incorporação de perspectivas enviesadas nos relatórios dos painéis pode legitimar a adoção de medidas unilaterais restritivas de alcance extraterritorial, influenciar o estabelecimento de novos parâmetros e acentuar desequilíbrios existentes. O artigo traça um panorama do tema e defende que a promoção da sustentabilidade no comércio deve ser compatível com os princípios fundamentais dos regimes de comércio e de meio ambiente.

Palavras-chave: Comércio internacional. Meio Ambiente. OMC.

COMERCIO Y MEDIO AMBIENTE EN LA OMC: EVOLUCIÓN RECIENTE Y RETOS

Resumen

La proliferación de medidas comerciales restrictivas con supuestos fines medioambientales ha ido acompañada de una intensa actividad diplomática y académica a favor de narrativas parciales sobre la sostenibilidad medioambiental en el comercio. Este escenario, sumado al recrudecimiento de los conflictos geopolíticos (y sus impactos inflacionarios), tiende a reforzar la defensa de la flexibilización del principio de no discriminación como forma de superar algunos de los principales retos del comercio internacional. El autor sostiene que, incluso con la parálisis del Órgano de Apelación, el Sistema de Solución de Controversias de la OMC sigue activo, y la incorporación de perspectivas sesgadas en los informes de los paneles puede legitimar la adopción de medidas unilaterales restrictivas de alcance extraterritorial, influir en el establecimiento de nuevos parámetros y acentuar los desequilibrios existentes. El artículo ofrece una visión general del tema y defiende que la promoción de la sostenibilidad en el comercio debe ser compatible con los principios fundamentales de los regímenes comerciales y medioambientales.

Palabras clave: Comercio internacional. Medio ambiente. OMC.

Introduction

The worsening climate crisis and the accelerating loss of biodiversity have heightened the convergence between trade and environmental governance, as well as between their respective regulatory regimes. Amid the proliferation of unilateral trade-restrictive measures and the growing use of subsidies justified on environmental grounds, there has been, within the World Trade Organization (WTO)—as well as in academic institutions and think tanks operating within its orbit—a strengthening of narratives that support the legitimization of such practices and endorse interpretations of the principle of non-discrimination that allow distinctions between products based on the sustainability of their production processes. These interpretations, however, fail to take into account fundamental principles of both the trade and environmental regimes, such as the recognition of differentiated historical circumstances and responsibilities.

In a context of growing friction in international trade, the WTO Dispute Settlement System (DSS) continues to be frequently invoked—38 new consultations (the stage preceding the establishment of a panel) were initiated between 2020 and 2024—despite the paralysis of its Appellate Body (AB). In March 2024, the panel established in the *European Union—Palm Oil (DS600)* case issued a controversial opinion endorsing several of the arguments advanced by the bloc to assert that its Green Deal is compatible with WTO rules. Such pronouncements by the DSS carry significant weight, given the rapid expansion of trade measures justified on environmental grounds and the continued role of the WTO—as the nerve center of the international trade regime, bringing together the "principles, norms, rules, and procedures around which the expectations of actors converge in a given area of concentration," according to Krasner's (1982) definition—as a benchmark for the formulation of trade policies, even when their compatibility with WTO rules is contested.

Considering that WTO jurisprudence is not static and that its legal framework is not immune to external influence, the growing prominence of narratives supportive of environmental trade restrictions within the WTO may influence panel decisions and thereby contribute to legitimizing partial and unbalanced conceptions of sustainability. This risks exacerbating systemic inequalities that disadvantage developing countries and carry implications for Brazil. Moreover, the paralysis of the organization's negotiating arm renders the WTO's legal activity even more central to the governance of interactions between trade and the environment (Von der Weid 2024).

Although the primary objective of the multilateral trading system is to generate predictability and foster the expansion of international trade flows, provisions allowing the adoption of restrictive measures aimed at conserving natural resources have existed since the 1947 General Agreement on Tariffs and Trade (GATT). The GATT establishes non-discrimination as a foundational principle, reflected in the obligations not to differentiate between like products originating from different trading partners ("most favored-nation treatment", Art. I) and not to discriminate between domestic and foreign like products (imports must receive "national treatment", Art. III). Article XX, however, permits members to adopt policies that are *prima facie* inconsistent with other GATT disciplines, provided they fall within specific exceptions, including measures: (a) *necessary* to protect public morals; (b) *necessary* to protect human, animal, or plant life or health; or (g) *relating to* the conservation of exhaustible natural resources. The interpretation of how these exceptions—and analogous provisions in other WTO agreements—accommodate environmental concerns has evolved significantly, with far-reaching implications for international trade.

This article argues that the advance, within the WTO, of partial interpretations of sustainability in trade has the potential to exacerbate existing injustices and generate consequences extending beyond the country's engagement in the organization. To this end, the article provides an overview of WTO jurisprudence at the intersection of trade and the environment, and examines how this interaction has recently manifested within the organization's three pillars—monitoring of trade policies, negotiation of new rules, and dispute settlement—as well as the opportunities these discussions present for Brazil.

WTO Jurisprudence on Trade and the Environment

Within the legal pillar of the multilateral trading system, environmental issues related to trade have been addressed in a number of cases, some dating back to the GATT era. Most of these disputes examined whether it is permissible to discriminate between like products on the basis of sustainability-related criteria. The creation of the WTO and the strengthening of the legal pillar of the multilateral trading system (MTS) introduced new dynamism into the interpretation of multilateral trade agreements. As Ramalho (2020) notes, during the first decades following the entry into force of the GATT, a "diplomatic-negotiated" approach to dispute settlement prevailed, whereas

the advent of the WTO reinforced a more legalistic approach, in a context in which the United States committed to curbing the unilateral use of Section 301-type retaliatory measures, thus prompting the establishment of a considerably more robust mechanism.

Although dispute settlement rulings produce effects only for the parties involved and only with respect to the specific case, precedents have guided the analysis of subsequent similar disputes. Consistency with its own jurisprudence is one of the reasons why the WTO has been accused by critics of "legal overreach." Furthermore, it is worth noting that the Appellate Body has affirmed in its case law that the balance between the objectives pursued—as well as the interpretation of the relevant provisions—is not static; rather, it must be delineated based on the concrete circumstances of the case and in light of a specific material and legal context (WTO 2025a).

In WTO jurisprudence, four main, non-exhaustive criteria have been used to determine whether products are "like": the physical characteristics of the products; whether they can serve the same or similar end-uses; whether consumers regard them as alternative means of performing specific functions; and their classification under the international tariff schedule (WTO 2025a). If the products are found to be like, any justification for differential treatment must rely on the general exceptions under Article XX of the GATT.

Article XX permits the adoption of restrictive measures that are inconsistent with WTO agreements but may nonetheless be justified on various grounds. Among the ten circumstances listed, three have been particularly relevant for the analysis of environmental issues within the WTO: subparagraph (a), concerning measures "necessary to protect public morals," which has been invoked with increasing frequency; subparagraph (b), concerning measures necessary to protect human, animal, or plant life or health; and subparagraph (g), concerning measures relating to the conservation of natural resources.

For an environmentally motivated measure that is otherwise inconsistent with WTO rules to be justified under Article XX, WTO jurisprudence has, since the *US–Gasoline* case (1996)—the first case reviewed by the Appellate Body—required a two-tiered analysis: a) the responding member must demonstrate that the contested measure falls within one of the policy objectives listed in Article XX; and b) the measure must also be shown to comply with the chapeau of Article XX. This second step requires assessing whether the measure has been applied in a manner that constitutes "arbitrary or unjustifiable discrimination between countries where the same conditions prevail" or a "disguised restriction on international trade." According to jurisprudence dating back to the GATT era (Cavalcanti, 2013), members seeking to defend the legality of restrictive

measures by invoking exceptions bear the burden of proof—an inversion of the usual rule that places the burden on the complainant to demonstrate a violation of a GATT obligation.

Another relevant factor concerns the interpretation of the terms used in Article XX. As affirmed in the *US–Gasoline* case (1996), the different formulations in subparagraphs (b)—measures "necessary" for a given objective—and (g)—measures "relating to" conservation—require different degrees of connection between the measure and the objective pursued. To justify a measure under subparagraph (b), the responding party must demonstrate that the measure is necessary to protect human, animal, or plant life or health. In the *Brazil–Retreaded Tyres* case (2007), the panel accepted Brazil's argument that the import ban on retreaded tyres was necessary to mitigate the risks associated with the accumulation of tyre waste, even though the measure violated Article XI (on quantitative restrictions). The panel, however, concluded that the exemption granted to MERCOSUR countries was not consistent with the chapeau of Article XX.

Although subparagraph (g) was originally conceived to permit trade restrictions on non-renewable natural resources—particularly minerals—in situations involving supply controls, it has also been used to justify trade restrictions aimed at environmental protection, illustrating how the absence of specific rules induces the adaptation of provisions created with different concerns in mind (Cozendey, 2013). To be justified under subparagraph (g), a measure must relate to the conservation of exhaustible natural resources and operate in tandem with restrictions on domestic production or consumption. In the *US–Shrimp* case (1998), the complainants argued that the provision was intended to conserve mineral (or "non-living") resources, since living organisms would be "renewable," rather than "exhaustible." The Appellate Body disagreed, affirming that the concept of "natural resources" is not immutable, that living species are susceptible to extinction and depletion, and observing that although the text of Article XX had not been modified since 1947, the 1994 Marrakesh Agreement reflects environmental protection as a fundamental objective of the WTO. This case stands as one of the clearest examples of how the interpretation of WTO agreements—particularly the 1947 GATT—has evolved over time in response to changing contexts.

Regarding the requirement that a measure be "related to" conservation, the Appellate Body found in the *US–Shrimp* case (1998) that there must be a genuine causal relationship between the measures adopted and the objectives pursued. Additionally, the requirement of "effective" domestic restrictions on production or consumption demands that the measure not be applied in

a discriminatory manner. In the *China–Raw Materials* case (2012), the panel found that China had not adopted domestic measures aimed at conserving the resources for which it had imposed export restrictions, and therefore the measure could not be justified.

With respect to the need for conformity with the chapeau of Article XX, the Appellate Body held in the *US–Gasoline* case (1996) that the obligation concerns the manner in which a measure is applied—namely, whether imported products receive less favorable treatment than like domestic products, or whether the measure discriminates among trading partners. In that case, the panel determined that the U.S. measure violated Article III:4 of the GATT because imported gasoline had been treated less favorably than domestic gasoline. Similarly, while Brazil's ban on the importation of retreaded tyres was found justifiable under subparagraph (b), it was nonetheless inconsistent with the chapeau because it allowed exceptions for domestic products and those from MERCOSUR countries.

The chapeau functions to underscore that, although exceptions may be justified, they cannot be applied with the purpose of circumventing obligations arising under the GATT. It therefore embodies the necessary balance between rights and obligations, preventing potential abuse of the exceptions. The chapeau does not prohibit discrimination *per se*, but rather "arbitrary or unjustifiable" discrimination[2] between countries where the same conditions prevail; in its application, both the actual effects of the measure and the existence of non-discriminatory alternatives must be taken into account.[3] In the *US–Shrimp* case (1998), the Appellate Body also stated that prior engagement or good-faith dialogue with affected parties, the calibration of differential treatment according to differing conditions and risks, and the availability of viable, non-discriminatory alternatives to achieve the same objective are all relevant to assessing conformity with the chapeau.

In *EC–Seal Products* (2009), Norway argued that the European Union's ban on the importation of seal products was discriminatory because it included exceptions that granted privileged market access to similar products produced within the EU (e.g., Greenland) and in countries other than Norway. The panel found the measure unjustifiable under both subparagraph (b)—protection of animal life—and the chapeau. In that case, the absence of effective measures within the European Union aimed at protecting animal life, combined with the exception granted to traditional communities in Greenland, rendered

2 Appellate Body Report, US—*Gasoline* (1996), 23.

3 Panel Report, *Argentina—Hides and Leather* (2001), paras. 11.324–11.330.

the import restriction unjustifiable. Moreover, the Appellate Body held that the protection of animal life could also be justified under subparagraph (a), as necessary to protect public morals—an important precedent regarding environmentally motivated measures invoking Article XX. In the recent *EU–Palm Oil* dispute, the European Union sought to justify Green Deal–related measures by arguing that subparagraphs (a), (b), and (g) together formed an "indivisible set of rights" (Von der Weid 2024).

Discrimination Based on Processes and Production Methods (PPMs)

Another fundamental question concerning environmental measures is whether WTO rules permit the differentiation of like products based on the processes and production methods (PPMs) used to produce them, and whether PPMs affect the characteristics of the final product. WTO jurisprudence indicates that the mere use of different PPMs in the manufacture of two products does not, in itself, render them "unlike." In *US–Shrimp*, the contested measure was the U.S. prohibition on the importation of shrimp from countries that did not use the technology known as Turtle Excluder Devices (TEDs). The measure imposed differential treatment based on PPMs that do not affect the final product. Although the measure was found to be justified under subparagraph (g) of Article XX, the Appellate Body held it to be inconsistent with the chapeau of that article. After the United States modified the measure to bring it into conformity with the Appellate Body's findings, the Appellate Body concluded that the United States had made good-faith efforts to seek a negotiated solution. In practice, this amounted to an endorsement of the use of unilateral measures with extraterritorial effects and of considering production methods in the analysis of product "likeness" (Zanocchi, 2020).

Environmental Discrimination under Other WTO Agreements

The Technical Barriers to Trade (TBT) Agreement also bears a strong relationship to environmental restrictions, being the first multilateral trade agreement to explicitly include the term "environment" (Patriota 2013). Approximately 25% of specific trade concerns raised in the TBT Committee relate to measures that cite environmental protection among their objectives (WTO 2025a). Since 1995, more than 100 environment-related specific trade concerns have been raised in connection with TBT measures adopted for purposes such as: controlling hazardous substances, chemicals, and heavy metals; regulating vehicles and air pollution; improving the energy efficiency of equipment and household appliances; and managing resources, waste,

reuse, and recycling of vehicles and electrical and electronic products. Like the GATT, the TBT Agreement requires imported products to receive treatment no less favorable than that accorded to like domestic products (Article 2.1). It also stipulates that technical regulations must not be "more trade-restrictive than necessary" to fulfil a legitimate objective (Article 2.2). A similar provision appears in Article 5.6 of the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS), which seeks to prevent the legitimate right to regulate and set national standards from resulting in a proliferation of non-tariff barriers—a phenomenon that became more significant as tariffs were progressively reduced under the evolution of the multilateral trading system (Zanocchi 2020).

It is also important to note that support measures have increasingly been used to promote the decarbonization of the economy, making it essential to assess the compatibility of such subsidies with the Agreement on Subsidies and Countervailing Measures (ASCM). The Appellate Body has indicated that, as long as they do not discriminate between domestic and foreign products, nor among different countries of origin, decarbonization-oriented subsidies may be compatible with WTO rules, and differentiation among energy sources may be legitimate (Bodansky, Brunnée, and Rajamani 2017). Moreover, in light of the climate crisis, such subsidies could be understood as satisfying the "necessity" requirement under subparagraph (b) (Gehring, Segger, and Hepburn 2012).

Trade and the Environment at the WTO: Recent Developments

In the year the WTO marked its 30th anniversary, numerous questions have been raised about its relevance in helping to address the various challenges currently facing international trade. It is often claimed that the paralysis of the Appellate Body, combined with the difficulty of negotiating new rules—which, some argue, would allow the institution to better adapt to the growing complexity of global trade—has rendered the WTO unable to provide the solutions required in the present context. A closer examination, however, shows that activities across the WTO's three pillars remain fundamental not only for anchoring expectations regarding the functioning of the trading system, but also for potentially defining new parameters in areas of significant importance.

The WTO as a Platform for Narratives on Trade and the Environment

Beyond trade dispute settlement, the WTO also has as core pillars the negotiation of new rules and the discussion and monitoring of trade policies. Examining the WTO as a forum at the intersection of trade and sustainability reveals surprising dynamism. In the Committee on Trade and Environment (CTE), recent measures such as the European Union's Green Deal and the United States' Inflation Reduction Act have been debated, with their compatibility with WTO rules being questioned. Meanwhile, the establishment of the Trade and Environmental Sustainability Structured Discussions (TESSD)—a plurilateral initiative launched in 2020 and formally joined by nearly 100 members—has created an additional and more flexible space for engagement on these issues. Debates within the group are organized around four themes: (i) trade-related climate measures (TRCMs); (ii) environmental goods and services; (iii) the circular economy; and (iv) the environmental impacts of subsidies.

Two other Joint Initiatives—plurilateral initiatives—created in 2020 have also advanced discussions of environmental issues within the WTO: the Dialogue on Plastics Pollution and Environmentally Sustainable Plastics Trade (DPP) and the Fossil Fuel Subsidy Reform (FFSR) initiative. The first aims to explore how the WTO could contribute to efforts to reduce plastic pollution and to support the Intergovernmental Negotiating Committee (INC), which is responsible for drafting a legally binding treaty to eliminate plastic pollution. The FFSR, in turn, promotes discussions aimed at reducing and gradually phasing out fossil fuel subsidies.

Because no single member can unilaterally block the agenda of the Joint Initiatives, and because these initiatives feature greater participation from international organizations and think tanks, the TESSD, DPP, and FFSR have emerged as more dynamic spaces for the exploration of ideas and debates that would have limited room within the CTE but which may influence the definition of new parameters (Fukunaga 2024).

Also noteworthy is the WTO's growing openness to external actors, including academics, business representatives, NGOs, and trade unions. This trend is visible in the Public Forum—an open and accessible platform for dialogue with external stakeholders on international trade and WTO policies—as well as in the annual Trade and Environment Week, which features dozens of panels on the trade–environment interface with broad external participation. In both settings, one observes substantial engagement from experts based outside Geneva, with a predominance of participants from countries favored by geographic proximity.

Both the plurilateral fora—open to the participation of think tanks and convention secretariats—and the Public Forum and Trade and Environment Week have been used as platforms to disseminate narratives favorable to the use of unilateral restrictive measures purportedly adopted for environmental purposes. In these settings, countries that implement such measures organize panels dedicated to their justification and claim that they were subject to extensive consultations (so that, in a potential adjudicatory panel, they could argue that broad prior dialogue with affected parties took place), while scholars supportive of these measures are given ample space to promote their ideas.

One proposal circulating in this environment is the establishment of a Climate Waiver. In his book *Trade Links* (2022), former WTO Appellate Body member James Bacchus contends that the differentiation of products based on carbon emissions would create the predictability needed to reduce the risk of carbon leakage—i.e., the relocation of industries to countries with more permissive environmental regulations—and to encourage the creation of climate clubs, thereby facilitating trade among countries with similar carbon-pricing systems. The initiative was first proposed by Germany in 2020 (Bellmann 2022) and has been endorsed by prominent academics, such as Georgetown professor and former Appellate Body member Jennifer Hillman (Hillman and Damian 2023).

A similar idea has been advanced by Yale international law professor Daniel Esty, who served as an advisor to the WTO Director-General between 2022 and 2023 and participated actively in discussions on the matter in Geneva. Author of *Greening the GATT—Trade, Environment, and the Future* (1994), Esty argues that measures such as border carbon adjustment mechanisms (BCAs), designed to enable greater ambition in addressing climate change, should be viewed as acts of "multilateralism-unilateralism" (Dominioni and Esty 2023) and should be subject to lighter scrutiny within the WTO. This is because, as signatories to the Paris Agreement, WTO members would have at least tacitly expressed support for measures aimed at decarbonization. Esty also coordinated the development of the *Villars Framework*, a set of proposals to promote greater flexibility in WTO rules in favor of a partial view of sustainability.

Also noteworthy is the growing role of the Secretariat in this area. In addition to publishing numerous reports in recent years—not always with the expected balance—the Secretariat has taken an active role in various forums and events, such as the UNFCCC COPs, where it maintains its own pavilion, organizes panels, and produces studies (Bellmann 2022). Furthermore, the Secretariat has sought coordination with other international organizations

to promote convergence in carbon-pricing mechanisms and advance a nature-positive agenda at the intersection of trade and biodiversity (TESS 2024), without prior consultation with members.

Regarding the WTO's function as a forum for debate and monitoring, it is also worth noting how the topic has been addressed at recent Ministerial Conferences, the organization's highest decision-making body. At MC12 (Geneva, June 2022), the final declaration recognized—for the first time in the WTO—the need for trade to contribute to climate crisis solutions (Bellmann 2022). At MC13 (Abu Dhabi, March 2024), however, there was considerable pushback from developing countries, which issued and broadly endorsed a declaration emphasizing the importance of respecting the fundamental principles of environmental and trade regimes and criticizing the imposition of unilateral measures that create arbitrary or unjustifiable discrimination (James, Bhola and Deere-Birkbeck 2024).

The WTO as a Negotiating Forum

In the area of trade negotiations, ongoing activities within the WTO also merit close attention, with renewed momentum in discussions on environmental goods and services and on the development of parameters for decarbonization and for the adoption of trade-related climate measures (TRCMs).

As part of the "Geneva Package" achieved at the conclusion of MC12, in June 2022, WTO members adopted the Agreement on Fisheries Subsidies. As the first agreement in the WTO with a primarily environmental purpose—and the first example of the "multilateralization" of environmental clauses originally set out in trade agreements outside the organization (Fukunaga 2024)—the accord seeks to protect marine ecosystems and eliminate illegal, unreported, and unregulated (IUU) fishing, as mandated by target 14.4 of the Sustainable Development Goals.

Discussions on environmental goods and services have gained new impetus with the creation of a dedicated sub-group on the topic within the TESSD. Although the long-standing challenge of defining "environmental goods" remains—just as it did during the Doha Round (Patriota 2013)—participants in the forum have been working to draw up a list that could allow negotiations to resume, while the Secretariat has sought to revive discussions within the CTE-SS. Although the TESSD is a dialogue platform rather than a negotiating body, the initiative may pave the way for future negotiations on binding commitments (Fukunaga 2024).

Recent Analysis of Environmental Issues by the WTO Dispute Settlement System

With the expiration of the terms of two Appellate Body members in December 2019 and the United States' objection to new appointments, the WTO Appellate Body was left with only one adjudicator. In light of Article 17.1 of the Dispute Settlement Understanding (DSU), which requires at least three members to constitute the division, the Appellate Body became inoperable. Nevertheless, this paralysis did not lead to a decline in the use of the Dispute Settlement System: 38 new consultations (the stage preceding the establishment of a panel) were initiated between 2020 and 2024, and several of the reports issued—and the interpretations therein regarding the interface between trade and sustainability—are of considerable importance.

It is worth emphasizing that many unilateral restrictive measures purportedly adopted for environmental purposes are drafted in ways that make them potentially compatible with WTO rules (Sutton 2025). Moreover, WTO agreements have been interpreted in an evolutionary manner in dispute settlement, allowing the system to accommodate members' emerging concerns (Fukunaga 2024). As a result, interpretations that endorse the discrimination of products according to selective sustainability criteria may legitimize ongoing measures and encourage the adoption of similar practices.

It is in this context that the panel report in case DS600 (European Union and Certain Member States–Palm Oil, brought by Malaysia) assumes particular significance. The challenged measures set renewable-energy consumption targets for the EU transport fuel market, limiting the use of certain biofuels on the grounds that they would have negative environmental impacts.

In its 2024 report, the panel agreed with Malaysia that the EU had acted in a discriminatory manner when assessing the risk that different biofuels contribute to indirect land-use change (ILUC) and that the measure afforded more favorable treatment to like domestic products. Nonetheless, the panel upheld several of the EU's arguments, finding that the restriction on certain biofuels did not violate Article 2.2 of the TBT Agreement, which provides that technical regulations must not be "more trade-restrictive than necessary to fulfil a legitimate objective." The panel further agreed that limiting high-risk biofuels constituted a measure "necessary to protect human, animal or plant life or health" and one "relating to the conservation of exhaustible natural resources," thus falling within the justifications of Article XX(b) and (g) of the GATT. Regarding the extraterritorial reach of unilateral measures, the report stated that the exceptions in TBT Article 2.2 and GATT Article XX "do not have any inherent jurisdictional or territorial limitation," and that, because

the climate crisis is "inherently global in nature," there was a sufficient nexus between the measure and the objective of reducing emissions. This represents a more "environment-forward" understanding than in previous cases, where the dispute settlement system recognized the space for environmental measures but sought to maintain the primacy of trade liberalization. In light of the evolutionary nature of WTO jurisprudence, the decision may reflect growing pressure to adopt interpretations favorable to trade restrictions justified on environmental grounds, particularly in the absence of new multilateral rules on the matter.

With respect to the recent evolution of the WTO's legal pillar, it is important to underline that some members have opted for an alternative mechanism to the Appellate Body for reviewing panel reports. The Multi-Party Interim Appeal Arbitration Arrangement (MPIA) brings together 54 members, incorporates the WTO's appellate review rules, and, in disputes between participants, replaces the previously existing appellate procedures. Since 2020, twelve cases have been initiated between MPIA participants, and the involvement of major economies (e.g., China, the EU, Brazil), along with the mechanism's complementary nature vis-à-vis the Dispute Settlement System, indicates that members are likely to continue relying on the WTO to resolve trade disputes (Shaffer 2021).

Brazil's Recent Engagement in Debates on Trade and the Environment

Brazil has maintained an active profile in discussions on trade and environment at the WTO, engaging constructively in the three Joint Initiatives related to the topic—as a co-sponsor in the case of the TESSD, and as an observer in the others—as well as in the CTE and various other bodies addressing the issue. Within the TESSD, Brazil's involvement was essential to ensuring that the environmental impacts of agricultural subsidies remained on the agenda. Brazilian experts have also participated in panels during both the Public Forum and Trade and Environment Week.

Another important avenue of engagement has been Brazil's submission of documents for analysis and discussion by WTO members. In June 2024, Brazil circulated document WT/GC/W/938, proposing an expanded debate on sustainability in agriculture in order to rebalance how the topic is treated within the WTO. To that end, the document examines the implications of environmentally motivated measures that may negatively affect agricultural trade, which is already highly distorted, and discusses national policies capable of promoting sustainable agriculture without harming trade, as well as the

importance of recognizing differing national circumstances—one of the pillars of international environmental law and also recognized in the multilateral trading system—in the promotion of sustainability in production processes.

This initiative is necessary to help rebalance discussions on agricultural trade, a major unresolved issue in the WTO. Despite the bargain struck in the Uruguay Round—in which developing countries accepted rules on issues such as intellectual property, services, and investment in exchange for long-awaited multilateral rules on agricultural trade, an area marked by substantial distortions—and despite the commitment in Article 20 of the Agreement on Agriculture (AoA) to reduce limits on agricultural subsidies, there has been no progress on this issue since 1995. Producers in developed countries have received substantial support to comply with new environmental requirements (TESS 2022), enabling exports at prices that do not cover production costs (Domen and Golay 2020). In a scenario in which developing countries did not fully benefit from the bargain (Bacchus 2022), the advancement of biased perspectives risks exacerbating distortions in agricultural trade and increasing inequities within the current framework.

Also notable is how Brazil has used its presidencies of the G20 and the BRICS to articulate new perspectives on the relationship between trade and environment, thereby opening avenues to shape the treatment of the issue in Geneva. In 2024, Brazil led the approval of the *G20 High-Level Principles on Bioeconomy*, a concept supporting the development of more sustainable and inclusive products, processes, and services, as well as the *G20 Principles on Trade and Sustainable Development*, through which G20 members committed to ensuring that environmentally motivated trade measures are compatible with WTO rules and take into account different levels of development among countries. During its BRICS presidency, Brazil promoted constructive approaches to the trade–environment nexus, focusing on cooperation, inclusiveness, and equity in carbon-accounting methodologies and on the dissemination of technologies necessary for the energy transition. In both forums, the discussions advanced by Brazil provide valuable inputs for shaping WTO debates on the topic, so that the pursuit of sustainability in trade takes place in a fair and balanced manner.

Conclusion

In the 30 years since its establishment, the WTO has contributed to the significant expansion of global trade, the improvement of living standards

in many countries, and the promotion of sustainable development. At the ceremony marking the anniversary—held just days after the drastic import tariff increases announced by the United States—Director-General Ngozi Okonjo-Iweala stated: "The uncertainty around global trade has reminded many members why they value the WTO as a bedrock of predictability in the global economy – and as a platform for dialogue and cooperation on trade" (WTO 2025b). She also noted that the legitimate concerns expressed in recent years about the WTO and the multilateral trading system should be viewed as an opportunity to "change the system for the better." The challenge, in the face of advancing partial narratives, lies in determining what would in fact constitute "better"—and for whom.

The convergence of the trade and environmental regimes is unfolding across a broad range of fora, actors, and perspectives. Yet, what stands out is the increasing use of discriminatory trade policy instruments adopted for environmental purposes, characterized by selective criteria and unilateral procedures that disregard fundamental principles of both regimes. This trend has been accompanied by calls to reform the rules of the multilateral trading system so as to accommodate measures that, under the current framework, would be vulnerable to challenge before the Dispute Settlement System (DSS). Given this context, several factors underscore the importance of Brazil maintaining active engagement in discussions on trade and environment at the WTO.

While environmental governance is one of the most fragmented areas of international law—with numerous agreements in force and no international body responsible for ensuring consistency in their implementation (Ikeda 2015)—the WTO remains the focal point for expectations in international trade. Even members adopting unilateral restrictive measures generally seek to demonstrate their compatibility with WTO rules. Negotiations and deliberations within the organization are likely to continue, even in the form of "soft law," and may ultimately shape the definition of new parameters (Shaffer 2021). Moreover, bilateral and plurilateral trade agreements have sought to codify and consolidate WTO case law (Vidigal 2024). Members continue to bring disputes to the DSS, and panel decisions may—at least in part—legitimize unilateral restrictive measures, encouraging not only the proliferation of similar policies but also the incorporation of equivalent provisions into non-WTO agreements. Because DSS jurisprudence is not static and adjudicators' reasoning may be influenced by contemporaneous political and economic conditions, developments on this issue in Geneva require constant scrutiny.

It is incumbent upon Brazil not only to question the social costs and the relationship between an adopted unilateral measure and its desired environmental benefit, but also to identify less trade-restrictive alternatives capable of achieving the same objective and promoting more inclusive ways of harnessing trade for environmental purposes. It is essential to ensure that the pursuit of legitimate objectives remains consistent with the fundamental principles underpinning both the trade and environmental regimes, and that the necessary transition to a more sustainable economy unfolds in a fair and inclusive manner.

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Annex I – Landmark WTO cases on trade and the environment

Case	Description	Decision
DS2–US–Gasoline (US v. Venezuela). 1996–1997.	Venezuela argued that a tax imposed by the U.S. on imported gasoline to reduce air pollution violated the principle of non-discrimination.	This was the first case decided by the Appellate Body (AB). The AB recognized the legitimacy of the environmental objective and affirmed that clean air constitutes an "exhaustible natural resource." However, it concluded that the measure violated Article III:4 of the GATT (national treatment) because it accorded less favorable treatment to imported gasoline
DS58–US–Shrimp (US v. India, Malaysia, Pakistan, Thailand). 1997–1998.	The case concerned a U.S. ban on the importation of shrimp from countries that did not require their fishing fleets to use turtle-excluder devices (TEDs) to protect endangered sea turtles.	The panel found that the import prohibition violated Article XI of the GATT (a point not disputed by the United States). The Appellate Body (AB) held that the measure was "related to" the conservation of exhaustible natural resources within the meaning of Article XX(g), noting that this concept also encompasses living species. However, the AB ruled that the measure's implementation was discriminatory and therefore not consistent with the chapeau of Article XX.
DS135–European Community–Asbestos–(EC v. Canada). 1998–2001.	Canada challenged France's ban on the importation of asbestos-containing products. A central issue was whether it would be legitimate to differentiate between "like products" based on the presence of asbestos in their composition.	The Appellate Body (AB) found that the measure was related to the protection of human health and that no reasonably available alternatives existed, concluding that the ban was justifiable under Article XX(b) of the GATT and consistent with the chapeau of that article. The AB also held that products containing asbestos were not "like" asbestos-free products.
DS332–Brazil–Retreaded tyres (Brazil v. European Community). 2005–2007.	The case concerned Brazil's prohibition on the importation of retreaded tyres. Brazil argued that the measure was necessary to protect public health.	The Appellate Body (AB) upheld the panel's finding that the measure was justifiable under Article XX(b) of the GATT and that no "reasonably available" alternatives existed that would achieve the same level of protection. However, the AB concluded that the manner in which the measure was applied resulted in discrimination.

DS381–United States–Tuna II (US v. Mexico). 2009–12.	Mexico challenged the labeling requirements for tuna in relation to the use of fishing methods considered harmful to dolphins.	The AB found that the measure violated Article 2.1 of the TBT Agreement because it accorded less favorable treatment to imported tuna compared with like domestic products. However, the AB disagreed with Mexico's claim that reasonably available alternative measures existed that would achieve the same regulatory objective
DS 394, 395, 398–China–Raw Materials (China v. Mexico, U.S., EU). 2009–2012	The disputes concerned the compatibility of China's export restrictions on certain raw materials with its WTO Accession Protocol and with the relevant provisions of the GATT.	The panel found that the restrictions imposed by China were not justifiable under Articles XX(b) and XX(g) of the GATT. These findings were not appealed. The Appellate Body (AB) affirmed that, to fall within the scope of Article XX(g), such export restrictions would need to be applied "in conjunction with restrictions on domestic production or consumption."
DS 412–Canada–Renewable Energy (Canada v. Japan). 2011–2013.	The dispute concerned local-content requirements in Canada's renewable energy programs. Japan argued that these requirements constituted prohibited subsidies.	The Appellate Body (AB) held that the discrimination against imported products was not covered by Article III:8(a) of the GATT. It agreed that the measure constituted a financial contribution within the meaning of Article 1.1(a) of the SCM Agreement and accepted that it was valid to conceptualize a more specific market for renewable energy in line with consumer preferences. However, the AB found itself unable to determine whether the measure conferred a benefit under Article 1.1(b).