

## POLICY BRIEF

# Trade and Climate Change in the World Trade Organization

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### Key Insights

- In today's integrated global economy, addressing transboundary environmental challenges like climate change requires coherent trade policy approaches and international cooperation.
- This policy brief explores the relationship between trade, climate change, and sustainable development, and the potential for trade policies to support climate goals—focusing on the role of international cooperation in the context of the World Trade Organization (WTO).
- After reviewing how trade and trade-related policy tools can support climate mitigation and adaptation, the brief introduces how these issues have been discussed in the multilateral trading system and suggests possible options for meaningful cooperation.
- Achieving the Paris Agreement's climate goals will require important shifts in economic activity, production practices, and trade. It will also demand a focus on a just transition, especially for developing and least developed countries, including a just transition to sustainable trade.
- Governments have at their disposal a wide range of trade and trade-related policy tools that can be applied domestically and at the border to influence production and consumption patterns in support of climate mitigation and adaptation.
- While there is scope for WTO members to advance climate goals under existing WTO rules, the need to move more swiftly and decisively is spurring calls for more proactive efforts to harness trade and trade policies to support climate ambition. It is also raising concerns around potential tensions at the intersection of climate-trade policymaking.
- A growing number of members recognize that the WTO has a role to play in supporting trade-related cooperation on climate action, and the interface of trade and climate change is attracting enhanced attention in the organization. This interest has stimulated increasing engagement in member-led initiatives on environmental sustainability and fossil fuel subsidy reform.

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## 1. Introduction

Greenhouse gas (GHG) emissions are accelerating global warming and with it the frequency of extreme weather events, ocean acidification, sea level rise, and desertification, threatening the life and livelihoods of millions of people worldwide. As governments intensify their efforts to tackle the climate crisis, speeding up the transition to a low-carbon economy will require a drastic reshaping of global production and consumption patterns. This will only be possible if economic policies provide real incentives to shift towards a more sustainable use of resources. In the meantime, countries around the world—particularly small island developing states and least developed countries (LDCs)—are struggling to adapt their economies to the existing impacts of climate change and recover from the damage caused by the climate crisis. These include, among others, land and ecosystem degradation, declining productivity in agriculture, damages to infrastructure, declining tourism activity, and migration (UNCTAD, 2021).

Trade and trade policies have a key role to play in supporting and driving the transition to sustainable low-carbon economies and supporting country efforts to adapt and build resilience in the face of climate change. For instance, trade can promote the dissemination of goods, services, and technologies that are essential for climate mitigation and adaptation. However, in the absence of effective regulatory frameworks and prices that internalize environmental externalities, trade can exacerbate and globalize challenges such as deforestation, land degradation, and GHG emissions.

In today's highly integrated global economy, aligning trade and climate policies will not only require effective domestic policies, it will also need concerted action and international collaboration (Deere Birkbeck, 2021b). This implies overcoming the traditional silo approach to policymaking which has resulted in trade and climate policies being often developed in isolation by different ministries with little, if any, communication.

This cooperation will be important not only to spur the massive economic transformation that realizing international climate goals requires, but also to ensure a just transition for developing countries. Here, priorities range from enhancing trade-related capacity building under mechanisms such as the Aid for Trade Initiative led by the World Trade Organization (WTO), bolstering climate finance and debt relief to liberate government resources for climate action, boosting access, transfer, and uptake of climate adaptation and mitigation technologies, and spurring investment in green sectors of developing country economies. Fostering a just transition will also require specific efforts to promote exports of environmental goods and services from developing countries and their participation in green value chains, as well as to ensure that domestic trade-related climate policies do not unfairly or unnecessarily harm the trading prospects of developing countries.

Building on the Glasgow Climate Pact reached at the 26th session of the Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC) in 2021, where governments agreed to strengthen their climate pledges and increase the provision of climate finance, we can expect intensified action to align economic policies for climate mitigation and adaptation. Although trade was not explicitly on the COP26 agenda, a number of trade issues are relevant to the implementation of the pact, some of which arose in Glasgow. For example, the governments of 27 countries—including Brazil, Indonesia, the Republic of Congo, and the United States (US)—and the European Union (EU) published a joint roadmap for cooperation on trade in forest and agricultural commodities as part of the Forests, Agriculture and Commodity Trade Dialogue (FACT Dialogue, 2021). These developments reflect the critical importance of complementing efforts at promoting a clean energy transition and improving energy efficiency with nature-based solutions to absorb carbon through biodiversity conversation, forestry, and sustainable agriculture.

Another example is the idea of creating an international “climate club”—a proposal floated by Germany’s Finance Minister and discussed among G7 and G20 finance ministers in May 2020 (German Federal Ministry of Finance, 2021). The idea is to establish an open, collaborative partnership in which participating countries commit to ambitious climate goals and to the measures needed to reach them. The purpose of such a club, which could bring together EU members with other countries like the US, Japan, and possibly even China, would be, among others, to avoid trade friction linked with the imposition of border carbon adjustment measures. In the run up to the Glasgow Conference, the EU and US also initiated talks about an agreement on green steel and aluminium to partially reverse Donald Trump’s 25% tariff on EU steel imports, against which Brussels promptly retaliated, but retaining them on imports from other governments failing to meet standards for low-carbon steel production (Keating & Gerdes, 2022).

As these different initiatives unfold, a growing number of developing countries are assessing how to address the intersections of climate and trade, including how to integrate climate change considerations into their trade policies. A clear

sign of this attention is that “climate and environmental crises” were identified as one of three core global challenges at the Fifteenth session of the United Nations Conference on Trade and Development (UNCTAD) held in October 2021.<sup>1</sup> Several developing countries have insisted on the need to take into account the historic responsibility of developed countries for the climate crisis and their higher per-capita emissions. These countries emphasize that the economic costs of climate action must be shared fairly and that discussions of trade-climate intersections and solutions must be informed by the UNFCCC principle of “common but differentiated responsibilities and respective capabilities.”

At the WTO, there is interest among a growing number of members and stakeholders in addressing the nexus of climate and trade, as illustrated by the unprecedented focus on climate and sustainability issues at the 2022 WTO Public Forum. Director-General Ngozi Okonjo-Iweala has repeatedly highlighted the role of trade in supporting climate action and role of the WTO in providing a forum for dialogue involving all members (e.g. WTO, 2021a). The topic is also the focus of the 2022 World Trade Report prepared by the Secretariat (WTO, 2022). At the 12th Ministerial Conference (MC12) held in June 2022, the full WTO membership formally recognized for the first time global environmental challenges including climate change and related natural disasters, loss of biodiversity, and pollution. Ministers also highlighted the contribution of the multilateral trading system to promote the United Nations 2030 Agenda and its Sustainable Development Goals.

There is also increasing mention of climate and trade intersections in a range of WTO bodies, including the Committee on Trade and Environment (CTE), although little as yet in formal committees around concrete proposals for cooperation. Finally, recognition of the importance of enhanced dialogue and cooperation on climate issues has given rise to two ministerial statements at the WTO—one on trade and environmental sustainability co-sponsored by 74 members, which includes a commitment to launch dedicated discussions on how “trade-related climate measures and policies can best contribute to climate and environmental goals and commitments while being consistent with WTO rules and principles,” and another on fossil

1. United Nations Conference on Trade and Development, *The Bridgetown Covenant: From inequality and vulnerability to prosperity for all*, TD/L.435 (3–7 October 2021).

fuel subsidy reform co-sponsored by 47 WTO members (Deere Birkbeck, 2021a; Lim et al., 2022).

As a contribution to ongoing discussions, this policy brief explores the relationship between trade and climate change and the potential for trade policies to support climate goals, focusing on the role of international cooperation in the context of the

WTO. After reviewing a range of trade-related policy tools that can be harnessed to support a low-carbon transition and climate change adaptation, it reviews how climate-trade intersections have been discussed in the multilateral trading system and suggests possible options for cooperation in the WTO setting that could produce meaningful outcomes.

## 2. The Intersection of Trade Flows and Climate Change

The relationship between trade and climate change mitigation and adaptation is complex and multidimensional. From the perspective of climate change, trade can exacerbate the climate impact of unsustainable production and consumption patterns. But trade can also play a critical role in scaling up the diffusion and uptake of climate-friendly technologies. From the perspective of trade, extreme weather events resulting from climate change are likely to alter the direction and geography of global trade flows through their impact on agricultural yields, productivity, and trade infrastructure. At the same time, trade has a vital role to play in offsetting climate-induced production shortfalls and securing access to essential goods and services in parts of the world affected by climate change (Brenton & Chemutai, 2021).

### 2.1 The Relevance of Trade for Climate Change

International trade contributes to GHG emission trends in most emission-intensive sectors including transport, construction, agriculture, chemicals, and extractive industries (Ge et al., 2020). Energy consumption, including transportation, electricity and heat, buildings, manufacturing, and construction, is the largest contributor to climate change and accounts for 76% of global GHG emissions. It is followed by agriculture, including livestock and crop cultivation, at 12%, industrial processes (e.g. chemicals and cement—5.9%), waste and waste water (3.3%), and land use, land-use change, and forestry (2.8%). In the absence of effective regulations to ensure the environmental sustainability of these sectors, cross-border movements of goods and services can further exacerbate the climate impacts associated with their production and consumption.

### *Emissions Embodied in Trade*

In climate policymaking, traditional accounting methods to report emissions and set reduction targets are usually based on domestic production and do not take into account emissions embodied in imported goods and services. To account for the role of trade, "consumption-based" approaches seek to estimate both emissions produced domestically and those embodied in imported goods.

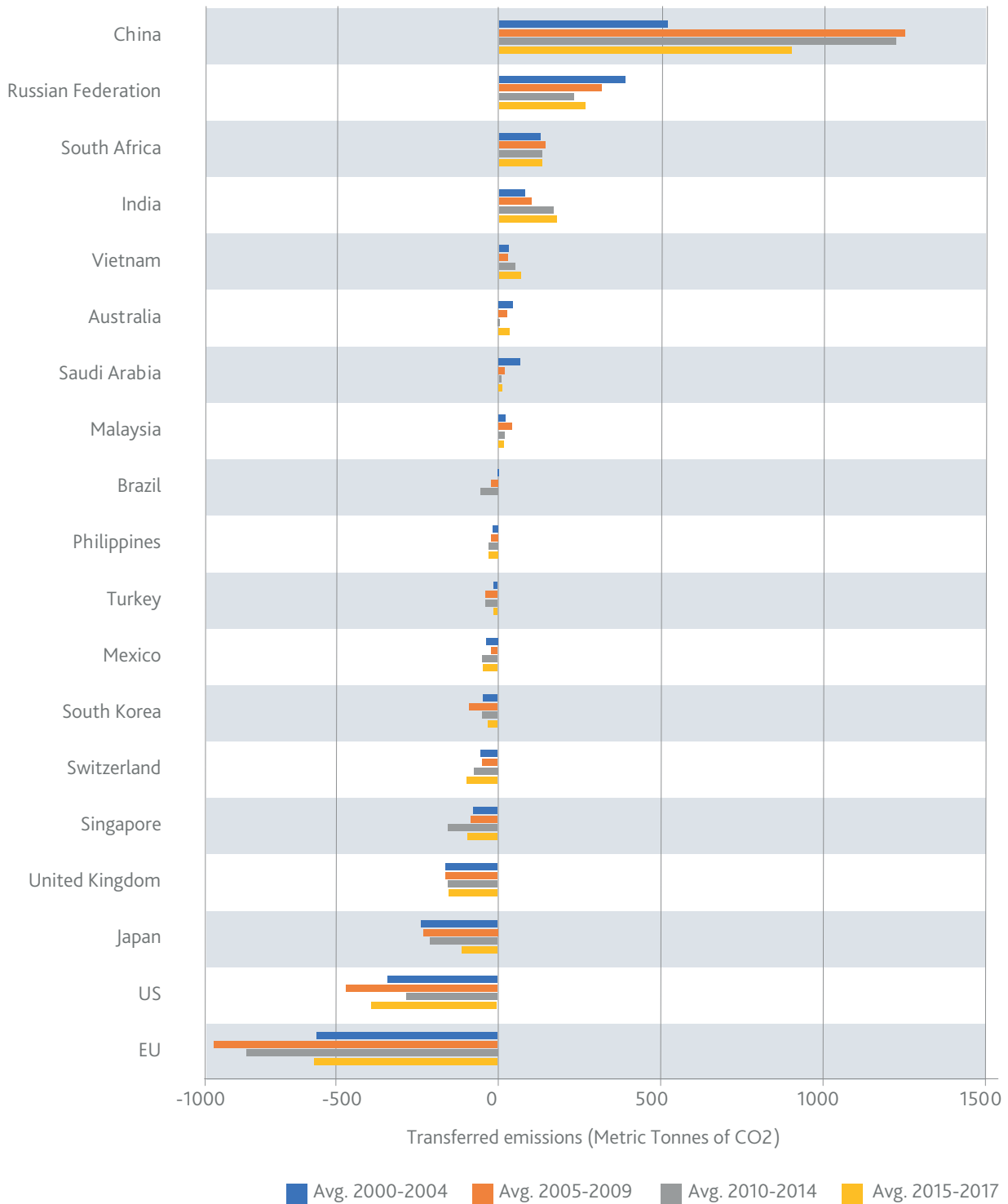
Overall, countries that have reduced their emissions over the last 20 years tend to be, at the same time, net importers of emissions, representing the equivalent of 6–30% of their territorial emissions (up to 222% in the case of Singapore). Another set of countries has seen emissions grow over the last 20 years, with part of these emissions generated for exports (up to 50% in the case of Trinidad and Tobago). This latter set of countries includes not only oil producers like Saudi Arabia and Nigeria, but also countries producing agricultural products or consumer goods for export such as Argentina, China, India, South Africa, and Vietnam. Finally, a large group of both developed and developing countries ranging from New Zealand and South Korea to Costa Rica, Nepal, and Senegal has seen territorial emissions increase while at the same time being a net importer of GHG emissions. In some cases, these imported emissions represent up to 50% of domestic emissions (77% in the case of Sri Lanka).

Figure 1 shows the amount of emissions transferred through trade for selected countries (i.e. production-based emissions minus consumption-based ones). Positive transfers indicate that the country is a net exporter of emissions and negative ones show net importers. Figure 2 compares domestic emissions with those embodied in imports. The

horizontal axis shows the average amount of transferred emissions as a proportion of those produced domestically between 2000 and 2017. A negative figure indicates net imports of emissions, while a positive one shows the share

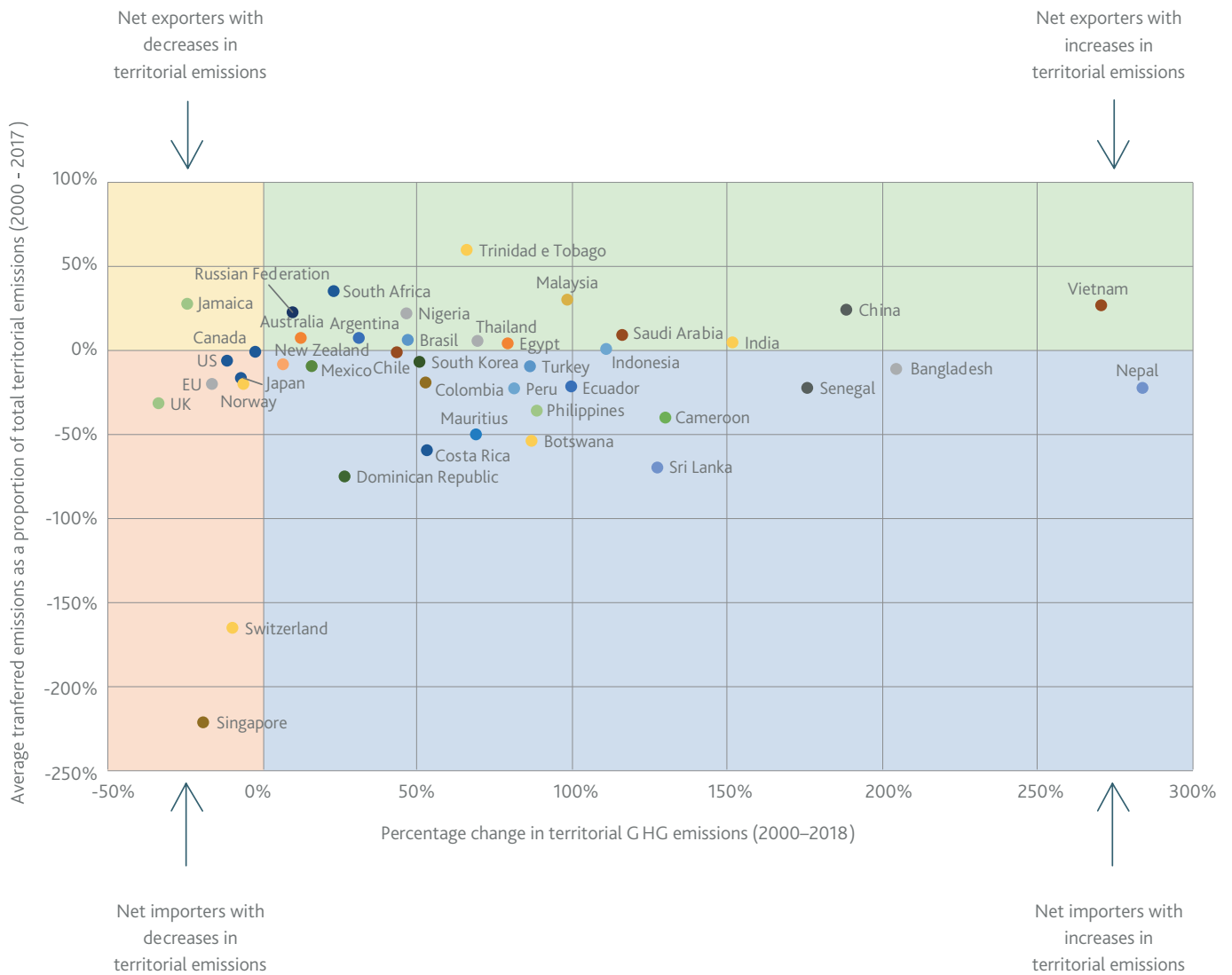
of domestically produced emissions generated for the production of exported goods. On the vertical axis, countries are organized according to the growth in their territorial emissions between 2000 and 2018.

**Figure 1. Transferred Emissions Through Trade (2000–2017)**



Source: Author's elaboration based on data from the Global Carbon Atlas (2021).

Figure 2. Country Mapping Based on Emissions Growth and Trade in Embodied Emissions



Source: Author's elaboration based on Global Carbon Atlas (2021).

### Carbon Leakage and Competitiveness

The transfer of emissions through trade raises concerns about carbon leakage and impacts on competitiveness. Carbon leakage refers to a situation where companies producing carbon-intensive goods relocate their activities to jurisdictions with laxer emission constraints as a result of climate policies imposed domestically. The environmental concern is that the leakage could undermine the effectiveness of domestic climate policies and may even result in increases in total emissions globally. In addition, an economic concern expressed by some producers is that domestic requirements to reduce GHG emissions can impose additional economic

costs on producers in ways that reduce their competitiveness vis-à-vis companies located in countries with less stringent requirements. This has prompted calls for granting free emission allowances to energy-intensive industries highly exposed to foreign competition such as cement, aluminium, textiles, and plastics.<sup>2</sup> In the trade realm, leakage and competitiveness concerns are cited as the main rationale for proposals to impose restrictions on imports of carbon-intensive goods, including through border carbon adjustments such as the Carbon Border Adjustment Mechanism envisaged under the EU Green Deal (see section 3.1).

2. See, for example, the list of sectors and subsectors deemed to be at risk of carbon leakage in the EU under Commission Delegated Decision (EU) 2019/708 of 15 April 2019 supplementing Directive 2003/87/EC of the European Parliament and of the Council concerning the determination of sectors and subsectors deemed at risk of carbon leakage for the period 2021 to 2030.

### Trade-Related Transport Emissions

International trade also has an impact on climate change through the GHG emissions generated by transport, particularly shipping and aviation emissions, which have increased significantly in the past decade. Together, these sectors accounted for approximately 2 billion tonnes of carbon dioxide (CO<sub>2</sub>) in 2019 or roughly 5% of global CO<sub>2</sub> emissions (UNEP, 2020). About two thirds of these emissions are international and therefore not reported to the UNFCCC. For most parties to the convention, trade-related transportation emissions are not covered in their nationally determined contributions aimed at reducing emissions under the Paris Agreement. The International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) (each of which are specialized United Nations agencies) have been tasked with addressing international GHG emissions related to transportation, although the initiatives to date are widely considered inadequate given the urgency of action required to meet the Paris goals.<sup>3</sup>

To reduce GHG emissions from trade-related transportation, some have suggested reducing overall global trade volumes. While there is a case for reducing unnecessary trade and improving the efficiency of transportation, policies that focus on reducing trade, while intuitively appealing, represent an expensive and inefficient way of reducing emissions (Bureau et al., 2017). According to recent estimates, a stabilization of trade flows at today's level until 2030 would reduce global emissions by 3.5% but result in a decline of 1.8% in global gross domestic product (GDP) (Bureau et al., 2017). This estimate highlights a key challenge for climate and trade policymaking: how to achieve the drastic GHG emission cuts required in ways that minimize the negative effects on employment and global economic welfare. In this context, while there is a strong case for limiting production of the most carbon-intensive products and for reducing transport-related emissions, cutting trade flows represents one of the options

that would affect more directly economic development and livelihood prospects compared to other emission cutting options.<sup>4</sup> In comparison, according to a recent report, cutting fossil fuel subsidies could reduce global emissions by 3.2% without affecting GDP, leading to a win-win situation with gains in economic welfare accompanying emission reductions in emissions (UNESCAP et al., 2021).

Trade can also be part of the solution to climate change mitigation and adaptation. By promoting trade in climate-friendly goods and services, trade policy can contribute directly to the rapid diffusion and uptake of clean energy and energy-efficient technologies across the world, the scaling up of climate smart agricultural practices,<sup>5</sup> and the decarbonization of production processes. With the right regulations in place to ensure sustainability, trade can also contribute directly to the efficient use and allocation of material resources at regional and global scales by exploiting economies of scale and comparative advantages in the production of clean energy-efficient technologies and low carbon production processes. However, this shift towards sustainable trade will require an array of “flanking” policies (including policies that promote affordable access to cutting-edge technologies and enable their adaptation to local circumstances), financing to shift production processes towards sustainability, and cooperation on standards needed to underpin climate-friendly supply chains.

## 2.2 The Impact of Climate Change on Trade

Climate change also impacts trade. It does so directly, through the effects of more frequent extreme weather events on trade-related infrastructure and transport routes, and indirectly, through climate-induced changes in endowments and productivity in different economic sectors (Dellink et al., 2017). This is viewed as a major risk to supply chain

3. ICAO (n.d.) has focused on creating a global carbon offsetting scheme. IMO (n.d.) has developed a set of CO<sub>2</sub> reduction measures coupled with a legally binding scheme aimed at reducing carbon intensity across the global fleet by 40% by 2030 (relative to 2008) and cutting emissions by 50% by 2050.
4. Bureau et al. (2017) find that implementing the commitments under the Paris Agreement would result in the same decline in GDP but with a 27% reduction in GHG emissions instead of only 3.5%. They also find that establishing a single market in tradable emissions permits among the top three CO<sub>2</sub> emitters (China, the EU, and the US) could cut emissions by more than 40% with a 3.2% decline in GDP.
5. According to the FAO, climate-smart agriculture aims to achieve three main objectives: sustainably increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing GHG emissions. For further details, see FAO (n.d.)

profitability by large finance, investment, and insurance companies for example (Woetzel et al., 2020).

Storms, sea surges, floods, prolonged heatwaves, and droughts directly affect the price, quality, and speed of supply, transport, and distribution channels. Such impacts hurt developing countries the most, particularly small island developing states and low-lying coastal states. Indirect effects from changes in temperature, precipitation, and the prevalence of pests and disease are particularly significant in sectors such as agriculture and fisheries. They tend to change crop yields and productivity, as well as natural resource endowments (Brenton & Chemutai, 2021). The scope and magnitude of these effects depend on future climatic and agro-ecological conditions—for example the types of crops produced and existing agricultural systems (e.g. whether rain-fed or irrigated).

Most models predict that regions in the high latitudes may see increases in production, but anticipate major disruptions in lower latitudes particularly in Africa and Asia. As comparative advantages in agricultural production evolve in response to changes in yields and prices, some countries will see their food bills surge, while others may lose their ability to grow and export food.<sup>6</sup> This, in turn, will result in changes in the composition and geography of trade.

From a food security perspective, trade will therefore play a critical adaptation role in addressing imbalances between supply and demand, and acting as a buffer in case of climate-induced production shortfalls by making food available in countries that can no longer produce. Research suggests that when trade flows are constrained, global welfare losses from climate change increase by 76% (Gouel & Laborde, 2019).

### 3. How Can Trade-Related Policy Measures Advance Climate Goals?

Governments have a wide range of policy tools at their disposal to influence production and consumption patterns in support of climate action, including instruments that can help steer trade in the right direction. These policies can be applied at the border—e.g. tariffs, quotas, and quantitative restrictions on carbon-intensive imports and exports—or within a country (i.e. domestically) through a range of economic incentives that shape how sectors operate and/or produce goods and services—e.g. subsidies for low-carbon goods and services or climate-smart agriculture practices, export credits and guarantees, and sector-specific carbon emission allowances. Governments can also impose specific sustainability requirements in the form of regulatory measures, standards, and conformity assessment procedures.<sup>7</sup>

Table 1 provides an indicative list of trade-related policy measures to support climate change mitigation and adaptation in these three categories. It distinguishes between measures discouraging the type of production and trade that contributes to climate change, and measures encouraging production and trade that support climate mitigation and adaptation.

#### 3.1 Border Measures

##### *Discouraging Trade in Carbon-Intensive Goods*

Border measures can be used to impose quantitative restrictions or outright bans on imports or exports of carbon-intensive goods such as highly polluting vehicles.

These measures can also take the form of border carbon adjustments to avoid carbon leakage as envisaged under the EU green deal and in a growing number of jurisdictions.<sup>8</sup>

6. The International Food Policy Research Institute estimates by Nelson et al. (2009) suggest that by 2050 South Asia's imports of cereals could increase by 560% from 2000 levels because of climate change. In sub-Saharan Africa, this figure could reach over 250%.

7. Conformity assessment procedures include any procedure used to determine that relevant requirements in technical regulations or standards are fulfilled.

8. A border carbon adjustment is a duty applied on imported goods based on the amount of carbon emissions resulting from their production. Its objective is to avoid carbon leakage or competitiveness losses by equalizing the carbon cost paid by domestic and foreign producers.



Table 1. Trade-Related Policy Tools to Support Climate Action

Measures		Discouraging production and trade that contribute to climate change	Encouraging production and trade that support climate change mitigation and adaptation
Trade and trade-related policy measures	Border measures	<ul style="list-style-type: none"> <li>Removing tariff protection on domestically produced carbon-intensive goods.</li> <li>Applying market-correcting measures on imports to avoid carbon leakage (e.g. carbon taxes, border carbon adjustment).</li> <li>Import/export restrictions or bans on high emissions intensity products.</li> </ul>	<ul style="list-style-type: none"> <li>Trade preferences or market access concessions on goods complying with specific climate requirements (e.g. through tariff rate quotas or duty-free quota-free preferential schemes).</li> <li>Removing tariff and non-tariff measures on climate-friendly goods, services, and technologies.</li> <li>Prohibiting the use of trade remedies on clean climate-friendly goods.</li> </ul>
	Economic incentives	<ul style="list-style-type: none"> <li>Removing subsidies on the production, transformation, and/or consumption of fossil fuels.</li> <li>Removing subsidies encouraging the production of carbon-intensive goods.</li> <li>Removing export credit, guarantees, and financing provided to fossil fuel or carbon-intensive goods.</li> </ul>	<ul style="list-style-type: none"> <li>Subsidies for the production or consumption of clean energy, energy-efficient, or low-carbon goods and services (e.g. electric vehicle purchase and registration tax rebates).</li> <li>Payments for climate mitigation- or adaptation-related practices, services, or production methods (e.g. climate-smart agricultural practices).</li> <li>Fast-tracking the granting of patents on climate change mitigation or adaptation technologies.</li> </ul>
	Regulatory Measures	<ul style="list-style-type: none"> <li>Climate-related mandatory requirements, standards, and regulations (e.g. energy efficiency requirements, mandatory targets for electric vehicle sales).</li> </ul>	<ul style="list-style-type: none"> <li>Green government procurement rules.</li> <li>Voluntary standards and environmental labelling (e.g. organically produced food, deforestation-free supply chains).</li> <li>Private standards (e.g. carbon footprint).</li> </ul>
International support measures	Technical assistance & capacity building	<ul style="list-style-type: none"> <li>Support for fossil fuel subsidy reform.</li> <li>Support for economic diversification away from carbon-intensive sectors.</li> </ul>	<ul style="list-style-type: none"> <li>Technical assistance and capacity building to promote climate change mitigation and adaptation production methods or to meet environmental standards in export markets (e.g. through the Aid for Trade initiative).</li> <li>Incentives for the transfer of climate change mitigation or adaptation technologies.</li> </ul>

In principle, WTO provisions allow countries to put in place quantitative restrictions for environmental purposes. While unilateral duties reflecting the cost of embodied GHG border carbon adjustments raise several conceptual and legal questions in the WTO and remain highly controversial. For example, there is no consensus on how the carbon content of goods can be determined in a robust manner and what should be the selection of goods targeted by such measures. As several jurisdictions put in place carbon pricing mechanisms, methodologies for granting credit or recognizing equivalence for carbon prices already borne by foreign goods in the country of export have also become the subject of intense debate in international instances such as the International Monetary Fund, WTO, and Organisation for Economic Co-operation and Development (OECD).<sup>9</sup> Developing countries also point to the historical responsibility of developed countries in the climate crisis and their higher per-capita emissions, arguing, as noted earlier, that the cost of climate action must be shared fairly based on the principle of “common but differentiated responsibilities and respective capabilities.”

Alternatively, a country could choose to remove domestic protection on carbon-intensive goods (if and where carbon-intensive goods are highly protected) and expose them to international competition if the same goods can be produced more efficiently or with fewer emissions in third countries.

### ***Encouraging Trade in Goods and Services That Support Climate Action***

To promote access to, and the diffusion of, climate mitigation and adaptation technologies, governments need to consider a range of relevant policy tools. The most common starting point for trade negotiators is to focus on how they can remove, either collectively or unilaterally, tariffs and non-tariff barriers on environmental goods and services. In 2012, for example, the Asia-Pacific Economic Cooperation economies agreed to cut tariffs voluntarily to 5% or less on a list of 54 environmental goods. To encourage imports from developing countries, this can also be envisaged under trade preference schemes that are commonly

used to reduce tariffs applied on exports from developing countries or LDCs. The EU's Generalised Scheme of Preferences (GSP) includes, for example, a specific preferential scheme, known as GSP+, which is open to countries that implement 27 international conventions related to human rights, labour rights, protection of the environment, and good governance.

Similarly, the liberalization of trade in environmental goods and services has been explored under bilateral or regional trade agreements. For example, the Agreement between New Zealand and the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu on Economic Cooperation identifies a list of 132 environmental goods to be liberalized immediately upon entry into force of the agreement. The United Kingdom (UK) and New Zealand free trade agreement also provides for the immediate elimination of all import tariffs on 293 environmental goods. Finally, the liberalization of environmentally preferable products can be encouraged through the use of additional market concessions. Under the Comprehensive Economic Partnership Agreement between the European Free Trade Association states and Indonesia, for example, Switzerland provides a specific tariff rate quota for sustainably produced palm oil imports from Indonesia.

Beyond tariff liberalization, facilitating trade in goods and services that support climate action would also require addressing non-tariff barriers and regulatory cooperation as well as issues such as access to finance, government procurement, and intellectual property rights and technology transfer. In this area, several governments have stressed the importance of better understanding the range of opportunities and challenges relevant to developing countries, including their participation in exports of environmental goods and services and in green value chains, as well as their development of productive capacities and export competitiveness in environmental goods and services. Governments can also establish trade facilitation measures targeted at low-carbon goods and services by reducing red tape associated with their trade and expediting

9. This equation is further complicated by the fact that carbon prices can be explicit, such as carbon taxes or emission trading schemes, but also implicit when they reflect the cost to society resulting from broader policy measures that have an impact on GHG emissions (OECD, 2013, pp. 11–15). Another approach could be to impose an internal (rather than border) tax that would be applied equally to imported and domestic goods failing to comply with certain environmental requirements.

administrative procedures. Finally, they can decide not to impose trade remedies such as countervailing duties, anti-dumping duties, and safeguard measures against climate-friendly goods, or at least to limit the use of such remedies through lesser duties and shorter time limits or subjecting them first to a public interest test (UNCTAD, 2014, p. 50).

### 3.2 Economic Incentives

#### *Removing Incentives for Carbon-Intensive Goods*

Economic incentives are another lever in the policy toolbox relevant to trade. A first approach is to remove, either unilaterally or collectively, perverse domestic incentives that support carbon-intensive trade, starting with subsidies to the production, transformation, or consumption of fossil fuels as currently envisaged under the G20 process, (G20, 2013; OECD & IEA, 2021) in the Glasgow Climate Pact (UNFCCC, 2021, paragraph 36), and in the Agreement on Climate Change, Trade and Sustainability negotiations (New Zealand Ministry of Foreign Affairs and Trade, n.d.).

Beyond fossil fuels, subsidies can also be removed when they encourage the production or consumption of—and subsequently trade in—carbon-intensive goods like livestock or the use of certain agricultural inputs like fertilizers and pesticides (Bellman, 2022). According to the Food and Agriculture Organization of the United Nations, the United Nations Development Programme, and the United Nations Environment Programme (UNEP), global support to agricultural producers was estimated at almost \$540 billion per year between 2013 and 2018, with two thirds considered as harmful to the environment, including by contributing to climate change. Such support measures could be reduced or repurposed to benefit more climate-friendly agricultural methods (FAO et al., 2021).

In addition to subsidies to production, governments can also commit to remove trade finance, including export credits and guarantees, for carbon-intensive goods (a number of European countries are already taking action in this respect).<sup>10</sup> Trade finance refers to credits, guarantees, and

financing provided by governments, private companies, and international development banks to reduce the risk to exporters. Environmental advocates have long called for improved environmental criteria and risk assessments in trade finance and for export credit agencies to pull out of specific fossil fuel projects (Deere Birkbeck, 2021b).

#### *Providing Incentives for the Production and Trade of Low-Carbon and Climate Adaptation Goods and Services*

Economic incentives can also be used to support the production or consumption of clean energy and energy-efficient and low-carbon goods and services, for example through research and development subsidies, electric vehicle tax rebates, and feed-in tariffs for the generation of clean energy. According to the International Renewable Energy Agency, subsidies to renewable energy accounted for \$128 billion in 2017, representing less than a third of support granted to fossil fuel energy, which distorts the market and trade in favour of more polluting energy sources (Taylor, 2020). Beyond the energy sector, subsidies can also promote the delivery of public goods—for example in the agricultural sector through environmental payments that are decoupled from production and by rewarding low-carbon or climate-resilient agricultural practices as well as general services such as research and development and extension services (Bellmann, 2022).

Another positive incentive could be to fast-track green patent applications to encourage and reward climate mitigation or adaptation innovations.<sup>11</sup> Efforts to encourage the diffusion of such innovations and affordable access to technologies are also needed. There are a range of proposals on approaches that would incentivize the sharing of key climate technologies, including patent pools, open non-exclusive licensing arrangements for government-backed research, reduced licensing fees, and donations of technologies for use in LDCs.

10. See for example Atkins (2021).

11. A number of intellectual property offices are already putting such systems in place in Australia, Brazil, Canada, China, Israel, Japan, South Korea, the UK, and the US (Dechezleprêtre, 2013).

### 3.3 Regulatory Measures

Domestic regulatory measures like environmental requirements, standards, labelling schemes, and government procurement policies favouring low-carbon goods and services are another set of policy instruments that can help trade deliver for climate. These measures and requirements can be both product- and production-related. Product-related requirements focus on the quality and the properties of the final good (e.g. energy efficiency requirements and maximum emissions on motor vehicles) whereas process and production methods-related requirements look at the manner in which goods are produced and which may not necessarily be reflected in the final product (e.g. labelling schemes that focus on the carbon footprint and organic production methods for agricultural products). The most common type of regulatory measures aimed at discouraging carbon-intensive production and trade are mandatory product requirements like minimum energy performance for electric appliances or mandatory targets for electric vehicle sales applied indiscriminately to domestic and foreign producers.<sup>12</sup>

Regulatory measures aimed at encouraging climate-friendly production and trade include green government procurement policies that favour goods based on their environmental footprint or performance. They can also take the form of mandatory or voluntary product or production standards such as labelling schemes for organically produced goods and deforestation-free value chains. Increasingly, these policy measures define the conditions, including process and production methods, that goods need to comply with to be traded internationally. As one of the first movers following the COP26 outcome, the EU published its proposal for a legislative framework that would only allow deforestation-free products to enter the EU market.<sup>13</sup> The proposed framework sets a “deforestation-free” standard for a number of global commodities of which the EU is a main consumer and that are known to cause forest loss and degradation like soy, beef, palm oil, wood, cocoa, and coffee. The standard is expected

to be implemented through mandatory due diligence rules on operators importing to the EU, supported by a “low, standard, or high risk” benchmarking system for countries of origin operated by the European Commission.

Voluntary sustainability standards can also be developed and implemented by the private sector. These include, for example, labelling schemes providing information on the GHG emissions or carbon footprint associated with certain goods. Initially developed by large retailers in the food chain and focusing mostly on emissions associated with air freighted products or food miles, these schemes have become more sophisticated over time and take more of a life-cycle approach. From a trade perspective, while voluntary standards reward producers able to comply, they also imply costs which can discourage producers, particularly in developing countries. Beyond the cost-benefit analysis of compliance, concerns have also been raised with respect to the transparency and interoperability of different standards as well as their credibility in terms of both the science underpinning their design and their conformity assessment techniques (Meliado, 2017). In spite of these shortcomings, standards have increased in importance in recent years, due in part to the emergence of international supply chains and changes in strategies adopted by large non-governmental organizations. They also increasingly fill a regulatory vacuum left by the inability of governmental initiatives to regulate on sustainability issues (Lee et al., 2019).

### 3.4 Support for Developing Countries

A key component of enhanced global cooperation on climate and achieving climate targets will be the provision of effective international support to developing countries to ensure that the cost of climate change adaptation and the transition to a low-carbon economy does not leave them more marginalized in global trade. Such trade-related measures should be designed to support a low-carbon transition in developing countries, build domestic resilience, enhance their participation in green

12. Such measures may also include production-related requirements as envisaged in ongoing discussions on deforestation-free value chains in Europe.

13. European Commission COM (2021) 76: Proposal for a regulation of the European Parliament and of the Council on the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010, 17 November 2021.

supply chains, and ensure a post-Covid-19 economic recovery that does not undermine climate goals.

In practical terms, the above could be achieved through enhanced trade-related capacity building under existing financing mechanisms such as the WTO-led Aid for Trade Initiative and the related Enhanced Integrated Framework (Keane et al., 2021). Assistance could focus on promoting economic diversification away from carbon-intensive sectors or supporting socially responsible fossil fuel subsidy reforms. It could also be targeted at promoting climate change mitigation and adaptation production methods, overcoming supply side capacity constraints, and complying with the growing array of environmental requirements in export markets. In practice, such an approach would imply building complementarities and synergies including co-financing arrangements with existing and future climate funds (Deere Birkbeck, 2021b; Deere Birkbeck, 2022; Monkelbaan et al., 2021, p22).

## 4. How is Climate Change Addressed in the World Trade Organization?

Issues of trade and climate change arise in a range of WTO processes. Many of the trade and trade-related policy measures identified in section 3 have arisen in the WTO including in discussions, negotiations, the implementation of agreements, and technical assistance and aid for trade. Figure 3 provides an overview of the different fora, entry points, and decision-making bodies where climate change has been addressed in recent years at the WTO.

The highest authority in the WTO is the Ministerial Conference, which involves representatives of all WTO members and generally meets at least every two years to take decisions on all matters under any of the multilateral trade agreements. In the interim, the General Council conducts the day-to-day work. It also convenes in two particular forms: as the Dispute Settlement Body to adopt panel reports under the dispute settlement mechanism, and as the Trade Policy Review Body to review members' trade policies under the Trade Policy Review Mechanism.

Beyond technical assistance and capacity building, providing incentives for the transfer and uptake of climate adaptation and mitigation technologies is another avenue for international support measures. In low-income countries, traditional channels of technology transfer such as trade and investment tend to result in suboptimal levels of technology diffusion and adaptation, not least due to limited absorptive capacities (Foray, 2009). This market failure calls for the provision of specific incentives and mechanisms in favour of these countries. At the WTO, it has prompted discussions on the extent to which international intellectual property rules are adequate to ensure appropriate technology transfer (Kelly et al., 2021). Besides intellectual property rules, technology transfer can also be incentivized, for example, through public-private partnerships that provide more flexible, non-exclusive, and affordable licensing arrangements for climate technologies.

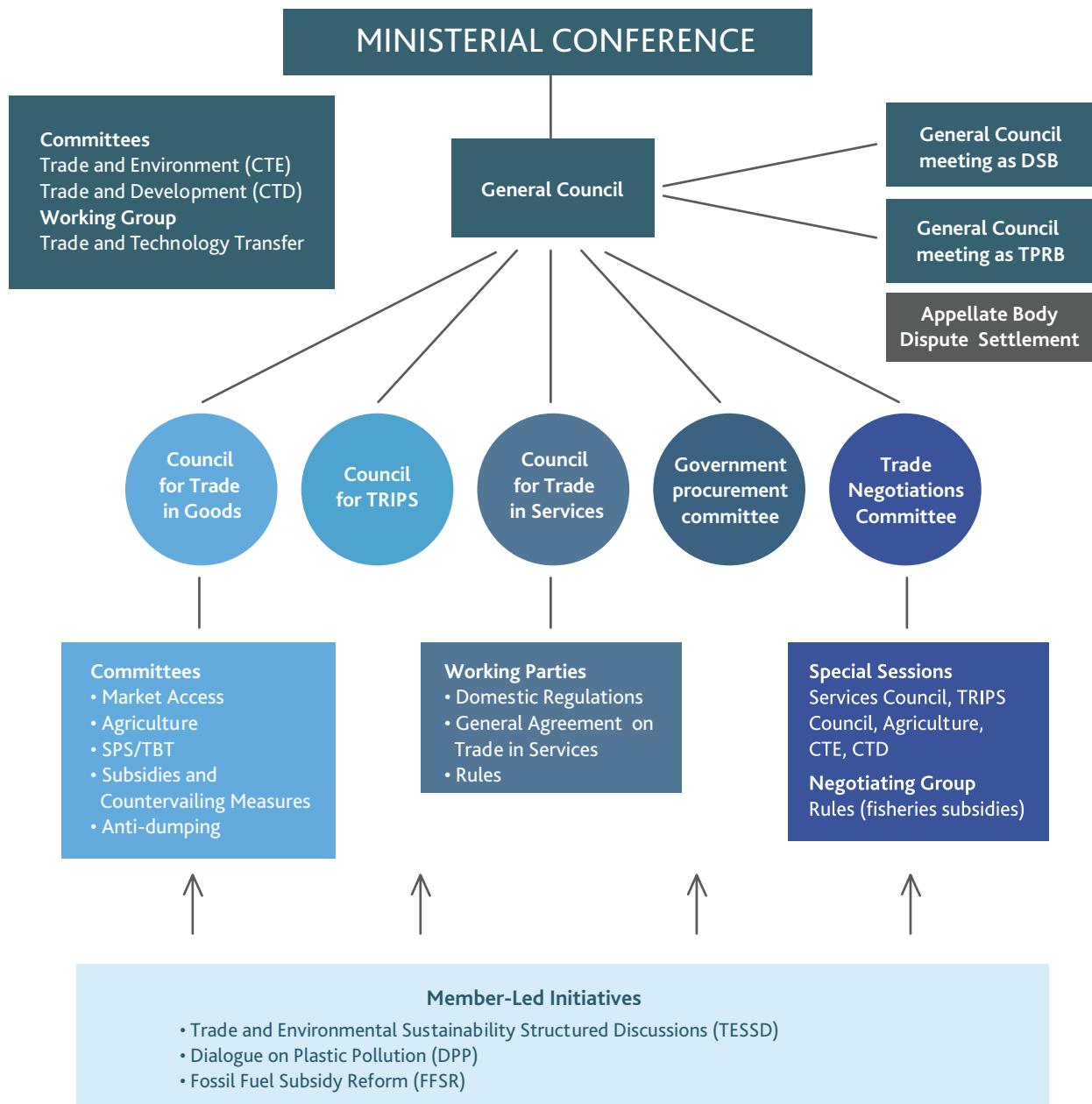
The WTO General Council delegates responsibility to three councils dealing respectively with trade in goods, trade in services, and trade-related aspects of intellectual property rights (TRIPS). Under each council, specific committees or working parties meet regularly to review the implementation of different agreements. These include, for example, the Committee on Agriculture charged with monitoring implementation of the WTO Agreement on Agriculture and the Committee on Technical Barriers to Trade (TBT) and the Committee on Sanitary and Phytosanitary (SPS) Measures charged with monitoring compliance with WTO disciplines in these areas. Committees which are not related to particular WTO agreements, such as the CTE and the Committee on Trade and Development, report directly to the General Council.

The negotiating and rule-making function of the WTO is performed under the Trade Negotiations Committee established at the launch of the Doha Round in 2001. Under the Trade Negotiations Committee, different committees

meet in “special sessions” indicating that they serve as the body to negotiate new rules. For example, negotiations aimed at developing new international disciplines on trade and environment-related issues have taken place under special sessions of the CTE.

Figure 3 also includes recent member-led initiatives bringing together different subsets of WTO members to foster cooperation on environmental sustainability. These initiatives provide additional spaces for addressing aspects of the trade and climate interface.<sup>14</sup>

Figure 3. Entry Points for Climate Change Discussions at the WTO



Note: DSB stands for Dispute Settlement Body and TPRB for Trade Policy Review Body.

Source: Bellmann et al. (2022).

14. For an in-depth discussion on the trade and environment debate at the WTO see Bellmann et al. (2022)

## 4.1 Compatibility of Climate Measures with the WTO “Rule Book”

The issue of the compatibility of climate measures with WTO rules spurs considerable debate. While the WTO has not ruled on any dispute related to the Paris Agreement, a number of cases have involved climate-related considerations, mostly focused on the discriminatory or trade-distorting aspect of certain clean energy-related policies.

Overall, WTO rules do not prevent members from implementing good faith policies to address climate change, including those identified in section 3 of this brief, provided they are not applied in a manner which constitutes an arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade.<sup>15</sup> This scope for environmental action under WTO rules has been confirmed on numerous occasions by WTO jurisprudence including the Appellate Body.<sup>16</sup> In practice, panels have refrained from questioning the environmental legitimacy of a challenged measure and have focused their analysis on whether those measures were applied in a manner that constituted disguised protectionism or an unjustifiable discrimination.<sup>17</sup>

To date, climate-related disputes that have arisen at the WTO include traditional trade remedy cases against allegedly subsidized or dumped clean energy products as well as subsidy cases involving, for example, local content requirements (see Box 1).<sup>18</sup> In these cases, the panels reiterated the legitimacy of domestic policies aimed at supporting clean energy production but questioned the fact that these were conditioned on the use of domestic inputs over imported ones. In other words, the problem was not related to the environmental objective but rather that the scheme

discriminated against imported components in the generation of clean energy.

Notwithstanding this reality, as WTO members develop domestic approaches and policies to promote climate action, observers have expressed concerns around possible tensions with trade rules, particularly when those schemes affect the export prospects of third countries. At a time when there is growing action among a diversity of countries to implement stronger climate policies, there are varying political views, perceptions, and legal opinions about the extent to which various trade-related environmental measures will be deemed WTO compatible. This generates concern among environmental advocates that countries will refrain from environmental action due to concerns about potential trade disputes. Alongside, there is also concern that the growing range of environment-related trade measures, as well as trade-related measures to advance climate action, may undermine the open, non-discriminatory principles of the multilateral trading system and generate significant trade tensions and a growing number of disputes, which may also hamper the cooperation on trade needed to tackle climate action.

In this context, some have suggested, for instance, that the WTO is not well equipped to solve disputes related to domestic policies linked to addressing climate change, prompting a range of proposals for ways forward. This includes a proposal for a WTO “climate waiver” (which would allow members to impose certain non-discriminatory trade-restrictive measures to advance ambitious and timely climate action that other members may perceive to violate WTO law) (see section 5.2), along with calls for consensus-building on principles or guidelines on the implementation of trade-related climate measures (see section 5.3) (Bacchus, 2017).

15. See Article XX of General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT]. See also, for example, Requests for Consultations by Canada, *European Communities – Measures Affecting Asbestos and Products Containing Asbestos*, WTO Doc. WT/DS135/1 (June 3, 1998).

16. See WTO (n.d.-b) for an overview of environment-related disputes at the WTO.

17. See, for example, Status Report, *Brazil – Measures Affecting Imports of Retreaded Tyres*, WTO Doc. WT/DS332/19 (September 15, 2009). In this case, Brazil had imposed a ban on imports of used and retreaded tyres arguing that the accumulation of waste tyres could lead to soil and ground water contamination and create breeding grounds for vectors of malaria or zika. The ban, which had been challenged by the EU, was found illegal by the WTO Appellate Body because Mercosur countries were exempt from the ban. It nonetheless recognized that the measure was necessary to protect human health and the environment. Following the dispute, Brazil reformed its policy by eliminating the Mercosur exemption in line with the Appellate Body’s recommendation.

18. See, for example, Communication from Canada, *Canada – Measures Relating to the Feed-in Tariff Program*, WTO Doc. WT/DS426/19 (May 6, 2013), and also Request for the Establishment of a Panel, *India – Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc. WT/DS456/20 (January 29, 2018).

## Box 1. Climate-Related Disputes in the WTO

### DS426: Canada – Measures Relating to the Feed-in Tariff Program<sup>19</sup>

In 2011, the EU challenged the legality of local content requirements in Ontario's feed-in tariff programme for the generation of clean energy which required wind and solar generators to source a minimum percentage of equipment in Ontario. The EU argued, among other things, that this was a prohibited subsidy. While the Appellate Body did not question the legitimacy of the feed-in programme itself, it recognized that the local content requirement was inconsistent with Canada's WTO obligations as it discriminated between imported and domestically produced goods.

### DS456: India – Certain Measures Relating to Solar Cells and Solar Modules<sup>20</sup>

In a similar case, the US challenged in 2013 the domestic content requirements included under the Jawaharlal Nehru National Solar Mission for solar cells and solar modules. While some observers praised the WTO panel's decision arguing that local content requirements are inefficient and expensive, some environmentalists have criticized an attempt to kill India's nascent solar industry (Economist Intelligence Unit, 2019).

## 4.2 Ongoing Discussions on Climate Change in WTO Regular Bodies and Processes

Trade-related policies adopted by WTO members to address climate change adaptation and mitigation, as introduced in section 3, are routinely discussed in the context of WTO committees responsible for monitoring compliance with existing multilateral trade agreements under the WTO. Discussions range from market access and TBT to subsidies and countervailing measures or intellectual property rights. In 2023, for example, the TBT Committee is planning to hold a dedicated workshop on climate and trade. In the context of these discussions, WTO members are required to notify existing and upcoming measures with trade implications. Other members can then raise questions regarding their implementation or design. This process essentially focuses on enhancing transparency while allowing members to raise specific trade concerns. It is not designed as a problem-solving exercise. It nonetheless provides a unique multilateral space to exchange information and address trade frictions in a pre-emptive, non-litigious, and cooperative manner.

One of the key ways to understand which issues WTO members are raising at the WTO is therefore to review climate-

related notifications in the WTO. Figure 4 provides an overview of measures notified between 2009 and 2020 with climate change, renewable energy, or energy efficiency as their stated objectives. It displays the number of notifications per year throughout the WTO, the countries making those notifications, the agreement under which the measures were notified, and the specific sectors they targeted. The data shows an average of nearly 300 notifications per year. The vast majority are on subsidies (including agricultural subsidies) followed by TBT (climate-related regulations, standards, and conformity assessment procedures). In terms of sectors, measures targeting manufacture and energy top the list followed by agriculture and services. Roughly a third of total notifications came from developing countries, and 64% from developed countries. LDCs represented only 2% of the notifications. This reflects the lower prevalence of such measures among the poorest WTO members but also probably a lack of capacity to regularly notify them to the WTO.

Finally, the WTO trade policy review mechanism offers a dedicated process for monitoring trade policy measures.<sup>21</sup> Members could harness this mechanism more systematically to increase transparency and understanding of other members' trade policies and practices including with respect to climate-related policies impacting trade.

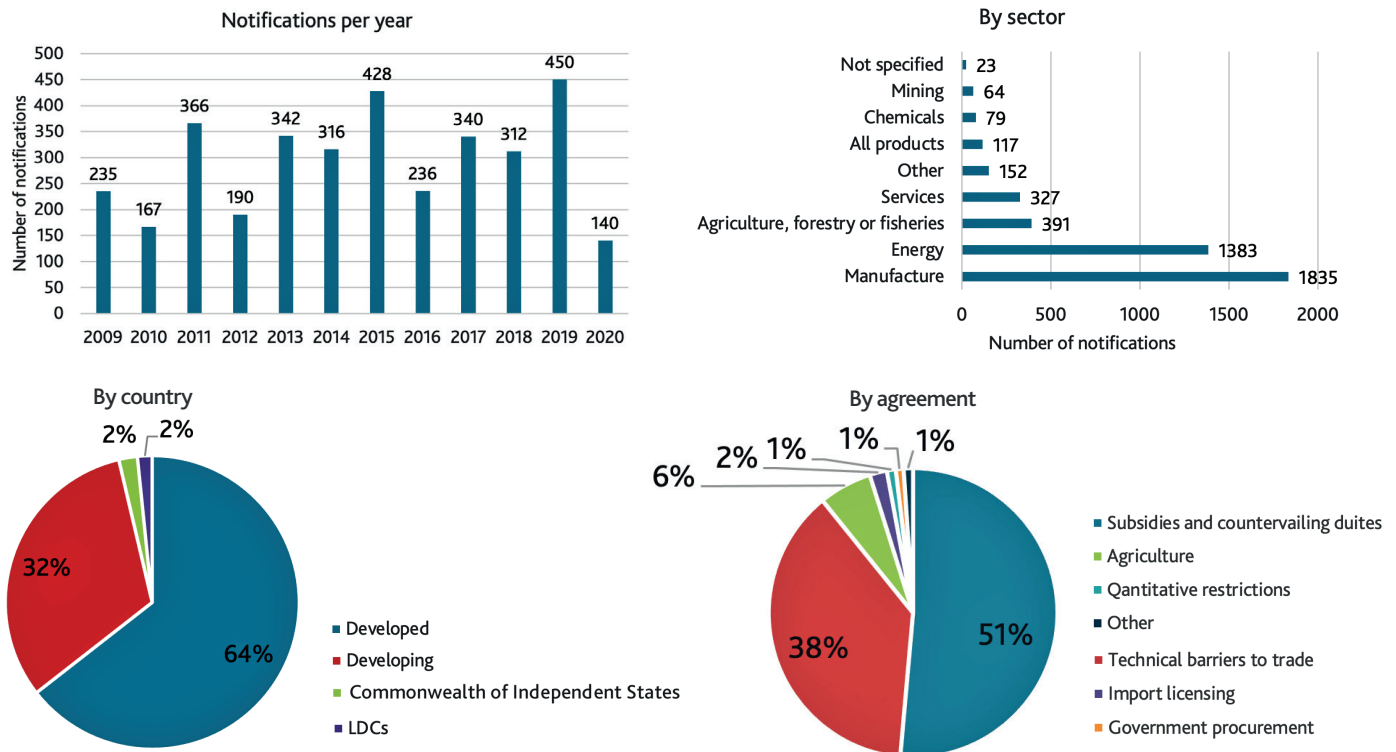
19. Communication from Canada, *Canada – Measures Relating to the Feed-in Tariff Program*, WTO Doc. WT/DS426/19 (May 6, 2013).

20. Request for the Establishment of a Panel, *India – Certain Measures Relating to Solar Cells and Solar Modules*, WTO Doc. WT/DS456/20 (January 29, 2018).

21. One of the WTO's core tasks is to conduct regular surveys of the national trade policies of its members with a view to enhancing transparency and thus improve the functioning of the multilateral trading system. The reviews are based on a report by the Secretariat and by the member and provide an opportunity for other WTO members to ask questions regarding existing trade policies implemented in the country under review.



Figure 4. Trends in the Climate Change-Related Notifications in the WTO (2009–2020)



Source: Author's elaboration based on WTO (n.d.-a).

Beyond monitoring and compliance with multilateral trade rules, discussions through the WTO's regular committees also offer a deliberative space to explore specific aspects of the trade and climate change nexus. Over the years, discussions at the CTE have provided a natural avenue to address a wide range of climate change-related issues from border carbon adjustments to labelling issues.<sup>22</sup> As a contribution to this discussion, a joint UNEP and WTO (2009) report on climate change generated, for the first time, focused exchanges on climate change in the WTO. The Working Group on Technology Transfer, set up in 2001 at the Doha Ministerial Conference, and the TRIPS Council provide venues to discuss concerns around the diffusion and absorption of climate technologies for mitigation and adaptation as well as how to balance the incentives that intellectual property regimes provide for innovation and the need to secure affordable access to

new technologies.<sup>23</sup> Meetings of both the Goods Council and the Committee on Market Access have seen discussions on the potential impact of the proposed EU Carbon Border Adjustment Mechanism unveiled in December 2019. Aid for trade to support trade-related challenges linked to climate mitigation and adaptation were raised in the Committee on Trade and Development in the context of the 2020–2022 Aid for Trade Work Programme.<sup>24</sup> The issue was also a main focus of the 2022 Aid for Trade Global Review, with members discussing options to integrate such concerns in aid for trade programmes in ways that reflect developing country views and sustainable development priorities (Deere Brikbeck, 2022).

Finally, the WTO Secretariat itself plays an important role in producing information and facilitating information flows that support dialogue on trade and climate change, both among

22. See, for example, Communication from Singapore, *Promoting Mutual Supportiveness Between Trade and Climate Change Mitigation Actions: Carbon-Related Border Tax Adjustments*, WTO Doc. WT/CTE/W/248 (March 30, 2011); see also Committee on Trade and Environment, Report of the Committee on Trade and Environment, WTO Doc. WT/CTE/18 (November 21, 2011), and also Committee on Trade and Environment, Report of the Meeting Held on 6 July 2011, WTO Doc. WT/CTE/M/52 (September 6, 2011).

23. See, for example, Ecuador's submission to the TRIPS Council, Communication from Ecuador, *Contribution of Intellectual Property to Facilitating the Transfer of Environmentally Rational Technology*, WTO Doc. IP/C/W/585 (February 27, 2013). In the Working Group on Transfer of Technology, see for example Communication from Switzerland, *Creating Incentives for the Transfer of Environmentally Sound Technologies (EST)*, WTO Doc. WT/WGTT/W/7 (May 9, 2003).

24. Committee on Trade and Development, *Aid for Trade Work Programme 2020–2022: Empowering Connected, Sustainable Trade*, WTO Doc. WT/COMTD/AFT/W/81/Rev.1 (July 9, 2020).

WTO members and with a broader international audience, including through the preparation of research reports, briefings, and presentations. For example, for COP26 in 2021 the WTO's Trade and Environment Division prepared five information briefs on trade and climate with a view to informing its members and a wider audience on the state of play regarding trade-related climate issues and measures (WTO, 2021b). The briefs provided information on trade policies notified by WTO members to address climate change, information on climate change-related provisions in regional trade agreements, trade resilience amid natural disasters, carbon emissions associated with international trade, and the role of trade in supporting climate change adaptation in Africa. The Secretariat also launched its 2022 World Trade Report on the climate and trade interface at the time of the 2022 United Nations Climate Change Conference (COP27) in Egypt (WTO, 2022). Finally, drawing on its database of environment-related trade measures, the Secretariat has prepared analysis on the climate-related measures undertaken by members.

### 4.3 Ongoing WTO Negotiations Relevant to Climate Change

In terms of the WTO negotiating agenda (as established by the 2001 Doha Ministerial Declaration), talks on environmental goods and services are most directly relevant to advance global climate objectives. Mandated by paragraph 31(iii) of the Doha Ministerial Declaration, these negotiations aim to reduce or, as appropriate, eliminate tariff and non-tariff barriers on environmental goods and services.<sup>25</sup> Immediately prior to the United Nations Climate Change Conference in Bali in December 2007, the EU and the US submitted a joint proposal at the WTO calling for the liberalization of trade for 43 climate-friendly goods, identified by the World Bank (2007) from an earlier list of 153 products submitted by several WTO members, and for the liberalization of services relevant to addressing climate change (ICTSD, 2007). Along with the rest of the Doha Round, these negotiations have been stalled for over a decade. A particular challenge in the discussions was the inability of members to agree

on the scope of the mandate and particularly on how to define the goods and services which should qualify as “environmental.” Another challenge is to agree on the depth and speed of liberalization commitments.

After several years of persistent disagreements among members, a subgroup of 46 WTO members launched in 2014 a plurilateral initiative for an Environmental Goods Agreement. During subsequent negotiations, participants identified around 300 goods for further liberalization—many of which related to cleaner and renewable energy, energy, and air pollution—but ultimately failed to reach consensus. Since December 2016, these negotiations have also stalled due to disagreement on the definition of environmental goods and the list of products to be liberalized.

However, co-sponsors of the Trade and Environmental Sustainability Structured Discussions (TESSD) (see section 4.4 below) agreed in their Ministerial Statement in December 2021 to explore opportunities and possible approaches for promoting and facilitating trade in environmental goods and services to meet environmental and climate goals. They also agreed to encourage the global uptake of new and emerging low-emissions and other climate-friendly technologies.<sup>26</sup> A dedicated working group under the initiative was established for that purpose.

In the meantime, parallel exploratory discussions have continued on services, with proposals identifying potential environmental services beyond the narrow definition of the current WTO services classification system. These talks have highlighted, in particular, the role of engineering, architectural, construction, distribution, and consulting services.<sup>27</sup> Beyond negotiations on environmental goods and services, parallel WTO deliberations on agriculture may offer a suitable channel to address issues around climate-smart agriculture, including green subsidies, even if negotiating proposals so far have not prioritized this aspect in particular. Similarly, negotiations on WTO rules as part of the Rules Negotiating Group may provide an avenue for discussions on green subsidies.<sup>28</sup>

25. World Trade Organization, Ministerial Declaration of 14 November 2001, WTO Doc. WT/MIN(01)/DEC/1, 41 ILM 746 (2002). These negotiations were split between the special sessions of the CTE dealing with environmental goods and the special session of the Council for Trade in Services dealing with environmental services.

26. World Trade Organization, Ministerial Statement on Trade and Environmental Sustainability of 15 November 2021, WTO Doc. WT/MIN(21)/6/Rev.2.

27. Communication from Australia, Canada, Mexico, New Zealand, Switzerland and the United Kingdom, *Exploratory Discussions on Market Access: Environmental Services*, WTO Doc. JOB/SERV/299/Rev.1 (Oct. 5, 2020).

28. On ongoing debate in this area is whether the Agreement on Subsidies and Countervailing Measures should reintroduce a category of non-actionable subsidies following the model of the now-expired Article 8, including a set of well-circumscribed environmental subsidies. See, for example, Horlick and Clarke (2016).

## 4.4 Member-Led Initiatives Addressing Climate Change

The trade and climate change debate in the WTO has received renewed impetus in the form of a series of member-led initiatives bringing together a subset of members (commonly referred to as co-sponsors) interested in environmental sustainability and fossil fuel subsidy reform. They aim at stimulating engagement, interest, and collaborative action on particular issues of concern. At this stage—and contrary to joint statement initiatives at the WTO on e-commerce and investment facilitation—they are not designed as a negotiating forum, but rather as a deliberative space where members can exchange experiences, best practices, identify areas for strengthened cooperation, and incubate concrete outcomes (Lim et al., 2020).

### *Trade and Environmental Sustainability Structured Discussions*

Initially launched in November 2020, the TESSD process aims to complement and support ongoing work on the environment at the WTO, including work underway at the

CTE and other relevant WTO bodies (WTO, 2020). In 2021 and 2022, discussions covered a wide range of issues at the intersection of trade and environmental sustainability including several aspects related to climate change. A number of co-sponsors of TESSD circulated written submissions (see Annex) or presented statements during meetings, which are open to all members and a range of non-state actors.

In December 2021, 71 WTO members co-sponsored a ministerial statement on trade and environmental sustainability—including the world's three largest trading powers (EU, China, and US) and a diversity of members from New Zealand, Chad, and Ecuador to Fiji, Albania, Australia, and the UK. The statement recognizes that international trade and trade policy can and must support climate goals, providing ministerial guidance on priorities and a road map for future work (see Box 2). To advance this agenda, the now 74 co-sponsors have created four informal working groups dealing respectively with trade-related climate measures, environmental goods and services, the circular economy, and subsidies, each led by two co-facilitators.

### **Box 2. The TESSD Ministerial Statement**

The TESSD statement recognizes that international trade and trade policy can and must support climate goals. It underscores the need for inclusive approaches that reflect the circumstances and specific development needs of the diversity of the WTO's membership and notes the importance of a just transition.

The statement provides ministerial guidance on priorities and a roadmap for future work. Ministers agree to hold a high-level event at the end of 2022 to take stock of progress achieved and adopt a workplan towards the Thirteenth WTO Ministerial Conference.

In the area of climate change, the statement calls for dedicated discussions on how trade-related climate measures can best contribute to climate goals and commitments while at the same time being consistent with WTO rules and principles. It instructs participants to explore opportunities and possible approaches to promote and facilitate trade in environmental goods and services to meet climate goals, including through addressing supply chains and regulatory elements. It also calls for encouraging the global uptake of new and emerging low-emission and other climate-friendly technologies.

Ministers further agreed to identify and compile best practices and explore opportunities for voluntary actions and partnerships to ensure that trade and trade policies contribute to a more resource-efficient circular economy and sustainable supply chains. On subsidies, it supports continued discussions on the environmental effects and trade impacts of support measures and the role of the WTO in addressing them. Finally, regarding developing countries and LDCs, the statement encourages support for technical assistance and capacity building on trade and environmental sustainability.<sup>29</sup>

29. World Trade Organization, Ministerial Statement on Trade and Environmental Sustainability of 15 November 2021, WTO Doc. WT/MIN(21)/6/Rev.2.

30. World Trade Organization, Fossil Fuel Subsidies Reform Ministerial Statement of 12 December 2017, WTO Doc. WT/MIN(17)/54.

### ***Fossil Fuel Subsidy Reform***

At the Eleventh WTO Ministerial Conference in 2017, 12 countries led by New Zealand issued a joint Ministerial Statement on Fossil Fuel Subsidy Reform to “advance discussion in the World Trade Organization aimed at achieving ambitious and effective disciplines on inefficient fossil fuel subsidies that encourage wasteful consumption, including through enhanced World Trade Organization transparency and reporting.”<sup>30</sup> At COP26, the Glasgow Climate Pact included the strongest international statement yet on the importance on fossil fuel subsidy reform, calling on countries to accelerate “efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies” (UNFCCC, 2021). In the following weeks, 45 members co-sponsored a ministerial statement in the WTO on fossil fuel subsidy reform, bringing together industrialized

countries, including G7 members such as the EU and the UK, with a number of developing countries, including small island developing states (see Box 3).<sup>31</sup>

Today, the initiative brings together 47 co-sponsors and aims to elaborate concrete options for advancing the fossil fuel subsidy reform at the WTO ahead of the Thirteenth WTO Ministerial Conference. With the support of stakeholders, this work seeks to build understanding of current activities in other international processes, discuss development issues and perspectives from developing countries, including lessons from ongoing reform experiences, and share updates on data and policy development at the national, regional, and global level.

#### **Box 3. The Fossil Fuel Subsidies Ministerial Statement**

In 2021, proponents of fossil fuel subsidy reform issued a ministerial statement with support from 45 co-sponsors. In the statement, ministers agree to seek the rationalization and phase-out along a clear timeline of inefficient fossil fuel subsidies that encourage wasteful consumption. They encourage remaining WTO members to join in these efforts.

The statement recognizes the need to take fully into account the specific needs and conditions of developing countries and to minimize the possible adverse impacts of reform on their development. In terms of activities, co-sponsors agree to share information and experiences to advance discussion in the WTO aimed at achieving ambitious and effective disciplines on fossil fuel subsidies, including through enhanced transparency and reporting. Finally, the statement calls for the elaboration of concrete options to advance this issue in advance of the Thirteenth WTO Ministerial Conference.<sup>32</sup>

## **5. The Road Ahead: Future Needs and Opportunities for Climate Dialogue at the World Trade Organization**

Governments can take a range of trade-related policy measures to deliver climate objectives. Countries can pursue many of the options highlighted in section 3 unilaterally. To the extent that climate policies are designed as good faith

environmental policies and do not discriminate arbitrarily between countries where the same conditions prevail, they will most probably not violate existing WTO laws.

31. Co-sponsors of the December 2021 ministerial statement include Albania, Chile, Costa Rica, EU, Fiji, Iceland, Liechtenstein, Moldova, Republic of, Montenegro, New Zealand, North Macedonia, Norway, Panama, Switzerland, Tonga, United Kingdom, Uruguay, and Vanuatu.

32. World Trade Organization, Ministerial Statement on Fossil Fuel Subsidies of 14 December 2021, WTO Doc. WT/MIN(21)/9/Rev.1.

However, in today's globalized economy, characterized by internationally integrated value chains, addressing transboundary environmental challenges such as climate change requires coherent trade policy approaches and international cooperation, both to avoid creating unnecessary barriers to trade and to enhance the effectiveness of policy measures.

For example, harmonizing energy efficiency standards across jurisdictions not only minimizes trade frictions, it also creates strong incentives to scale up the diffusion and uptake of energy-efficient solutions to reduce GHG emissions (Yada et al., 2017).<sup>33</sup> Concerted action can also help address concerns about leakage or loss of competitiveness and make climate mitigation measures more acceptable politically. In short, harnessing trade and trade policies to advance climate action in ways that are ambitious and fair will not only require effective domestic policies, it will also largely benefit from international collaboration.

The multilateral trading system provides a unique space to advance cooperation at the nexus of trade and climate change, including the discussions in different WTO bodies and the member-led initiatives on environmental sustainability and fossil fuel subsidy reform.

To be credible and effective in bolstering cooperation on climate and trade in the multilateral setting, efforts in the member-led initiatives will need to sustain and expand the engagement of a wide range of countries and demonstrate that they can deliver concrete outcomes in the short to medium term. To engage economies and other developing countries, including LDCs, there will need to be concrete proposals and initiatives to address the challenges of a just transition.

Where governments identify that new rules—or clarifications of existing rules—or new market access commitments are the way forward to tackle specific climate-trade challenges, the prospects of success at the multilateral level will be highest if there are provisions on topics such as longer

implementation periods, appropriate special and differential treatment provisions, technology transfer, and comprehensive aid for trade packages. Moving beyond binding market access commitments or efforts to achieve consensus on rules, an alternative or complementary approach is to explore other forms of collaborative outcomes that may be more easily advanced politically and generate more practical outcomes. The following sections explore possible options for action at the multilateral level.

## 5.1 Progress Through Market Access and Rules?

A first option is to pursue binding climate-related commitments in the form of new market access concessions or international rules at the WTO. This, however, would require consensus among the whole, or at least a critical mass, of the WTO membership (such as in the case of plurilateral market access negotiations). While such legally binding and enforceable outcomes have the advantage of providing predictability and legal security, experience has shown that achieving these types or results is time-consuming and politically difficult.

There are nonetheless important proposals on the table that warrant consideration and that members may seek to advance, including through the regular work of WTO committees and through the member-led initiatives. Some members are, for instance, have been advocating for multilateral or plurilateral negotiations to promote and facilitate trade in environmental goods and services. Members could also agree on specific disciplines on fossil fuel subsidies or domestic support provided to carbon-intensive goods. They can prohibit remedial action on certain forms of green subsidies by creating a category of non-actionable subsidies or prevent the use of trade remedies against certain climate-friendly goods. There have also been calls for a WTO ministerial declaration on TRIPS and climate change with a view to facilitating access to patent-protected critical climate technologies (UNCTAD, 2021b).

33. The global GHG savings potential resulting from best practice policy harmonization of product energy efficiency standards is estimated at around 7% of all energy-related emissions from all sectors in 2030.

In seeking to spur dialogue and cooperation on ways forward, co-sponsors of the TESSD have agreed in their work plan to intensify discussions on the relationship between trade and climate measures, and also to explore opportunities and possible approaches to promote and facilitate trade in environmental goods and services, including to meet climate goals. The approach to environmental goods and services set out in their ministerial statement includes, but is not limited to, tariff liberalization or market access considerations, but envisages a more comprehensive approach, including with a focus on the priorities of developing countries. In their discussions, the co-sponsors have signalled the importance of exploring “opportunities and possible approaches for promoting and facilitating trade in environmental goods and services to meet environmental and climate goals, including through addressing supply chain, technical and regulatory requirements.”<sup>34</sup>

## 5.2 Progress Through a Climate-Related Exception?

A second option is to agree on a waiver or “peace clause” for climate action with respect to certain WTO provisions. As discussed in section 4, some observers have argued that the WTO is not well equipped to solve the vast array of disputes they predict will arise around trade-related climate change measures. To avoid highly politically charged disputes being brought to the WTO that could test the limits of the dispute settlement system, they propose a “climate waiver.” This waiver would allow members to impose certain non-discriminatory trade-restrictive measures that aim to advance ambitious climate policies, including potentially in instances where their compatibility with WTO law is uncertain or would be otherwise contested. Similar proposals have called for a peace clause that would clearly define and expand policy space for climate and development initiatives, giving countries—particularly developing countries—the assurance that they will not face disputes for policies or initiatives to foster, for example, their renewable energy sectors or promote green jobs (UNCTAD, 2021b).

While these approaches would not require changes to existing WTO rules or schedules of commitments, they would still require consensus among WTO members (or a three-quarters majority in the case of a waiver), making such proposals relatively difficult to implement in practice—unless they are implemented on a voluntary basis by a subset of WTO members.

## 5.3 Progress Through Non-Binding Principles, Guidelines, and Pledges?

A third possibility for governments in the WTO context is to establish best-effort, non-binding commitments. Such soft law approaches (i.e. agreements, principles, or declarations that are not legally binding) will not only be easier to achieve than binding agreements among the WTO’s full membership, or even subsets of members, but could also be a more effective way to address some of the climate-trade intersections and challenges at hand. Soft law commitments could, for instance, take the form of set of common principles and best practices that provide guidance to members when designing and implementing trade-related climate measures.

Already, some observers have proposed that governments should devise a set of principles and best practices for the elaboration and implementation of border carbon adjustment measures, so as to reinforce the scope for ambitious action to achieve legitimate environmental objectives (like climate mitigation and adaptation) while avoiding unnecessary barriers to trade (e.g. Cosbey, 2021). Similarly, non-binding commitments among members to follow good regulatory practices or international guidelines could be pursued in other areas where governments are establishing trade-related climate measures, ranging from regulations, standards, and conformity assessment procedures to a suite of green industrial policy measures. WTO precedents for such non-binding outcomes exist, such as in the WTO TBT Committee where members have discussed a non-exhaustive list of voluntary mechanisms and related principles of good regulatory practice for the implementation of the TBT Agreement.<sup>35</sup>

34. World Trade Organization, Ministerial Statement on Trade and Environmental Sustainability of 15 November 2021, WTO Doc. WT/MIN(21)/6/Rev.2.

35. See, for example, Wijkström (2015).

Further, outcomes could include specific pledges or voluntary actions by WTO members, reinforced through peer pressure review mechanisms. Interested members could undertake voluntary collective action to reduce GHG emissions associated with international transport, promote deforestation-free international supply chains, or promote and facilitate trade in specific goods and services that can help achieve climate goals. They could also involve standstill commitments on new fossil fuel subsidies or commitments to end trade finance for fossil fuel expansion. Such pledges or voluntary action, ideally pursued by a diversity of countries, would send a strong political signal, deliver concrete climate benefits, and encourage wider action on trade and climate change. The CTE is a key forum through which governments could formally exchange views and table proposals on soft law options, while harnessing the TESSD process as a vehicle for elaborating ideas, enabling the informal dialogue critical to shared action, and incubating collaboration.

#### 5.4 Learning and a Space for Dialogue as Outcomes

An often-overlooked outcome of WTO processes is the process dialogue and of learning by governments. Key to avoiding trade-related tensions or constraints on climate action is for governments to understand the climate and trade-related challenges that other members face, consider the implications of their policies and measures on third parties, and identify opportunities to work together. Even in the absence of new rules or market access commitments (which many continue to see as the key meaningful “deliverables” of the multilateral trading system), the value of ongoing dialogue in multilateral settings around implementation of existing commitments, challenges, and opportunities for improvements should not be underestimated. Ultimately, the purpose of international trade cooperation and international climate cooperation is to spur action and reforms at the national level in countries that will achieve shared goals and international

commitments, such as on climate mitigation and adaptation, and to do so in ways that do not unnecessarily harm trade but rather support economic opportunities for all countries. To the extent that WTO processes provide a vehicle for countries to share experiences, policy options, and lessons learned in ways that spur action at the national level, this can be considered a positive outcome of the WTO process. While its flaws are well known, the WTO is currently the most inclusive forum where climate and trade issues are on the table for discussion. Although the OECD, G7, and G20 each have important work underway, none offers the opportunity for open discussions among such a diversity of countries.

Beyond technical discussions, there is also a lack of a multilateral processes for high-level political discussion on climate and trade necessary to galvanize action to ensure international trade supports climate ambition and fosters cooperation in the face of competitiveness and sustainable development concerns. In recognition of this need, Ecuador, the EU, Kenya, and New Zealand convened in June 2022 a diverse group of ministers alongside MC12 to explore the idea of an inclusive Trade Ministers Coalition on Climate Action (TESS, 2022). Such a coalition could provide a much-needed focal point for constructive efforts to ensure that trade and trade policy work for climate mitigation and adaptation. It would provide a vehicle to ensure that climate actions do not unnecessarily harm trade, unfairly burden developing countries, or exacerbate trade tensions (Deere Birkbeck, 2021b). It would ideally engage 40 trade ministers, including G20 members that are the main contributors to global GHG emissions, as well as countries at different levels of development from all regions. This inclusive approach would enable the needed involvement of countries most vulnerable to the impacts of the climate crisis, as well as those particularly impacted by trade-related action on climate and countries championing constructive efforts to align trade agendas with climate goals.

## 6. Conclusion

Addressing the urgent imperative of climate change mitigation and adaptation requires enhanced policy coherence between trade and climate policymaking, and stronger international cooperation. This policy brief has emphasized that the multilateral trading system offers a wide range of entry points for members to address issues at the intersection between trade and climate change mitigation and adaptation. Work under the different WTO bodies described in this brief provides a critical space to review existing policies, exchange information, discuss best practices, negotiate, and litigate when necessary.

In addition, recent ministerial statements on environmental sustainability and fossil fuel subsidy reform each establish goals, policy guidance, and work plans that pave the way for efforts to foster dialogue, build shared understandings, incubate cooperation, and stimulate action among interested members. A core priority for work on climate and trade at the WTO is to focus attention on the urgent need for trade and trade policies to support ambitious climate action, while ensuring inclusive discussion among a wide range of members, including developing and least developed countries, with outcomes that are fair and contribute to a just transition.

## ABBREVIATIONS

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CO <sub>2</sub>	Carbon Dioxide
COP26	26th session of the Conference of the Parties
CTE	Committee on Trade and Environment
EU	European Union
FACT	Forests, Agriculture and Commodity Trade
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GSP	Generalised Scheme of Preferences
ICAO	International Civil Aviation Organization
IMO	International Maritime Organization
LDC	Least Developed Country
MC12	Twelfth WTO Ministerial Conference
OECD	Organisation for Economic Co-operation and Development
SPS	Sanitary and Phytosanitary
TBT	Technical Barriers to Trade
TESSD	Trade and Environmental Sustainability Structured Discussions
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
US	United States



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## ANNEX. Climate-Trade Topics Raised for Discussion in the TESSD

Environmental topics	Proponent (s)	Submission quote
<b>Trade and environment interface</b>		
Environmental goods and services	Canada	INF/TE/SSD/W/3
	Switzerland	INF/TE/SSD/W/4
	Iceland	INF/TE/SSD/W/5
	UK	INF/TE/SSD/W/6
	EU	INF/TE/SSD/W/7
	Korea	INF/TE/SSD/W/8
	Australia, Korea, Singapore	INF/TE/SSD/W/9
	Japan	INF/TE/SSD/W/10
Regulatory issues	Japan	INF/TE/SSD/W/10
Compatibility between environmental measures and multilateral trade rules	Korea	INF/TE/SSD/W/8
	Australia, Korea, Singapore	INF/TE/SSD/W/9
Greening Aid for Trade	Switzerland	INF/TE/SSD/W/4
	EU	INF/TE/SSD/W/7
Enhancing the transparency function of the CTE	EU	INF/TE/SSD/W/7
<b>Climate change</b>		
Border carbon adjustment measures	Canada	INF/TE/SSD/W/3
	EU	INF/TE/SSD/W/7
	Japan	INF/TE/SSD/W/13
Trade-related aspects of climate change mitigation and adaptation	Canada	INF/TE/SSD/W/3
	Switzerland	INF/TE/SSD/W/4
	UK	INF/TE/SSD/W/6
	EU	INF/TE/SSD/W/7
	Japan	INF/TE/SSD/W/10
Decarbonizing supply chains	UK	INF/TE/SSD/W/6
<b>Harmful environmental subsidies</b>		
Fossil fuel subsidies	New Zealand	INF/TE/SSD/W/1
	Switzerland	INF/TE/SSD/W/4
	UK	INF/TE/SSD/W/6
	EU	INF/TE/SSD/W/7
Industrial subsidies causing environmental harm	Iceland	INF/TE/SSD/W/5
Agricultural subsidies causing environmental harm	Brazil, Ecuador, El Salvador, Paraguay	INF/TE/SSD/W/12
<b>Circular economy and resource efficiency</b>		
Circular economy and plastic pollution	Canada	INF/TE/SSD/W/3
	Switzerland	INF/TE/SSD/W/4
	UK	INF/TE/SSD/W/6
	EU	INF/TE/SSD/W/7
<b>Biodiversity and forestry</b>		
Sustainable use and trade of biodiversity	Canada	INF/TE/SSD/W/3
	Switzerland	INF/TE/SSD/W/4
Sustainable commodities	UK	INF/TE/SSD/W/6

Source: Author's elaboration based on TESSD submissions in 2021.

## About TESS

By promoting dialogue on trade, the environment, and sustainable development, the Forum on Trade, Environment & the SDGs (TESS) supports a trading system that addresses global environmental crises and advances the United Nations Sustainable Development Goals. Our work catalyses inclusive, evidence-based, and solutions-oriented debate, facilitates engagement between policy communities, and inspires governments and stakeholders to build consensus for meaningful action on trade and trade policies that work for people and the planet. TESS is a partnership of the Geneva Graduate Institute and the United Nations Environment Programme (UNEP), housed at the Geneva Trade Platform.

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