GREENING INTERNATIONAL TRADE

PATHWAYS FORWARD

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About the paper

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Contents

Executive Summary

Discussions of environment-trade issues are notoriously complex, opaque and cluttered with legalistic and technical language. Amidst growing pressures for a greener, fairer global economy, environmental stakeholders require information and tools to engage effectively in the trade policy arena. Stakeholders keen to promote green trade face common questions about priorities and strategy, including:

- What updates in the content, implementation and interpretation of trade rules could support green trade?
- Beyond improved trade rules, what other pathways and opportunities could be used to foster cooperation and action on green trade?
- How can trade policy better incentivize, require and support business to prioritize green products, production, and supply chains?
- How can the green trade agenda meet the needs of developing countries?
- How can green trade agendas address the challenges and opportunities for developing countries and respond to their wider sustainable development priorities?
- Where are the political opportunities and prospects for success greatest in 2021, and what kind of alliances would progress require?

To help facilitate progress, *Greening International Trade* serves as a non-technical entry point for actors keen to navigate the environment-trade policy conversation and promote more sustainable trade. It maps the current state of play and identifies a range of possible pathways forward.

Greening International Trade argues that advancing green trade requires a reframing of the environment and trade narrative around a forward-looking Environment and Trade 2.0 agenda that:[1]

- Safeguards and strengthens ambitious environmental policies nationally and internationally,
- Harnesses trade and trade policy to incentivize and drive green economic transformation,
- Reduces negative environmental impacts of international trade and trade policies,
- Supports sustainable, resilient, and fair international supply chains,
- Addresses the wider sustainable development priorities of developing countries and supports a just transition,
- Strengthens alignment of national trade policymaking with environmental goals and sustainable development priorities, and
- Supports democratic, transparent, and accountable processes of trade policymaking.

Making this agenda a reality requires a four-pronged strategy.

First, greening trade must start with strong environmental laws, regulations, institutions, and enforcement nationally, complemented by international environmental agreements that set out shared goals, targets, and obligations, including minimum standards and trade measures where relevant.

Second, in terms of trade policies and agreements, governments can green trade through a strategic approach to measures and tariffs applied at their borders. Governments can also update trade rules and policies relevant to environmental action 'behind the border.' In addition to bolstered environmental and sustainable development chapters in trade agreements, this requires work to ensure the core provisions and commitments defined in trade agreements support environmental goals and incentivize sustainable production and consumption. In each of these areas, the report highlights the importance of consultation with trading partners, transparency, fairness, and approaches that respond to the wider sustainable development priorities of developing countries.

Third, looking beyond trade rules, the report highlights a range of additional pathways to stronger intergovernmental cooperation on green trade that require attention, such as green Aid for Trade and trade finance, improved monitoring, green trade classifications and sustainability impact assessments.

Fourth, the report highlights the opportunities presented by stakeholder initiatives to green trade and supply chains, along with a number of challenges, and identifies how trade policy frameworks could support and complement these.

Introduction

Faced with compounding crises of climate, nature loss, and pollution, the urgent need for a green global economy is rising on the international political agenda. At the same time, the world faces a profound equity problem: acute social and economic inequalities between and within countries are worsening alongside vastly different levels of vulnerability to environmental risks and degradation. The COVID-19 pandemic has shown us the degree to which these issues are inter-dependent and has spurred calls to 'build back better.' From across the political spectrum and from all corners of the world, the vision of recovery is one that is sustainable and equitable.

As governments, civil society and businesses grapple with how to achieve the deep and rapid economic transformations that environmental sustainability requires,[2] the relevance of international trade and trade policies to this green economic recovery is increasingly clear. A growing range of environmental and other actors know that trade and trade policies are relevant to achieving their environmental ambitions nationally and globally. And the policy environment right now offers stronger opportunities for positive engagement on environment-trade intersections than for many years. To seize this moment, many questions need to be answered. Most central among these are: How can we ensure that trade and trade rules do not provoke or exacerbate environmental harm? How can international trade rules, policies and institutions be harnessed to support progress on shared environmental goals and higher environmental ambition? And which existing international arrangements – national, bilateral, regional, plurilateral or multilateral – are the most promising building blocks for further improvements?

Greening International Trade aims to help environmental stakeholders engage effectively in the trade policy arena, bridging the gap that exists because discussions of environment-trade issues are notoriously complex, opaque, and cluttered with legalistic and technical language. It addresses an array of recurring questions that stakeholders keen to promote green trade encounter about priorities and strategy, including:

- What updates in the content, implementation and interpretation of trade rules could support green trade?
- Beyond improved trade rules, what other pathways and opportunities could be used to foster cooperation and action on green trade?
- How can trade policy better incentivize, require and support business to prioritize green products, production, and supply chains?
- How can green trade agendas address the challenges and opportunities for developing countries and respond to their wider sustainable development priorities?
- Where are the political opportunities and prospects for success greatest in 2021, and what kind of alliances would progress require?

To help facilitate progress, this paper serves as a non-technical entry point for actors who are keen to navigate the environment-trade policy conversation and promote sustainable trade. It maps the current state of play and identifies a range of possible pathways forward.

Policy opportunities for greening trade

2021 is a significant year for international environmental diplomacy – most notably because of negotiations for a post-2020 Global Biodiversity Framework in October 2021 and the 26th UN Climate Change Conference of the Parties (COP26) in December 2021. The UN Food Systems Summit is also poised to be a key event for boosting the sustainability of food and farming. In each of these international processes, there are important trade-related opportunities and challenges to be addressed. At the same time, countries are working to advance progress on the UN Sustainable Development Goals (SDGs), which provide an overarching policy framework for advancing environmental, economic and social priorities in tandem. Trade cooperation is identified as a core 'means of implementation' to achieve them.

Recognition of the need to integrate global economic and environmental policy making is growing,[3] and 2021 offers new openings to advance environmental goals in the international trade policy arena. Among major powers, the European Union (EU) is renewing efforts to align its trade policy with its environmental ambitions, the Biden administration has pledged to re-engage at the World Trade Organization (WTO) and has already reignited its multilateral diplomacy on environment, and China has made several high-level commitments on environmental action. Together, these developments signal that the prospect for political engagement on environment-trade intersections is stronger than in years. Many developing countries are also more open to cooperation on the environmental dimensions of international trade than in the past – especially those with green exports to promote and those already facing the economic costs of environmental degradation that are fearful of the risks of further environmental shocks on their production, infrastructure and trade.

In their preparations for the 2021 ministerial meeting of the UN Conference for Trade and Development (UNCTAD), governments have highlighted climate and the environmental

crisis as one of three key themes for attention.[4] At the WTO, the launch of Structured Discussions on Trade and Environmental Sustainability in November 2020 provides an opportunity for governments and stakeholders to advance a forward-looking agenda. While negotiations at the WTO have long been stymied – and trade tensions between major players remain significant – the appointment of a new WTO Director General with strong development credentials and a declared commitment to environmental goals is also encouraging.

Meanwhile, a growing range of companies recognise the array of environmental threats to supply chain resilience; the importance of improved environmental performance to their long-term business prospects; and the business potential of global markets for green products. Underlining that business needs a predictable and transparent trade policy framework to incentivise investment in green production and technologies,[5] and to compete effectively in green markets, a number of business coalitions have joined the call for aligning trade policy with environmental goals.

In short, the political momentum in favour of greening trade is building.

The challenges

International trade diplomacy has, however, long struggled to keep up with changing economic circumstances, policy goals, and public expectations. Considerable political challenges also complicate the task of greening trade.

First, international trade diplomacy must overcome enduring tensions among major trading partners on a range of topics, most obviously between the US and China, but also between the EU and the US, India and China, and between the US and many other countries. In the context of COVID-19, the challenges many developed and developing countries face in accessing critical supplies – of food, energy and medicines – is stretching already frayed notions of international solidarity and jeopardises the potential for international cooperation on trade, on environment and on their intersection.

Second, trade policies and rules are key vehicles through which governments will seek to address issues of competition and fairness in the green global economy – and this may intensify in the context of post-COVID recovery. Important issues of fairness will also arise: developed countries will have far more resources to allocate to greening their economies than developing countries, and few currently meet their commitments to providing environmental and development financing to developing countries. Countries will also pursue a range of different policy and regulatory approaches to meeting shared environmental goals. International trade diplomacy will thus face a triple challenge of promoting higher environmental ambition, while also providing scope for regulatory diversity in how to achieve it, and at the same time minimizing unnecessary or unfair barriers to trade.

A third challenge relates to the process of trade policymaking. Civil society movements underline that large corporate interests have long dominated trade policymaking nationally as well as international trade diplomacy. The limited voice of the diversity of relevant environmental stakeholders and business interests in both developed and developing countries in the definition of national economic goals and in trade policymaking limits the scope for green trade policymaking. At the same time, among civil society groups, approaches to green trade vary widely and there are divergent visions on what sustainability means and requires. There are also very different visions of what a green economy looks like, let alone agreement on the best path to get there.

Trade policy does not occur in a vacuum, but rather exists in a broader, dynamic, and permanently contested context that requires simultaneous attention to the economic and social dimensions of sustainability. Governments intent on forging a greener trade policy are, at the same time, trying to meet the needs of many competing constituencies at home, facing longstanding questions from their citizens about how international trade affects local jobs, the resilience of supply chains, access to essential goods and so on. In addition, to achieve a successful greening of trade, trade policies need to be supported and integrated with flanking policies relating to investment, innovation, intellectual property, finance, debt relief and development assistance.

Key messages

Advancing green trade requires a reframing of the environment and trade narrative and a forward-looking Environment and Trade 2.0 agenda that:[6]

- Safeguards and strengthens ambitious environmental policies nationally and internationally,
- Harnesses trade and trade policy to incentivize and drive green economic transformation,
- Reduces negative environmental impacts of international trade and trade policies,
- Supports sustainable, resilient, and fair international supply chains,
- Addresses the wider sustainable development priorities of developing countries and supports a just transition,
- Strengthens coherence of national trade policies with environmental goals and priorities, and
- Supports democratic, transparent, and accountable processes of trade policymaking.

As governments seek to juggle pressures of competition with the quest for environmental cooperation, views on

which trade policy measures and practical efforts have the greatest potential to advance environmental goals vary widely, as do views on where best to pursue these. Looking ahead, it will be important to pursue nuanced approaches tailored to the countries and trading partners in question: the priorities and most effective strategies for greening trade will differ among North–South, North–North, and South–South trade arrangements and will depend on their relative size, economic circumstances, power relations and environmental performance. The environment-trade priorities for the US–China context, for instance, will be different to those for a UK–US trade deal, an EU–Indonesia deal, or for intra-African trade. A viable green trade agenda at the multilateral level will also demand a distinct approach that blends environmental ambition with inclusiveness in the context of the wider sustainable development and trade challenges facing developing countries.

This paper cautions against generalizations about the behaviour and interests of developing countries on environment and trade, which too often present a dichotomy between developed and developing economy interests. Like developed countries, many developing countries pursue environmental policies today out of awareness of the urgent need for action, self-interest, and demand from domestic constituencies. Most are keen to establish and bolster green sectors and international market share, to participate in and reap more value from international supply chains, and to avoid marginalization in a greener global economy. A growing number of develeoping countries are adopting environmental-driven practices for export-oriented sectors, even if not extended to the domestic economy, are concerned about environmental risks to their trading prospects, and are actively interested in promoting a green trade agenda.

That said, important North–South tensions remain in trade and on environment–trade issues as well. Here, context is vital: many developling countries argue that rules on trade have long been tilted against them and limit their policy space for economic development,[7] and that developed countries have failed to address key development concerns. Developing countries have a strong interest in ensuring that environment-trade policies and rules are designed in ways that support green transformation and just transition in their economies, and that these are complemented by adequate trade finance, environment and development financing, private sector investment and debt relief. In this respect, neither trade policymaking, nor environment and trade policymaking, occur in isolation but are part of a wider economic system and policy landscape, and environmental context.

Making this agenda a reality requires a four-pronged strategy. First, greening trade must start with *strong environmental laws, regulations, institutions,* and enforcement nationally, complemented by international environmental agreements that set out shared goals, targets, and obligations, including minimum standards and trade measures where relevant.

Second, in their trade policies and agreements, governments can green trade by *upgrading trade policies and rules* that apply to measures at the border as well as to environmental actions 'behind the border'. In addition to bolstered environmental and sustainable development chapters, this also calls for ensuring that the core provisions and commitments defined in trade agreements support environmental goals and incentivize sustainable consumption and production. In each of these areas, the report highlights the importance of consultation with trading partners, transparency, fairness, and approaches that respond to the wider sustainable development priorities of developing countries.

Third, looking beyond trade rules, other pathways to foster and strengthen *intergovernmental cooperation* that supports green trade are also required. Fourth, *stakeholder initiatives* can support sustainable trade, but also present challenges, and trade policy frameworks could better address these.

Whereas most reports on environment-trade interface provide policy, legal or economic analysis of specific environment challenges or country-specific viewpoints, the ambit of this paper is broader. It maps the state of play in the international trade and environment policy landscape, and highlights where openings exist to tackle the environmental challenges arising from trade and trade policy, and to harness them in support of environmental action.

This paper does not aim to provide an environmental assessment of any specific trade agreements (TAs) or provisions or which pathways would provide the greatest environmental impact. It recognizes the importance and relevance of an array of intersecting sustainable development challenges on the trade policy agenda – including issues of gender, poverty eradication, income inequality, health, indigenous peoples, human rights, labour rights and decent work, but integrating all of these critical aspects was beyond the scope of this paper. These deserve stronger attention in future research and on the policy agenda.

This paper has four parts. Part 1 provides a snapshot of the international environment and sustainable development challenges and commitments that set the context for the push to green international trade. Part 2 highlights existing environment provisions in trade agreements. Part 3 reviews the multiple pathways for advancing a proactive Environment and Trade 2.0 agenda to green trade. Part 4 assesses the political context and prospects for action, including a road map of opportunities in 2021. The paper concludes with recommendations on principles, priorities, and political strategies for greening international trade.

1. International policy context: Priorities and actors

A range of international commitments on sustainable production and consumption set the context for ongoing efforts to green trade and trade policy. The SDGs, along with international agreements to address the triple crises of climate, nature and pollution, are of central relevance to efforts to ensure that trade and trade policy better support progress toward a green global economy (see Figure 2). This chapter sets the scene with a brief review of each of these international priorities in turn, while recognizing the linkages between them.

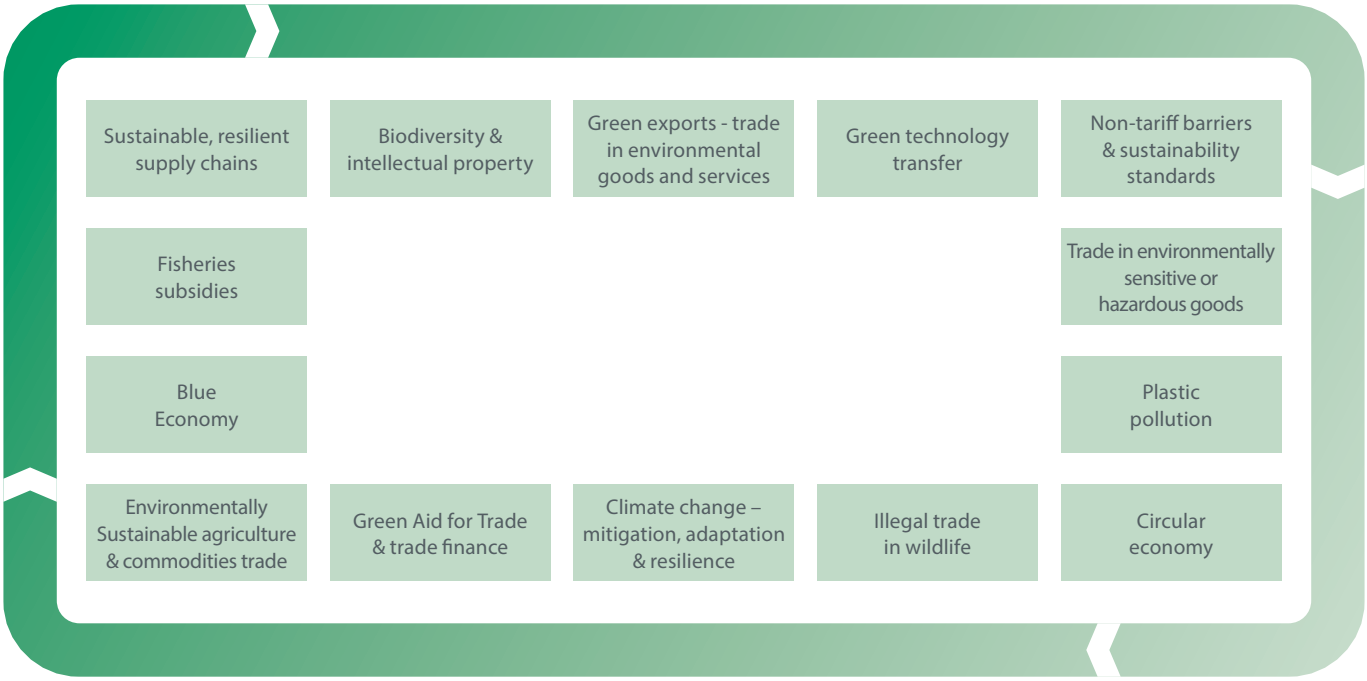
1.1. SDGs and trade

Thirty years of debate on trade and environment have spawned a diversity of actions at the national, regional, plurilateral and multilateral levels, a vast array of policy papers, legal analyses and technical proposals on specific environment-trade issues, and an array of activities on the part of international organizations. Alongside this, stakeholders from business and civil society sectors have launched a broad range of practical efforts to push for greener trade policy and sustainable supply chains. These developments have been informed by extensive scholarly literature on how trade, environment, and sustainable development intersect, including numerous studies on the effects of trade on the environment, and whether trade liberalization is good or bad for the environment. Conversely, there is also a growing literature on how the world's environmental crises can modify trade patterns, disrupt supply chains and harm the trading prospects of countries.

The anchor of current international efforts on sustainable production and consumption is the SDGs, which represent the core of the UN's 2030 Agenda.[8] SDG 12, which focuses explicitly on the need for a transition to more sustainable consumption and production, has a long history in international diplomacy. The importance of sustainable consumption and production was highlighted at the 1992 Rio Earth Summit and reiterated again at the 2012 Rio +20 Summit, where governments agreed to a 10-year Framework of Programmes on sustainable consumption and production patterns.[9] Despite a vast array of activities and efforts, however, progress has been fragmented and piecemeal. Reviews hosted by the UN High-Level Political Forum on Sustainable Development have repeatedly noted that although cost-effective and high-impact solutions exist, significant gaps in implementation and a shortfall of concrete changes in practices hamper progress on SDG 12.[10]

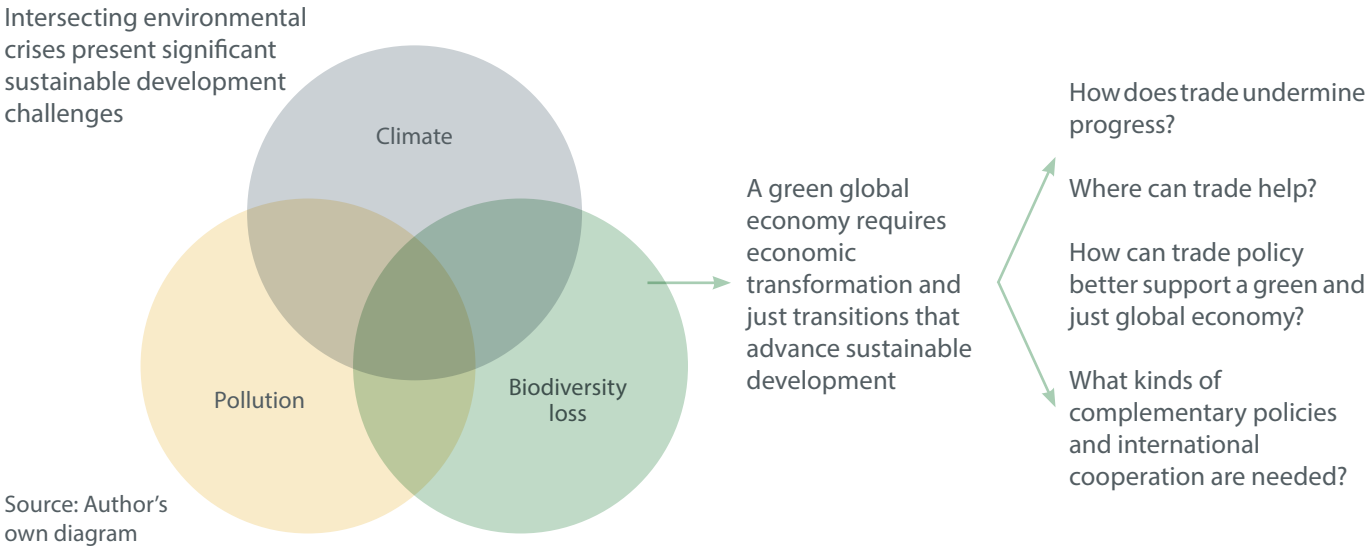
The SDGs also include a number of specific trade-related

Figure 1. Sample of topics on the international environment and trade agenda



Source: Author's own diagram

Figure 2. How are trade and trade policy relevant to a green and just global economy?



Source: Author's own diagram

goals and targets that are relevant to green trade. SDG 14 on 'Healthy Oceans' has, for instance, put the sustainable use of ocean resources and the 'Blue Economy' high on the environment-trade agenda for a number of developing countries and IGOs. This included on trade-related aspects of promoting sustainable value chains for seafood and other living marine resources.[11] SDG 14 also set a 2020 deadline for a WTO deal to reduce environmentally harmful fisheries subsidies. Additionally, SDG 15 'Life on Land' focuses on protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainable forest management, combating desertification, halting and reversing land degradation, as well as halting biodiversity loss. It also includes targets related to combatting illegal trade in endangered species.[12]

Further, SDG 17 on 'Partnerships for the Goals' recognizes trade as a "means of implementation" for the 2030 Agenda as a whole and underlines the importance of a "universal, rules-based, open, non-discriminatory and equitable multilateral trading system."[13] In broad terms, the SDGs suggest that a realignment of trading relations in favour of developing countries is vital to advance progress on a suite of issues – from sustainable agriculture to environmentally sustainable natural resource extraction.

Although the SDGs are routinely cited by both stakeholders and governments to build political support for specific trade-related proposals and for greater Aid for Trade, talk has yet to be matched by action. At the WTO, governments failed to reach the SDG deadline of 2020 for a deal on the reform of environmentally harmful fish subsidies, despite 19 years of negotiations, though efforts to conclude a deal in 2021 continue. Meanwhile, although the EU routinely includes sustainable development chapters in its bilateral trade arrangements with both developed and developing countries,[14] the SDGs have limited traction as a guiding framework for most bilateral and regional trade negotiations.

While talk of the SDGs does arise in trade diplomacy, the dominant narrative and work of international organizations is on how to use trade and investment as vehicles to achieve the SDGs,[15] with less emphasis on exploring or addressing harmful impacts of trade or trade deals.

A broad range of international organizations are working on some aspects of SDG 12. The UN Environment Programme (UNEP), for instance, has a range of work focused on sustainable consumption and production (see Box 1). The International Organization for Standardization (ISO) works to promote sustainable consumption and production patterns by helping stakeholders develop sustainability standards on issues ranging from procurement to production methods on a vast diversity of goods and environmental goals.[16] In line with SDG 12, the UN Food and Agriculture Organization (FAO) coordinates a number of global activities and initiatives on topics such as food loss, waste reduction, and sustainable agriculture.[17] The International Telecommunication Union's (ITU) work on SDG 12 includes its Global E-waste Statistics Partnership (GESP), which aims to help countries produce and track e-waste statistics.[18]

On the trade front, UNCTAD and the International Trade Centre (ITC) have numerous programmes that aim to support progress on SDG 12. UNCTAD's Trade, Environment, Climate Change and Sustainable Development Branch, for instance, works to foster national capacity to produce 'green' exports, to influence international environment and trade negotiations, and to design appropriate national policy frameworks.[19] Its activities include work to support adoption in developing countries of voluntary sustainability standards, which can be especially complicated and costly for smallholder farms and other small-scale businesses, and National Green Export Reviews (NGERs) that assess the national potential to promote green sectors that generate new employment and export opportunities. UNCTAD also hosts the BioTrade initiative, which aims to boost environmentally sustainable exports of goods and services

Box 1. UNEP's work on sustainable consumption, production, and trade

UNEP's "One Plan for One Planet" strategy aims to "accelerate the shift towards SCP [sustainable consumption and production] in both developed and developing countries as an essential strategy and requirement for sustainable development."[306] This work includes multi-stakeholder programmes and partnerships, experience sharing, capacity-building, and facilitating access to technical and financial assistance for developing countries.[307] In this context, UNEP has a range of projects and activities that focus on life cycle analysis, sustainable investment, resource efficiency, and the circular economy, and also hosts the 'One Planet network.'[308]

UNEP's Environment and Trade Hub also supports policy dialogue, analysis, and capacity building among governments and stakeholders with the goal of aligning trade policies with the SDGs; supporting sustainable consumption, production, and trade; and implementing international environmental commitments. This includes advice on specific options for greening trade.[309]

derived from plants and animals. Alongside, the ITC works to help micro, small and medium-sized enterprises (MSMEs) from developing countries adapt to changing market requirements, meet international sustainability standards, participate in sustainable supply chains, and compete in export markets where sustainability can be key to business profitability.

Notably, while the SDGs are widely appealed to by governments and a diversity of stakeholders, some critics raise questions about the coherence of those SDGs focused on protecting the planet from degradation and achieving 'harmony with nature' with those calling for sustained global economic growth as a means for achieving human development objectives, especially in the context of the need for urgent and rapid action on climate change.[20] Although a thorough examination of this viewpoint is beyond the scope of this paper, it serves to underline the importance of debates about what kinds of growth can promote environmental sustainability and keep economic activity within planetary boundaries, with some calling for 'degrowth' and others for decarbonized and dematerialized growth. It also signals the importance of metrics for economic and societal performance beyond GDP per capita, and that environmental sustainability requires a focus on reducing inequality within and between nations, incouding resource and energy consumption per capita in high-income nations.

1.2. The climate crisis and trade

Amid pressures to ratchet up climate commitments in the context of COP26 and the Paris Agreement, recognition of the need to align trade policy with climate ambition is growing, as is awareness of the scale of carbon emissions embodied in international trade[21] and associated with trade-related international transportation,[22] and the impacts of the climate crisis on international trade.

As a detailed review of the wide range of climate-trade issues and proposals is beyond the scope of this paper, Figure 3 illustrates a sample of the topic areas that governments, NGOs, businesses, and scholars have put on the table for discussion.[23] The key message to take away is the growing focus on climate and trade policy intersections, including by business groups speaking in favour of a more predictable and transparent trade policy framework that enables and supports climate action.

Looking across climate-trade issues, key questions shaping international policy discussions include:

- How can trade and trade policy support decarbonization of production at home and abroad?
- How can trade policies help address concerns about carbon leakage and fears that national climate policies may lead businesses to lose market share to more carbon intensive competitors from abroad?
- How can trade policy support the transition by national industries and communities working to decarbonize and bolster green job while also promoting transparency, fairness and openness in the global trading system?
- How to ensure that countries do not 'offshore' their carbon footprint through consumption of imported products produced unsustainability elsewhere?
- How to reduce the carbon footprint of international transportation associated with trade?
- How to promote transparency, fairness and use of climate-related standards and labelling that apply to international trade?
- How to balance calls to use trade policy as a powerful lever for stronger climate ambition with concerns about economic consequences for developing countries and the need for cooperation on a just transition?
- How to address the impacts of climate change on trade, including supply chain risks due to climate-related natural disasters, the need for climate-resilient trade infrastructure, and the challenge adapting production and exports to changing climate realities?

Three developments highlight the complexity of the climate–trade interface. The first is the emergence and implementation of climate policies with direct trade policy implications. Especially prominent among these is the

Figure 3. Sample of climate and trade policy intersections

Border-related measures	Liberalization of climate-friendly goods and services
	Border carbon adjustments
	Quotas or bans on 'high emissions intensity' products
	International cooperation on emission trading systems
'Behind the border' measures	Climate related standards, labels and due diligence requirements (government and voluntary)
	Trade disciplines on fossil fuel subsidies
	Greening trade rules (e.g. on subsidies, government procurement, investment) to support climate action
	Investor-state dispute settlement provisions that safeguard space for climate action
	Technology transfer and intellectual property rules that spur innovation and affordable access to climate technologies
Using trade agreements to reinforce the Paris agreement and its implementation	Provisions in trade deals on ratification and implementation of enhanced commitments under the Paris Agreement
	Enhanced transparency of trade-related climate actions in WTO and UNFCCC processes
	Climate-related trade sanctions
	Climate cooperation in environment and sustainable development chapters of RTAs
	Sustainability impact assessments that include climate impacts on trade, trade impacts on climate, and global carbon footprints of national trade policies
Flanking and interlinked areas for trade-climate diplomacy	Trade-related transportation GHG emissions
	Green Aid for Trade to support resilience, climate mitigation and adaptation
	Green trade finance to advance climate goals
	Supply chain policies, including on carbon footprints, timber products and deforestation-free commodities

Source: Author's own diagram

European Green Deal unveiled in 2020, which commits Europe to achieving carbon neutrality by 2050[24] and to introducing a Carbon Border Adjustment Mechanism (CBAM) (see section 3.2.2 and Box 14).[25] There are numerous concerns among trading partners, especially developing countries, about the potential for the CBAM to provide cover for 'disguised' protectionism and unfairly disadvantage trading partners. While several proposals exist on ways to design border carbon adjustments (BCAs) that are effective, fair, transparent and compatible with WTO rules,[26] key political tasks are to avoid unnecessary discrimination between domestic producers and importers,[27] support trading partners in the transition to decarbonization, and acknowledge BCAs as just one item of a broader agenda for aligning trade policy with climate goals.

The second relates to the growth of the digital economy. As governments work to update trade rules to respond to the digital economy and e-commerce, optimism about the potential for digital technologies to help reduce the environmental footprint of trade is coupled with rising concern about the immense and growing energy consumption of the digital economy (arising, for instance, from the carbon footprint of vast data centres required to power online and mobile communication technologies).[28]

The third development is the growing recognition of linkages between issues of climate, nature and trade. Not only are there clear linkages between trade policies and efforts to reduce deforestation, there are also ongoing discussions in the context of the Paris Agreement on cooperation for international emissions trading, and ways in which these could be used to promote investment in nature-based solutions to climate change.[29]

More broadly, the push for greater integration of climate and economic policy making has spurred calls for a Global Green New Deal, emphasizing the importance of a just transition toward decarbonization, with numerous trade policy implications.[30] In addition to using the resources saved by cutting fossil fuel subsidies to support workers who lose livelihoods in the process of transition, UNCTAD's work

on *Financing a Global Green New Deal* emphasizes the importance of public and private investment, as well as debt relief and industrial policies, for achieving a decarbonized global economy. It also highlights the need for incentives and support for developing countries to leapfrog carbon-intensive development paths.[31] Many of the proposed industrial policies – including targeted 'green' subsidies, tax incentives, loans and guarantees, and enabling intellectual property and licensing laws – require international trade and investment frameworks. In 2021, as governments call for a green global recovery from COVID-19 to upgrade their commitments to action under the Paris Agreement, and look to address the shortfall of climate financing in developing countries, there are also calls to 'green trade for a green recovery' aligned with the need for stronger climate action.[32]

1.3. The nature crisis, biodiversity loss and trade

In 2020, the UN's *Global Biodiversity Outlook* reported that little progress was made over the last decade in eliminating or reforming harmful incentives to biodiversity loss. Natural habitats have continued to disappear, species are still threatened by extinction due to human activities, and environmentally harmful governments subsidies to the agricultural sector (at more than US$ 500 billion per year)[33] swamp resources available to support biodiversity (at US$ 89-90 billion per year).[34] In 2021, governments are continuing negotiations in the context of the UN Convention on Biological Diversity (CBD) for a new Global Biodiversity Framework,[35] with the overall goal of setting out what countries need to do to achieve the overall vision of "living in harmony with nature" by 2050 (see Box 2).[36]

Trade and trade policy are of central relevance to biodiversity protection and restoration.[37] Growing trade flows in renewable and non-renewable natural resources – from water, forest and fisheries to arable land, fuels and minerals, and ocean resources – represent a significant share of total natural resource exploitation and are closely linked to challenges such as deforestation,[38] land degradation, soil erosion, and desertification and ecosystem decline.[39] Trade in natural resource and agricultural commodities – ranging from fruit, vegetables, and meat to palm oil, grains, and wildlife – can spur the expansion and intensification of production, harvesting and extraction associated with unsustainable resource use, environmental degradation, and pollution, which in turn have cumulative impacts on ecosystem health and biodiversity loss.[40] By some accounts "some 30 per cent of global species threats" can be attributed to international trade.[41]

While the exporters and importers of diverse natural resources traded internationally vary widely, the challenges of sustainable use and effective governance of natural resources arise in both developed and developing countries. For developing countries that depend on natural resource-based commodity production and exports, volatile world commodity prices compound the challenges associated with gaps in capacity for environmental management and governance.

Box 2. The post-2020 Global Biodiversity Framework

To date, negotiations for a new Global Biodiversity Framework have produced an initial draft that includes five long-term goals for 2050, with intermediary milestones and 20 targets to achieve by 2030. These five goals relate to: 1) reducing net losses in the area and integrity of freshwater, marine and terrestrial ecosystems, and increasing these over time; 2) reducing the per centage of species threatened with extinction and increasing the abundance of species; 3) maintaining and enhancing genetic diversity and species; 4) promoting the benefits of nature to people through improvements in nutrition; sustainable access to safe and drinkable water; resilience to natural disasters and achievement of the Paris Climate Agreement; and 5) increasing the benefits, shared fairly and equitably, from the use of genetic resources and associated traditional knowledge.

In regard to agricultural products and commodities, the links between biodiversity threats and trade are especially well documented for highly-traded products such as coffee, tea, sugar, textiles, and fish, all of which have a large biodiversity footprint at origin.[42] Nearly 70 per cent of tropical deforestation is linked to commercial agriculture, mostly due to the production of four soft (i.e. grown, not mined) 'forest risk' commodities that can cause wide-scale deforestation: palm oil, soy, cattle products (beef and leather), and timber products (including paper).[43] At the same time, increased extraction of minerals and metals, often fuelled by opportunities to generate revenue from exports, also drives biodiversity loss.[44] Through their role in shaping incentives, demand, production, and international flows of agricultural commodities, trade and trade policies are also relevant to the goals of more sustainable, regenerative agriculture and food systems.[45]

Another important driver of biodiversity loss is trade in invasive environmentally harmful species.[46] International trade plays a significant role in the introduction of invasive alien species (IAS) into places different from their original natural environment, including through transportation and shipping, with significant negative impacts on biodiversity.[47] Since the 1970s, the number of IAS has increased an estimated 70 per cent across 21 countries.[48] In addition, efforts to combat illegal wildlife trade have long been a central pillar of the environment-trade agenda, in particular through the Convention on International Trade in Endangered Species (CITES).[49]

A further dimension of the trade and biodiversity interface is that, since the 1970s, some 40 per cent of material resources – biomass, fossil fuels, metals, and minerals – extracted around the globe have been channelled to export-related purposes.[50] Moreover, recent analysis from UNEP of the 'material footprint' of trade reveals the high and growing dependence of affluent nations on the resource base and manufacturing capacity of the rest of the world, and the corresponding shift in resource-intensive processes and environmental burdens from high-income importing countries to low-income exporting countries.[51] In 2017, UNEP estimated that the indirect or 'embodied' materials in trade amounted to 35 billion tons, exceeding the direct volume of resources traded across nations (i.e. 11 billion tons) by a factor of three. That is, if the 'upstream resource requirements' across the whole life cycle of traded products are considered (i.e. the materials, energy, water, and land used in the extraction and production of traded goods as well as the material left behind as waste and emissions in the exporting country), the real contribution of trade flows to material resource exploitation and ecological impacts are higher. At a global scale, UNEP estimated that one-third of the total of 92 billion tons of materials extracted in the global economy are destined to produce goods for trade.[52]

1.4. The pollution crisis and trade

International trade is also relevant to the pollution crisis. Most obviously, pollution from trade-related transportation is a central issue for environment and trade discussions, where there are strong concerns about greenhouse gas emissions and the carbon footprint of international trade.

Trade can also be a conveyer belt for the movement of polluting goods around the world. According to UNEP, some 14 million used cars, vans and mini-buses were exported worldwide from Europe, US and Japan between 2015 and 2018, with an estimated 80 per cent destined for low- and middle-income countries.[53] In the absence of proper regulation in exporting and importing countries on the quality and safety of used vehicles, these exports to developing countries have contributed to increased air pollution and hindered efforts to tackle climate change.[54]

A long-standing environment and trade debate has been on the potential for international trade to spur pollution intensive production to move to countries with lower environmental regulations; so called 'pollution havens'.[55] Conversely, trade can also facilitate the diffusion of technologies and integration of global production networks in ways that promote the use of greener and cleaner technologies that reduce pollution.

Finally, over the last half century, the global economy has also seen an enormous rise in volumes of waste and international trade in waste. Pollution resulting from the export of e-waste and plastics waste to developing countries is provoking considerable concern.[56] While some countries view themselves as having a comparative advantage in sorting, re-using or recycling certain kinds of imported waste, others express alarm about shipments of products that are too contaminated to be recycled, or for which they manifestly lack the capacity to manage in an environmentally sound manner. Some developing countries further express concern about pressures to accept imports of sub-standard used, refurbished or remanufactured products. These include used batteries with a short life span that swiftly add to the national waste burden, recycled goods with unknown chemical compositions, household goods that would not meet developed country environmental and health standards, and second-hand vehicles with poor environmental performance.[57]

Trade policies can be used to reduce pollution in a number of ways, including by restricting or banning trade in certain polluting or environmentally harmful products or that are highly polluting to produce, supporting effective recycling markets, promoting the use of standards to reduce the use of hazardous materials in products and improve labelling of chemicals used in traded goods, and encouraging trade and technology transfer of environmental goods and technologies that can support pollution reduction efforts,[58] including waste management, recycling and clean energy technologies.

2. International rules on environment and trade: The state of play

To promote green trade, there is a range of policy vehicles, forums, and levers that governments and stakeholders can use. A review of where progress has already been made on aligning trade with environment goals reveals that the pathways to change have varied widely. Improvements have been achieved, for instance, through negotiation and interpretation of environment provisions in international TAs; cooperation to strengthen environmental laws and regulations; soft law instruments and guidelines; dispute proceedings that affirm the scope for environmental action; policy diffusion through training, capacity-building, and information-sharing; and policy dialogue.

Governments pursue their trade policy objectives – both competitive and cooperative – through a range of strategies, including on environmental matters. This can include unilateral action, where governments 'go it alone' such as through unilateral decisions to reduce tariffs on certain goods (irrespective of whether their trading partners reciprocate), as well as national decisions to restrict trade in certain products. Powerful countries can sometimes also apply political pressure on weaker countries to alter their trade policies or practices, including through threats to withdraw or reduce trade benefits, aid, or political security arrangements. They can also launch trade dispute settlement proceedings to defend their trading interests and compel changes in the policies of other countries.

Some governments may also adopt national trade policies that define their approach to certain trading partners. A number of developed countries, for instance, provide preferential access to their markets for least-developed countries (LDCs) through national legislation for this purpose (e.g. duty-free, quota-free access for LDCs and the US African Growth and Opportunity Act (AGOA)). The incorporation of issues such as human rights, labour, environment, and development priorities into national trade policies has also provided the mandate for governments to pursue action on these issues in the context of bilateral and regional trade and investment negotiations.

Alongside legal agreements – and sometimes in specific chapters of TAs – governments also pursue regulatory cooperation to minimize disruptions to trade, or alternatively, use regulatory decision-making as a tool to gain a competitive advantage. Governments also seek to shape their trading relations using policy dialogue and information exchange, which can be significant vehicles for diffusing policy ideas and shifting the stance of trading partners over time. Economic cooperation and integration arrangements, such as the Belt and Road Initiative, are also part of the wider approach to trade cooperation, as are Aid for Trade, development assistance, and trade finance. Finally, governments may also support or engage in public–private partnerships (PPPs) on specific trade-related challenges, or to support certain international supply chains.

Governments choose different vehicles for advancing their trade-related goals for a range of strategic reasons. While multilateral approaches can potentially yield far greater international coverage of any rules or market access benefits that are reached, they can also take many years to negotiate and require significant compromises to reach a deal. By contrast, non-WTO TAs may be faster to conclude and can also serve a range of other strategic purposes (such as strengthening political alliances). Countries may also have industries with specific interests in TAs with particular countries that are more significant for their overall trading prospects than multilateral deals.

Similarly, on the environment-trade front, governments make choices about which vehicles are most effective for advancing environment-related trade goals, depending on the kinds of commitments sought. On certain issues, such as fisheries subsidies reform, the multilateral rules that apply to all WTO Members are widely deemed more effective in promoting action, especially where risks of free riding exist, than a patchwork of bilateral deals. However, governments working to advance certain environmental goals in TAs have sometimes found it swifter to achieve results through bilateral, plurilateral and regional trade arrangements outside the WTO, where the challenges of building consensus among a diverse membership have proven far more challenging. For some environment-trade intersections, governments have deemed international environmental treaties, such as multilateral environmental agreements (MEAs), to be the most appropriate place to advance action, rather than international trade laws (see section 3.2.1). Further, governments have also sought to use soft law instruments, pledges, and PPPs to support action on sustainable supply chains.

The remainder of this chapter aims to provide a snapshot of the state of play on how governments have addressed environment-trade intersections through one sub-set of this array of possible approaches – that is, through environment provisions in legal agreements between governments on trade, focusing first on WTO rules and then on non-WTO TAs (see Box 3).

Box 3. Trade agreement terminology

In WTO terminology, any TA that is not a WTO agreement is referred to as a 'regional trade agreement (RTA).' In academic and policy communities, such agreements are sometimes referred to collectively as preferential trade agreements (PTAs). The term 'free trade agreements' (FTAs) is widely acknowledged to be misleading because most TAs are as much about regulating as liberalizing trade (and investment) while also reflecting wider strategic political objectives. A growing number of recent TAs among a range of countries are referred to as 'economic partnerships' rather than FTAs in their official titles. Given the growing incorporation of investment issues into TAs, some analysts use the terminology of trade and investment agreement (TIAs), or economic integration agreements.

This report adopts the simple terminology of 'trade agreement' (TA) as shorthand for non-multilateral trade agreements that are either bilateral (between two countries), regional (among countries within a given geographic region), plurilateral (among a group of countries that is not regionally defined), or mega-regional (among one or more regions or sub-regions).

Notably, the term plurilateral also has an additional specific meaning in the WTO context, where it refers to agreements, negotiations or discussions at the WTO that do not include all Members, such as the WTO Government Procurement Agreement and negotiations that occur in the context of WTO Joint Statement Initiatives (JSIs). As multilateral negotiations at the WTO have stalled in recent years, JSIs have emerged among like-minded Members that agree to work together, plurilaterally, to advance discussions and action on issues of shared concern (such investment facilitation, e-commerce, gender, MSMEs, and environmental sustainability). As the pursuit of JSIs is challenged by a number of WTO Members, they are not considered to be formal WTO processes, and there are ongoing legal debates about the status of their negotiated outcomes and options for their eventual incorporation into the WTO system, which normally operates on the principle of consensus.[310]

2.1 Environment at the WTO

The WTO is the key forum through which governments seek to advance multilateral trade cooperation. Figure 4 offers a visual snapshot of the range of WTO agreements and provisions relevant to environmental protection, while Figure 5 presents the range of WTO committees and bodies where discussion of environmental issues arise. While an assessment of the WTO's environmental performance – or indeed all of its environment-related activities – is well beyond the scope of this paper, two key elements of the WTO approach set vital context for ongoing international efforts to green trade: the Preamble to the suite of WTO Agreements and the provisions on general exceptions included in two of the WTO's central agreements, the General Agreement on Tariffs and Trade (GATT) and the General Agreement on Trade in Services (GATS).

2.1.1. Environment in the WTO Preamble

The Preamble to the WTO Agreements enshrines both sustainable development and environmental protection as core goals. In it, WTO Members recognize that their trade relations should be conducted in accordance with the objective of sustainable development "…seeking both to protect and preserve the environment and to enhance their means for doing so..." (see Box 4).

Box 4. Preamble to the WTO Agreements

Relations in the field of trade and economic endeavour "should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development."

Source: WTO (1995) *Agreement Establishing the WTO*, The WTO Agreement Series, WTO: Geneva.

While the WTO Preamble is not binding on WTO Members, it has been used in legal disputes to interpret the provisions of WTO Agreements. In the early days of the WTO, the Appellate Body in the 1995-1997 US – Gasoline dispute emphasized the importance of the Preamble to the WTO Agreement in the context of environmental issues stating that:

> "…in the preamble to the WTO Agreement and in the Decision on Trade and Environment, there is specific acknowledgement to be found about the importance of coordinating policies on trade and the environment. WTO Members have a large measure of autonomy to determine their own policies on the environment (including its relationship with trade), their environmental objectives and the environmental legislation they enact and implement. So far as concerns the WTO, that autonomy is circumscribed only by the need to respect the requirements of the General Agreement and the other covered agreements."[59]

Environmental advocates regularly appeal to the importance of the WTO Preamble in establishing that the organization's purpose is not to promote trade as an end in itself but rather as means to achieve broader public policy goals.

2.1.2. General exceptions in WTO Agreements relevant to the environment

The GATT is the WTO's core umbrella treaty related to trade in goods and aims to promote international trade by reducing or eliminating trade barriers such as tariffs and quotas. Originally established in 1947, it has been revised through various rounds of negotiations, including the Uruguay Round, which resulted in the current 1994 version and the conclusion of a range of other WTO agreements, including an Agreement establishing the WTO.

GATT Article XX on 'General Exceptions' lays out a number of specific conditions under which WTO Members may be exempted from GATT principles and rules, including on environmental grounds. The two Article XX exceptions directly relevant to environmental protection are found in paragraphs (b) and (g). Pursuant to these two paragraphs, WTO Members may adopt policy measures that are inconsistent with GATT disciplines but necessary to protect human, animal or plant life or health or to the conservation of exhaustible natural resources respectively. Some examples of policies falling under Article XX (b) that have arisen in past WTO cases include policies aimed at reducing the consumption of cigarettes; protecting dolphins; reducing risks to human health posed by asbestos; and reducing health risks to human, animal and plant life arising from the accumulation of waste tyres. Examples of policies that have fallen under Article XX (g) include those aimed at the conservation of tuna, salmon, herring, dolphins, turtles, and clean air.[60]

A key legal component of Article XX is the wording in its introductory paragraph or 'chapeau,' which states that "nothing in this Agreement shall be construed to prevent the adoption or enforcement" of measures enumerated in Articles XX (a)-(j). In order to justify a GATT-inconsistent environmental measure under Article XX, a WTO Member must perform a two-tier analysis proving first, that its measure falls under at least one of the exceptions noted under Article XX and, second, that the measure satisfies the non-discrimination requirements of the introductory paragraph of Article XX, meaning that it is not applied in a manner that would constitute "a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail" and is not "a disguised restriction on international trade."[61]

The WTO's General Agreement on GATS also provides for the possibility of environmental exceptions. Subject to similar requirements as GATT Article XX, GATS Article XIV affirms that "nothing in this Agreement shall be construed to prevent the adoption or enforcement by any Member of measures… (b) necessary to protect human, animal or plant life or health."

In short, both GATT Article XX and GATS Article XIV affirm the right of Members to pursue environmental objectives even if in doing so, Members act inconsistently with obligations set in other provisions of the respective agreements, provided that a set of conditions are satisfied, and that the measures are "necessary." Together and separately, the implications of the WTO Preamble, GATT Article XX and GATS XIV exceptions for environment-trade intersections have spurred enormous policy and scholarly discussion.

Among the many considerations at hand is that designing environmental measures on complex issues in ways that adhere to trade rules can be a challenging and daunting task for many governments, especially in developing countries. A recent WTO review of environment-trade disputes noted that, in addition to meeting the Article XX requirements of non-discrimination, environment-related measures are more likely to be considered favourably in dispute settlement proceedings if the country imposing the measure made a serious effort to cooperate with the trading partner(s) to find a mutually agreeable solution, and if the measure was designed with sufficient flexibility to account for different circumstances in different countries that might prompt them to meet the objective but through a different approach.[62]

Further, while legally possible, meeting all of the relevant conditions needed to prevail in the case of a legal dispute over a claim for an Article XX exception is difficult. This has prompted some environmental advocates to caution that this provision should not be viewed in any way as a guarantor that environmental actions will not be challenged. Legal opinions aside, this highlights a key question, which is the extent to which policymakers and stakeholders are cautious about implementing environmental measures for fear they may run afoul of WTO rules. The fact that countries under-report their environment-related trade measures under WTO notification requirements is suggestive of concerns that scrutiny of such measures might raise questions about their compliance with WTO obligations. On the other hand, while many governments strive to implement WTO Agreements, on many counts they do so incompletely and do not face legal challenges: on the environment front too, some governments might choose to proceed on the basis that the likelihood a trading partner would indeed request a WTO consultation or launch a formal WTO dispute in regard to a given environmental measure is low.

Looking ahead, while far from the only WTO provisions relevant to environment and trade, the 'state of play' on general exceptions is an important backdrop for ongoing discussions on how to design WTO-compliant environmental policies, and to what extent updates to WTO rules are needed to provide greater clarity on or expand the scope for environmental action.

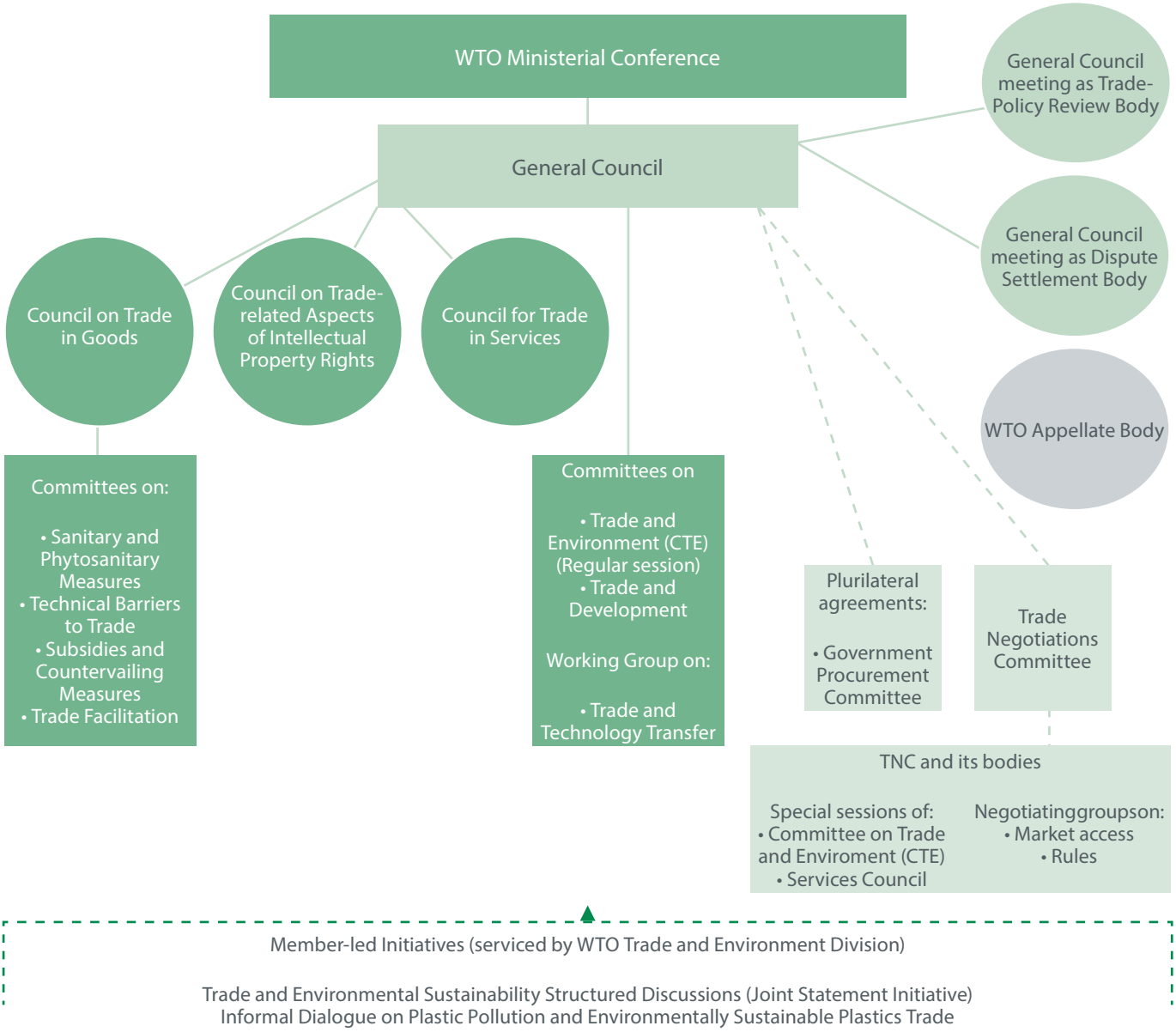
2.2. Environment provisions in non-WTO trade agreements

As multilateral negotiations on trade have languished in recent years, governments have turned to a growing array

Figure 4. Sample of WTO agreements and activities relevant to environmental action

WTO Agreements and provisions		Relevance to environment action
Preamble to WTO Agreements		Establishes environment and sustainable development objectives
General Agreement on Tariffs and Trade	GATT Article XX exceptions	Establishes environmental grounds for exceptions, provided a number of conditions are met
	Includes tariff schedule commitments	Shapes market access for products, including on environmental criteria
	Rules on trade bans, Establishes rules on quantitative restrictions, licensing, as well as environmental taxes, fees & charges	
General Agreement on Trade in Services	Article XIV(b) exception	Establishes environmental grounds for exceptions, provided a number of conditions are met
Agreement on Technical Barriers to Trade (TBT)	Covers technical regulations, standards and conformity assessment	Establishes rules on measures based on production and process methods (PPMs), relevant to environmental standards and labelling
		Requires use of relevant international standards where they exist, except where they are an ineffective or inappropriate means for fulfilment of legitimate objective
Agreement on Sanitary and Phytosanitary Measures (SPS)	Establishes rules for the use of sanitary and phytosanitary measures	Establishes that SPS standards must comply with one of three international standards list or conduct risk assessments to justify more stringent measures
Agreement on Subsidies and Countervaiing Measures	Regulates government subsidies	Relevant to efforts to reduce environmentally harmful subsidies and scope for green subsidies
Agreement on Agriculture	Establishes rules for agricultural trade	Relevant to market access for agricultural goods
		Relevant to scope for environmentally harmful and green agricultural subsidies
Agreement on Trade-Related Intellectual Property Rights	Establishes minimum international standards for intellectual property protection	Relevant to green innovation and affordable access to green technologies, and technology transfer
		Relevant to ownership of and access to genetic resources
Government Procurement Agreement (plurilateral)	Establishes conditions for competition in government procurement markets	Relevant to efforts to promote green procurement policies and practices
Monitoring of trade policies and measures	WTO Trade Policy Review	Relevant to transparency of environment-related policies and measures, information exchange and policy dialogue
	Notificationrequirementsfortrade-related environmental measures/regulations	
Aid for Trade, capacity-building building, technical assistance and Standards Facility		Relevant to green exports, trade-related infrastructure, capacitybuildingonenvironment-tradepolicyandnegotiations capacity, and meeting environment-related standards

Figure 5. WTO bodies and activities with ongoing work relevant to the environment



Source: adapted from WTO (2021), 'WTO orgnanization chart', World Trade Organization, https://www.wto.org/english/thewto_e/whatis_e/tif_e/org2_e.htm (accessed 4 May 2021).

of trade arrangements outside the WTO to pursue their trade goals. This section reviews the state of play in the evolution and range of environment provisions included in non-WTO TAs. In so doing, it does not aim to assess the implementation or effectiveness of these environment provisions, nor does it provide any overall assessment of the environmental impact of the agreements as a whole or of specific provisions. Such assessments would require an examination of how the market access and other provisions of agreements shape international markets, and the implications for an array of different environmental issues and priorities. Having sampled what some governments have put in place so far, Part 3 of this paper then takes up the question of what more could be done to green trade, including but not limited to reforms and updates of trade rules.

2.2.1. The evolution of environment provisions in non-WTO trade agreements

In 2021, the WTO estimated that some 339 non-WTO agreements were in force worldwide and many negotiations for additional or upgraded agreements are underway.[63] The EU, the US, and the UK, for instance, are pursuing a range of bilateral agreements with both developed and developing country trading partners. At the same time, a broad range of developing countries are pursuing South-South agreements bilaterally and within sub-regions. In the past few years, the most significant new TAs have been at the regional or cross-regional level, including the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) (among 11 Pacific Rim countries),

the African Continental Free Trade Area (AfCFTA), and the Regional Comprehensive Economic Partnership (RCEP) (among 15 Asian and Pacific countries).

Non-WTO TAs incorporate an evolving and growing range of environmental considerations, albeit in very diverse ways and with varying impacts. In 2016, a WTO study noted that almost 90 per cent of 690 TAs contained at least one environmental provision; it noted over 270 different types of environmental provisions, each with varying legal strength.[64] The Trade and Environment (TREND) database documents examples of over 300 different types of environmental provisions in over 660 non-WTO TAs.[65] These include provisions that incorporate WTO rules, as well as provisions that go deeper than WTO obligations (WTO-plus) and that extend coverage of WTO disciplines (i.e. WTO-beyond or WTO-extra obligations).[66] While such provisions signal an important and evolving set of environment-trade possibilities, their scope and ambition vary widely, and enforceable environmental provisions in TAs are rare, although some binding commitments do exist (see Box 6).

The increasing economic significance of developing country markets is a key development for those keen to promote greater alignment of trade with environmental goals.

The growing number of TAs between developing countries, and South–South trade cooperation reflects the rise of developing countries in international trade, both in absolute and relative terms.

While developed countries sometimes use trade-related market access constraints and conditionalities as tools to spur environmentally sustainable production practices in developing countries, the growth of South–South trade means that companies in the countries they target can instead seek access to growing markets elsewhere with less stringent environmental requirements.

By way of example, a number of TAs have been completed or are under negotiation among developing countries associated with trade in forest-risk commodities.[67] Mercosur countries, for instance, account for 65 per cent of the world's soy and 37 per cent of its beef exports.[68] In addition to trade deals with India, Chile, Egypt, Israel and the Southern African Customs Union (SACU), Mercosur is also negotiating with the EU, South Korea, Singapore and Canada. The 10-member ASEAN group (comprising Indonesia and Malaysia among others), which account for 92 per cent of the world's palm oil exports, has concluded an ASEAN Trade Area along with trade deals with China as well as Australia, China, Japan, New Zealand and Korea.[69] Indonesia also has trade deals with Pakistan and India, along with negotiations with the Kenya, the Gulf Cooperation Council and the EU.

This context underlines the importance of environmental leadership within and among developing countries to shape trade deals that promote environmental protection. It also underscores the need for developed countries keen to pursue approaches that encourage and support trading partners to boost their environmental standards and production practices irrespective of the export markets for their products.

Importantly, developing countries have proven to be important proponents of certain environmental provisions in their TAs. On biodiversity, for instance, Colombia and Peru have been key forces behind provisions in TAs on access and benefit sharing that contribute to the implementation of the Convention on Biological Diversity's Nagoya Protocol,[70] including provisions on sovereignty over genetic resources, the protection of traditional knowledge, prior informed consent, the disclosure of origin in patent applications, and conditions for bioprospecting activities. However, the scope and focus of access and benefit sharing commitments in TAs varies widely; while Latin American countries have pioneered high standards, these are not widely spread and many TAs have a much more limited approach.[71]

Notably, while the focus of this chapter is on the environmental provisions that many TAs include, it is also important to note that some TAs take a minimalist approach to environmental issues. The RCEP, for instance, does not include any separate environmental or sustainable development chapter. Its only specific environment-related references are its affirmation of the rights and responsibilities of each party under the CBD and its intellectual property provisions related to the protection of genetic resources, traditional knowledge, and folklore.[72] The AfCFTA also does not have an environment or sustainable development chapter, though it does include a standard general environmental exception and preambular environmental references.[73] As in other cases, there is the possibility to expand and elaborate provisions over time.

A final observation is that while there is much focus on developed countries as demandeurs of environmental provisions in TAs, bilateral trade negotiations are also a context in which weaker negotiating partners can face important commercial, economic, and political pressures from developed countries that can threaten domestic environmental action. In the course of US–Kenya trade negotiations in 2020, for instance, the American Chemistry Council urged the US government to ensure expanded market access for plastic products and waste in Kenya, which environmental critics warn will threaten Kenya's domestic policies to reduce plastic pollution.[74]

2.2.2. Examples of existing environment-related provisions in trade agreements

Looking across the diversity of TAs, there are some commons themes in the ways that governments have committed to support, improve, and incentivize stronger environmental policies, practices or outcomes. The most common environment-related provisions fall in one of seven categories.[75] The following summary provides a taster of the kinds of actions that governments have taken to date in each of these categories.

Preambular language and general provisions

Many TAs refer to environment or sustainable development in their preambles, which establish the broad objectives for the entire agreement. Such provisions may be relevant to treaty interpretation and help determine the scope of dispute settlement action.

Environment-related exceptions

Many TAs include provisions based on or fully incorporating the general environmental exceptions of GATT Articles XX(b) and XX(g), or GATS Article XIV(b).

Environmental law provisions

Many TAs include provisions that aim to maintain or improve environmental standards and create a level playing field for trade, by ensuring that parties cannot secure a trade advantage through low standards of environmental protection. Such provisions can include:

- Commitments to comply with domestic environmental laws, regulations, and standards
- Commitments not to weaken or derogate from environmental laws in order to encourage trade or gain a trade advantage
- Efforts to improve levels of environmental protection
- Commitments to effective enforcement of environmental laws, and
- Effective access to remedies for violations of environmental laws.

Multilateral environmental agreements

A number of TAs include provisions that affirm the importance of MEAs. Some TAs also require governments to exchange information on their experiences and progress relating to the ratification and implementation of MEAs, include a list of specific MEAs, or specify that in the case of a conflict the MEA will prevail. A number of TAs call on countries to implement MEAs, while some require parties to adopt and implement measures to fulfil MEA obligations.

Environmental provisions in core chapters of agreements

Some TAs include provisions that regulate the conditions under which goods and services can cross borders based on environmental considerations, including:

- Market access commitments to promote trade in certain environmental goods and services (e.g. lower tariffs for imports of wind energy products). One recent TA included a provision that explicitly differentiated the tariff treatment of products based on the sustainability of their production methods, providing lower tariffs for products that met specific private sustainability standards (see Box 6).[76]
- Market access restrictions for environmentally sensitive products (e.g. export and import restrictions on trade in certain plastics waste and bans on illegal wildlife trade).
- Environment-related provisions, references, or considerations within 'non-environment' chapters on TAs, such as those on government procurement, services, technical barriers to trade, investment, subsidies, regulatory cooperation, and subsidies. To date, such provisions have been far less prevalent than provisions clustered within separate environmental or sustainable development chapters of TAs.

Environmental cooperation provisions

A number of TAs include provisions on environmental cooperation in separate environment chapters, sustainable development chapters, or side agreements, as well as in annexes.

A range of US TAs, for instance, include chapters that affirm shared environment commitments, while EU TAs include sustainable development commitments (see Box 5). In both instances, the focus is on promoting cooperation on specific priorities and issues. While some chapters provide few specific details, others set out detailed commitments to cooperate on a diverse range of topics, including promotion of trade in environmental goods and services; renewable energy; energy conservation; climate change; biodiversity; control of invasive species; air quality; water quality; soil quality; marine pollution; water resources; fisheries resources; sustainable trade in forestry products; forest conservation and management; combatting trade in illegal timber; and desertification. At least one recent agreement requires Parties to undertake environmental impact assessments of central government projects that may have significant effects on the environment (see Box 6).

The enforceability of environment and sustainable development chapters is evolving. Most chapters contain non-binding commitments that are not enforceable through the wider TAs dispute settlement proceedings, although some have mechanisms for dealing with concerns that arise, including complaints from civil society groups. The EU has been working to boost the enforceability of its sustainable development chapters (see Box 5) and the recent USMCA is the first agreement to make an environmental chapter enforceable through the same dispute settlement system applicable to other substantive chapters of the agreement (see Box 6).

Some TAs create a specific body responsible for overseeing implementation of the environmental cooperation chapter (and in some instances environmental provisions included within the wider TA). However, the degree of detail included in the agreements on the operation and responsibilities of these bodies varies. Some environment chapters also have issue-specific annexes, such as the Annex on forest governance in the case of the 2009 US–Peru FTA (see Box 4).

Public participation

Some TAs include provisions that set out procedures for

public transparency and participation in certain activities related to the implementation of environment and sustainable development chapters, including in some instances, procedures for stakeholders to lodge complaints about environmental impacts. Environment chapters and side agreements generally also include provisions for public submissions and public sessions.

Enforcement

Most TAs include some form of dispute settlement mechanism, starting with consultations between the parties, at least in the initial stage of resolving disputes. Some agreements focus on consultations as the key approach to settling disputes, while others include the possibility of binding dispute settlement, and some include an arbitration procedure involving an independent panel for disputes not settled by consultation. However, only in some cases are dispute settlement panels specifically required to include members with environmental expertise.

Enforcement of the environment provisions in TAs vary.[77] Many TAs exclude environmental matters and sustainable development chapters from the dispute settlement mechanisms of the agreement, relying instead on consultations between parties where disputes arise (such as in the case of the Canada–Peru and Korea–Turkey TAs). In addition to consultations where disputes on environmental provisions arise, a number of EU TAs include the possibility of adjudication by an external panel, followed by implementation measures (which rely on discussions between parties on appropriate measures in light of the panel's report) (e.g. EU–Singapore, EU–Vietnam, EU–Mercosur). Finally, some TAs include the possibility of recourse to the agreement's overarching dispute settlement mechanism where environmental disputes arise, including in some cases the right to impose trade sanctions in the event of non-compliance with environment provisions (e.g., US–Korea, US–Peru, US–Panama and US–Colombia).

Under the USMCA, environmental disputes can be brought if government environmental standards are lowered in ways that affect trade. To measure whether parties to the USMCA have failed to "effectively enforce" their environmental laws, the agreement requires a "sustained or recurring" course of action or inaction in a manner affecting trade between the parties.

2.3 An evolving baseline but no 'green trade deals' yet

This chapter has provided evidence of ways that TAs are already being used to leverage improved environmental policies and practices, observing that approaches and the strength of commitments vary widely and that provisions are constantly evolving. The range of topics covered in TAs in particular has grown over time and the types of cooperation have expanded.

These developments aside, there is significant debate about the extent to which environmental provisions have lived up to their potential and broad agreement in the environmental community that no government has yet produced a truly 'green' TA.[78] In Europe, for instance, a recent assessment by a leading European environmental think tank concludes that although some EU agreements "appear to be headed in the right direction, no single existing trade agreement can yet be considered a 'gold standard.'"[79] In so doing, it observes that "none of the EU's trade agreements – existing or under negotiation – provide fully adequate safeguards for protecting the environment," either in terms of mitigating the negative impacts of trade, or in terms of using trade to boost environmental sustainability.[80]

At least five sets of concerns are commonly identified by environmental advocates. First, existing environmental provisions in TAs do not address the full range of relevant issues, are too weak, and are not sufficiently enforceable. Second, to support and incentivize stronger environmental outcomes, more provisions are needed within the core 'non-environment' and 'non-sustainable development' chapters of TAs. Third, greater attention is needed to ensure that specific provisions in TAs, such as on investment and investor-state dispute settlement (ISDS), do not undermine or reduce the scope for environmental action. Fourth, market access commitments in TAs can increase trade in ways that exacerbate environment crises of nature, climate and biodiversity loss (such as by boosting trade in unsustainably produced agricultural commodities). Fifth, although most TAs affirm commitments to uphold environmental laws, many countries lack the robust environmental laws and institutions vital for effective environmental protection, especially in the face of the commercial pressures and opportunities associated with international trade.

Looking ahead, a priority for advocates of greening trade is to identify where and how governments and stakeholders can improve on the current state of play, a number of options for which are reviewed in the folllowing sections of this paper.

Box 5. Sustainable development chapters in EU trade agreements

All EU TAs since 2009 have included a sustainable development chapter. The EU Canada Comprehensive and Economic Trade Agreement (CETA) has three separate chapters on labour, environment and sustainable development.[311] Within such chapters, parties generally commit to upholding standards in MEAs and there are numerous references to the SDGs.[312] Commitments in such chapters are also complemented by technical assistance projects, sometimes in the pre-implementation phase of the agreement.

Recent EU TAs promote cooperation on topics as diverse as voluntary sustainability assurance schemes and on the trade-related aspects of implementation of MEAs; the sound management of waste; biodiversity conservation and sustainable use (including fair and equitable sharing of benefits arising from the use of genetic resources); corporate social responsibility to foster sustainable supply chains; conservation and sustainable management of forests with a view to reducing deforestation and illegal logging; sustainable fishing practices; and sustainable consumption and production initiatives (including circular economy models aimed at increasing efficiency and reducing waste generation).

In their sustainable development chapters, a number of EU TAs include specific commitments related to deforestation, including to:

- Encourage trade in forest products from sustainably managed forests and harvested in accordance with the law of the country of harvest (e.g., deals with Canada and Mercosur)
- Develop systems and mechanisms to verify the legal origin of timber products (deals with Colombia, Peru, and Ecuador)
- Develop certification schemes for sustainably harvested products (deals with Central America).[313]

A core concern expressed by European environmental NGOs has been that the environment and sustainable development chapters of EU TAs have lacked adequate enforcement mechanisms. The EU-Mercosur TA is, for instance, the source of considerable debate, with European environmental NGOs arguing against ratification of the agreement on the grounds that Brazil is failing to take adequate action to implement its Paris Agreement climate commitments (specifically with respect to deforestation).[314]

In 2020, the EU established new trade enforcement regulations, which includes the creation of a single entry point for complaints from EU stakeholders and businesses on violations of sustainable trade commitments, such as on human rights as well as environmental protection.[315] The EU has also withdrawn trade benefits due to violations of sustainable trade commitments, notably in 2019 in relation to violations of labour rights in Cambodia.[316] Meanwhile, an array of European environmental NGOs and think tanks call for stronger implementation and enforcement of trade and sustainable development chapters in EU trade deals, and for broadening their scope.[317]

Box 6. Examples of specific environment commitments in trade agreements

This box provides a sample of some of the specific environment provisions included in different TAs to provide a flavour of the diversity of approaches. It does not intend to provide a full review of the environment provisions in any specific agreement. The inclusion of provisions in this box does not reflect an endorsement of the adequacy or effectiveness of these provisions or the approach taken. Indeed, each of the agreements cited below has spurred significant and wide ranging criticisms from environmental constituencies, focusing on specific environment provisions, omissions, and the wider environmental impacts of the TA.

European Free Trade Association (EFTA) agreements. Several EFTA agreenments include commitments to develop and use certification schemes for forest products from sustainably managed forests (EFTA–Ecuador, EFTA–Indonesia). The EFTA–Indonesia Comprehensive Economic Partnership Agreement (CEPA) grants preferential tariff treatment to certain products, such as palm oil, which meet sustainability requirements, thereby making an explicit distinction between conventional and sustainable production, with a focus on incentivizing the latter. The approach taken in the agreement is to provide preferential tariff treatment where importers of palm oil and palm oil derivatives can prove compliance with one of three voluntary sustainability standards.[318]

Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). This agreement was the first to include disciplines on fisheries subsidies by including a provision recognizing that "the implementation of a fisheries management system that is designed to prevent overfishing and overcapacity and to promote the recovery of overfished stocks must include the control, reduction and eventual elimination of all subsidies that contribute to overfishing and overcapacity."[319] Notably, the CPTPP extended the coverage of its dispute settlement mechanism to violations of environmental obligations (including those in the environmental chapter that do not necessarily affect the trade or investment between its contracting parties). However, while the CPTPP's environment chapter focuses on implementation of existing MEAs and enforcement of domestic environmental law, this does not amount to the positive vision on environmentally sound trade that many environmental advocates would like to see.[320]

US–Mexico–Canada Agreement (USMCA). In mid-2020, the USMCA entered into force, revising the 25-year old North American Free Trade Agreement (NAFTA).[321] The USMCA makes a number of changes on the environment front, including the inclusion of an environmental chapter, which brings environmental provisions into the core of the agreement and makes them enforceable. The environment chapter includes commitments to enforce environmental laws and to promote transparency, accountability, and public participation. It recognises that each Party has the right to establish its own levels of domestic environmental protection and to modify this as it sees fit, calling on parties to "strive to ensure" its laws provide for high levels of environmental protection. The USMCA also includes a list of seven MEAs, specifying that in the case of a conflict the MEA will prevail, and requires parties to adopt and implement measures to fufill obligations under these MEAs. Although promoted as having the "strongest, most enforceable environmental obligations of any TAs,"[322] among the concerns that environmental critics have highlighted is that USMCA does not address climate change nor does it include the UNFCCC or the Paris Agreement on its list of MEAs.

The USMCA includes commitments on a range of specific environmental matters, including requirements to restrict shark finning and whaling; improve fisheries management; prohibit certain harmful fisheries subsidies, as well as the use of poisons and explosives in commercial fishing operations; undertake environmental impact assessments of central government projects that may have significant effects on the environment; and for the first time in a TA, to take action to prevent and reduce marine litter. It requires countries to tackle trafficking in timber and fish and other wildlife, setting minimum penalties for environmental crimes and requiring enhanced customs and border cooperation. Like the NAFTA, USMCA is accompanied by a parallel Environmental Cooperation Agreement (ECA), which requires the retention of the Commission for Environmental Cooperation and its Montreal based Secretariat established under NAFTA side agreement.

US–Peru FTA Annex on Forest Sector Governance. The Environment Chapter of the 2009 US-Peru FTA (Chapter Eighteen) includes an Annex on Forest Sector Governance, which details concrete actions that Parties will take to strengthen forest sector governance and fight illegal logging and illegal trade in timber and wildlife products.[323] In line with the Forest Annex, Peru introduced penalties for illegal logging and wildlife trafficking[324] and the US has invested over US$60 million in environmental cooperation programs in Peru with the aim of supporting implementation.[325] In 2019, environmental consultations arose in relation to this Annex. At that time, the US expressed concern that Peru was undermining the independence of its Agency for the Supervision of Forest Resources and Wildlife (OSINFOR) and its ability to enforce Peru's forestry laws and supervise timber concessions and permits. The US prevailed in its effort to ensure that the agency would remain a separate and independent agency, as required by the FTA, and report directly to Peru's Prime Minister.[326]

3. Environment and Trade 2.0

Looking ahead, greening international trade will require a multi-pronged approach. This part of the paper maps a range of possible pathways and vehicles relevant to an Environment and Trade Agenda 2.0.

As illustrated in Figure 6, high environmental ambition and strong environmental laws and regulations at the national level, complemented by robust international environmental agreements, are the foundation for greening trade, as is implementation of trade provisions in MEAs. Additionally, a key pathway forward is to pursue strong environmental action in the framework of trade policies and agreements. This can include updating and strengthening environment provisions in existing and new TAs, not only in environment-specific chapters but across other chapters of agreements as well, while also using the existing space that TAs provide to take environmental action. Here, there is an array of possibilities for action at the border and 'behind the border'. Another pathway is to look beyond TAs and rules to bolster complementary actions and cooperation that are vital to greening trade. Stakeholder efforts to support sustainable supply chains are a final pathway explored here, along with strategies to hold them to account.

Notably, each of these pathways does not stand in isolation: there are many linkages between them and an array of relevant actors and processes are involved, both within and beyond the trade policy arena. The analysis that follows aims to provide a brief, introductory synopsis of the range of pathways, explain their relevance, highlight opportunities to consolidate and go beyond existing approaches, and identify issues for future work. The analysis does not aim to be fully comprehensive, nor to assess which pathways promise the greatest positive environmental impact. These tasks would require detailed topic and sector specific analyses, the conclusions of which are likely to vary widely depending on the products and countries involved.

3.1. Strengthened and environmental laws, regulations, and institutions

High ambition environmental laws and institutions, at both the national and international level, are a prerequisite for greening trade.

Box 7. Terminology on environmental standards

The term 'environmental standards' is used in a variety of ways in international policy discussions, which can generate considerable confusion.

On the one hand, some use the term standards to refer exclusively to private, voluntary initiatives that establish minimum environmental requirements or criteria on product characteristics or production, harvesting or extraction methods (see section 3.3.1). Individual companies or organizations that meet these standards sometimes self-declare their adherence, or acquire certification by third parties, and sometimes use labelling to signal to potential buyers that they meet a given standard. These private, voluntary standards may be developed by individual companies, a consortium of companies, NGOs, or through collaboration among these. Such standards may be commodity or product specific or be more general in scope.

On the other hand, the terminology of standards is also used in some policy contexts to refer to mandatory requirements set by governments through environmental laws and regulations. It is common, for instance, to hear calls for international trade rules to protect and uphold national environmental standards, and to apply those same environmental standards to imports, including where relevant as a basis for trade restrictions or bans on goods that do not meet such standards, or preferential access for goods that do. In trade law terminology, mandatory environmental requirements are referred to as 'technical regulations.'

Finally, the term standards is often used more loosely to refer to all mechanisms – private or public – that aim to distinguish between the environmental quality of goods and services on the market.

WTO rules also refer to international standards. This includes standards that governments have developed through intergovernmental processes, such as the Codex Alimentarius, as well as standards set through the ISO, which while international in scope does not have the status of an 'intergovernmental' organization. In both cases, the Codex texts and ISO standards are voluntary and do not have binding effect on national legislation (see Box 10 and Box 12).

3.1.1. Environmental laws and regulations: Setting standards for green trade

On a range of environmental priorities – from climate to the sustainable use of natural resources – domestic statutory environmental standards, as embodied in law and regulations, have a central role to play in promoting green global

supply chains and environmentally-sound production and consumption.

Environmental laws and regulations may apply to a range of different aspects of a product or service – from the product itself, to the production process, its impacts when consumed or used, or impacts at the 'waste' end of the product's life. At present, there are calls to enshrine clearer, stronger, and more enforceable environmental standards in national laws on a vast array of products and their production processes. This includes carbon footprints, recyclability of industrial materials and packaging, efficiency and management of natural resources, sustainability of food production processes, and impacts on animal welfare as well as product design and repairability (see Box 7).

Figure 6 Non-exhaustive overview of approaches to greening international trade

Environmental action in the framework of trade policies & agreements

General environment provisions

- Preambular language on environment & sustainable development objectives
- 'Essential clauses' on environment
- Environmental exceptions
- Safeguards for environmental laws & commitments to enforce and not reduce ambition
- Deference to MEAs in case of conflicts
- Requirements for MEA implementation
- Enforceable chapters on environmental cooperation
- Cooperation on extended producer responsibility
- Public participation and transparency
- Waivers to trade rules on specific environmental grounds
- Provisions to promote public participation and transparency

Border measures

- Bans and quantitative restrictions on environmentally harmful products & unsustainably produced products
- Tariff structures and border taxes that promote trade in green products & reward green production processes (e.g., liberalisation of green goods, preferential tariffs for green goods)

Behind the border measures

- Environmental regulations, standards & labelling requirements, including based on production and process methods (PPMs)
- Removal of non-tariff barriers to green trade
- Due diligence requirements
- Environmental taxes & charges
- Removal of environmentally harmful subsidies
- Green industrial policies (e.g., on green procurement, subsidies, IP, technology transfer)
- Regulatory cooperation on high environmental standards
- Investment rules for environmental sustainability

Trade measures in MEAs & other international agreements

- Measures to regulate trade in environmentally sensitive or harmful products
- Bans or restrictions on trade in environmentally sensitive or harmful products
- Measures to improve the traceability of products (e.g., documentation schemes)
- Minimum international environmental standards that apply to internationally traded goods

Beyond trade rules – cooperation for green trade

- Policy dialogue & information exchange on best practices
- Green Aid for Trade
- Support for green customs capacity
- Green trade finance
- Debt relief, debt-for-environment swaps, and green development finance
- Transparency and monitoring of environmentally-sensitive trade flows
- Transparency and monitoring of environment-related trade measures
- Sustainability impact assessments of trade & global environmental footprint accounting
- Green trade classifications

Stakeholder supply chain measures

- Voluntary, private environmental standards (e.g., labelling & certification schemes)
- CSR measures and corporate pledges
- Supply chain traceability & transparency
- Supply chain commitments & partnerships
- Consumer campaigns, boycotts and legal action

Underpinned by

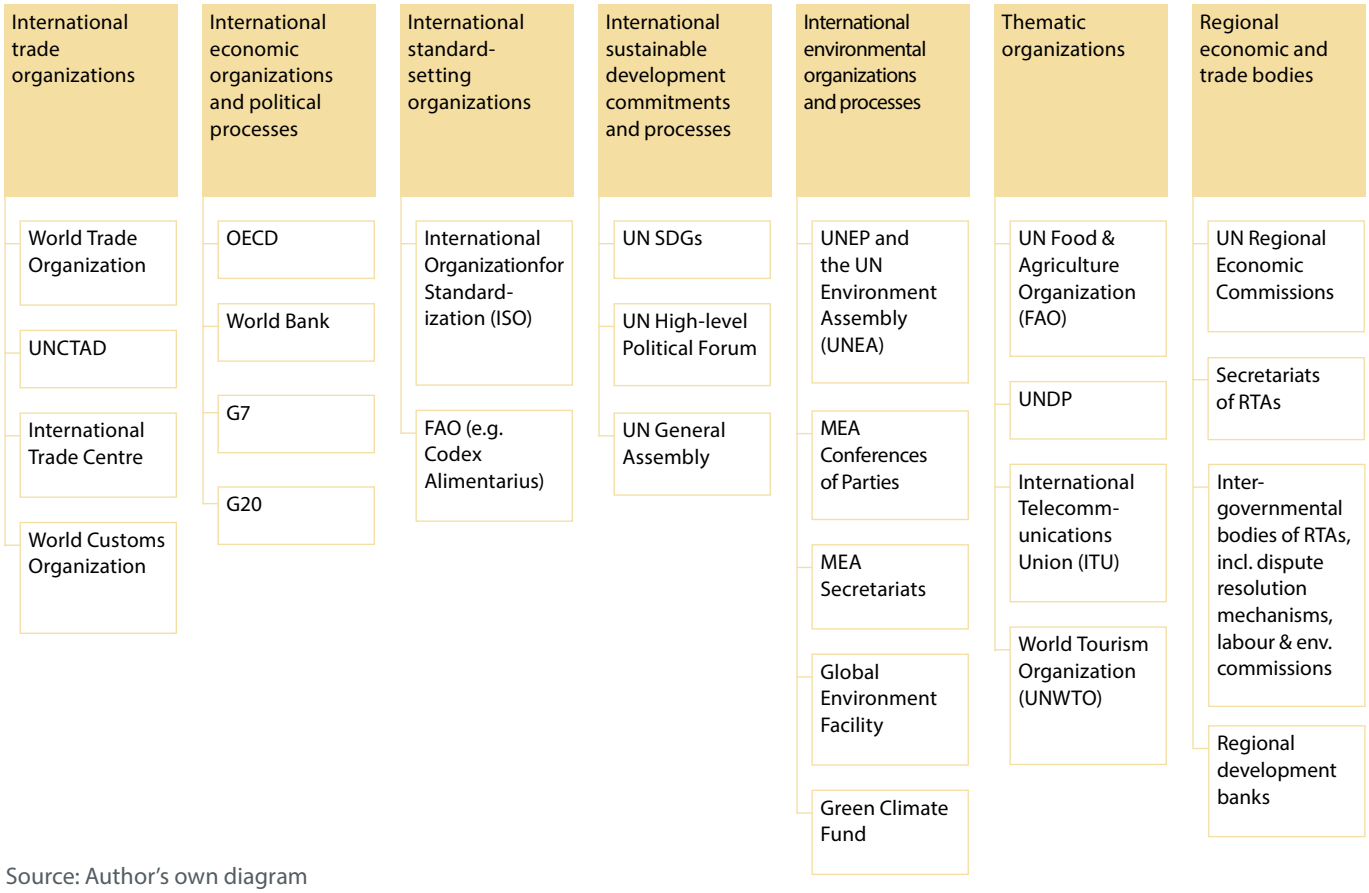
– strong, well-enforced national & international environmental standards and institutions

– enhanced support to developing countries for green economic transformation and transition

– Special and differential treatment for developing countries, especially the least developed and most environmentally vulnerable countries, that supports sustainable development outcomes

– coherent environment & trade policymaking at the domestic level, informed by cooperation among relevant ministries, parliamentary oversight, and input from the diversity of business and civil society stakeholders, as well as the research community

Figure 7. Selection of key international actors engaged in work on trade and environment



Source: Author's own diagram

The issue of environmental standards embodied in national laws and regulations is one of the thorniest areas of trade policy debate. As environmental advocates work to bolster national environmental standards, several issues arise on the trade front. On the one hand, there is broad consensus that trade negotiators are ill-equipped to negotiate on the content of environmental standards and that this task is best deferred to environmental or other non-trade ministries. TAs do not generally set the content of national environmental standards, either voluntary or mandatory, although some bilateral agreements do set out specific requirements related to environmental laws, institutions, and enforcement on certain issues. On the other hand, trade policymakers are regularly called upon to ensure that trade policies and rules provide space – and indeed encourage – the use of high environmental standards. At the same time, they are asked to address competitiveness and development concerns that arise from the enforcement of environmental standards, such as on high-stake issues like climate action in the steel and cement sectors, and in the agricultural sector.

To advance green trade, several pathways forward exist, including: 1) ensuring trade rules do not undermine domestic environmental laws and protections, and that they offer scope for these to be strengthened over time, and 2) harnessing trade rules as a vehicle to support high ambition environmental standards that are applied equally to domestic and imported goods, and to encourage higher environmental standards for products and production processes in other countries. On both counts, ensuring environmental standards are clearly enshrined and enforceable under national laws will help safeguard them from being undermined by TAs or the trade flows that these may promote.

Further, import bans or restrictions that governments or environmental advocates may wish to impose are more likely to avoid trade disputes if these are based on domestic environmental laws that apply the same requirements to domestic producers. Governments can also use national environmental standards to underpin differential tariffs, which provide lower, preferential tariffs on products that meet such standards (some TAs have also included provisions on preferential tariff treatment for products that comply with internationally-recognized voluntary standards as well). In addition, governments can also seek to learn from and build on voluntary standards and labelling efforts, working to embed minimum environmental requirements for all producers in national law rather than relying on private consumer choices and market forces to promote environmental best practices. Governments can also provide better guidance for the design and implementation of stakeholder-led environmental standards and certification initiatives, including in respect of certification and verification of compliance over time.

Simultaneously, there is a need for transparent, consultative, and cooperative approaches because the implementation of environmental laws in one country, and their application to imports, can present important challenges for trading partners. Trading partners, and especially developing countries, consistently call for greater transparency of environmental standards and standard-setting, both for standards incorporated into national environmental laws and regulations, as well as voluntary standards set through national, regional and international standard-setting bodies, and private environmental standards (see section 3.4.1). A related priority is for standards to account for variations in environmental challenges in different settings and different possible approaches to meeting a desired set of environmental outcomes (e.g. while specific thresholds for pesticide could be universally relevant, sustainability criteria related to matters such as the volume of water used for irrigation, production technologies and techniques may need to be flexible). Here, a key environment-trade issue for attention is how much scope trade rules provide for governments to differentiate between products on production and processing methods (PPMs) (see section 3.2.3).

A further issue relevant to the use of environmental standards in international trade relates to the methodological challenges and costs of monitoring and tracking environmental impacts arising across the life cycle of products, especially where products are made from a diversity of components sourced from different countries. A growing range of climate policies, for instance, are likely to rely on information about the carbon footprint of products produced through internationally distributed production networks. While rapid improvements in supply chain management capacities, technological advances (such as satellite monitoring and block chain technologies), and environmental impact methodologies have enhanced the ability of market-leading companies to collate information about environmental performance across their supply chains (see section 3.4.3), small and medium-sized companies have far weaker financial and technical capacities to gather and analyze data on their environmental footprints and will require focused assistance in this respect.

Looking ahead, greater transparency of national environmental decision-making processes, along with stronger participation of environmental experts from business, academia and civil society groups, would help bolster the scientific basis and credibility of environmental laws, regulations and standards that underpin both domestic environmental protection and are applied to international trade. Coordination among governments, including through regional approaches, and prior consultation with trading partners, would help avoid trade tensions. Notably, on a range of international environmental challenges – from forest management to agricultural production and plastic pollution to climate change – existing international legal frameworks do not provide international minimum standards, deferring instead to national laws. Here, intergovernmental processes of standard-setting could help bolster the ambition, transparency, environmental credibility, and global reach of minimum environmental standards (see section 3.1.2).

Finally, at the national level, a number of governments are implementing policies to make companies more responsible for environmental performance and social impacts across international supply chains, some of which are the focus of trade-related environmental cooperation. The sustainable development and environment chapters of a number of recent trade agreements incorporate 'soft' commitments to promote environmental, social and governance (ESG) and corporate social responsibility (CSR) initiatives in their businesses sectors and across supply chains, and a number of governments are exploring environmental due diligence requirements, which are directly relevant to trade.

Government-mandated supply chain responsibility: Due diligence systems and extended producer responsibility

A specific new development relevant to the environment-trade intersection is the growing attention to national due diligence requirements.

To create stronger regulatory frameworks for environmental performance along supply chains and greater accountability, a number of governments are boosting due diligence requirements on companies.[81] These initiatives build on earlier efforts, such as the 2005 OECD guidelines for Multinational Enterprises[82] and the 2016 OECD Due Diligence guidance for mineral supply chains from conflict-affected and high-risk areas,[83] as well as the EU's Conflict Minerals Regulation[84] and Raw Material Initiative.[85] At the 2015 G7 Summit, governments forged an agreement to develop a common understanding of due diligence for responsible supply chains,[86] which was the origin of the 2018 OECD agreement on Due Diligence Guidance for Responsible Business Conduct.[87]

Meanwhile, in 2017, France introduced a law on due diligence that obliges businesses to identify, prevent, and mitigate the human rights and environmental related risks linked to their activities.[88] In April 2020, the European Commission announced plans to develop a legislative proposal in 2021 that will "require EU companies to conduct mandatory human rights and environmental due diligence on their operations and global supply chains" and that will include provisions for liability with the possibility of sanctions for non-compliant companies.[89] Like the French legislation, the proposal focuses on abuses of human rights as well as environmental damage, including with respect to climate.[90]

There are also proposals in the UK for due diligence legislation that would require its businesses to carry out due diligence on the potential impacts of their activities on the environment, with a focus on making it illegal for a relatively small number of larger UK companies to "use forest risk commodities that have not been produced in accordance with relevant local laws" and requiring them to undertake due diligence to show that they have taken proportionate action to ensure this.[91] In 2021, the German parliament is also considering a proposed national supply chain law to define companies' duties concerning surveillance of human

rights and related environmental standards throughout their supply chains.[92] Among other requirements, the law would include a risk analysis obligation, a duty to take follow-up measures (with termination of business relationship as a last resort), and a reporting obligation, and would make German companies liable in German courts. In the Netherlands, the Dutch parliament is reviewing a mandatory due diligence bill submitted in March 2021 on 'Responsible and Sustainable International Business' that would hold all corporations in the Netherlands accountable for human rights and environmental abuses that occur in their supply chains, both within and outside the country.[93]

Meanwhile in Switzerland, citizens voted in early 2021 on a Responsible Business Initiative that aimed to require Swiss companies to ensure their subsidiaries and supply chains comply with UN human rights guidelines and international environmental standards.[94] While the initiative was narrowly rejected, the Swiss government is expected to put forward milder legislation that still includes due diligence and reporting requirements.[95]

While action on environmental due diligence requirements is spreading across a growing group of developed country markets, it will take several years to determine their effectiveness at achieving the desired transformation in favour of more environmentally sustainable production practices in exporting markets. On the one hand, due diligence laws can put game-changing pressures on supply chains for products entering the importing country that implementing such laws. On the other hand, due diligence requirements that are limited to a handful of countries do not address the potential for rising demand from other markets in which environmentally sustainability requirements may be less stringent. In a global marketplace, where companies can continue to sell unsustainably produced products to other markets, international coordination will be important, as will cooperation that supports the shift toward more environmentally sustainable production methods irrespective of the end market. Further, where these schemes are adopted by countries that host market-leading companies in key global markets, they will attract growing attention and scrutiny in trade diplomacy. This will include calls from developing countries for coherent international approaches and for transparency, fairness and support to ensure that their exporters are able to compete in green markets.

Beyond cooperation on due diligence requirements, a further area where cross-border linkages or coordination between national schemes could support effectiveness includes national extended producer responsibility schemes, which make companies responsible for waste at the end of product life. (see Box 8).

3.1.2. Strengthening MEAs and international environmental standards

A number of opportunities exist to use non-trade regimes to raise international environmental standards in ways that promote environmentally sustainable trade, through both MEAs and international standard-setting processes.

Box 8. Linking extended producer responsibility systems

Extended producer responsibility (EPR) measures aim to make producers responsible for reducing environmental impacts of products throughout their whole lifespan, including the post-consumer end of life stage of the product's life.[327] They also aim to spur producers to better address environmental considerations in the design and manufacture phases of product development.[328]

At present, the EU is recognized as a leader in EPR measures, with four government directives currently in place: the End-of-Life Vehicles Directive (ELV), the Waste Electrical and Electronic Equipment (WEEE) Directive, the Batteries Directive, and the Packaging Directive.[329] This is in addition to the European waste legislation, which aims to provide an overarching framework for the implementation of EPR by individual EU member states.[330] The EU also has EPR schemes for a number of specific waste streams within the region, including tyres, waste oil, paper and card, as well as construction and demolition waste.[331]

In recent years, growing evidence of the export of waste to developing countries in the absence of adequate waste management capacities has highlighted the shortfalls of EPR schemes that operate only within national boundaries. International cooperation among EPR schemes is proposed as one way to ensure that companies operating globally can no longer claim to have met their producer responsibilities unless it can be shown that exported wastes are being recycled or managed in an environmentally sound manner. It would mean that companies exporting products that generate significant quantities of waste, such as single use plastics, electronic products, and pre-packaged foods and beverages, are held to account for waste collection and management costs. One proposal is that a portion of revenues raised through EPR schemes in developed countries is devoted to developing countries faced with the cost of managing and cleaning up waste resulting from the consumption of imported products.

Supporting implementation of trade measures in MEAs

MEAs play a central role in setting goals and targets for international environmental cooperation. The features of MEAs vary but may include provisions that establish international environmental goals and targets, minimum international environmental standards, and monitoring mechanisms, as well as commitments for technology transfer,

Box 9. Sample of MEAs with trade-related measures

The Convention on International Trade in Endangered Species (CITES) of Wild Fauna and Flora

CITES aims to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species. Through its three appendices, the Convention accords varying degrees of protection to more than 37,000 plant and animal species, whether they are traded as live specimens, fur coats, or dried herbs. International wildlife trade involves hundreds of millions of plants and animals, and if not regulated, this trade can lead to exploitation of these species and consequently their depletion. Some of the key provisions in CITES outline under what conditions certain species can be traded across borders, usually requiring clearance from relevant management and scientific authorities of the state. In countries with weak environmental, legal and border control institutions, implementation of CITES remains a major challenge.

The Minamata Convention

The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury. The aim of the Convention is to limit mercury mining, regulate trade, reduce the use of mercury in products and processes, decrease and eliminate the use of mercury in gold mining, control mercury emissions into the air and water, and promote sound waste disposal.

The Basel, Rotterdam and Stockholm Conventions

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the Stockholm Convention on Persistent Organic Pollutants share the common objective of protecting human health and the environment from hazardous chemicals and wastes at all stages of their life cycle, from production to disposal. All three Conventions provide for the control of the international trade or transboundary movements of the substances and wastes covered by their provisions.

The Montreal Protocol

The Montreal Protocol on Substances that Deplete the Ozone Layer regulates the production and consumption of nearly 100 man-made chemicals referred to as ozone depleting substances. Under this treaty, all parties have specific responsibilities related to the phase out of the different groups of ozone depleting substance, including through annual reporting of data and controls on imports and exports, such as through national licensing systems. The Montreal Protocol's trade provisions are widely considered to be one of the most successful examples of trade-related cooperation.

The Convention on Biological Diversity

The CBD is an international legally binding treaty with three main goals: conservation of biodiversity; sustainable use of biodiversity; and fair and equitable sharing of the benefits arising from the use of genetic resources. While the text of the Convention does not explicitly refer to trade measures, nor does the Convention generally prescribe specific measures, it does contain a number of provisions that may have consequences for trade. The CBD provisions on access and benefit sharing of genetic resources have interlinkages with the WTO's provisions on intellectual property related to genetic resources.

The International Plant Protection Convention (IPPC)

The IPPC is a multilateral treaty overseen by the FAO that aims to secure coordinated, effective action to prevent and to control the introduction and spread of pests of plants and plant products. The IPPC makes provision for the application of measures by governments to protect their plant resources from harmful pests (phytosanitary measures) that may be introduced through international trade.

The UN Framework Convention on Climate Change and the Paris Agreement

The Paris Agreement aims to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future. While the Paris Agreement does not have provisions that directly restrict trade, the domestic actions countries take for its implementation could have trade implications. A number of elements in the Nationally Determined Contributions (NDCs) prepared by countries have links to trade, including measures that reduce trade barriers for low carbon technologies, establish climate-related standards and labelling, and regulate trade in products associated with deforestation. Further, Article 6 of the Paris Agreement provides a framework for voluntary cooperation through international markets for carbon emissions and offsets.

technical assistance and capacity building. About 20 MEAs include trade-related provisions, such as measures that "prohibit trade in certain species or products or that allow countries to restrict trade in certain circumstances."[96] Most of these provisions are tightly focused in scope and target specific products (see Box 9). To date, there has been no WTO dispute on the relationship between MEAs and the WTO laws, with the presumption being that action taken pursuant to the implementation of an MEA is unlikely to be successfully challenged in the WTO context.

From an environmental standpoint, a key advantage of MEAs as a focus for action on environment-trade intersections is that they are more likely to be informed by environmental expertise and objectives than trade decision-making processes. On the downside, while TAs generally have legally binding enforcement provisions (although rarely for environmental chapters), MEAs rely heavily on peer pressure for compliance and have weaker enforcement mechanisms. That said, a number of MEAs have introduced trade measures to bolster their implementation and enforcement (see Box 9).

The 2013 Minamata Convention on Mercury, for instance, includes provisions on the mining, export and import, and safe storage of mercury as well as its disposal.[97] It commits signatories to a prohibition on the manufacture, import and export of mercury by 2020, except where countries have requested an exemption for an initial five-year period. Governments are working to better regulate trade in mercury waste, plastic waste, e-waste and toxic chemical wastes through the Basel Convention on the Transboundary Movement of Hazardous Wastes.[98] Additionally, under the framework of the 2001 Stockholm Convention on Persistent Organic Pollutants, governments are also reviewing proposals to phase out the trade and manufacture of different types of harmful chemical inputs to plastic products, such as certain flame retardants used in polystyrene polymers.[99] Further, at the regional level, 25 African signatories to the 1998 Barnako Convention prohibit the import into their countries of any hazardous (including radioactive) waste or substances that are forbidden from use in the country of manufacture.

Some regional fisheries management organizations (RFMOs), such as those created by the International Commission for the Conservation of Atlantic Tunas (ICCAT) and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), have also adopted environment-related trade measures, such as trade documentation schemes that apply to fish and fish products as they move through supply chains. Such schemes seek to "positively identify legal products and to deny illegal products (not covered by certificates) market access at all levels of the supply chain – from landing through processing and importation into the final consumer market."[100] Another example of trade measures are trade embargoes imposed through RFMOS to eliminate illegal, unreported and unregulated fishing (IUU).[101]

Looking ahead, governments could make further use of MEAs to set trade-related goals (such as to reduce trade in certain environmentally harmful substances) and to establish legal commitments on the documentation and certification of trade in certain products, requirements for prior informed consent on the trade of certain products, and restrictions or bans on certain products. Political declarations in non-trade processes can also be used to establish the overarching goals and commitments necessary to spur and guide action in trade decision-making processes, such as SDG 14's goal and deadline for a WTO deal on reducing fisheries subsidies.

International environmental standards for trade

There is interest in stronger international environmental standards to address a range of environmental challenges. Here a key issue for consideration is that while many MEAs set environmental objectives and establish priorities for cooperation, only some define the substantive international environmental standards, that could play a critical role in greening trade. At present, for instance, there are no international minimum standards for food and agricultural production. Similarly, neither the UNFCCC or the Paris Agreement set climate standards for products or production.

The WTO's Agreement on Sanitary and Phytosanitary measures (SPS Agreement) refers to three specific organizations that set international standards, including the Codx Alimentarius. The WTO Agreement on TBT does not detail any specific institutions that can set international standards. In 2000, the TBT Committee issued six principles to give guidance on which requirements need to be met for an instrument to be considered an 'international standard'.

The SPS Agreement specifically refers to the Codex Alimentarius (see Box 10) food safety standards as one of the international standards on which Members should base their SPS measures. The Codex Alimentarius is also one of the benchmarks against which national measures and regulations can be evaluated in the context of trade disputes. Notably, WTO Members can apply stricter food safety measures than those set by the Codex Alimentarius, and many have done so.[102]

To complement the Codex Alimentarius, there is growing interest in the development of a new set of minimum international standards – a Codex Planetarius – that would set standards for the sustainable production of the most important globally traded food and soft commodities, with the goal of safeguarding the health of the planet's food systems (see Box 11).[103] Like the Codex Alimentarius, the proposal is that the Codex Planetarius would be developed and administered under the auspices of the FAO. Governments would use its minimum environmental standards as a baseline for national laws to promote sustainable food systems, which would apply equally to national and imported products.

Another source of international standards relevant to the environment are international human rights instruments, such as those that establish the right to a healthy environment.

Box 10. The Codex Alimentarius

The Codex Alimentarius is a collection of internationally recognized standards, guidelines, codes of practice, and other recommendations that aim to contribute to the safety, quality, and fairness of international food trade. The Codex Alimentarius includes standards for all the principal foods, whether processed, semi-processed or raw, for distribution to the consumer. It includes provisions with respect to food hygiene, food additives, residues of pesticides and veterinary drugs, contaminants, labelling and presentation, methods of analysis and sampling, as well as import and export inspection and certification.[342] Codex Alimentarius standards are based on scientific evidence provided by independent international risk assessment bodies or ad hoc consultations organized by the FAO and WHO.[343] They have a consumer dimension (so consumers trust the safety and quality of the food products they buy) and a trade dimension (so importers can trust that the food they import meets agreed standards).

In the case of Codex Alimentarius, the FAO clarifies that:

"WTO Agreements on Sanitary and Phytosanitary Measures (SPS Agreement) and on Technical Barriers to Trade (TBT Agreement) encourage WTO members to harmonise national regulations with the international standards. Indeed, the SPS Agreement specifically identifies Codex standards, guidelines and recommendations as the international benchmark for food safety. As such, national regulations consistent with Codex standards are deemed to meet the requirement of the SPS Agreement. Under the SPS Agreement, WTO Members are allowed to implement national standards that are more stringent than those of Codex. In doing so, however, WTO Members may be requested to provide scientific justification that such stringent sanitary measures are required to achieve their appropriate level of protection, as well as demonstrate that the measure taken is based on an assessment of risk. Codex standards, guidelines and other recommendations may also be used as a reference in case of a food trade dispute."[344]

Box 11. The proposal for a Codex Planetarius

The proposal for a Codex Planetarius, developed by WWF, aims to establish an international baseline for the development of national environmental standards, which countries can improve upon and go beyond at the national level.[339] Spurred by the need to "tackle biodiversity loss, advance restoration goals and help reduce greenhouse gases emissions" caused by food systems that affect and are affected by the world's changing climate, the Codex Planetarius is being championed as a key item for multilateral consideration at the UN Food Systems Summit, planned for October 2021.[340]

In early 2021, the proposal was referenced in the recommendations of the UK government's independent Trade and Agriculture Commission (TAC), which called for the UK to establish core national environmental, public health and animal welfare standards for imports, and to support strong international standards through the Codex Planetarius as part of a 'twin track' approach.[341]

In 2020, for instance, the UN's Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes (toxics), argued that the export of banned toxic chemicals to poorer countries that lack the capacity to manage them constitutes "a violation of extraterritorial obligations under international human rights law, including obligations relating to a healthy environment and safe and healthy working conditions."[104]

The ISO is another source of relevant international standards. The ISO is an independent, international, non-governmental organization that facilitates the development of an array of voluntary standards. To date, ISO has developed over 23,000 standards covering topics ranging from manufactured products and technology to food safety, environmental protection, agriculture, and healthcare. On the environment front, these include ISO standards on environmental management, production processes, product design and disposal, and labelling (see Box 12). ISO's members are the national standards organizations of 165 countries, which work to develop consensus-based international standards. While ISO standards are voluntary and non-binding, they are a prominent vehicle for international cooperation on standards and some are widely used in international trade. The WTO's Agreement on TBT, along with numerous regional and bilateral TAs refers to the ISO as one possible source of international standards that WTO Members can refer to in order to justify national environment-related trade measures (see Box 7).

The private sector is the primary user of ISO standards, which can be purchased for use by companies. The private sector is also the key player in many ISO standard-setting processes as well as national and regional standard-setting bodies with international influence. While such voluntary standards cannot replace the need for minimum environmental requirements embodied in national laws, they are increasingly referred to in government policies. Looking ahead, the relevance and credibility of such standard-setting processes as vehicles for raising international environmental performance will require greater transparency and engagement by developing country governments and a wider diversity of environmental stakeholders.

Box 12. International Organization for Standardization (ISO)

ISO has developed standards on a range of different environmental topics from recycling to plastic packaging as well as some cross-cutting environmental standards. The ISO 14000 standards on environmental management aim, for instance, to help organizations minimize their negative environmental impacts as well as comply with environmental regulations.[332] Examples from this family of standards include:

- ISO 14001 (2015) – Environmental management systems: specifies the requirements for an environmental management system that a company or organization can use to enhance its environmental performance in order to contribute to environmental sustainability.[333]
- ISO 14004 (2016) – Environmental management systems: provides general guidelines on implementation: provides guidance for an organization on the establishment, implementation, maintenance, and improvement of a robust and efficient environmental management system.[334]
- ISO 26000 (2010) – Guidance on social responsibility: defines how an organization can contribute to sustainable development through socially responsible behaviour, helping organizations and businesses to translate principles into effective actions and share best practices related to social responsibility.[335]

The ISO also has standards on topics as diverse as sustainable procurement (ISO 20400),[336] managing and handling garbage on ships (ISO 21070), and greenhouse gas management (ISO 14080).[337] The ISO hosts ongoing work on a range of environmental standards relevant to the measurement of the carbon-intensity of production and 'net zero' standards, as well as on standards for the circular economy. Recognition of the push for international standards linked to climate action, and their cross-cutting importance to the ISO, spurred the creation in 2020 of an ISO Task Force to review its entire suite of climate related activities and relevant standards.[338]

3.2. Upgrading environment action in trade policies and agreements

Finding ways to support environmental actions in ways that do not fall foul of trade rules is a key challenge for the Environment and Trade 2.0 agenda. Numerous proposals have been tabled on how governments can work together to mitigate such risks, including through careful design of domestic environmental measures. There are also a range of proposals to update environment provisions in trade agreements to clearly safeguard national environmental laws and MEAs; to commit countries to their implementation and resist derogation from environmental standards in order to gain a competitive edge; and to affirm the sovereign right of countries to raise environmental standards over time.

This section reviews a number of pathways for ensuring trade rules better enable and support environmental action, including through provisions on MEAs, measures implemented 'at the border' (such as bans, restrictions and tariff policies), and a diversity of measures that can be implemented 'behind the border'.

3.2.1. MEAs in trade agreements and arrangements

Many international trade agreements – bilateral, regional and multilateral – recognize the importance of MEAs.[105]

MEAs at the WTO

At the multilateral level, it is generally well-established that WTO rules allow environmental measures taken under MEAs, provided certain conditions are met. To date, no trade-related measures taken by governments in the context of MEAs have been the explicit subject of any trade challenges. However, there are outstanding legal questions, such as the WTO compatibility of non-equivalent treatment of 'like' products, for example where imports from an MEA signatory country are authorized, but not imports from a non-MEA signatory country. To illustrate, the question at hand is whether a country can refuse a shipment of a waste product from country A (which is not a signatory to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal) while accepting a shipment of an equivalent product from country B that is a party to that Convention.

In 2001, WTO Ministerial Conference established a mandate for negotiations to clarify the relationship between specific trade obligations included in some MEAs and WTO rules, which have also covered procedures for regular information exchange between MEA secretariats and relevant WTO committees, and criteria for the granting of observer status to MEA Secretariats. The negotiations take place through a Special Session of the WTO's Committee on Trade and Environment, but as with most Doha Round negotiations, have lacked clear political direction and timelines for completion in recent years.[106]

On the process side, only a subset of MEA Secretariats have observer status at the WTO Committee on Trade and Environment (CTE). Despite long standing calls to grant observer status to all MEA Secretariats to all relevant WTO Committees where environmental matters are discussed, the stalemate on this issue has been caught up in a larger political stand-off on observers to the WTO (linked to tensions over the blocking of the Arab League's application

for WTO observer status and its trade boycott of Israel). Meanwhile, some MEA Secretariats are invited as ad hoc observers to the CTE special negotiating sessions. A range of forms of cooperation and information exchange between WTO and MEA Secretariats also exist, including information sessions held by the WTO CTE that are open to all MEA Secretariats, exchange of documents, collaboration between the WTO, UNEP and MEAs in the provision of technical assistance, and the organization of side events by the WTO Secretariat in the margins of MEA meetings of their parties.

From safeguarding MEAs to implementation and enforcement

A number of TAs include provisions that mention MEAs and advance a variety of approaches (see section 2.2.2). Some MEAs specify that in case of a conflict with trade rules, MEAs will prevail. Others seek to promote, and sometimes require, implementation of MEAs listed in the agreement. The recent USMCA, for instance, calls on governments to "strive to ensure" implementation of MEAs, and outlines that the obligations under the seven MEAs it lists should prevail over those found in the agreement (the Paris Agreement is not among these). Notably, where disputes arise in the context of bilateral and regional TAs, panels hearing a dispute make their rulings based on the text of the TAs, and not based on other agreements, such as MEAs, unless these are explicitly noted in the TAs.

The climate crisis has increased interest in the use of TAs to spur ratification and strengthen implementation of MEAs. The EU, for instance, has stated that it will only pursue trade arrangements with countries that ratify and implement their commitments under the Paris Agreement on climate. Several EU members have voted – or threatened to vote – against ratification of the EU-Mercosur trade agreement until they are satisfied that Brazil demonstrates appropriate action to implement its Paris Agreement commitments.[107] The Netherlands and France have argued that trading partners must live up to their Paris Agreement commitments to implement progressively more ambitious climate policies or risk the withdrawal of trade benefits. They also argue that reference to the Paris Agreement must not be limited to the environmental chapter of a TA, but should be added to the two existing 'essential elements' in EU trade agreements (i.e., respect for human rights and the fight against weapons of mass destruction) in any current or future trade negotiations, as well as in existing EU trade agreements that are modernized or renegotiated.[108] The elevation of the Paris Agreement to the status of an 'essential element' of trade agreements would signal that it is of highest political importance and of cross-cutting relevance across the Agreement.

3.2.2. Border measures

Restricting trade in environmentally harmful and unsustainably produced products

Governments have a range of options for restricting trade in environmentally harmful and unsustainably produced goods. In general, the GATT prohibits WTO Members from imposing export or import bans or restrictions on goods (ranging from quotas to licensing rules). Nonetheless, under GATT Article XX, WTO Members can justify violation of GATT rules on environmental grounds, provided a set of conditions are complied with. Governments keen to avoid potential legal questions about measures that restrict trade on environmental grounds can do so by ensuring careful design of their measures to satisfy WTO principles of national ltreatment, non-discrimination, and transparency. A review of WTO disputes to date also suggests that adjudicators may look into whether the country imposing an environmental measure has undertaken good faith consultations with trading partners before its implementation.[109]

Notably, the GATT does allow export and import restrictions through duties, taxes and other charges, although these must be applied in a manner consistent with WTO principles of national treatment and non-discrimination among trading partners. Governments can also choose to vary the degree of market access they provide to products they deem sustainable or unsustainable, such as through variations in tariffs (see section 3.2.2).

There are numerous examples of governments takingt action to limit trade on environmental grounds. First, as noted above, many governments limit certain trade in line with their implementation of MEAs (e.g., bans on trade in certain endangered species, or restrictions on trade in hazardous wastes or chemicals) (see section 3.1.2). Second, governments can take national action independent of international agreements, which as noted above, they can do provided any restrictions equally apply nationally and do not discriminate between exporters. In 2018, for instance, Canada banned the import of toiletries that contain plastic microbeads[110] and China banned the import of several types of solid wastes, including plastic waste.[111] In 2020, under its Marine Mammal Protection Act, the United States banned the import of fish or fish products from commercial fishing operations that result in the mortality of marine creatures.[112] Through its 2003 Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan, the EU has implemented trade measures to stop illegal logging and the associated trade in illegal timber globally, including through 'place on market' restrictions on imports of illegally-harvested timber.[113] The UK also has restrictions on the import of timber products, which must comply with UK plant health regulations designed to protect the UK natural environment from the introduction of harmful organisms that can be present in wood (e.g. insects, bacteria).[114] A broad range of countries are developing import-related measures that apply to a wider range of commodities and products associated with deforestation (such as agricultural products and minerals associated with land-clearing for production or extraction).

Bans on exports of certain natural resources have also been deployed, though these bans are sometimes for strategic or economic purposes rather than for environment purposes. For instance, China banned the exports of certain rare earths in 2012.[115] Various forms of export restrictions also exist in

resource-rich countries in Africa, such as Cameroon, Chad and Sierra Leone, though again these are not necessarily pursued on environmental grounds.[116]

A long-standing environment-trade-related issue that warrants more attention in an Environment and Trade 2.0 agenda relates to trade in domestically prohibited goods.[117] In 2019, at least 30 countries (including France, the UK, Germany, Switzerland, China and Denmark) exported toxic and hazardous chemical substances to developing countries that had been banned from national markets due to health and environmental concerns.[118]

Notably, governments have set an interesting precedent at the WTO that may be useful to ongoing efforts to reduce legal uncertainty about the scope for restrictions or bans on certain goods, and to promote widespread use of them for specific products. In 2003, WTO Members agreed to an exemption from certain WTO obligations for national measures aimed at reducing trade in 'conflict diamonds'. This was in line with their participation in the Kimberley Process Certification Scheme for Rough Diamonds, which provides that each participant should "ensure that no shipment of rough diamonds is imported or exported to a non-Participant."[119] The 'Kimberley Waiver' clarified that trade actions taken against non-participant WTO Members to help suppress trade in conflict diamonds under the Kimberley Process are justified under the trade rules.[120] Looking ahead, environmental advocates could consider whether similar waivers could be usefully applied to specific kinds of trade measures taken by governments to address particular environmental challenges, such as climate action (see Box 14) or to measures designed to stop trade in illegally harvested fisheries products or timber products.

Tariff policies to promote green trade

A core issue on the global environment-trade agenda is how governments can use tariff policy to promote trade in green goods and technologies that support environmental protection, climate action, and the transition to more circular economies. Here, three approaches warrant attention: 1) using differentiated tariff structures, combined with environmental standards, to favour trade in green products; 2) liberalization of trade in environmental goods to spur the international diffusion of environmental products by reducing import tariffs (as well as non-tariff barriers); and 3) guarding against reductions of tariffs for goods that do not meet high environmental standards applied in importing countries or that threaten to undercut the competitiveness of domestic companies producing high ambition green products and using more environmentally sustainable production processes.

Differentiated tariff structures

A range of environmental advocates argue in favour of tariff structures that differentiate between products based on their green credentials and the sustainability of production processes.

At present, high tariffs are a barrier to the diffusion and use of a range of environmentally friendly goods and technologies. Recent estimates suggest, for instance, that lowering tariffs on a broad range of environmental goods would lead to 10 million tonnes of CO_2 reductions by 2030.[121] Meanwhile, there are low tariffs on many industrial and agricultural goods with a high negative environmental impact. Further liberalization of tariffs for such products could spur new market opportunities that further exacerbate environmental harm. Where countries lack clear national environmental standards that can be applied to imports of environmentally damaging goods or to imports produced in an environmentally harmful manner, lowering tariffs can not only reward unsustainable production by expanding international markets, but also undercut domestic producers that deliver higher environment performance. Here, environmental advocates emphasize the need to avoid lowering tariffs on agricultural goods without setting environmental standards for these products, especially where environmental standards in exporting countries reflect less stringent approaches to issues of environmental risk and precaution.

A further challenge, especially for developing countries, is the problem of tariff escalation, where tariff rates in export markets for processed and manufactured goods are higher than those for raw materials (such as minerals and timber) and other unprocessed commodities and agricultural products. Tariff escalation has been long observed to undercut developing country efforts to move into more value-added production and exports. Addressing tariff escalation could reduce environmental pressures arising from the status quo, where the limited scope for value-added processing means that many developing country exporters overexploit natural resources and the environment in order to maintain foreign exchange earnings especially for raw materials and commodities that frequently face either falling prices or notoriously volatile prices.

One option is to ensure that tariff policies are implemented in ways that ensure green products are not unfairly disadvantaged compared to 'like' or similar, but unsustainably produced products. In addition to lower tariffs for 'green products' (discussed below), governments can offer preferential market access for sustainably produced, harvested or extracted products through the application of lower tariffs for products that meet certain environmental standards. And at least one international trade agreement (EFTA–Indonesia) refers to compliance with specific voluntary environmental standards (for palm oil production) as a basis for preferential tariff treatment (see Box 4).

Liberalization of environmental goods

Among the range of environment-trade issues on the international agenda, the liberalization of environmental goods is one that has instinctive appeal to many trade negotiators as it relates most closely to what many view as their core purpose, negotiating expanded market access for national exports.

All countries are free to apply lower tariffs to more

environmentally efficient goods, and countries can unilaterally reduce their tariffs for environmental goods. The UK has, for instance, reduced tariffs on over 100 environmental goods in their UK Global Tariff.[122] Alternatively, governments can seek to negotiate tariff reductions with their trading partners, which generally occurs through a quid-pro-quo exchange of concessions on different tariff lines for exports of interest to the countries involved.

At the multilateral level, the WTO's 2001 Doha mandate included a commitment to launch negotiations on liberalization of trade in environmental good and services. Amidst the wider decline of Doha Round of WTO negotiations, the environmental goods and services (EGS) negotiations never acquired broad support among WTO Members and stumbled as governments debated definitions of 'environmental goods'. Frustrated by lack of progress, a smaller group of interested Members subsequently launched plurilateral talks on an Environmental Goods Agreement (EGA), but these talks stalled in 2017. In 2021, a number of developed country governments are calling for the revival of EGA negotiations at the WTO, including the EU, Japan, Korea, and Switzerland.

Looking ahead, a key challenge for environmental goods negotiations is to find an approach to what counts as a 'green good' that is environmentally credible and that can engage a diversity of governments. Here, while some governments focus on goods related to renewable energy, energy efficiency, waste disposal, materials recycling, and air pollution, others argue that the range of green goods for negotiation should include those that are sustainably produced, such as organic agricultural goods and certified biodiversity-based goods. Some advocates call for a narrow focus on liberalizing trade in goods that support climate action (such as renewable energy, energy efficiency technologies). In addition to waste disposal technologies, there is also a push for liberalization of recycled and recyclable products as one way in which trade policy could support the growing groundswell of business and governments action in favour of a more circular economy (see Box 13). In this spirit, some developing countries have expressed interest in exploring opportunities to liberalize trade in non-plastic substitutes.[123]

In order to enable new negotiations on environmental goods to get started, some call for a 'living agreement' approach, where new goods could be added over time. In the context of climate action, there are calls to explore new approaches that would focus negotiations on maximizing the rapid and broad diffusion of the most vital climate technologies, rather than mercantilist bargaining driven purely by commercial interests and competitiveness considerations. That said, the politics of competition will not be easily waved away. In the context of US-China tensions over technology and trade, for instance, any new EGA negotiations that engaged these two economic giants would encounter wider tensions: many US stakeholders are unlikely, for instance, to be enthusiastic about requests for greater market access for Chinese environmental technologies, such as solar panels.

A recurring challenge to the liberalization of green goods is the absence of agreed standards and criteria at the product level for differentiating between 'green' and 'non-green' products, an issue that is further complicated by the fact that the official classifications used to monitor trade do not differentiate most products on sustainability criteria. The absence of internationally agreed definitions and standards for green goods exacerbates practical constraints facing customs authorities charged with differentiating between green and other products at the border, applying appropriate customs duties, and monitoring flows.

Finally, there are also calls for guaranteed access or 'fast-stream' customs mechanisms for green commodities or products linked to schemes with verified environmental standards as well as to facilitate trade flows that enable circular economy approaches. Here, a range of businesses keen to use recycled inputs in their products argue that prevailing trade and investment regulations can limit their capacity to spur effective recycling markets and trade in the secondary waste materials that represent important inputs for circular business models.[124] The argument is that facilitated flows of certain waste products and second-hand materials across borders could support the circular economy by making recycling, repair, remanufacture, and refurbishment more cost-effective through economies of scale. As noted in Box 13 The rising interest in trade policy for the circular economy, however, there are also important risks of eco-dumping on developing countries, especially where wastes are hazardous or contaminated, and also where countries do not have necessary facilities to safely recycle, refurbish or remanufacture second-hand products or waste.

Importantly, while calls for tariff liberalization dominate discussion of how trade can help diffuse green products and technologies, developing countries call for attention to how trade policies can better support transfer of affordable environmental production technologies, including through the strategic use of industrial policies for environmental purposes (see section 3.2.3). While developed countries with established competitive advantages emphasize the importance of trade liberalization to speed the dissemination of environmental goods, technologies and services, many developing countries underline the importance of supporting national capacity and innovation in environmental technologies in ways that bridge the technology gap – and technology ownership gap – between developed and developing countries. They emphasize the importance of trade rules that provide 'policy space' for governments to intervene strategically in the economy to build and support local green industries, including through intellectual property rules, government procurement and technology transfer, as a necessary complement to importing foreign technologies (with associated licensing fees) or allowing foreign companies and their subsidiaries to invest in and operate their own technologies within their borders.

3.2.3. Environmental action 'behind the border' and green industrial policy

Closer attention to how trade policy can better support

Box 13. The rising interest in trade policy for the circular economy

A broadening array of governments, sub-national authorities, and cities are adopting circular economy strategies and policies.[345] At the heart of the circular economy vision is the move from a 'take-make-waste' economic model toward 'reduce, reuse, recycle' approaches that maximise resource efficiency.[346] In early 2020, the European Commission adopted the Circular Economy Action Plan,[347] which adopts a targeted approach to material-specific sectors such as plastics, critical raw materials, biomass, and food.[348] Beyond the EU, countries adopting circular economy include strategies range from China to Ghana.[349]

An incresing number of businesses are also working to promote circularity in business operations and in global supply chains, recognising that it makes good commercial sense to increase resource efficiency and reduce waste.[350] At the same time, there is also a growing focus on ensuring that circular economy policies and business models incorporate attention to decarbonization as well as protecting, restoring and regenerating nature.[351]

In the trade arena, a growing range of governments, business organizations, and environmental advocates are keen to explore how trade policy can promote circularity.[352] At the international level, proponents of a more circular global economy highlight that efficiencies of scale, such as disassembly of products and recycling, can be achieved through international trade. They also emphasize the importance of ensuring trade policy frameworks facilitate trade in recycled and other secondary materials for use as inputs into production processes.

At the same time, growing attention to the export of e-waste, plastic waste, and textiles waste to developing countries with insufficient capacity to manage even their domestic waste streams in environmentally sound manner presents importance challenges for the circular economy vision. Many developed countries have counted plastic waste shipped for recycling abroad as 'recycled,' for instance, despite the reality that most is incinerated, landfilled or discarded in the open environment, with a range of local environmental and health effects, rather than recycled.[353] A trade-related issue that has arisen is the potential to link disposal beyond borders through national extended producer responsibility schemes, which make companies responsible for waste at the end of product life.

Importantly, the circularity concept is not limited to end-of-life issues, such as waste management and recycling, but also calls for reducing unsustainable production and consumption, and promoting greater re-use and repairability of products. On re-use, priorities include ending built-in obsolescence, designing repairable products that can be upgraded rather than discarded, promoting 'refill' retail models, and supporting the refurbishment and remanufacture of used products.[354] Here again, there are ongoing efforts to explore how trade policy can better support efforts to phase out unsustainable production and consumption and promote re-use. While governments can and do use trade policy to ban or limit trade in certain products on environmental grounds, the notion that trade policy and the trading system can support the circular economy by reducing markets for certain wasteful products can be a challenging sell for trade negotiators accustomed to gauging their success on their capacity to expand trade. In this context, a framing that emphasizes the scope for trade in less wasteful, more resource-efficient alternative products and also services related to their maintenance, repair and re-use should be central to circular economy and trade approaches.

national environmental and economic policies designed to spur green economic transformation and transition will be a necessary part of an Environment and Trade 2.0 agenda. Governments can implement a range of policies and measures 'behind the border' to promote cleaner production processes, a more circular economy, and more nature-friendly production in ways that promote green trade. This section explores a range of the pathways 'behind the border' that could be harnessed for greening international trade, including proposals for updates to core provisions of trade agreements.[125]

In the context of the COVID-19 pandemic, countries everywhere are expanding interventions in their economies and adapting their trade policies to offer more support to domestic industries, promote strategic autonomy in key essential industries and secure access to essential supplies. At the same time, the push for a lower carbon, circular global economy is prompting growing action on green industrial policies – a broad set of policies with trade-related dimensions – including subsidies, government procurement, and investment, as well as standards, intellectual property and technology transfer.[126] Trade-related rules and policies in each of these areas can hinder or support the cost-competitiveness, availability and dissemination of sustainable technologies, the ability to participate in sustainable supply chains, as well as the innovation vital for more environmentally sustainable products and production methods.[127]

A key concern in the environment-trade arena is that high environmental standards and trade measures designed

to support green production and reduce environmental footprints at home may have the perverse effect of moving environmental impacts to other countries, either because companies shift production to countries with lower environmental standards or because consumers meet their consumption needs through the import of products produced less sustainably elsewhere. In this context, from an environmental viewpoint, a priority for trade policy is to incentivize businesses with the existing wealth and resources to innovate, invest in and share new approaches to sustainable production to do so, while supporting and providing the enabling policy environments for all businesses in all countries to follow suit.

There is an important political economy aspect to the design of environment-related trade measures because many of these combine mixed environment goals and economic objectives.[128] That is, as governments work to advance environmental goals, such as the transition to low carbon production, they face pressures from constituencies to use green industrial policies to create 'green jobs' nationally, especially in communities that face the phase out of existing industries and jobs. At the same time, one country's green measures at the national level may create non-tariff barriers (NTBs) to trade, either internationally or unintentionally, for the exports of other products. Frequent tensions also arise between the push to harness trade and trade policies as a means to speed the diffusion of green technologies, including to help developing countries 'leap-frog' carbon-intensive development pathways, while aligning trade policies with the desire of many developing countries to build and diversify their own economies, including in the fastest growing and lucrative green sectors.

With this background in mind, among the many possible pathways forward, this section reviews the potential to green trade through 'behind the border' measures related to: trade in environmental services; production and process methods; environmental taxes; subsidies reform; green government procurement; green technology transfer; regulatory cooperation; investment rules; and competition policies.

Trade in environmental services

International trade offers numerous opportunities to support the reach and growth of both direct and indirect environmental services. Direct environmental services include those related to sewage, waste disposal, recycling, vehicle emissions and nature protection, as well as eco-tourism and green construction and engineering. Indirect environmental services include those related to the assembly, installation, testing, monitoring and maintenance of environmental products (such as wind turbines) as well as technical support and research and development.[129]

Unlike liberalization of environmental goods, where the focus is primarily on lowering tariffs, the liberalization of environmental services generally involves commitments on market access and national treatment for different types of foreign services suppliers, including for the establishment of subsidiaries for the supply of environmental services and the cross-border movement of people, such as for installation, maintenance, and operation of equipment. The focus of negotiations is on rules that prevent non-discrimination between national and international service providers, as well as some technical regulatory issues (e.g., rules on data transfer are relevant, for instance, where these can hinder software updates and performance monitoring related to environmental services and performance).[130] Efforts to promote a more circular economy are refreshing calls for trade policy frameworks to facilitate and promote trade in environmental services, such as those related to the refurbishment or remanufacture of goods.[131]

At the WTO, trade in services is governed by the General Agreement on Trade in Services. As noted above, the 2001 Doha mandate also provided for negotiations on environmental goods and services. Although WTO negotiations on trade in services are in drift along with other aspects of the Doha Round, and multilateral negotiations on environmental goods and services stalled, a number of WTO Members are committed to reviving talks on liberalization of trade in environmental services.[132] In 2020, for instance, the UK, Switzerland, Canada and the EU tabled a non-paper at the WTO on liberalization of trade in a number of environmental services (focusing first on construction and architectural services) in order to revive discussion.[133] Meanwhile, a number of provisions in regional and bilateral trade agreements have expanded upon existing GATS provisions, including in regard to investment (with numerous environmental implications) and on some environmental services.[134] In the APEC context, governments have an Environmental Services Action Plan (ESAP) to promote liberalization, facilitation and cooperation in environmental services and have undertaken a number of studies and workshops on opportunities to expand trade in environmental services.[135]

Notably, some countries and environmental stakeholders express important reservations about the push to expand international trade in environmental services, often linked to wider consideration about the privatization of public services. For instance, liberalization of trade in water services has spurred concerns linked to the privatization of public water resources and environmental risks associated with large scale commercial use of water supplies.[136] Further, many developing countries are struggling with devising policy frameworks and negotiating positions on trade in services in general, and even more so to identify their national interests with regard to trade in environmental services. In developing countries where many essential public services are provided by governments and where improved environmental services are urgently needed, the decision to open domestic markets for environmental services to international companies requires careful consideration of impacts on local environmental management, local businesses, and livelihoods.

An additional consideration is whether governments have in place the legal frameworks and capacity to negotiate

assurances about the scope of services to be provided and their extension to disadvantaged communities at appropriate costs. Many developing countries also view environmental services negotiations in the context of wider competitiveness concerns. They observe, for instance,

developed countries calling for liberalization of various environmental services only once they have acquired the competitive advantage to export them, while at the same time refusing to take up developing country proposals for liberalization in a key area of services trade of interest to them, such as cross-border movement of people to deliver services.

Production and process methods

A central topic of debate on the trade and environment agenda over the past three decades has focused on the scope trade rules provide for countries to differentiate between imports based on the sustainability of production and process methods (PPMs). As detailed reviews of the many technical and legal aspects at hand are available elsewhere, the section offers a brief synopsis of why the PPM issue matters to greening trade, the state of play, and proposals on ways forward.

The PPM debate arises from questions about whether trade rules allow governments to distinguish between products based on characteristics not visible in the product itself, but on the basis of their process of production (e.g. how they are produced, manufactured or harvested). A core feature of GATT and the WTO's TBT Agreement is that they contain national treatment and most favoured nation obligations that require countries to treat imports no less favorably than 'like' domestic products or 'like' products from a third-party country. Annex 1 of the TBT provides, among other elements, definitions of technical regulations and standards focused on processes and production methods when they relate to the characteristics of products covered by the Agreement. However, the debate is not yet settled on whether the Agreement also covers processes and production methods that are not detectable in the final product, also known as non-product related PPMs. Here, two kinds of PPMs are relevant: product-related (which leave physical traces in the end product , such as cotton grown using pesticides, leaving pesticide residue in the product itself) and non-product-related (NPR) (which leave no physical traces in the end product, such as the amount of carbon emitted during production).

At the WTO, dispute settlement rulings have confirmed that trade measures that differentiate products based on their PPMs are not prohibited per se under the GATT,[137] provided certain conditions are met. However, despite this reassurance, there are enduring concerns among environmental groups that enduring fear of potential legal challenges and trade disputes may dissuade governments from more proactive use of PPM-based trade measures to green trade (i.e., the 'chilling effect). Here, a key issue of concern for environmental advocates is the lack of clarity in WTO rules on the legal scope and conditions for Members to implement environment-related trade measures that distinguish among products based on NPR PPMs.

In the early 1990s, developing countries expressed firm opposition to NPR PPM measures, fearing that they would make these countries vulnerable to an array of protectionist measures. Allowing products to be deemed 'unlike' due to NPR PPMs would, they cautioned, open a slippery slope in terms of the broad array of environmental, economic or social considerations, including on labour and human rights, that governments could use to discriminate against imports. Trade advocates similarly feared that allowing NPR PPMS could undermine the basic principles of non-discrimination that are the core of the multilateral trading system.

Questions on the scope for NPR PPMs are increasingly important given the ongoing expansion of government policies and technical regulations, as well as voluntary standards, labels and certification, that aim to tackle the environmental sustainability of production processes. Indeed, such measures are likely to be central to effective policies to combat climate change, pollution, natural resources management, and biodiversity conservation.

There are different views about how best to address the enduring uncertainty. One option is to update and clarify WTO's Agreement on TBT with respect to the permissibility of NPR PPMs. Here, however, the prospect of multilateral negotiations being launched and concluded in a manner that better reflects environmental goals or provides greater environmental security than today are doubtful. A formal amendment of the TBT Agreement would also require the consensus of all WTO Members. An interpretive statement or declaration on PPMs by the WTO Ministerial Conference is another option but could similarly fail to attract the multilateral consensus required. Other options could be for a group of like-minded Member States to issue a statement of shared understanding, guidelines or a reference paper that could provide non-legally binding guidance or for a country to initiate 'a test case' on PPMs in an effort to trigger clear legal guidance from the WTO's dispute settlement system.

One additional proposal is for introduction of rules of methods of production (ROMP) that would determine which goods from anywhere in the world, made by specified production methods, can benefit from trade preferences, in the form of lower tariffs for products that confirm with specified production methods.[138] The suggestion provided is that the specific production methods could be based solely on government regulations concerning production standards and methods, or on private standard schemes, and would require clear and objective criteria for evaluating conformity and/or equivalence and accompanies by mechanism for product inspections and certification.

Among the proposals for preventing conflicts between climate policies and trade rules, is the call for a WTO climate waiver, which would establish an exemption for specific climate-related

actions rather than require a change to trade rules, but which also does not preclude future efforts to update those rules as experience of climate and trade intersections grow (see Box 14). In the absence of rules or modalities for differentiating among products on the greenhouse gas emissions, a second proposal is to require internationally traded goods to carry a 'carbon passport' that would provide reliable data on the its emissions, based on internationally accepted and sound accounting methodologies.[139] The passport would rely on the setting of a minimum threshold for greenhouse gas emissions, which all producers would need to meet in order to maintain their market access. The proposal also notes the potential for governments to grant preferential market access to good carrying carbon passports.[140]

A final word on the design of NPR PPMs is the importance of a flexible approach that accounts for the diversity of circumstances in producing countries, and reflects principles of international law, such as common but differentiated responsibilities. Here, the ideal is for measures and standards to focus on the environmental outcomes or performance effects desired, rather than the use of specific methods of technologies, especially those that may not be unavailable, unsuitable, or affordable for all producers, especially in developing countries. In addition, such standards and requirements would be accompanied by assistant for countries in meeting those standards, including through cooperation on technology transfer.[141]

Box 14. The proposal for a WTO climate waiver

The proposal for a WTO climate waiver is one that attracts considerable interest in trade and environment discussions.[359] It builds on previous collective waivers (such as the 'TRIPS Waiver' on certain intellectual property obligations designed to support access to generic drugs for developing countries in specific circumstances).[360] The climate waiver proposal aims to address the growing likelihood of trade measures related to climate policies and to prevent trade tensions and pressure on existing trade rules that may result from an expansion of the use of trade measures that differentiate between products on the grounds of NPR PPMs, namely the intensity of greenhouse gas emissions involved in production of products. Rather than amending WTO rules to provide wider scope for NPR PPMs (which trade lawyers fear could open the way to a pandora's box of discrimination among products on a vast array of grounds), the waiver would instead apply existing rules differently in "carefully defined and limited circumstances to certain kinds of measures that relate to climate actions."[361] The specific proposal is for an initial temporary waiver, that could later be made permanent.

Environmental taxes

In recent years, the push for a greener economy has prompted governments to implement an ever-growing array of environmental charges and taxes on pollution, energy, transport, natural resources, and plastic packaging.[142] Key trade-related issues that arise in regard to such measures include concerns about competitiveness in the face of untaxed, unsustainably produced imports, market access among exporters uncertain about how such taxes will be applied to their products, and 'leakage effects' that diminish the effectiveness of the measures (in the sense that environmentallyharmfulproductionsimplymoveselsewhereto avoid environment taxes and other environmental measures).

From a trade law perspective, governments can implement taxes at the national level on imported products, such as on the carbon intensity of products, provided these are equally applied to domestic products. The legal challenge that arises is how to design environmental taxes and charges in ways that are transparent and that do not unfairly disadvantage trading partners, for example, by ensuring that taxes applied to imported products are equally applied to domestic products. As governments devise carbon pricing policies as part of their efforts to address climate change, proposals to apply carbon taxes or other BCAs are spurring robust discussion of their trade-related implications (see Box 15).

Subsidies reform: From harmful to green

Many intergovernmental processes have called for the reduction of environmentally harmful subsidies, including those provided to fisheries, agriculture, and the fossil fuels sector. One of the most prominent issues on the environment-trade agenda in recent years has been the potential for international trade rules to support reform of subsidies that support unsustainable production practices and present barriers to, or disincentivize, environmentally sustainable production.

The WTO is recognized as the key multilateral venue through which governments could work to reduce trade-distorting subsidies, largely due its role as the custodian of the Agreement on Subsidies and Countervailing Measures (ASCM). The advantage of a multilateral approach to subsidies is that commitments that arise may apply to all players, not just to a sub-set of countries: this universality can be vital for effectiveness and also for persuading countries to commit (e.g., country A will not commit to reducing its subsidies if countries B and C can continue to subsidize in a way that harms its trading interests). However, disciplines on subsidies are not identical across the WTO membership. The ASCM provides for special and differential treatment of subsidies provided by LDCs and other developing countries.

Over the past two decades, there have been numerous proposals for the WTO to harness or update the ASCM to help reduce environmentally harmful subsidies. The difficulties reaching a multilateral deal are demonstrated by the fact that WTO negotiations for a multilateral deal on the reduction of fisheries subsidies that have dragged on for over 19 years, missing a series of agreed deadlines for action.

Box 15. Carbon taxes and border carbon adjustments

In a number of countries, an array of business, labour and environmental voices are calling for BCAs to address concerns about the competitiveness effects of climate policies in the face of trade partners without similarly ambitious policies.[355] In 2021, BCAs are especially salient given the EU's stated commitment to introducing a CBAM. By putting a carbon tax on imports of certain goods, the EU aims to: 1) ensure that goods produced by European companies subject to internal carbon pricing policies are not competitively disadvantaged compared to imports not subject to carbon pricing; and 2) prevent 'carbon leakage' (i.e. where firms operating in the EU could move carbon-intensive production to countries with less stringent climate policies).[356] The EU's draft proposal (to be released in June 2021) is expected to focus on energy intensive industrial goods – such as steel and cement – and not on commodities and agricultural products.

A range of proposals exist on how BCAs can be designed in ways that comply with WTO rules and address some of the concerns of affected trading partners, especially developing countries.[357] There are also proposals for coordination among trading partners, including through 'carbon clubs' of countries with BCAs.[358] Here, an important reality check is that the political challenges of introducing carbon pricing in many countries may limit the number of economically significant countries that introduce BCAs.

Meanwhile, countries with no immediate plans to adopt BCAs express a range of concerns how this will impact their exports, in which sectors and how adjustments will be implemented. A clear priority is for BCA proponents to engage in dialogue about the scope and design of their proposed measures and their impacts on affected countries, especially developing countries, with an eye to designing policies that achieve the goal of boosting environmental ambition at home and abroad, while avoiding unnecessary trade impacts and supporting transition for affected industries in developing countries.

A key challenge that has frustrated proposals to date has been that the relevant trade rules were primarily designed for the removal of trade distorting subsidies, not those that cause environmental harm. Discussions among trade negotiators swiftly gravitate toward issues of commercial interest rather than what is necessary from an environmental viewpoint. Three further challenges constraining international cooperation on the removal of subsidies are: the lack of shared definitions on what constitutes a subsidy; lack of transparent national data; and issues of fairness, with a range of developing countries calling for exemptions to subsidy reform obligations, especially for low income communities.

The lack of progress on fisheries subsidies has dampened expectations for any rapid action on binding multilateral deals on other environmentally harmful subsidies at the WTO. It has not, however, dissuaded important efforts to harness the multilateral trading system as a venue for cooperation. For instance, a group of governments known as the 'Friends of Fossil Fuel Subsidy Reform,' led by New Zealand, are calling for work at the WTO to improve transparency and dialogue on fossil fuel subsidies, with an eye toward reform.[143] While no G7 country has cosponsored formal submissions to the WTO on fossil fuel subsidy reform, both the EU and the UK have indicated their interest in discussion of transparency of fossil fuel subsidies, including in the WTO context. Meanwhile, in their ongoing negotiations for an Agreement on Climate Change, Trade and Sustainability (ACCTS), six governments are seeking to include rules on fossil fuel subsidies in their plurilateral deal, with an eye to also providing a set of pathfinder ideas on ways that governments could proceed multilaterally.

In general, however, the same fossil fuel lobbies in both developed and developing countries that constrain domestic action to reduce subsidies oppose any efforts that would bind national commitments in this respect. Some developing countries are reluctant because their economies rely heavily on fossil fuel exports or fossil fuel intensive production, and also because they are fearful of the political fallout of efforts to reduce subsidies to fossil fuel consumption (such as subsidies to energy consumption for low-income communities). While the prospect that major fossil fuel producers (e.g. the US, Saudi Arabia) will undertake binding commitments on fossil fuel subsidy reform in trade agreements is not strong, a focus at the WTO and beyond on transparency and reform of fossil fuel subsidies, and potentially voluntary pledges, is nonetheless an important part of a wider strategy to ramp up urgently needed national action among the largest players.

For many years, WTO Members have also been struggling to negotiate reform of agricultural subsidies in the context of agricultural trade negotiations. The many subsidies to resource-intensive agricultural production, including those related to the use water, pesticides, and fertilizers, are not only environmentally harmful but can also constrain the global competitiveness of more sustainably produced agricultural goods. Subsidized agricultural products also distort international markets, exacerbating pressures on developing countries to increase productivity and lower costs in order to compete, with a range of environmental consequences. Negotiations to reduce agricultural subsidies, despite being on the agenda since before the launch of the WTO, are one of the most divisive issues for multilateral diplomacy, mired in concerns about fairness and food security, as well as domestic pressures from powerful constituencies within major trading countries to maintain the status quo. Looking ahead, a key issue for exploration is the degree to which a focus on environmentally sustainable

food systems could be introduced into agricultural trade and subsidies negotiations.

Long-standing WTO negotiations on non-agricultural subsidies (known in the WTO context as 'industrial subsidies') are also relevant to environmental protection and the use of green industrial policies. There are proposals, for instance, to re-instate exceptions as envisioned in Article 8.2 of the WTO ACSM. This article provided a 'safe harbour' available to all Members for particular forms of subsidies, including certain types of research subsidies, subsidies providing assistance to disadvantaged regions, and subsidies promoting the adaptation of existing facilities to environmental requirements. Since the expiry of Article 8.2 in 1999, subsidies that favour green products have been subject to the same WTO disciplines as any other industrial subsidies. Looking ahead, some argue that sufficient policy space exists for certain forms of green subsidies, even without a reintroduction of Article 8.2, noting that the growth of green industries will require attention to a range of other fiscal and political challenges as well. Others argue for the reintroduction of 'green light' subsidies and expansion of the scope for subsidies to green industries. Here, for instance, there are calls for a wider approach to non-actionable subsidies that would permit 'green' subsidies to scale up deployment of clean energy, support efforts towards climate change adaptation and address negative environmental externalities. There are also calls to incorporate green subsidy provisions in non-WTO trade agreements.[144]

Three political considerations are important to note. First, environment-related discussions of subsidies will encounter wider trade tensions on the thorny topic of subsidies to state-owned enterprises (especially those provided by China). To the extent possible, environment-focused work on subsidies should first advance on a separate track, focused on devising policy options and building support across the diversity of the WTO's membership. Second, important questions will arise about trade-offs, where governments will have to balance the benefits of green subsidies for the environment, especially in light of urgent challenges such as climate change, with the fact that all subsidies distort markets and give rise to trade tensions. A third and related consideration is that, compared to major industrial powers, most developing countries have limited capacity to provide green subsidies. This disadvantage constrains their competitiveness in the green economy, especially when they also face pressures to reduce tariff barriers to subsidized green technologies from developed countries.

In late 2020 the US submitted a proposal to the WTO to address what is characterized as the "imbalance in the existence and enforcement of fundamental environmental protection standards among Members."[145] To ensure that "no Member gains a comparative advantage in trade due to insufficient or unenforced environmental laws, regulations or standards," the proposal calls for a decision that would confirm that the "failure to adopt and enforce environmental protections at or above a threshold of fundamental standards should be considered an actionable subsidy under the WTO's ASCM, and that, where an industry disproportionately benefits from environmental measures below that threshold, WTO Members may impose a countervailing duty equal to the benefit received by an industry."[146] Submitted toward the end of the Trump Administration, it remains to be seen whether the Biden Administration remains committed to this proposal and how other WTO Members will respond.

Green government procurement

Global annual spending by governments on the public procurement of goods, services, and public works and infrastructure was estimated at US $9.5. trillion in 2019.[147] Around the world, there is increasing attention to green government procurement policies as a tool to foster a more circular economy, sustainable industrialization, and economic diversification that supports environmental sustainability.[148] The importance of green government procurement as a tool for promoting sustainable development is recognized in SDG 12, which calls for procurement practices that are environmentally sustainable (see Box 16).[149]

Many recent international TAs incorporate rules on government procurement and there is growing interest in how trade policy frameworks could support the greening of government procurement. Among existing trade rules on government procurement, most have no specific restrictions on the ability of national governments to support green government procurement, except that the rules require them to refrain from discrimination between domestic and foreign suppliers.

The CETA and CPTPP are recent examples of trade agreements that include government procurement provisions with some explicit environmental dimensions.[150] Under the CETA, for example, the EU and Canada can specify technical requirements for government procurement, including environmental criteria. At the multilateral level, the 48 governments that are party to WTO's Government Procurement Agreement (GPA)[151] have adopted a work programme on sustainable procurement as part of wider efforts to improve implementation of the Agreement and consider potential updates.[152] Key topics under consideration include the definition of criteria for green procurement decisions and the challenges of defining what constitutes a green product or service worthy of support through green government procurement efforts. At the national level, some governments use private environmental standards, labels or certification schemes as instruments for benchmarking and verifying the environmental performance of goods in their green government procurement decision-making. This development underlines the intersection of private, voluntary environmental standards with government laws and regulations. It also has an important trade dimension as trade partners must have adequate information about the relevant private environmental standards and ability to acquire certification in order to be able to compete effectively for procurement contracts.[153]

Box 16. Green government procurement

Green government procurement policies and procedures are ways that governments can deploy their buying power to increase the use of green products and services, support market for such products, and provide incentives for their development. Procurement guidelines can, for instance, establish sustainability guidelines or criteria for the procurement of a range of goods (vehicles, building materials) and services (electricity). The refusal by governments to procure certain environmentally harmful products can also help lead the way toward the wider phase out of such products (e.g. procurements policies that eliminate the use of single use plastics).

A further issue on the green government procurement agenda relates to the use of local content requirements (LCR) that aim to promote national green industries and their permissibility under trade rules.[154] A growing diversity of LCR measures have been introduced by a range of developed and developing countries, and their use is increasing. These include through procurement regulations that grant preferences for local products, these include requirements related to local assembly, tax cuts for domestically manufactured goods that include a certain amount of local content, or the reservation of certain markets for locally produced goods. A 2013 WTO dispute ruling against India's LCRs on foreign enterprises in the solar energy industry[155] has spurred ongoing discussions about the definition of LCRs, their compatibility with WTO rules, and what clarifications are needed to support green economy efforts.

Looking ahead, a number of recent studies underline the potential for TAs to better support sustainable procurement policies and practices, arguing that greater "legal certainty about what a procuring authority can do under international trade obligations is one way to address the barriers and enable better use of sustainable procurement."[156]

Green technology transfer, intellectual property, and genetic resources

Affordable access to technology and know-how will be critical for the global diffusion, adaptation, and uptake of green technologies and to progress on environmentally sustainable production and trade. Across the global economy, private companies and government agencies (including government departments, research centres and universities) hold patents and related intellectual property rights to a vast range of green technologies. Both intellectual property and technology transfer are addressed in a broad range of trade agreements and processes. Numerous MEAs also include provisions that promote the transfer of technologies that can support and speed their implementation.

The WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is the centrepiece of the global system of rules, institutions, and practices governing the ownership and flow of knowledge, technology, and other intellectual assets.[157] One of the TRIPS Agreement's objectives is that "the protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology."

An array of studies exists on the ownership of intellectual property on green technologies and its relevance to efforts to the green economy. In the climate arena, for instance, there is ongoing debate about the extent to which intellectual property rules may present a barrier to technology diffusion for clean energy technologies, such as wind and solar.[158]

On the one hand, there is an argument that intellectual property protection provides vital incentives to innovation and investment in green technologies and that legal frameworks that secure intellectual property protection underpin the global diffusion of such technologies. Concerns about the absence of adequate intellectual property protection can make governments and companies hesitant to transfer technology or to send goods, especially where they fear these will be used or copied without compensation in ways that undercut their potential market.

On the other hand, there is an argument that intellectual property protection can impair the diffusion of environmental technologies, especially to developing countries. Licensing arrangements may require royalty fees that are not be affordable for governments or businesses[159] and international intellectual property rules may limit government options to support local green industrial development and to adapt technologies for local circumstances.[160]

To establish where and to what extent intellectual property is or will be a significant barrier to uptake of certain green technologies, a key step is to determine the intellectual property ownership structure for such technologies, as well as current licensing arrangements and terms. A related step is to create awareness and promote access to information about technologies that do exist, and relevant patent information.[161]

Policy debates on trade and intellectual property are closely linked to questions of industrial development and strategy. Building green industries domestically, including through investment in local technological innovations, is a priority for both developed and developing countries alike. For many developing countries, beyond acquiring technology 'off the shelf' through imports or addition in order to allow foreign companies to establish production facilities, a wider goal is for domestic firms to acquire the capacity and know-how to manufacture green technologies and materials themselves, and to adapt the innovations to the local context – or to develop partnerships that support such goals.

As governments and businesses work to speed the diffusion

rate and affordability of environmental technologies key to decarbonizing the global economy and supporting a more circular economy, they are likely to face pressure to share critical intellectual property. A range of proposals to support sharing of intellectual property exist, including the development of global licensing databases, patent pools and pledges, and updated arrangements for university-to-industry technology transfer, among others. At the international level, the WTO has previously affirmed the right of Members to use flexibilities under the TRIPS Agreement to promote public health objectives, such as access to essential medicines,[162] spurring calls for similar waivers in the case of technologies vital to addressing emergencies such as climate change mitigation.[163] Importantly, debates on affordable access to green technologies exist in a high-tension geopolitical context. Governments view the protection of their industrial IP as a key national security and foreign policy priority, backed by powerful business interests keen to maintain their competitive advantage. Concerns about weak intellectual property enforcement in China and industrial property theft are central to US–China trade tensions, for instance, and will also be relevant to discussions of the global dissemination of green technology.

Notably, the TRIPS Agreement includes an article that obliges developed country WTO Members to provide incentives to their companies and institutions to promote and encourage technology transfer to LDCs "in order to enable them to create a sound and viable technological base" (Article 66.2).[164] To date, however, compliance of developed country Members with this obligation has been limited, and has not shifted incentives for transfer technology to LDCs.[165]

Meanwhile, the wider trade dimensions of technology transfer were acknowledged at the 2001 Doha Ministerial Conference when trade ministers established a WTO Working Group on Transfer of Technology, which aims to examine the relationship between trade and the transfer of technology from developed to developing countries, and ways to increase the flow of technology to developing countries.[166] In this Working Group, countries have emphasized that the successful development, transfer, and deployment of technologies involves not only intellectual property-related issues, but also capacity to absorb and use acquired technologies, training, and technical assistance to develop relevant know-how, as well as industrial and innovation policies – all of which equally apply to green technologies. One future area of work for this Group could be to identify specific green technological gaps in developing countries and measures to address them, including trade rules that enable green industrial policies, multi-stakeholder initiatives (including private sector, development banks, WIPO and bilateral aid agencies), and implementation of technology transfer provisions in MEAs (such as those found in the Paris Agreement).[167]

An additional environment–trade issue linked to intellectual property is the call from developing country governments and civil society groups to update intergovernmental arrangements on access to genetic resources and the sharing of benefits from their use, as well as to the use of traditional knowledge related to biological materials and biogenetic information.[168] At the WTO, for instance, developing countries have long campaigned for the completion of the review, mandated by the TRIPS Agreement, of its Article 27.3(b),[169] which sets out rules related to the patentability or non-patentability of plant and animal inventions and calls for the 'effective' protection of plant varieties. At the same, they have also highlighted concerns about the commercial use of genetic material and traditional knowledge by those other than the communities or countries in which they originated, particularly when these are the subject of patent applications.[170] In the 2001 Doha Declaration, developing countries secured a commitment to work at the WTO on the relationship between TRIPS and the UN CBD,[171] and tabled a number of proposals, such as for new requirements to disclose the source of biological material and associated traditional knowledge used in inventions.[172] While the conclusion of the CBD's Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity has meanwhile addressed some developing country concerns,[173] they continue to call for updated international legal frameworks at the WTO, the CBD and the World Intellectual Property Organization (WIPO).[174]

Meanwhile, as noted in section 2.2., a number of non-WTO trade agreements include provisions on access and benefit sharing that contribute to the implementation of the Nagoya Protocol, including provisions on sovereignty over genetic resources, the protection of traditional knowledge, prior informed consent, the disclosure of origin in patent applications and conditions for bioprospecting activities. The scope and focus of such commitments in trade agreements varies widely: while Latin American countries have pioneered high standards, these are not widely spread.[175]

Regulatory cooperation for strengthened environmental protection

The environmental impacts of trade agreements are increasingly found not just in how they affect international flows of goods and services, but also in how they shape domestic regulatory environments, with deep implications for both production and consumption trends.

At the WTO, trade officials regularly review a growing range and number of trade concerns related to the use of health and safety regulations with an environmental dimension, including regulations related to food safety, plant health, and import approval of biotech products. The WTO's committees dealing with TBT, SPS Measures, and environment, all act as fora for regulatory cooperation as governments use them to exchange news on a range of topics, including environmental ones. Beyond the WTO, a growing number of trade agreements have entire chapters dedicated to regulatory cooperation.[176] The approaches vary widely, including commitments to greater transparency, dialogue and

information exchange, efforts to secure agreements' mutual recognition of regulation and standards, and harmonization of regulations.[177] Political sensitivities mean that these focus primarily on cooperative measures rather than legal obligations. In addition, the OECD and ASEAN countries host numerous policy initiatives that focus on soft approaches to strengthening regulatory cooperation.[178]

The growing emphasis of trade diplomacy on regulatory matters raises both concerns and opportunities for green trade. In general, the purpose of regulatory provisions in trade agreements is to minimize disruptions to trade due to regulatory requirements and divergences and to smooth the flow of product between countries: that is, they are not driven by the goal of promoting environmental outcomes. Many environmental advocates express concern that regulatory cooperation arrangements in trade agreements can instead spur additional scrutiny that puts downward pressure on domestic environment policies or slows efforts to upgrade environmental requirements.

Consensus between countries on regulatory matters is difficult to implement in practice, with governments routinely favouring cooperation, but only on the basis of their own preferred standards. The task is doubly complicated because trade negotiations on environmental topics demand consultation and engagement of domestic regulators and legislators, who are often reluctant to cede their decision-making power and may be unfamiliar with wider trade considerations. Similarly, trade officials are rarely expert in the detailed scientific and technical reasoning that inform the development of domestic environmental regulations, and most trade policymaking processes lack the necessary processes for engaging environmental expertise and constituencies.

For the green trade agenda, key questions that arise on regulatory cooperation are: how can governments balance pressures to use regulatory cooperation to reduce business costs and facilitate trade, on the one hand, with legislative concerns about national sovereignty and their "right to regulate" on the environment, on the other? How can governments manage different regulatory approaches to scientific evidence and the precautionary principle with regard to environmental and health risks, as well as national preferences on ethical issues? How to promote dialogue on regulatory cooperation to ensure that TAs do not unleash trade flows or competition that undermine national environmental standards or spur regulatory backsliding? How can trade-related regulatory cooperation efforts be used instead to spur cooperation for more responsive and faster upgrading of environmental laws and regulations?

A core priority is to explore the scope to use regulatory cooperation discussions to set the direction of travel in favour of higher environmental standards. If framed around a shared commitment to raising environmental ambition, regulatory cooperation efforts could be a vehicle through which governments find ways to better manage their different regulatory approaches to environmental and health risks, precaution, and scientific evidence. They can also be a process through which trading partners promote transparency of environmental laws and regulations and consider how these could be designed to maximize their environmental benefit while minimizing unintended consequences for trade. This will be especially important at a time when all countries will need the scope for dynamic regulations to drive more environmental production and development of environmentally beneficial products. Further, they can explore how and where cooperation on environmental regulations and standards can help to promote trade in environmentally beneficial products and services.

Investment rules for sustainability

Coherent decision-making on policymaking for trade, investment, and the environment is of rising importance to the environment-trade agenda.[179] In a world of globally integrated production networks and supply chains, investment and trade flows are increasingly linked. Foreign direct investment is a key strategy deployed by international companies to reach consumers in new markets and manage relationships with supply chain partners, with profits then remitted to home country headquarters.

Amid the push for greater public and private investment in the green economy, there are calls for international investment rules to more explicitly promote environmental sustainability, both by reforming the investment provisions included in trade agreements as well as international investment agreements, some 2,654 of which were in force as the end of 2019.[180]

Compared to bilateral and regional trade agreements, the WTO has a more limited set of investment rules set out in its agreement on Trade-Related Investment Measures (TRIMS). While some WTO Members have long called for a broader set of investment rules, many developing countries and civil society groups remain opposed to any further WTO rules on investment, even those focused more narrowly on investment facilitation.[181] In the absence of consensus among all WTO Members, a sub-set of WTO Members are pursuing a plurilateral initiative that focuses on improving multilateral cooperation around investment facilitation. Environmental advocates argue that any framework on investment facilitation that emerges must explicitly support – and not constrain – attention to environmental issues and sustainable development goals considerations in investment decision-making.[182]

A key environmental concern linked to investment provisions in trade and investment agreements relates to ISDS provisions, which grant foreign countries the possibility to sue governments when they can show that changes to regulatory environment, including through strengthened or new environmental laws and regulations, reduce the economic value of their investment. The growing number of ISDS cases has provoked public protests about impacts on public interest goals and regulatory space, including for environmental protection.[183] Most prominent among the concerns of environmental advocates is that ISDS

provisions can lead countries to roll back, defer or refrain from environmental action and grant foreign corporations excessive power to influence their regulatory affairs. These risks are deemed especially high for developing countries that have more limited financial resources and depend heavily on foreign investment. Environmental advocates are especially concerned that companies could lodge a growing number disputes, challenging the implementation of climate policies that harm their business interests. In 2020, for instance, the company RWE initiated an ISDS case against the Netherlands, arguing that government's effort to phase out fossil fuel subsidies negatively affected an RWE-owned powerplant.[184]

Some recent international investment agreements have introduced reforms to ISDS provisions that emphasize the right to regulate.[185] Proposals for a more transparent and balanced approach to the settlement of investor-state disputes are also gaining some traction at the International Centre for Settlement of Investment Disputes (ICSID)[186] and in the context of the United Nations Commission on International Trade and Law (UNCITRAL),[187] where the EU has tabled proposals for a new multilateral investment court.[188] Efforts are also underway to modernize substantive clauses of investment treaties, such as the Energy Charter Treaty (ECT), which regulates investment in the energy sector. Critics argue that ECT provisions undermine the scope for governments to implement energy transition policies vital for addressing the climate crisis without threats of investor–state disputes and arbitrations,[189] and call for ECT reforms to strengthen the right to regulate, reduce the scope of provisions on indirect expropriation, and promote sustainable development and corporate social responsibility.[190]

For a number of critics, rather than ISDS reforms and renegotiations, the overarching goal should be to exclude or terminate ISDS provisions altogether.[191] A number of important investment agreements now omit ISDS provisions, including Brazilian bilateral investment agreements, the USMCA, the US–Australia FTA, and New Zealand's relationship with several signatories to CPTPP.[192] Alongside new approaches to avoiding and resolving investor-state tensions are calls for 'interpretative statements', whereby governments would "endorse joint statements clarifying and defining their positions on contentious clauses in their existing investment treaties."[193]

Motivated by the goal of preserving the regulatory space of governments, including with regard to environmental protection, a number of governments and regional organizations have adopted non-binding principles for investment policymaking to support sustainable development drawing on UNCTAD's Investment Policy Framework for Sustainable Development[194] and its Reform Package for the International Investment Regime.[195]

A further investment-related component of the green trade agenda is the growing emphasis of governments, IGOs, NGOs, banks, and companies on private sector investment in the green economy alongside divestment from sectors and projects that cause environmental harm. On the climate front, for instance, environmental campaigners on fossil fuel subsidies combine proposals for stronger trade disciplines on fossil fuels with calls for private investors, export promotion authorities, export credit agencies, and development banks to divest from fossil fuels and related infrastructure. At the same time, the financial community's grasp of the economic and commercial risks of climate change is spurring important efforts to integrate climate considerations into global investment strategies, risk assessment and insurance strategies. A vast array of initiatives exists to green international finance and investment, including through pledges by individual banks and investors,[196] as well as requirements to disclose environmental risks as part of wider financial disclosure obligations.[197]

Finally, new regional trade and integration initiatives that aim to boost trade and investment, especially in trade-related infrastructure, have important environmental implications. China's Belt and Road Initiative, for instance, involves over eighty countries and is expected to generate overall investments in infrastructure development of more than US$ 1 trillion.[198] While the Belt and Road Initiative can be seen as a significant opportunity for investment in modernized infrastructure in line with environmental priorities, a range of concerns about associated environmental impacts on climate and biodiversity have spurred efforts to promote a 'Green' Belt and Road Initiative.[199]

Competition, market concentration, trade law, and the environment

In many sectors, the prominence of a small number of large, multinational companies, along with significant intra-company trade in global supply chains, has strategic implications for efforts to green trade. Around 500 companies, for instance, control roughly 70 per cent of global markets for the commodities that have the most significant environmental impacts – such as timber, beef and fish.[200] In the global banana and grain trade, a handful of companies control the majority of global trade, and over half of global coffee trade processing is carried out by the four largest companies.[201] In 2021, just four corporations are responsible for 65 percent of sales in the global agrochemicals market, 50 percent of the seed market, and 45 percent of farm equipment sales.[202]

On the policy front, two sets of environment-trade issues arise. First, at the national level, competition policies and laws can help phase out anti-competitive practices that reinforce the dominant position of 'brown' industries in national markets and hinder the capacity for greener businesses to establish themselves as viable competitors in the market place.[203] While commonplace in developed countries, a growing number of developing countries are also implementing competition policies as tools to enhance efficiency, promote innovation, and support wider product and quality. Such policies can also support environmental outcomes by helping to bring down the costs of new

environmentally friendly technologies and green products. A challenge for competition laws and policies is to promote both free and fair competition. In this respect, there may be a case to exempt certain practices, such as farmers' cooperatives, or products, such as green technologies, from competition law enforcement.

To promote the global diffusion of competition policies, there have been numerous efforts to promote international cooperation, including proposals from developed countries to introduce international rules on competition into the WTO framework. The call for WTO rules on competition has been repeatedly rejected by many developing countries. Among their concerns are that such rules could promote competition from foreign investors and companies that could threaten the development of domestic industries or technologies that cannot compete with larger international rivals.[204] Meanwhile, numerous bilateral and regional trade agreements include detailed chapters on competition policy, including those involving developing countries.

Second, global market concentration in key sectors and supply chains where environmental concerns are high (such as natural resources, agriculture, and commodities trade) has implications for environmental strategies to green trade. On the one hand, the dominance of a small group of companies in key commodity supply chains has spurred some environmental organizations to work directly with market-leading producers and investors, judging that such companies can play a prominent role in promoting sustainable production and consumption through their buying power and management of international supply chains, as well as the global reach of their investment decisions, procurement, and buying power.

On the other hand, some environmental advocates emphasize the environmental and social dangers of multinational-led cartels and monopolies in environmentally sensitive sectors. In the agricultural sector, for instance, they argue that market concentration in the hands of large multinationals presents risks to livelihoods in rural communities and undercuts the possibility for more sustainable approaches to agricultural production and land management. In this spirit, they argue for global level anti-trust rules and international competition policies that target global market dominance in sectors and for commodities with significant environmental impacts.[205] While developing countries have not favoured the introduction of competition rules at the WTO, there is a long history of interest in action on national competition policies at UNCTAD as well as on cross-border cartels and restrictive business practices. In 2021, for instance, governments agreed to establish a working group on cross-border cartels at UNCTAD.[206]

3.3 Beyond rules: Additional pathways for cooperation on greening trade

Beyond trade rules and measures that regulate trade at or behind the border, a number of additional pathways for cooperation on greening trade can be advanced. This chapter reviews eight of these possibilities: 1) Aid for greening trade; 2) green trade finance; 3) debt relief; 4) monitoring environment-related trade measures and trends; 5) greening trade classifications; 6) green customs; and 7) sustainability impact assessments.

3.3.1. Aid for greening trade

A key theme of environment-trade tensions is how to ensure that responsibilities for environmental protection, sustainable use, and restoration are fairly applied within and between countries. A core priority is to find new ways to integrate considerations of fairness and responsibility into environment-trade discussions, recognizing that developing countries bear the greatest share of the economic costs of environmental degradation and, at the same time, have the least resources available for supporting the transition toward more environmentally sustainable production and trade.

In international environmental diplomacy, the responsibility of developed countries to support environmental action in developing countries is well-established, as is the notion that the economic burden of responding to global environmental problems should not fall on LDCs. The growing offshore environmental footprint of developed country consumption (through imported products) further reinforces the case for developed country aid to developing countries to support environmentally sustainable production and trade, build environmental resilience of their production and trade, and enable adaptation to changing environmental conditions.

At the multilateral level, progress on the green trade agenda will require efforts to green existing trade-related capacity building for developing countries and to increase assistance for green trade.[207] WTO rules, non-WTO TAs and MEAs all include provisions committing developed countries to the provision of technical assistance and capacity building to developing countries. In the context of efforts to green trade, a number of governments and stakeholder groups are making calls for more systemic assistance to developing countries to green trade, including by 'greening' the existing Aid for Trade initiative.[208]

The Aid for Trade Initiative was launched in 2005 as part of an effort to help developing countries improve their capacity to implement WTO agreements,[209] address obstacles that constrain their participation in international trade,[210] and build the supply-side capacity and trade-related infrastructure countries need to implement and benefit from WTO agreements.[211] The Aid for Trade initiative supports five types of activities – each of which has important environmental implications:

- Technical assistance for trade policy and regulations (helping countries develop trade strategies and their implementation)
- Trade related infrastructure (building roads and telecommunication networks)
- Building productive capacity and supply side capacity, including trade development (assisting countries to diversify their exports)
- Trade related adjustment (assisting developing countries and LDCs with the costs associated with trade liberalization)
- Other trade-related needs.[212]

While the WTO Secretariat and the OECD work together to monitor Aid for Trade flows, and conduct periodic Global Reviews, projects are funded directly in beneficiary countries by bilateral and multilateral donors.

As in the past, any new environmental commitments or initiatives at the WTO are likely to be accompanied by calls for dedicated support for developing countries. The WTO's 2013 Trade Facilitation Agreement, for instance, was accompanied by the creation of a special facility, alongside the Aid for Trade Initiative, to ensure that developing and LDCs obtained the necessary assistance to fully benefit from that agreement.[213]

While boosting aid for trade will require new resources, as well as enhanced partnerships, it can build on what is already in place. Across the range of international and stakeholder organizations engaged on environment and trade issues, a vast array of worthy Aid for Trade platforms, pilot projects, initiatives and collaborations already exist but are underfunded. Scaling-up resources for the plethora of existing initiatives is one clear pathway forward, as is establishing goals and methodologies for mainstreaming environmental considerations across Aid for Trade activities, supported by reporting systems for monitoring progress.

A second priority is to mainstream attention to environmental goals in Aid for Trade planning and projects, especially, for instance, infrastructure projects with significant potential environmental implications, but also through specific support for 'green' projects, such as those focused on supporting environmentally sustainable agriculture, natural resource value chains, and sustainable tourism.[214] A third dimension is to add new resources to advance green goals through long-standing developing country priorities, like economic diversification. A related cross-cutting priority is building the competitiveness of MSMEs in sustainable production and trade, including by fostering investment in supply-side capacity, trade finance and the ability of companies to meet environmental standards and acquire certification where relevant. In addition, developing countries require support to align trade with environmental policies, implement relevant provisions of trade agreements and environmental standards, identify national priorities on environment and trade, and engage effectively in related international negotiations.[215]

On the climate front, green Aid for Trade priorities could include support to developing countries for climate-resilient production, adoption of climate-related standards, low carbon transportation systems, decarbonization of key polluting industries and participation in low-carbon supply chains.[216] Assistance for trade-related infrastructure, including regional energy infrastructure, could focus on greening the energy matrix and, in the case of LDCs, support the development of a green energy matrix. In addition, countries that are especially vulnerable to climate impacts call for support for trade-related adaptation in the context of climate shocks and natural disasters, and climate-resilient ports as well as projects that support climate change adaptation among producers and exporters.[217]

Finally, for many countries, greening trade requires massive economic transformation with implications for foreign exchange earnings and powerful commercial constituencies at the national level. Governments need financial support to address stranded assets, tackle employment losses, and retrain workers, as well as access to investment and technologies so that they can seize new opportunities in green industries and sectors. Efforts to improve the environmental sustainability of trade will also require significant investments in environmental law, institutions, and enforcement in developing countries.

In this context, a final dimension of the Aid for Trade agenda in support of the environment is to foster a more integrated approach between multiple, but currently disconnected, sources of assistance that support greener economies in developing countries. This includes overseas development assistance, environmental and climate financing, trade finance, blended finance (green bonds) and Aid for Trade – as well as wider international economic policy frameworks also relevant to the trade priorities of developing countries, such as debt relief (see section 3.3.3).

3.3.2. Green trade finance

Trade finance warrants focused attention in an Environment and Trade 2.0 Agenda in two ways.

The first relates to the environmental track record of government-backed trade finance, which includes the activities of export and import promotion bodies, export credit agencies, and the loans and loan guarantees of multilateral and regional development banks.[218] Although environmental campaigners have long called for improved environmental criteria for government support to exporters and investors, their efforts have gained visibility and traction in the context of the climate crisis.[219] In 2020, the UK committed to ending export finance, aid funding and trade promotion for fossil fuel projects (new crude oil, natural gas and thermal coal).[220] In 2021, seven European countries announced the creation

of an Export Finance for Future (E3F) coalition, committing to increase export finance support for sustainable projects, end official finance for thermal coal projects and related infrastructure, and explore how best to phase export finance for oil and gas.[221]

Meanwhile, the International Union of Credit and Investment Insurers (known as the 'Berne Union'), which brings together both public and private export credit agencies, export import banks and political risk insurers, is stepping its toes into environmental action.[222] In late 2020, some Berne Union members called for transitioning to net zero portfolios before 2050.[223] There are proposals to consider wider environmental criteria as well, such as the environmental sustainability of agricultural and commodity investments associated with a high-risk of deforestation and biodiversity loss,[224] as well as to bolster trade finance for 'SDG-positive' projects that could advance implementation of the UN's 2030 Agenda.[225]

The second aspect of the trade finance relates to calls from developing countries for increased access to trade finance for their exports, from both public and private sources. At present, developing countries face a huge gap in trade financing for their exports. In this context, there is a tremendous need and scope for increases in 'green' trade finance that, along with greater investment in green sectors, will support green exports and the participation of developing country businesses in sustainable supply chains.

3.3.3. Debt relief and green development finance

Many developing countries face significant external debt and recurring financial crises, both of which are part of the wider economic context for efforts to green trade.

The links between trade, debt, finance, and sustainable development have been a consistent theme of international diplomacy on global economic policy and on the environment. Already in 1992, the need for an integrated approach to these issues was clearly outlined at the Rio Earth Summit.[226] In the subsequent decades, numerous international processes have highlighted the importance of debt relief and enhanced financing for development, including through new approaches. In the trade arena too, links between trade, debt, and development have long been recognized. WTO Members agreed in 2001, for instance, to establish a Working Group on Trade, Debt and Finance as part of the Doha Development Agenda to examine the intersection of these issues and recommend how the WTO could contribute to a "durable solution to the problem of external indebtedness of developing and least-developed countries, and to strengthen the coherence of international trade and financial policies, with a view to safeguarding the multilateral trading system from the effects of financial and monetary instability."[227]

On the environment-trade front, the issue of debt relief is important for two reasons. First, debt servicing obligations mean that developing countries depend on export revenues to generate the foreign exchange needed to repay debt.[228] In countries with poor environmental governance, the pressure to export has been linked to unsustainable patterns of natural resource use and extraction.[229] Financial volatility, especially in commodity prices can exacerbate pressures on the environment and have a range of negative impacts on sustainable development due to lower export earnings.

In the context of COVID-19, the collapse in export markets and commodity prices has reduced the ability of many developing countries to service debt and pay for critical imports.[230] As the COVID-19 pandemic continues, there is growing pressure for debt relief for developing countries, and for debt relief designed in ways that address the climate crisis, such as through debt for climate or debt for nature swaps. Even before the pandemic, calls to use debt relief to support climate action were advanced by UNCTAD in 2019 as part of its proposal for a Global Green New Deal.[231] To underscore their argument for greater financial support to developing countries on Green economy issues, including through debt relief, a range of environmental advocates underline the historical responsibility of developed countries for environmental degradation and their ecological debt to developing countries.

3.3.4. Monitoring environment-related trade measures and trends

To green trade, governments, businesses, and civil society groups need reliable, transparent, timely information on environmental related trade-related measures that countries put in place to improve environmental performance, and on relevant trade trends. Transparency of such measures is vital for businesses to be able adapt their production and export strategies to meet the regulations and standards that importing countries have in place. In numerous international trade forums, there have been calls from a diversity of governments for greater transparency of environment-related trade measures, along with prior advance consultation with stakeholders and trading partners in their design and implementation.

A key component of the WTO's work is to compile and publish notifications received from Members, all of which have a number of obligations to notify changes to domestic rules and regulations that affect trade. The WTO compiles a database of notifications received from Members on their environment-related trade measures and on environmental measures noted in Trade Policy Reviews. However, these two sources cover only a portion of measures actually implemented by countries. Although widely acknowledged as central to the WTO's transparency function, few Members reliably notify all relevant information in a timely manner, making the issue of improved notifications and transparency one of the key issues in wider discussion of WTO reform.

Beyond the WTO, other sources of information on environment-related trade measures include UNCTAD's TRAINS data base on non-tariff measures, including quotas, price controls and export restrictions.[232] The ITC also hosts information on a range of environmental standards relevant

to developing country trade, as do a number stakeholder initiatives, such as Global Trade Watch, which publishes regular data on the implementation of trade restrictions, including on environmental grounds, and the Insitute for International Sustainable Developement (IISD) which hosts an online database of voluntary sustainability standards for key commodities (see section 3.4.1).

Looking ahead, there is considerable scope for better coordination of existing efforts to monitor environment-related trade measures and sustainability standards, and to make these more easily accessible to businesses and government officials. A shared user-friendly portal could, for instance, provide a single access information point on evolving environment-related trade measures as notified by governments, as well as on environmental standards and requirements gathered by UNCTAD, the ITC, and civil society initiatives.

There is also a case for greater attention to environment-related trade policies and measures in the context of the WTO Trade Policy Review Mechanism, where governments could use the process to share more information and pose questions about their effectiveness, challenges, and lessons learned. Members could also better harness the WTO's Committee on Trade and Environment as a forum for focused information exchange and dialogue on trade-related policies and measures to specific environmental challenges.

3.3.5. Greening trade classifications

More effective policymaking on environment-trade intersections will rely on the ability of governments and stakeholders to identify and monitor environmentally positive and negative trade flows. Quantitative and qualitative trade data will be vital for measuring and reporting on the progress made by countries regarding the SDGs.[233]

At the international level, trade flows of goods are tracked using classifications defined by the World Customs Organization (WCO) Harmonized Commodity Description and Coding System, generally referred to as the 'Harmonized System' (HS). The HS is used by more than 200 countries and economies, covering 98 per cent of merchandise products traded internationally, as a basis for their customs tariffs and for the collection of international trade statistics.[234] The HS is also relied upon by governments in their efforts to negotiate tariff reductions and other trade policy measures.

The HS is updated periodically in light of developments in technology, changes in trade patterns and changing policy requirements through the WCO Harmonized System Committees.[235] On the environmental front, recent rounds of HS amendments (the latest of which will enter into force in January 2022) have included a number of environment-related updates, reflecting the growing need by governments for information on the environmental characteristics of trade flows. Recent editions of the HS have included new and updated codes for a wide range of environmentally sensitive goods (such as electronic wastes), which in turn enable better monitoring and government action with respect to illicit trade in such goods, as well as for specific environmental goods (such as solar photovoltaic panels and electric cars).[236]

As both governments and businesses seek to promote or discourage trade in products based on their environmental characteristics and the sustainability of production methods, there is growing interest in further updates to the HS.[237] Meanwhile, governments are repeatedly hamstrung in their efforts to liberalise trade in certain environmental goods and to implement MEAs with trade-related provisions by the absence of sufficiently granular HS codes on specific environmental and environmentally-hazardous goods. Further, without HS codes that differentiate between goods based on environmental characteristics, customs officials and governments face numerous practical challenges in providing data on flows in and out of their countries and determining which to limit or facilitate.

There are numerous proposals to update the HS with new or more specific codes for goods central to dealing with environmental challenges, especially in the context of the push for a more circular economy, climate action, sustainable agriculture and a Blue Economy. Examples of candidates for more granular HS codes include steel (high vs low carbon production), timber (sustainably forested or not), plastics (by polymer and with information on chemical composition), different compositions of waste and secondary waste, and ocean-based products.[238] The Basel Secretariat, for instance, has tabled proposals for HS updates to support differentiation of hazardous and non-hazardous plastic wastes, which are subject to different restrictions under the Basel Convention.[239]

The process of updating the HS codes takes around five years, with the next round of negotiations to start in 2021 for release in 2027. The amendment process usually starts with a request from the private sector to national customs or trade ministries, an international industry association, or an international organization. The adoption of proposed revisions is no means straightforward. Proposed amendments are considered and negotiated by governments in the WCO's committees.[240] For environmental goods, key challenges that arise are the absence of internationally agreed definitions and standards that enable differentiation of particular goods and the need to ensure that any new classifications can be applied in practice by customs authorities and businesses engaged in trade. Meanwhile, even without an amendment to the HS, individual countries can add additional levels of granularity to their classifications of imports and exports at the national level.

Looking ahead, given that the classification of trade flows is so central to monitoring environment-trade trends and to the design of green trade policies, there is a compelling case for an independent environmental review that considers how the HS can better respond to the need for growing demand for information on the environmental characteristics

of trade flows. Beyond environmental considerations, the HS faces a wider set of challenges, including difficulties customs authorities, courts and companies face in using the system as well as the tension between maintaining a system that is stable and uniform over time with the need for adaptability and relevance amidst rapid changes in products and technologies traded internationally.[241] Such concerns have already spurred calls for a wider process of reflection on reform of the HS, of which environmental considerations could be part.[242]

3.3.6. Green customs

At the national and regional level, customs authorities play a key role in monitoring and controlling the flow of goods across borders. As governments adopt regulations that aim to restrict or ban the flow of environmentally harmful and unsustainably produced products across borders, and to promote flows of 'green goods,' they will rely increasingly on customs authorities to help implement them. The ability of governments to control trade flows on the basis of the environmental characteristics and implications of products will rely on the capacity and resources of customs authorities to correctly and consistently differentiate between different products on environmental grounds. This task is especially challenging where the sustainability characteristics do not relate to the product itself but to its production methods that customs authorities cannot test or assess by examination of the product itself.

Greening trade flows will require considerable investments in technical assistance, training, and capacity building so that customs authorities can accurately identify and classify different types of goods according to the appropriate environmental criteria or standards. It will also require clear communication and support to exporters and businesses on the definitions and labelling of goods for customs purposes. Here, proof of certified compliance with environmental standards and labelling schemes is likely to become increasingly important, but will also raise questions about which standards are considered sufficiently robust on complex issues of 'sustainable production' and how these should applied by customs authorities, including for the application of restrictions, taxes, or preferential access.

To address some of the challenges at hand, the WCO hosts a Green Customs Initiative, a partnership of international actors working to prevent the illegal trade in environmentally sensitive commodities and substances (such as ozone depleting substances, toxic chemicals, endangered species and certain living-modified organisms) and to facilitate their legal trade.[243] The initiative aims to enhance the capacity of customs officials and other relevant border control officers to monitor and facilitate legal trade, while also preventing illegal trade, by raising awareness of relevant international agreements and providing assistance and tools, especially in developing countries. The WCO has also been working with the Basel Convention to support national capacities required to implement new restrictions on trade in plastic waste and guidelines on trade in e-waste.

In tandem, efforts by UNCTAD to develop and implement automated and digitized customs management systems, and of the UNECE to develop electronic permits and information exchange systems can support green trade. The UN Economic Commission for Europe's Centre for Trade Facilitation and Electronic Business (UN/CEFACT) has developed a number of e-standards that can support customs efforts to regulate trade in plastics waste and trade in illegally harvested fishing products. Support for enhanced training and capacity building for developing country business and government officials on the environmental dimensions of customs administration should be considered a vital component of wider green Aid for Trade efforts.

3.3.7. Sustainability impact assessments and global environmental footprints

Sustainability impact assessments (SIAs) of trade agreements are a further area where improvements can be made at national, bilateral, regional, and multilateral levels. Beyond the major developed countries, the practice of SIAs is limited. To date, few developing countries have systematically adopted SIA practices, and where impact assessments have been undertaken, they have focused primary on social, not environmental, impacts.

Key to better aligning trade policies with environmental goals will be for national governments to conduct independent ex-ante and ex-poste SIAs of existing and proposed agreements. Further, environmental advocates have underscored the need to bolster the credibility of SIAs and for stronger use by governments of the information SIAs yield to revise or improve their trade strategies. Here, the key is to ensure SIAs are not perfunctory exercises that have little link to ongoing trade decision-making and negotiations. A recent review of the EU's SIAs, for instance, argued for a more systematic, robust and accountable process, including through ex-post assessments of existing FTAs and greater clarity and transparency on how SIA insights and recommendations have been taken up in the negotiation of trade deals.244 Where they exist, governments could also task Environmental Councils and other environmental consultative bodies created through their trade agreements, to commission independent assessments.

To address the range of relevant environmental impacts, SIA methodologies need updating to address the both systemic challenges and scale effects arising from TAs, including trade-related transportation, carbon emissions, waste, pollution, biodiversity and ecosystem degradation, as well as impacts on 'the global environmental commons' such as rainforests, oceans, and atmosphere. Looking ahead, SIAs need to also consider the positive and negative environmental impacts of TAs on trading partners and on the achievement of global environmental commitments (such as on climate change).[245] Although the EU is the world's leader in the scope of its SIAs on trade agreements, its current approach

to environmental impacts on trading partners remains limited.[246] Beyond the EU, many SIAs remain limited to environmental impacts of tariff reductions and few developed countries require trade-related SIAs to cover global environmental considerations.

Recent studies have proposed new qualitative approaches, methodologies and indicators for assessing impacts of trade on biodiversity.[247] There are also proposals to make greater use of human rights approaches, including through impact assessments that focus on the right to a healthy environment, the rights of indigenous peoples, and the right to health (which is relevant to reduced trade in toxic chemicals, pesticides, waste).[248] The emergence of environmental footprint accounting methodologies offers governments new tools to monitor and assess how imported and exported goods are linked directly (and indirectly) to environmental impacts elsewhere in the world (see Box 17). The USMCA illustrates the possibility for innovation, by including a provision calling on countries to maintain appropriate procedures for assessing the environmental assessments of central government projects that may cause significant effects on the environment.[249]

At the multilateral level, an independent assessment mechanism, drawing on inputs from international organizations, stakeholder groups and scholars, could be created to review the impacts of WTO agreements on the SDGs and on specific environmental topics governments have identified as shared global priorities. In addition, the growing attention in the WTO Trade Policy Review process to monitoring environment-related trade policies and measures could be enhanced to consider the environmental impacts of trade flows, policies, and measures.

3.3.8. Public participation and transparency: parliaments, civil society, and business

Public participation and transparency are critical to the learning, information sharing, and compromise needed to address environment-trade linkages at both the national and international level. They can help improve the quality of agreements and the boost prospects of them securing approval in national parliaments and subsequent implementation.

At the WTO, numerous efforts have been made to broaden opportunities for civil society participation (e.g. the WTO's Annual Public Forum and the opening of some aspects of WTO dispute settlement procedures to public observation), and to promote stronger engagement of a range of business interests in dialogue on trade issues (e.g. through a series of WTO Trade Dialogues). Over the past decade, there has also been a steady expansion of the engagement of stakeholder groups in a range of WTO activities – from research and capacity building to promoting policy dialogue and monitoring – that contribute to the functioning and transparency of the multilateral trade system. However, there are important un-met demands for greater transparency of WTO

Box 17. Consumption-based environmental footprint accounting

Through international trade, consumers located across the world have access to goods and services that rely on environmental inputs and services from multiple countries. Supply chains that span regions and environmental pressures that are transboundary mean that for many goods and services, national consumption in one country is linked to environmental pressures arising from production in other countries. The environmental costs of developed country consumption, for instance, are increasingly experienced in production sites in developing countries from which they import (that is, some countries effectively 'offshore' their environment footprint). At the same time, countries may also export goods that generate environmental harm abroad, such as hazardous and other wastes that the importing country lacks the capacity to manage in an environmentally sound manner as well as second-hand vehicles that contribute to challenges such as air pollution. In short, it makes little sense to think about environmental impacts of trade occurring in one country, nor that one country bears the responsibility and economic cost alone.

In response, efforts to track the global ecological footprint of national consumption are making it possible to measure the total internal and external environmental pressures associated with a country's domestic consumption - including its imports of goods and services – along global supply chains.[362] In 2016, for instance, WWF showed that around 46 per cent of the UK's global carbon footprint was from greenhouse gas emissions released overseas to meet UK demand.[363] In Europe, emissions stemming from the consumption of imports account for more than 30 per cent of the total emissions of European countries (that is, Europe's total 'consumption-based' emissions are higher than its territorial emissions).[364] Using global footprint accounting, national consumption-based calculations of transportation-related emissions would include all emissions linked to a country's international imports (whether or not these emissions occurred in national waters or airspace).

By enabling systematic monitoring, assessment and transparency of how each country's demand for a certain set of imported goods is linked directly (and indirectly) to environmental impacts elsewhere in the world, consumption-based ecological accounting could be a game-changer for trade negotiations in the coming years. It has the potential to reshape understandings of what is traded internationally (i.e. not just goods and services, but also their environmental consequences), how governments measure and distribute the responsibility and risks of environmental degradation, and how cost-sharing for improved environmental performance should be integrated into trade-related bargaining and rule-making.[365]

negotiations and for more opportunities for parliamentarians and stakeholders – including the diversity of the business sector and civil society – to observe and provide input into unfolding discussions and negotiations at the WTO, many of which have become accepted practice in other international organizations and negotiations.

One important development in this respect is the launch of two new Member-led initiatives on environment at the WTO, where Members have signalled the importance of input from non-governmental stakeholders. The cosponsors of Structured Discussions on Trade and Environmental Sustainability have committed to engaging external stakeholders in their work, and the cosponsors of the Informal Dialogue on Plastics Pollution and Environmentally Sustainable Plastics Trade have also highlighted interest in receiving input from IGOs, business, civil society and academics.

At the bilateral and regional level, numerous trade agreements include provisions to facilitate public input on environmental matters. In some instances, 'best effort' clauses to accommodate requests for consultations by persons or organizations. The Dominican Republic-Central America FTA, for instance, calls on its Environmental Affairs Council to include a session in which members of the Council have an opportunity to meet with the public to discuss matters relating to the implementation of its environmental chapter.[250] The focus of public engagement is, however, limited to implementation of the environment chapter, not the integration of environmental considerations more widely across the implementation of the agreement as a whole.

Meanwhile, considerable dissatisfaction remains among many stakeholder groups and legislatures in both developed and developing countries about their degree of influence over national trade policymaking, and thus over the negotiation of new international trade agreements. In the UK, for instance, stakeholders are calling for a greater role for parliament and the public in providing input into the UK's new post-Brexit trade policy agenda and scrutinizing new trade agreements. Although a growing number of governments have established consultative processes to engage a diversity of business and public interest voices, most trade ministries and negotiations continue to see advancing and defending well-established national commercial interests as their core business. In the face of lobbying by well-organized and highly vocal commercial interest groups, most governments struggle to discern and advance wider public interests in regard to international trade cooperation, far less an environmentally ambitious approach to trade. Key to progress will be processes that engage a far greater diversity of perspectives, including those of SMEs and emerging businesses focused on seizing green economy opportunities, as well as representatives of under-represented constituencies keen to have more say in the content of trade rules that impact their livelihoods – including rural communities and indigenous peoples – and that can offer a range of proposals for trade policies that could better serve the environment.

3.4. Stakeholder initiatives to green trade

Stakeholders from the private sector and civil society are pursuing a broad range of market-based initiatives to promote greener and more socially responsible supply chains. From the business side, many businesses recognise the importance of improved environmental performance to their global competitiveness, access to markets, reputation, and long-term viability, as well as to their ability to attract investment from financial markets increasingly focused on environmental risks.

This section reviews a sample of stakeholder initiatives to green trade, such as private, voluntary environmental standards (including ecolabels), CSR strategies and environmental pledges, supply chain traceability initiatives, and public campaigns.

3.4.1. Private environmental standards, including ecolabels and voluntary sustainability standards

Many environmental NGOs and business groups are working to promote the use of private environmental standards developed by non-governmental actors, often accompanied by certification and labelling schemes, that address an ever-growing array of environmental challenges. Created to boost environmental performance, capture the 'green' market share, and bolster the green reputation of companies, many private environmental standards bring together business and civil society groups in their governance, while others are primarily private sector or civil society led.

A subset of private environmental standards are commonly known as voluntary sustainability standards (VSS), which usually focus on specific commodities or products (such as coffee, palm oil, forest products and fisheries products) (see Figure 8). Many VSS include a range of environmental and social criteria, including on labour and human rights performance. The Roundtable on Responsible Soy (RTRS), for instance, brings together leading business interests in the soy industry aiming to "facilitate a global dialogue on soy production that is economically viable, socially equitable and environmentally sound." The RTRS has established a certification scheme for soy production based on indicators on issues including legal compliance and good business practices, responsible labour conditions, responsible community relations and environmental responsibility, as well as good agricultural practices.[251]

In addition, a growing array of standards labelling schemes focus on promoting 'fair trade,' which are part of the wider context for discussion of the role of private standards in international supply chains. Some of these standards focus on specific products, aiming to support the livelihoods, communities and working conditions of farmers and workers that produce them in developing countries.[252] Other schemes certify organizations that are committed to improving the livelihoods of economically marginalised producers.[253]

Figure 8. Examples of voluntary sustainability standards in the agricultural sector

VSS	Description
Organic agriculture	The International Federation of Organic Agriculture Movements (IFOAM) federates 750 member organizations (non-governmental organic certifying organizations, producer organizations, NGOs, importers and retailers) in more than 120 countries.
	The IFOAM Family of Standards operates as basic voluntary standards to harmonize the different organic certifications.
Rainforest Alliance	Certifies producers of all sizes. The Sustainable Agriculture Network (SAN) is an association of non-profit conservation organizations (including the Rainforest Alliance) that promote the environmental and social sustainability of agricultural activities through standards for best practices, certification and training for farmers.
	3.5 million hectares of agricultural land has currently achieved Rainforest Alliance certification, and 1.4 million people have been trained in sustainable land use practices.
Fairtrade international	Fairtrade International (FLO) is a not-for-profit multistakeholder association that develops Fairtrade standards.
	Focuses on small farmer cooperatives and social criteria to guarantee fair trading relations and fair production conditions; it increasingly incorporated environmental criteria over the years.
	The Fairtrade system includes 1.65 million farmers and workers in 1 226 producer organizations in 74 countries.
GlobalG.A.P.	The Global Partnership for Good Agricultural Practices is a trademark and set of voluntary standards for the certification of safe, sustainable agriculture worldwide.
	More than 400 member organizations such as producers, retailers, industry and service providers support the initiative in more than 100 countries.

Source: Adapted from FAO (2017), Voluntary Sustainability Standards for Bananas, World Banana Forum Good Practices Collection, available at: http://www.fao.org/3/i6931e/i6931e.pdf

Some governments have sought to guide the design and implementation of private environmental standards through the adoption of environment laws and regulations that set guidelines for their development. Further, not all private environmental standards remain voluntary and some are integrated into government policy frameworks. For instance, some countries have made certification under the Global Partnership for Good Agricultural Practices (GLOBALG.A.P.) mandatory for agricultural production, including products destined for export markets.[254] Some government procurement schemes call also for the use of private environmental sustainability standards as criteria for green procurement decision-making. And, at least one international trade agreement (EFTA–Indonesia) refers to compliance with specific private environmental standards for palm oil production as a basis for preferential tariff treatment (see Box 4).

The growing range of private environmental standards in the global marketplace is accompanied by important questions about transparency, fairness, and effectiveness. There are concerns about growing consumer confusion and fatigue in the face of complex information and proliferating consumer labels; how the criteria and benchmarks that underpin standards are defined and by whom; the transparency of the requirements embodied in standards; the challenge of scaling up the market share of goods that meet voluntary green standards; and weakness of processes for verifying that standards are indeed being met. As in the case of labour rights, on which companies have long been engaged in voluntary CSR and due diligence schemes, widespread challenges regularly arise in regard to the ability of companies to secure and ensure credible environmental action is being taken along the supply chain. From an accountability perspective, whistle-blowers, civil society organizations, and investigative journalists play a key role in revealing and publicizing the realities in ways that raise the reputational risk of weak voluntary efforts.

A key challenge with private standards is that 'green' claims can mislead consumers: a leading example of this is the pervasive labelling of plastic packaging products as recyclable, when in fact only a minor share of such products is in fact recycled. A related challenge is discerning how much difference private standards and labels make on the ground. How much market influence, for instance, the supply chain decisions of a single retailer has on production practices in distant markets will depend on its size,

purchasing power, market share and ability to forge alliances with other companies. Not surprisingly, adoption of VSS is higher in markets with a relatively high level of consumer demand for sustainable products[255] and adoption levels vary greatly across countries depending on income levels.[256] In terms of market impact, while some VSS have achieved market penetration of 15 per cent of the global market for certain products, success at moving beyond this market share has been limited to specific products.[257] More than 25 per cent of the world's coffee, for instance, is produced using VSS and the share of the world's land dedicated to coffee that is certified as sustainable has been estimated at close to 50 per cent.[258]

In 2021, an independent, UK government-mandated Global Resources Initiative concluded that private, voluntary efforts fall far short of what is needed to support sustainable agriculture in the countries from which UK companies import, and called for a stronger focus on minimum legal standards across jurisdiction as a prerequisite for progress. A 2021 Greenpeace International report entitled 'Destruction: Certified' captured such concerns in a report documenting the limited track-record of voluntary certification schemes in preventing deforestation.[259]

Across the board, developing countries call for action to address the risks to developing country exporters arising from VSS, to support their transparency, and to respond to the challenges MSMEs face in complying with VSS by addressing the costs of certification. There is a strong case for market-leading companies to work more proactively with supply chain partners to define standards, boost their environmental performance, and support compliance. This would help avoid situations where private standards require the use of specific environmental technologies or techniques that may undermine or displace local production practices and market systems which, if properly resourced, may have become environmentally sustainable, while at the same time sustaining or boosting livelihoods and employment in local communities.

Amidst the proliferation of green and fair trade standards and certification schemes, there is also a strong case for finding ways to link and simplify systems in ways that promote green and fair trade while avoiding unnecessary trade barriers (including calls for an international Fair Trade Charter).[260] To address developing county concerns about market access barriers arising from the proliferation of private environmental standards, numerous efforts are already underway to promote coherence and transparency.[261] The UN Forum on Sustainability Standards (UNFSS),[262] for instance, publishes an annual review of the sustainability standards landscape and promotes dialogue between stakeholders and governments in regions and globally on sustainability standards and standard setting. In addition, the ITC hosts a 'Standards Map' featuring standards from over 600 standard-setting bodies, whether government or stakeholder-led.[263] Further, organizations such as the IISD also provide an extensive database of VSS and publishes detailed reports on the scope and details of standards related to specific sectors and commodities (e.g. cotton and coffee).[264]

At the international level, one option on the table is for governments to develop 'soft-law' guidance on the development of voluntary private standards (e.g. guidelines, codes of conduct or reference papers) to complement the existing guidelines on the development of standards such as those included in the WTO TBT Agreement. These could be pursued at the WTO, or through non-trade processes. At the FAO governments agreed in 2009 to guidelines for ecolabelling of fisheries products.[265] A further proposal is to seek ways to draw together core principles and requirements that underpin the growing array of standards into an overarching framework, such as the proposed Codex Planetarius for sustainable food and agricultural systems (see Box 11).

3.4.2. Corporate social responsibility strategies and environmental pledges

A rising number of companies around the world are making pledges and launching initiatives to produce, trade and invest in more environmentally sustainable products. These include efforts to boost the ESG of their companies, implement CSR strategies and guidelines, implement green procurement practices, and improve environmental performance across international supply chains.

An important appeal of private action by companies to green production and trade is that it can be swifter than efforts to strengthen environmental laws and enforcement across multiple jurisdictions relevant to international supply chains and compel corporate compliance. There are, however, important limits to the accountability of companies in regard to their public environmental commitments and pledges. One of these challenges relates to the difficulties assessing progress and the extent to which actions that countries report address the scale of the problem at hand. A further challenge to assessing the impact of environmental commitments is the complexity and opacity of supply chains. Another challenge relates to the relevance and credibility of claims companies make. Many companies focus, for instance, on eliminating trade in 'illegal' products, such as those that are harvested or produced in violation of local environmental laws. However, such laws and the definition of what is illegal may change over time. Moreover, not all environmentally destructive practices (such as those that lead to forest clearance) may be deemed illegal under national laws. So, while a product may indeed be accurately characterized as 'free' from illegal deforestation, its production may still have contributed to deforestation.

Another challenge is that progress may fall far short of pledges made. In 2015, for instance, the WEF's Tropical Forest Alliance was launched with the aim of halving deforestation by 2020 and ending it by 2030.[266] In the New York Declaration on Forests (NYDF), 49 leading international companies pledged to supply 'deforestation

free' commodities, with the specific target of eliminating deforestation from the production of agricultural commodities such as palm oil, soy, paper, and beef products by no later than 2020. Recent assessments, however, conclude that no company had met the NYDF target[267] and that 43 per cent of the 'Forest 500' – the most influential companies in forest-risk supply chains did "not have any deforestation commitments for any of the forest-risk commodities they are exposed to."[268]

Another example of a corporate responsibility initiative relevant to green trade is the WEF's Global Plastic Action Partnership (GPAP), which aims to promote transparency of the plastic footprint of a range of retail and manufacturing companies across their global operations. Through GPAP, a number of significant companies have published information on their plastic footprints as well as targets for reduction of plastic pollution, but as in many such efforts, the timeframes for implementation are long and no mechanisms exist for holding companies accountable for the pledges and claims made about enhanced sustainability across their supply chains.

3.4.3. Supply chain transparency and traceability

Stakeholder efforts to green international trade increasingly focus attention on the transparency of supply chains that have significant environmental impacts. The purpose of such efforts can include increasing the availability of information the resource efficiency and environmental impacts of production processes across supply chains, boosting availability and accountability of environmental information about products, increasing the traceability of products along international supply chains, supporting sustainable sourcing, and optimising efforts to improve environmental performance across the life cycle of products.

Examples of private sector efforts to boost the traceability of products along supply chains are especially prevalent for agricultural commodities, fisheries products and textiles. Many traceability schemes involve both social and environmental criteria and are also linked to voluntary certification and labelling schemes. Some initiatives specifically require or encourage companies to disclose information their sourcing practices (e.g. the textile industry's 'Cotton Pledge,' and the UN Guiding Principles on Business and Human Rights). Also on the sourcing front, the Union for Ethical BioTrade (UEBT) offers companies the possibility of being certified for environmentally sustainable and ethical sourcing of natural ingredients.[269]

The Stockholm Environment Institute's Transparency for Sustainable Economies (TRASE) initiative is a leading civil society and academic effort to compile data on agricultural commodity supply chains to "reveal the links to environmental and social risks in tropical forest regions, and create opportunities to improve the sustainability of how these commodities are produced, traded and consumed."[270] By the end of 2021, TRASE aims to map over 70 per cent of the total production in major forest risk commodities, thereby allowing companies, governments and researchers to understand the risks and identify opportunities for sustainable production.[271]

As the focus on traceability and transparency of supply chains grows, so too does interest in how Fourth Industrial Revolution (4IR) technologies, such as artificial intelligence, big data analytics, cloud computing, and blockchain, can help companies track information on environmental criteria and performance across supply chains.[272] Blockchain technologies, for instance, enable companies to gather detailed information that allow verifiable tracking and tracing of products from their origins through every stage of production through to point of purchase.[273] Blockchain technologies are being deployed in the textiles sector to provide assurance that a t-shirt marked 'organic' does indeed only use raw materials from organic, pesticide-free cotton fields.[274] Similarly, companies offering technologies such as blockchain and satellite monitoring systems are keen to apply their products to the challenges of capturing information about carbon and biodiversity footprint of the various components of products as they combine and move along international supply chains.[275] The potential utility of blockchain technologies to support traceability across supply chain varies by products, with some products (such as fish) so far proving more amenable to their effective than others (such as soy).[276]

Other technological innovations include the use by the Forest Stewardship Council of satellite monitoring of forests to support their efforts to certify sustainable products and monitor compliance with certification criteria. Alongside the development and implementation of automated and digitized customs data management systems,[277] a number of countries and companies are also using electronic permit systems and information exchange systems to better control trade linked to the spread of animal- and plant-borne diseases, support the implementation of CITES, control trade in illegal harvested fisheries products, and regulate the movement of plastic waste.[278]

3.4.4. Civil society campaigns and legal action

Civil society campaigns are a further important part of the landscape of efforts to green the global economy and international trade.

Across the world, a diversity of civil society groups are using public campaigns to push governments to pursue policies that promote greener and fairer trade. Civil society campaigns play a vital role in providing a check on gaps between rhetoric and reality, the scale of action needed to address urgent environmental challenges, and the need to move beyond conventional economic assumptions and business approaches. They also have a vital role to play in connecting and amplifying the voices of stakeholders, such as the rural poor, informal sector works and low-income communities, which are widely marginalized from trade policy-making processes. Investigations and monitoring exercises that

spotlight where and how the practices of companies and their suppliers contribute to environmental damage are a key component of such campaigns.

Civil society groups also lead efforts to harness consumer power for green trade, including through campaigns encouraging consumers to boycott certain products or to proactively favour products with green credentials (e.g. buying certified green products). Consumer-led boycotts of certain products have, for instance, led major retailers to cancel contracts with suppliers or commit to stronger environmental performance across supply chains in order to mitigate reputation risks. Public campaigns have also spurred some major companies and financial investors to divest from certain sectors (such as fossil fuels) and activities (such as unsustainable palm oil production). Notably, the strategies of groups vary: whereas some NGOs may call for bans on imports of palm oil, others may focus public campaigns on reducing investment in unsustainable production of palm oil, while still others may work to build consumer support for sustainably produced palm oil products.

A growing number of civil society-led litigation efforts are also seeking to extend the legal responsibility of companies for negative environmental and social impacts arising from their activities, including those of their overseas subsidiaries and suppliers abroad.[279] In the UK, for instance, a 2019 Supreme Court judgement ruled that a Kenyan community had the right to sue a UK-based company for compensation related to pollution, opening up the prospect of further claims by local communities in developing countries.[280] The prospect of future litigation on environmental performance across supply chains is signalled by legislation that aims to increase the transparency of social impacts along supply chains, such as the California Transparency in Supply Chains Act and the UK Modern Slavery Act, which requires companies to disclose efforts to eradicate slavery from their supply chains.[281]

The double standard of allowing production for export of domestically prohibited goods has attracted attention in national courts. In 2020, for instance, France's constitutional council ruled against companies selling pesticides (such as the pesticide Paraquat) that are banned in the EU in countries where they are still permitted.[282] In what is widely considered a ground-breaking development, the council rejected a legal appeal from a coalition of major agribusiness and chemical businesses, including Bayer, Syngenta and BASF, recognising for the first time in French courts that "the protection of the environment, human beings' shared heritage, constitutes a goal" with sufficient constitutional value to justify "infringing the freedom of enterprise…"[283] Finally, in the wake of laws requiring companies to disclose environmental risks as part of their financial reporting, some environmental groups are pursuing legal claims against companies that fall short of these environmental requirements.[284]

4. Political prospects for green international trade

What are the political prospects for greening international trade? This section reviews challenges and opportunities in 2021.

4.1. COVID-19 and challenges to international cooperation on green trade

Although political interest in updating – and indeed 'redesigning'— the trade system to advance environmental goals is growing, the current international context presents numerous challenges to international cooperation on trade, on the environment, and on their intersection, especially in the context of the enduring COVID-19 pandemic.

4.1.1. Impact of COVID-19

The COVID-19 pandemic has exacerbated an already complicated political landscape by provoking a spectacular drop in global trade flows and the collapse of certain commodity prices and export markets.

The impacts of COVID-19 on trade have been especially devastating for countries that rely on food and energy imports.[285] Many of the world's smallest countries continue to be affected by disruptions in international supply chains and tourism.[286] And for many developing countries, drops in trade have reduced their ability to service debt and pay for critical imports.[287] Across the world, in both developed and developing countries, the pandemic has spurred a greater focus on the management of trade amidst concern about the resilience of supply chains and access to essential products. It has also increased calls to 'reshore' production, shorten global supply chains, favour products that are made locally, and bolster 'strategic autonomy.' In developed countries, the economic fallout of COVID-19 has strengthened the conviction of those that have long argued for a retreat from a globalization they associate with rising inequality, job losses and the decline of middle classes.

Governments have responded to the economic situation bought about by the pandemic through increased intervention in trade and their economies. This has included export restrictions on certain food stuffs and medical supplies, including some export bans,[288] and recovery packages that see governments increasing their use of subsidies and other industrial policies. The array of international tensions arising from trade barriers, blockages of trade in medical goods, and mounting vaccine nationalism, all have difficult-to-estimate, longer-term reverberations, but certainly constrain the potential for successful trade diplomacy on environmental matters.

While many applaud calls to 'build back better' from COVID-19 and the vision of a fairer and greener post-COVID global economy, most governments struggle to focus on environmental goals at the same time as they respond to urgent economic, social and public health issues related to pandemic. For developing countries, for instance, top priorities include restoring trade in key sectors, boosting access to trade finance, and Aid for Trade to support recovery efforts, along with enhanced development finance and debt-restructuring. From a green trade viewpoint, the sharpened focus on supply chain resilience in the context of COVID-19 is already being harnessed to promote attention to the environmental resilience of supply chains. A challenge, however, will be to ensure that the renewed emphasis in many countries on supporting national and local products is pursued in ways that supports environmental goals, and does not unfairly disadvantage developing countries or their ability to access expanding international markets for sustainability produced products. Here, a key point is that local products may not always be intrinsically more environmentally sustainable than imported ones, underscoring that there are no simple answers.[289] In the coming two years, the primary focus of international trade diplomacy will be economic recovery and trade recovery – so advocates of green trade will need to penetrate these conversations to integrate a green trade agenda.

4.1.2. Challenges facing trade cooperation

On the trade front, central among the challenges that preoccupy trade policymakers are enduring tensions on trade and investment among major trading partners, the future of the WTO and its dispute settlement function, the trade rules required for the 21st century global economy, and China's role in the global trading system. Trade policymakers are faced with sustaining international cooperation at a time of a rapidly changing global economy and trade trends. The rise of digital trade, the growth of the services economy, and constantly evolving technologies have long outpaced the capacities of trade officials to shape appropriate rules and policy frameworks. As governments struggle to adapt their international cooperation to the rapidly evolving global economy, as well as the environmental challenges and opportunities that come with these changes, the intertwining of trade and investment and the rise of South–South trade add an extra dimension to the task at hand.

A further challenge is the continuing rise in the use of trade barriers, particularly in the COVID-19 context, which calls

into question long-held assumptions (albeit always rather tenuous) about shared commitments to open trade and a rule-based global trading system. There is also considerable debate about the impacts of proliferating regional and bilateral trade deals and the risks of fragmentation of the global trading system. At the same time, growth of South–South trade and regional integration efforts further limit the scope for developed countries to be in the driver's seat of agenda-setting for international trade. The fact that the trading system is under pressure from so many angles does not, however, mean that the prospects for green trade are low. Governments are actively pursuing a range of ways to cooperate internationally on trade: there is an openness to new ways of working, recognition of the need for trade cooperation to proceed along multiple avenues, broad recognition of the need to upgrade trade cooperation to respond to the contemporary challenges, and new partnerships being built. All these also provide opportunities to advance green trade.

4.1.3. Challenges facing international environmental cooperation

On the environment front, numerous challenges to effective international cooperation persist. The slow progress in securing sufficiently ambitious updates to NDCs and climate financing in the framework of the Paris Agreement are a stark case in point. Around the world, many governments struggle with effective implementation and enforcement of their environment laws and policies and face constant pressure from commercial interests to reduce or limit the scope of environmental requirements. Developing countries have especially limited resources to develop, implement and enforce environmental laws and policies, with some lacking comprehensive legal and institutional frameworks on critical environmental topics (such as on chemicals regulation and waste management). As developing countries suffer from the continuing social and economic fall out of the pandemic, so too will the resources and political attention available for environmental protection, even in those countries that recognise the critical economic importance of environmental sustainability to their countries. In this context, failures on the part of developed countries to meet their environmental financing pledges, along with cuts to development assistance, undermine the prospects for improved environmental performance, including in regard to international trade and for the international cooperation needed to align trade with environmental goals.

4.1.4. Challenges for environment-trade diplomacy

For international diplomacy at the intersection of environment and trade, a key political challenge is how best to secure ambitious improvements in environmental performance among commercial and geo-strategic competitors, while also being fair to less developed countries and to marginalized communities in both developed and developing countries.

Among major trading powers, we can expect environment-trade diplomacy to mirror the same competitive tensions that characterize trade diplomacy in general. If the future of trade is green, then the future of trade diplomacy will be tensions over green trade. Take two examples. First, as the EU, China, and US work to implement the significant climate policies that climate action requires, they will produce and encounter a range of impacts on trade, spurring fights among producers for green market share and profits. The voluntary efforts of some companies to green their product and production will be rewarded by buyers willing to pay a higher price, but to achieve the economy-wide transformations required to meet the environmental challenges at hand, stronger environmental requirements and government intervention will be required. No company anywhere will want to see its efforts to green products and production processes undercut by competitors not taking similar efforts. Second, expanded trade in environmental goods offers opportunities to green production around the world, but may also run into existing trade tensions. Will the US for instance be keen to open its markets to Chinese environmental goods at a time when it is already working to rebalance its trade relationship with China? To what extent and on what terms will countries keen to build their own green industries be willing to import green products and technologies from others?

A related issue that impacts the prospects for enhanced cooperation on trade and environment agenda relates to the views of developing countries.

Developing country engagement in the environment-trade agenda will be central to success, especially as a growing proportion of global trade is South–South. In the face of growing South–South markets, the impact of environment-related trade measures taken by developed country governments may still send important market signals and shape behavior of major international companies, but their ability to address unsustainable production and trade between other countries will be limited.

For many developing countries, the issue of green trade is viewed within a wide frame. At the WTO, for instance, many developing countries express enduring frustration with inadequate attention to long standing development concerns (such as developed country agricultural subsidies), many of which have now fallen by the wayside with the collapse of the Doha Round of negotiations. This frustration underpins the reservations of a number of powerful developing countries in regard to taking on 'new issues' in trade or joining plurilateral initiatives at the WTO, including on the environment. India and South Africa have taken a stance against the introduction of new issues and plurilateral negotiations at the WTO – arguing that Members should first address unfinished work to address the development priorities of developing countries.

Further, while mounting numbers of developing countries are genuinely interested in protecting their environment and the global commons, many also distrust developed country motivations for environment–trade cooperation given a history of agendas driven by green protectionism and mercantilist-

driven environmentalism designed to consolidate competitive advantage. In the case of India, there are long-standing concerns about an externally imposed environmental agenda, which they fear disguises protectionism on the part of more powerful trading partners, threatens national sovereignty, and risks limiting their own scope for growth, development, and expanded market access.

Developing countries also argue for greater attention to their green trade priorities. While developed country governments talk most about the importance of green trade, their trade policies and negotiating agendas can also threaten environmental performance. Developed countries routinely export environmentally damaging goods to developing countries (such as low standard second-hand vehicles and e-waste), in some instances including products banned or restricted domestically (such as single use plastics). In the context of its FTA negotiations with the US, for instance, Kenya faces commercial pressure to accept a deluge of US exports of plastic products and waste, which threaten to undermine environmental legislation aimed at reducing plastic pollution. Developed countries have also used trade and investment deals as ways to secure access of their companies to natural resources and have concluded agreements for access to fisheries (without ensuring that countries have the capacity to govern and manage those resources effectively). In addition, developing countries have long observed that developed country agricultural subsidies as well as limited market access for processed and value-added goods in developed country markets, exacerbate the pressures on the natural environment in their countries and undermine the prospect of green exports.

In addition to a more integrated approach to environment and trade policymaking, developing countries underline the need for simultaneous development of an array of flanking policies – on investment, innovation, finance, debt relief and development assistance – that shape their prospects for greening trade and deriving benefits from green trade.

For some developing countries, the opposition to binding environmental commitments in trade agreements does not necessarily mean they are unwilling to take action to address environmental concerns at the national level. Many developing countries recognize the urgency of tackling environmental issues for their development and economic growth and are willing to take action. They are concerned, however, about taking on trade-related obligations that make certain environmental actions mandatory. Here, part of the reasoning is practical: many developing countries business and governments lack the capacities and readiness to implement the rapidly evolving range of environmental requirements. They also fear that new requirements in trade agreements would make them vulnerable to trade disputes in case of non-compliance. Notably, threats of environment-related trade bans, sanctions or conditionalities are staunchly opposed by powerful constituencies in some of the key countries from which cooperation is needed to green trade. In India and Brazil, concerns about environmental conditionalities reflect a wider set of concerns about national sovereignty in the face of international trade obligations. As in developed countries, developing country governments also face powerful domestic commercial industries (such as soy and meat exporters in the agricultural industry) unwilling to see their export prospects threatened by externally imposed environmental conditionalities. The challenge for green trade advocates is to determine what combination of approaches is most likely to promote improved environmental performance on the ground and strengthen the hand of those at the national level seeking reform.

Importantly, compared to earlier phases of environment-trade discussion, and despite an enduring backdrop of concern about green protectionism and a Northern environmental agenda, a growing number of developing countries – and constituencies within them – are now allied in favour of greater sustainability in trade. This is especially the case for countries suffering the economic impacts of climate change and keen to garner support for a transition toward greener production and trade as a path toward economic diversification. More generally, developing countries recognise that mounting environmental pressures will require all economies to become greener and a growing number want a seat at the table in discussions of relevant international economic policy frameworks to ensure their interests are accounted for.

A final, significant challenge that serves as a backdrop for efforts to green trade, is the growing debate across the world on the relationship between the economy and the environment. A diversity of social movements argues that current economic models, and approaches to international trade, are inherently out of sync with planetary health and social justice goals. In a world where millions of people are marginalised economically and socially, working in precarious economic conditions, activists in both developed and developing countries argue that trade deals primarily serve big corporate interests. Many advocates of the rural poor in the global South dispute the benefits from being absorbed into or engulfed by the global economy, arguing that current trade models rely on the overexploitation of people and resources and that trade policymaking excludes their perspectives.[290] Across the world, there are also important debates about the extent to which economic growth – and export-driven growth – is able to support thriving societies, economies and environments. While some environmental advocates argue that technological solutions have the potential to decouple production from economic growth, others argue degrowth is the only way for societies to live within planetary boundaries. A range of stakeholders reject altogether the notion that incremental reform of current economic models will be adequate for addressing the environmental and social challenges around the world, with some calling for a more radical rethink of economic assumptions and policy approaches, including those that inform trade policymaking. Movements of rural people concerned about food security, for instance, present 'bottom up' alternatives focused on a trade model that support socially just and ecologically resilient

societies that are widely neglected by economic policymakers and trade negotiators.

What is clear is that the green trade agenda will need to grapple with the economic and social dimensions of sustainability. The massive and rapid economic transformation needed to address environmental crises will be especially challenging for developing countries saddled with enormous social and economic challenges, high vulnerability to environmental impacts, and limited resources to support a green transition.

4.2. Policy opportunities in 2021

While acknowledging the political challenges that will temper the prospects of turning the growing talk of green trade into action, there are a number of concrete policy opportunities in 2021 to advance a green trade narrative and policy agenda through inter-governmental processes at the multilateral, plurilateral and regional levels (see Figure 9).

4.2.1. Multilateral opportunities

2021 is a promising year for enhanced multilateral attention to environment and trade intersections.

At the WTO, the 12th Ministerial Conference (MC12) is scheduled for late 2021, and the new Director General, Dr Ngozi Okonjo-Iweala, has a declared commitment to climate action and sustainable development. Some 53 WTO Members has launched an unprecedented process of Structured Discussions on Trade and Environmental Sustainability, which is open to all Members, and includes a commitment to engagement with stakeholders.[291] Cosponsors of this initiative have signaled the importance of a Ministerial Statement on Trade and Environmental Sustainability at MC12. Here, the priority is to involve as many WTO members as possible, underscore the importance of advancing environmental action in the multilateral trade arena in ways that advance progress on the SDGs, highlight any concrete initiatives or commitments that have been forged, and set out a roadmap for future work.

Areas in which different combinations of Members have expressed an interest in intensified work on environmental at the WTO range from circular economy, climate, fossil fuel subsidies, plastics pollution, fisheries, sustainable agriculture, greening Aid for Trade, green technology transfer, and sustainability standards and labelling. There is also interest among some WTO Members in ensuring that environmental sustainability is part of the wider WTO reform agenda and integrated more strongly across the organization's work and committees, including those focused on agriculture, technical barriers to trade, and Aid for Trade, among others. As Members consider possible outcomes for MC12, there is an openness emerging to new kinds of 'deliverables' including soft law instruments, such as guidelines and commitments to outcome-oriented coordination as a complementary focus to outcomes reliant on on new multilateral negotiations. For MC12, the conclusion of a meaningful agreement on the reform of environmentally harmful fisheries subsidies would send a strong signal that Members are capable of achieving concrete environmental outcomes at the WTO.

In October 2021, the 15th Ministerial meeting of the UNCTAD hosted by Barbados is an important opportunity to articulate a development agenda for green trade aligned with implementation of the SDGs. There is strong interest among a range of developing countries for action at UNCTAD XV to bolster green trade by supporting the trade-'readiness' of developing countries in the face of the climate crisis, the Blue Economy, BioTrade and trade policy frameworks that support a global green deal, in which developing countries can use of green industrial policies to support green economic transformation and trade policy frameworks enable a just transition.[292]

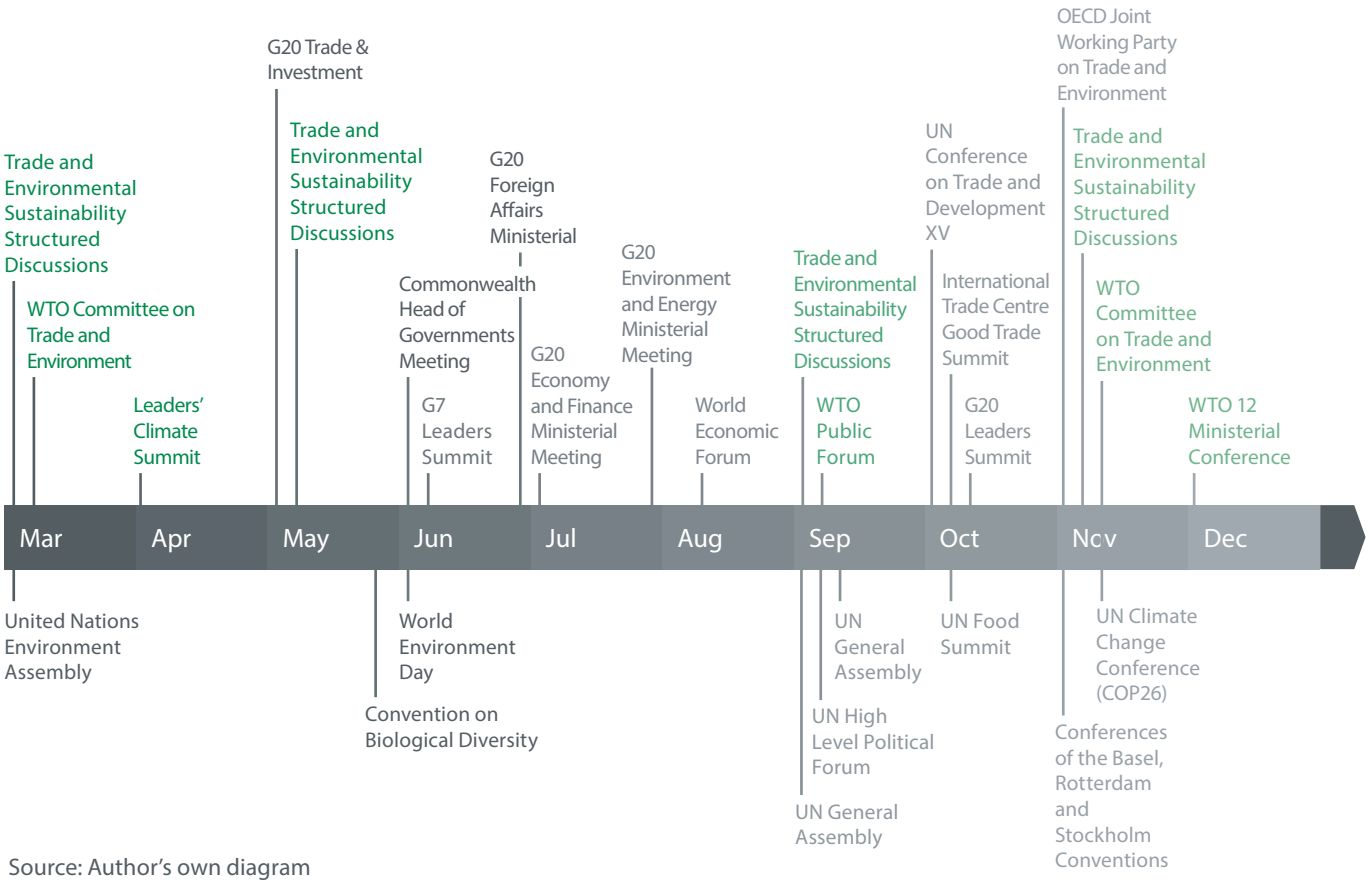
In the UN context, there is a recurring opportunity to use the High-Level Political Forum (HLPF) and SDG review processes to raise the profile of trade policy considerations across a range of SDG targets and benchmarks as well as to emphasise the need for more action to ensure that trade policy serves as a 'means of implementation' of the SDGs. The HLPF process, the UN General Assembly, and the meetings of the World Bank and IMF, each provide opportunities to foster a more integrated, coherent policy agenda for green economies that combines development financing, debt relief and trade.

On the international environmental front, negotiations in 2021 for a new Global Biodiversity Framework, the UN Climate Change Conference, and the conferences of the parties to the Basel, Rotterdam and Stockholm Conventions can each be seized as opportunities to boost the engagement of environmental ministries on green trade and articulate priorities for aligning trade policy with environmental goals.

In addition, the UN Food Systems Summit to be hosted by the FAO in October 2021 provides an occasion to consider how trade policy frameworks can support environmental sustainability food systems and food security, and by agreeing to negotiate a Codex Planetarius that would set minimum international sustainability standards for food and agricultural production.

The green trade agenda can also be pursued through efforts to develop strong, transparent and fair international standards, such as through the ongoing work of the ISO's taskforce on voluntary climate standards, which in 2021 can spur intergovernmental cooperation. At the WCO, robust proposals in 2021 for negotiations to green trade classifications as well as capacity building for customs authorities to administer environmental controls at the border will be vital to improved monitoring and management of trade flows in both green goods and environmentally harmful goods.

Figure 9. Opportunities for environment and trade in 2021: Sample of key international processes



Source: Author's own diagram

4.2.2. Plurilateral opportunities

An area of growing momentum is the pursuit of green trade among like-minded countries or 'coalitions of the willing.'

Ongoing negotiations for a plurilateral Agreement on ACCTS,[293] for instance, are widely viewed as a 'pathfinder' opportunity to identify ways forward on three trade-climate issues – fossil fuel subsidies, liberalisation of environmental goods and services, and climate-related standards and labelling. Beyond the six countries currently participating, there is an opportunity for other countries to ask to join or observe the negotiations, and also to use the ACCTS outcomes as a basis for strengthened climate-related cooperation in other trade arrangements and in the multilateral setting.

In June 2021, the Annual G7 Summit, bringing together leaders of major developed country economies, will include a separate Trade Ministers' meeting for the first time, with environmental sustainability and climate noted as one of the three priorities. The G7 process provides an opening to secure high ambition commitments to cooperation on environmental sustainability in the global trading system, and to multilateral approaches that can engage the support of developing countries.

The Annual G20 Leaders' Summit and Trade Ministers meetings also provide occasions for governments declare a shared political commitment to advancing progress on environmental sustainability in their trade relations, and the importance of inclusive multilateral approaches. In 2021, key topics for the attention of the G20's Trade and Investment Working Group (TIWG) could be the 'green trade for a green recovery' agenda, as well as climate, deforestation-free supply chains, and green Aid for Trade.[294] Alongside, the G20's discussions on climate change will likely include attention to the use of trade policy frameworks to support progress on the Paris Agreement goals. Although G20 ambitions on climate and trade are likely to be tempered by reluctance of countries such as Saudi Arabia and Russia to commit to climate action, the G20 is nonetheless an important forum for seeking to build coalitions on environment and trade, including through complementary processes such as the B20 (business), T20 (think tanks) and C20 (civil society).

The work of the OECD also offers a standing pathway to galvanize the green trade agenda. Although widely considered a 'developed country' institution (albeit with a growing number of developing country members), the OECD has demonstrated its agenda-setting role on a number of

environment and trade issues, including through the provision of compelling data (e.g. on fisheries subsidies, material resource use), policy analysis (e.g. circular economy), and authoritative studies on technical and legal aspects of environment and trade intersections. The OECD's Joint Working Party on Trade and Environment (JWPTE) could be better harnessed by environmental stakeholders as a vehicle for spurring policy engagement by governments and to request authoritative OECD research on trade and environment topics, including on approaches that would address concerns of developing countries vital to achieving a greener global economy.[295]

The Commonwealth Heads of Government Meeting (CHOGM), bringing together a diversity of both developed and developing countries of varied sizes in June 2021, could also be harnessed to build consensus building around environment and trade issues in ways that blend high ambition with fairness and a just transition.

The annual meetings of the Berne Union are another plurilateral process in 2021 that could be harnessed to boost the environmental performance and contribution of trade finance.

4.2.3. Regional and bilateral opportunities

Finally, there are important openings at the regional and bilateral levels to advance action to align environmental sustainability and trade in 2021.

A core focus of such efforts can be on integrating strong environmental considerations into the dozens of TA negotiations underway in 2021, both by consolidating and expanding upon the best practices in existing environment and sustainable development chapters, and also by integrating environmental priorities and provisions across TAs.

In 2021, the EU is working to align its trade policy with the climate goals of its European Green Deal, as well as with its new Biodiversity Strategy and Circular Economy Action Plan, through its bilateral relations as well as in the multilateral trade arena. Ongoing EU negotiations with a range of developed and developing countries are opportunities to widen the scope of sustainability impacts assessments, ensure that negotiating priorities respond to their findings, strengthen the enforceability of its environment and sustainable development chapters, and integrated environmental priorities across any new agreements in ways that are both ambitious and fair. As the UK builds its post-Brexit trade relations in 2021, it has an opportunity to build on the best of the environmental approaches already on the table, ensuring that environmental priorities are a core focus of its trade agenda and that its commitments to high environmental standards and climate action are reflected in the trade deals it forges.

Meanwhile, the conclusion of both RCEP and AfCFTA with minimal environmental provisions highlights the need for much greater attention among environmental experts and constituencies to trade action taking place at the regional level. Regional NGOs, think tanks, businesses, and governments, need support to identify environmental challenges and opportunities linked to trade, as well as trade-related pathways to greater sustainability. Of particular importance is the growing number of bilateral and regional TAs forged by countries where environmental risks are high, such as those involving the Mercosur region (forests, biodiversity, climate), Southeast Asia (forest, biodiversity, climate) and African countries (biodiversity loss, desertification, wildlife trade, forests).

Work at the regional level could help spur greener intra-regional and South–South trade. Intra-African cooperation is already growing on environmental priorities, including through collaboration of regional Environment Ministers on topics such as transition to more sustainable energy, which has direct links to trade and regional economic integration arrangements. Here, important vehicles for regional cooperation and stakeholder engagement on environmental sustainability and trade are the UN Regional Economic Commissions, each of which has units responsible for issues of trade and economic integration, and several of which are taking growing interest in sustainability issues. In 2019, for instance, Central Asian economies agreed to a joint statement of principles for sustainable trade in the context of joint cooperation facilitated by the UN's regional economic commissions for Europe and the Asia Pacific.[296] The UN Economic and Social Commission for Asia and the Pacific (ESCAP) is integrating environmental issues in its 2021 Trade and Investment Report. The African Trade Policy Centre of the UN Regional Commission for Africa recently published views on ways to promote the SDGs through regional integration and is working to advance climate and environmental considerations in the work of the AfCFTA. In 2021, for instance, the Centre is supporting work on a Strategic Environment Assessment (SEA) of the AfCFTA, which will include stakeholder consultations.[297] The African Union Development Agency (AUDA-NEPA), which conducts work on regional economic integration, including cross-border infrastructure, and environmental sustainability, can also be harnessed as a vehicle for promoting an integrated approach in its work on key trade-related issues, such as cross-border energy and transport infrastructure, agricultural transformation and climate change, and supporting the integration of environmental priorities in the implementation of the AfCFTA.[298]

5. Next steps

To conclude, this final section of *Greening International Trade* offers proposals on an Environment and Trade 2.0 narrative and policy priorities, as well as strategies for galvanizing action.

5.1. An Environment and Trade 2.0 narrative

Green reform of the global trading system will require a renewed policy narrative, grounded in principles of ambition and effectiveness, fairness and inclusiveness, as well as transparency and dialogue. Narratives are important because they are the foundation from which different kinds of policy priorities, approaches and actions flow.

First, the new green trade narrative must be focused on realizing positive environmental impacts, moving beyond the current 'sticky' narrative that is focused on ensuring trade rules do not 'stand in the way' of environmental action and minimizing damages to the environment. It must also move beyond the assertion that trade and environmental goals can be mutually supportive. The new narrative needs to be focused on how trade policy can actively support and drive forward environmental sustainability, underpinned by principles of fairness and sustainable development: this will require recognizing trade can be a force for environmental good, but that many trade flows undermine progress on environmental goals.

In this spirit, the new narrative needs to avoid a simplistic and unrealistic assertion that all trade flows can be greened. Some trade flows are simply unsustainable. Similarly, environmental risks linked to trade deals need to be spelled out.

Central to the new narrative must be the need for trade and environmental policy frameworks that green all trade. Instead of focusing on a limited number of 'green goods' and 'green exports' the focus must shift over time to 'green' becoming the norm for all goods and services traded internationally. The narrative must also drive governments and stakeholders to devising how the pursuit of green trade can be consistent with and support the sustainable development goals of each country (including, in terms of employment, for instance).

Second, progress on green trade will require a narrative that combines ambition with fairness and inclusiveness: an approach that builds cooperation between developed and developing countries, anchored in shared commitments to wider sustainability goals. It also means that adequate support to spur transformation and meet the costs of transition for impacted communities must be a central part of the green trade conversation. And it will require a new willingness in the trade policymaking space to integrate the concept of common and differentiated responsibilities – a well-accepted concept in the environmental realm. For developed country constituencies it will require tackling the global environmental footprint of domestic consumption. It will also mean pursuing the many social, cultural, and environmental benefits that can arise from consuming locally produced products, without retreating into a misplaced view that autarky is the answer or that all local products are necessarily green or greener than imported products.

Third, the green trade narratives likely to garner political traction in diverse national and regional settings vary, which will call for attention to nuance, including in terms of language. Whereas 'deforestation-free' commodities may appeal to some constituencies, for instance, preferencing 'sustainable agriculture' or 'green supply chains' may be more likely to motivate others. The challenge for environmental advocates is find narratives for campaigns on green trade that can be effective in galvanizing support for change domestically but that also resonate with and support the efforts of environmental constituencies working to promote environmental goals in trading partners as well.

Fourth, the new narrative needs to recognise that although trade is central to the economic strategies of all countries, there is considerable scepticism among voting environmental constituencies and social movements around the world about the degree to which current approaches to globalization and export-led growth are the path toward sustainable development. Some of these critiques are resolutely 'anti-trade', while others are opposed to trade relations as we currently know them. In a vast global economy where millions of products are produced and traded daily, any generalizations are fraught with risk. What is clear is that for some sectors, some products, and some communities, there will be a compelling case that the sustainable pathway will be to carefully nurture local environmentally sustainable production for national consumption over export-led pathways. For some industries and sectors, trade opportunities will be critical to upgrading environmental sustainability and to acquiring relevant technologies, goods, and services. In all cases, core to progress is that clear environmental priorities and strategies for production are in place – whether for domestic production or export – and that trade policies are designed in a way to incentivize and support green trade.

Finally, advancing a nuanced, fair, constructive and differentiated approach to promoting stronger environmental performance in trading partners demands an overarching frame that combines pressure for higher environmental performance everywhere with cooperation and solidarity to address shared environmental imperatives – a 'carrots' and

'sticks' approach to achieving greener trade. Tough decisions and strong enforcement will be needed to drive environmental action, especially among the strongest players in global trade. Governments committed to environmental action will use trade policy in ways that enable and support domestic economic transitions and bolster competitiveness of key sectors in the green economy. Environmental constituencies may call for strong trade measures to force action in countries deemed to be doing too little to comply with international environmental commitments.

At the same time, the new narrative must recognize the historical responsibilities of developed countries for environmental damage and the outsized global environmental footprint of their consumption. The new narrative must emphasize the need for rules that are fair and the need to catalyze financing for developing country trading partners. For developed countries – and market-leading companies– this will mean devoting stronger political energy and more financial resources to support sustainable production and consumption both at home and abroad. Also important is that efforts to promote more resilient, transparent and green international supply chains find ways to share a higher portion of value with those at the bottom of supply chains and support the economic diversification that is a sustainable development priority for many developing countries. Here, the need for multilateral approaches will be central to a narrative that is in line with the SDGs and spurs the durable transformations on the ground needed to incentivize green trade.

5.2. Environment and Trade 2.0 priorities

In line with the principles outlined above, top priorities for an Environment and Trade 2.0 agenda to green trade include:

1. Safeguard, strengthen and promote national environmental laws and institutions

- Ensuring effective and high ambition environmental commitments are legally enshrined in national laws (and apply equally to local and imported products)
- Ensuring trade agreements prevent backsliding on environmental protection or weak environmental performance as a strategy for competitive gain
- Ensuring trade agreements safeguard the scope to upgrade environmental ambitions and requirements over time
- Adopting import restrictions and bans on environmentally sensitive and harmful products

2. Promote evidence-based, democratically sound, and transparent domestic policymaking on trade and environment as the basis for a coherent strategy on the international stage

- Defining clear environmental priorities within national trade policies
- Enhancing inter-ministerial capacity and coordination on environment–trade decision-making
- Ensuring processes for active legislative oversight of environment-trade decision-making
- Promoting engagement from a diversity of stakeholders in trade policy development. This means moving beyond established advocacy groups to include a range of civil society interests, including marginalised groups (such as farming communities, miners, peasants, forest peoples) impacted by trade deals as well as emerging green business sectors
- Implementing robust sustainability impact assessments, which consider global environmental footprints, and using their recommendations to inform trade policy decision-making

3. Update trade policies, rules and market access approaches to support environmental goals

- Adopting trade policies that actively favour sustainably produced products and that phase out environmentally unsustainable production and trade
- Advancing new approaches in trade rules to support green industries and phase out unsustainable production (e.g. through differential tariff structures, rules on green government procurement, rules that phase out environmentally harmful subsidies, and green provisions in rules on technical barriers to trade, intellectual property, and investment)
- Unilaterally liberalizing trade in environmental goods and services
- Strengthening environment and sustainable development chapters and annexes, with enforceable provisions
- Using trade policy to incentivize and promote strong environmental performance along supply chains and among trading partners

4. Boost intergovernmental cooperation in favour of green trade

- Pursuing new approaches to progress on specific environment-trade issues, including through reference papers, interpretative statements, guidelines, pledges and coordination of national policies

- Seizing policy dialogue and sharing of best practices as central to the learning, policy diffusion and capacity-building required to green trade
- Promoting Green Aid for Trade and green trade finance to support developing country participation in green trade and address trade-related impacts of environmental degradation
- Improving the availability of environment and trade data, including by updating trade classifications to reflect environmental considerations
- Ensuring sustainability impact assessments of trade include attention to impacts on trading partners and global environmental footprints, and inform trade decision-making
- Building opportunities for more coordinated and coherent policy-making among intergovernmental trade and environmental processes

5. Strengthen cooperation on international environmental rules and standards

- Supporting MEAs that establish high environmental commitments and implementing their trade-related measures
- Supporting adoption of trade-related measures in the context of MEAs
- Cooperating on the development and implementation of high ambition, fair and transparent international environmental standards that support sustainable sourcing, consumption, design, production, and disposal across global supply chains, while ensuring transparency and maximising opportunities for developing countries
- Promoting agreement on a Codex Planetarius that would set minimum environmental standards for the food and agriculture sector
- Broadening participation of environmental constituencies and experts in industry-dominated national and international standard-setting processes

6. Boost policy frameworks in support of sustainable and resilient supply chains

- Implementing trade policy frameworks that require and incentivize businesses to raise environmental standards across production networks and international supply chains
- Supporting efforts to improve traceability and transparency of supply chains
- Bolstering the accountability, effectiveness, transparency and fairness of private initiatives to green supply chains, including through enhanced support for green producers and exporters in developing countries

5.3. Galvanizing action

To galvanize action on green trade in 2021, a priority is to consolidate support among known champions of environmental sustainability in trade and to encourage them to engage more proactively with the diversity of developing countries, both those keen to engage in a green trade discussion and those that are cautious.

In 2021, the EU's proposed new trade policy underlines the importance of environmental priorities to the EU trade agenda.[299] While views vary on whether the new EU policy is sufficiently ambitious on the environmental front, it does underline the increasing pressure from Europe's green constituencies to use trade policy as a vehicle for strengthening environmental performance and to support the transition process by defending EU businesses from international competitors that do not face equivalent environmental requirements.[300] In addition to cosponsoring the WTO's Trade and Environmental Sustainability Structured Discussions, the EU has also circulated a proposal for a climate initiative at the WTO, which focuses primarily on liberalization of environmental goods and services, and mentions greening Aid for Trade.[301]

A range of other developed countries, including Canada, New Zealand, Norway, Switzerland and the UK, are playing a key role in promoting specific environment–trade initiatives, as well as Japan and Korea. In addition, the Biden Administration's new trade strategy emphasizes the US intention to strengthen environmental sustainability in trade.[302] President Biden will face strong demands from domestic environmental constituencies to use trade policy as a vehicle for environmental action and also to support national industries taking action to green production, especially in the context of climate policies.

China has a key role to play at the multilateral, regional and plurilateral levels on environment and trade issues. China's 2020 net zero commitments are a promising indication of its interest in supporting a green global economy, as is the April 2021 US–China Joint Statement Addressing the Climate Crisis.[303] Further, China's 2018 import ban on certain types of plastic waste not only transformed trade flows in plastic waste, but has demonstrated the potential for China to energize discussions on environment and trade. On plastics, China is the co-chair of a new Informal Dialogue on Plastics Pollution at the WTO, drawing together a cross-section of countries to explore how cooperation at the WTO could help support international efforts to address plastics pollution and support more environmentally sustainable plastics trade.[304]

Meanwhile, a broad range of developing countries are open to discussion of a diverse set of environmental issues – ranging from circular economy to climate-related trade risks,

plastic pollution, fisheries subsidies reform, and sustainable agriculture. At the WTO, a number of developing countries actively support efforts to conclude meaningful disciplines on fisheries subsidies. Costa Rica has played a leading role in the Friends Advancing Sustainable Trade (FAST) at the WTO and is co-chair of the new Structured Discussions. Small island developing states (SIDS), such as Barbados, Jamaica and Mauritius, regularly speak up in favour of action to address trade-related impacts of climate change, support trade-related climate adaptation and ensure climate-resilient production and exports.[305] In recent months, countries as diverse as Cameroon, Central African Republic, Colombia, Ecuador, Ghana, Kenya, Morocco and Sri Lanka have discussed at the WTO the importance of a trading system that addresses the environmental challenges facing their countries and the international community.

National level strategies will be vital. All the talk at international level on environmental goals – or on environment and trade goals – will not have traction without stronger policy coherence and engagement on environment-trade intersections at the national level. At a time when the driving focus of diplomacy on international trade is COVID-19 responses and recovery, environmental stakeholders need to be a part of these conversations to accelerate the integration of greening trade into the agenda. On this point, in both developed and developing countries, there is a need to bolster legislative and inter-ministerial processes for consultation and coordination that can focus the attention of policymakers on how to use trade policy proactively and fairly to promote positive environmental outcomes.

Governments are not the only relevant actors. In all countries, there is a need to broaden and strengthen participation of stakeholders from civil society, business and the research community in the environment and trade conversation. A key priority must be to foster and support networks of experts and advocates at the regional and national level in Africa, Asia, and Latin America. Here, the secretariats of regional economic groupings, UN regional economic commissions and regional offices of UNEP, and regional stakeholder networks have a valuable role to play, as do environmental organizations with regional networks.

Progress on green trade will also require sustained and specific calls from the business sector for stronger alignment of trade policy with environmental goals, building on those that have already emerged from the International Chamber of Commerce (which is creating a Trade and Environment Working Group), the World Business Council on Sustainable Development (WBCSD) and the World Economic Forum (including through its Green Trade Network).

Across the NGO sector, achieving action on trade and environmental issues will require investing in staff who can build expertise, researchers, policy advocates and public campaigners. Promoting the green trade agenda will also require efforts to build bridges and a shared agenda among constituencies focused on supporting local producers that meet high environmental standards and those keen to ensure that trade policy supports sustainable development and environmental protection around the world. Across the world, linkages between campaigners working on nature, climate, and pollution, and on the many specific environment-trade issues from illegal logging to fisheries subsidies reform and wildlife trade, will be important. Green approaches to agricultural trade and sustainable food production, for example, are relevant to environmental constituencies working on climate as well as nature and deforestation, along with civil society movements focused on food security, rural livelihoods, land rights and healthy, nutritious food.

Finally, engagement by research centres is also vital to generate the evidence and policy options that governments need to shape green trade policies. Governments and stakeholders alike will need the research community to undertake analytical work on national and regional policy options, provide the evidence and data on the sustainability impacts of trade policies vital to hold governments to account, and offer proposals on new approaches.

5.4. Conclusion

While recognising the many challenges at hand, this paper has underlined the growing groundswell of political coalitions, involving both business and civil society stakeholders, calling for action on green trade. It has offered an overview of pathways forward for greening international trade, calling for a multi-pronged Environment and Trade 2.0 agenda that bridges, scales up and goes beyond existing efforts. This paper has also outlined the range of concrete policy opportunities for progress in 2021 and beyond.

Progress on the green agenda will require action through multiple processes – multilateral, regional, plurilateral and national – as well as through business commitments, public–private partnerships, and citizen advocacy in favour of more sustainable and resilient supply chains.

Greening International Trade has emphasised the importance of strong, enforceable domestic environmental laws, regulations and standards as the basis for green trade, and the need for international cooperation to raise shared environmental ambition. Here, it has highlighted the importance of implementing trade-related measures agreed in the context of MEAs and action on environment-trade intersections in other 'non-trade' intergovernmental arrangements and processes (such as those focused on food and agriculture).

This paper has also underlined that greening trade will rely on governments taking advantage of the scope for environmental action within existing trade rules, and exploring opportunities to expand the interpretations of these rules to spur for more rapid and effective environmental action. Greening trade will also require attention to where and how

trade rules could be updated and reformed to promote environmental goals, including environmental measures taken 'behind the border'. In addition to bolstered environmental and sustainable development chapters, there is a need to ensure the core provisions and commitments defined in trade agreements support environmental goals and incentivize sustainable production and consumption. In each of these areas, the report highlights the importance of consultation with trading partners, transparency, fairness, and approaches that respond to the wider sustainable development priorities of developing countries.

Beyond trade rules, *Greening International Trade* has emphasised the importance of other aspects of trade cooperation, such as policy dialogue, capacity-building, and trade finance, as vital to spurring transformation. Policy dialogue, for instance, is necessary to build shared agendas and galvanise political momentum for action on specific priorities, as well as for the learning, information-exchange, awareness raising, and consensus building that are pre-conditions for policy action. Practical actions by companies and NGOs to improve the environmental sustainability of production and global supply chains and, critically, to boost the credibility, impact and fairness of voluntary sustainable supply chain initiatives, will be vital.

Throughout, this report has emphasised that reform of the global trading system in favour of sustainability will require a renewed policy narrative, grounded in principles of ambition and effectiveness, fairness and inclusiveness, as well as transparency and dialogue. In so doing, it has underscored the critical need to develop a narrative and agenda in which developed and developing countries are partners in the drive to achieve the economic transformations needed to achieve a greener and fairer global economy. Advancing green trade will require action on the challenges and priorities that developing countries articulate, action to address trade rules and policies that undermine environmental progress, and adequate support for green economic transformation and transition.

Across the world, greening international trade will require far more consultation with a greater diversity of stakeholders and business interests to ensure that the trade policy agendas governments pursue are shaped by the core sustainable development priorities of their diverse constituents and not captured by the most politically influential industry groups. Evidence-based, democratically sound, and transparent policymaking on trade, environment and sustainable development at the national level is the foundation for a coherent green trade strategy on the international stage.

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Acronyms

4IR	Fourth Industrial Revolution
ACCTS	Agreement on Climate Change, Trade and Sustainability
AfCFTA	African Continental Free Trade Area
ASCM	Agreement on Subsidies and Countervailing Measures
AUDA–NEPAD	African Union Development Agency
BCAs	Border Carbon Adjustments
CBAM	Carbon Border Adjustment Mechanism
CBD	Convention on Biological Diversity
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CEPA	Comprehensive Economic Partnership Agreement
CETA	Comprehensive Economic Trade Agreement
CHOGM	Commonwealth Heads of Government Meeting
CITES	Convention on International Trade in Endangered Species
COP26	26th UN Climate Change Conference of the Parties
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CTE	Committee on Trade and Environment
E3F	Export Finance for Future
ECA	Environmental Cooperation Agreement
ECT	Energy Charter Treaty
EFTA	European Free Trade Association
EGA	Environmental Goods Agreement
EGS	Environmental Goods and Services
ELV	End-of-Life Vehicles
EPR	Extended Producer Responsibility
ESAP	Environmental Services Action Plan
ESCAP	United Nations Economic and Social Commission for Asia and Pacific
ESG	Environmental, Social and Governance
EU	European Union
FAO	UN Food and Agriculture Organization
FAST	Friends Advancing Sustainable Trade
FLEGT	Forest Law Enforcement, Governance and Trade
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GESP	Global E-waste Statistics Partnership
GLOBALG.A.P.	Global Partnership for Good Agricultural Practices
GPA	Government Procurement Agreement
GPAP	Global Plastic Action Partnership
HLFP	High-level Political Forum
HS	Harmonized (Commodity Description and Coding) System
IAS	Invasive Alien Species
ICCAT	International Commission for Conservation of Atlantic Tunas
ICSID	International Centre for Settlement of Investment Disputes
IGO	Intergovernmental Organization
IISD	International Institute for Sustainable Development
IPPC	International Plant Protection Convention
ISDS	Investor-state Dispute Settlement
ISO	International Organization for Standardization
ITC	International Trade Centre
ITU	International Telecommunication Union
IUU	Illegal, Unreported and Unregulated
JSI	Joint Statement Initiatives
JWPTE	Joint Working Party on Trade and Environment
LCR	Local Content Requirements
LDC	Least Developed Countries
MC12	12th Ministerial Conference
MEAs	Multilateral Environmental Agreements
MSMEs	Micro, Small and Medium-sized Enterprises
NAFTA	North American Free Trade Agreement
NDCs	Nationally Determined Contributions
NGERs	National Green Export Reviews
NGO	Non-governmental Organization
NPR	Non-product-related
NTBs	Non-tariff Barriers
NYDF	New York Declaration on Forests
PPMs	Production and Process Methods
PPPs	Public–private Partnerships
RCEP	Regional Comprehensive Economic Partnership
RFMOs	Regional Fisheries Management Organization
ROMP	Rules of Methods of Production
RTRS	Roundtable on Responsible Soy
SACU	Southern African Customs Union
SDGs	UN Sustainable Development Goals
SEA	Strategic Environment Assessment
SIAs	Sustainability Impact Assessments
SIDS	Small Island Developing States
SPS	WTO Agreement on Sanitary and Phytosanitary Measures
TAC	Trade and Agriculture Commission
TAs	Trade Agreements
TBT	Technical Barriers to Trade
TIWG	Trade and Investment Working Group
TRASE	Transparency for Sustainable Economies
TRIMS	Trade-Related Investment Measures
TRIPS	Trade-related Aspects of Intellectual Property Rights
UEBT	Union for Ethical BioTrade
UN	United Nations
UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
UNCITRAL	United Nations Commission on International Trade and Law
UNCTAD	UN Conference for Trade and Development
UNEP	UN Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFSS	UN Forum on Sustainability Standards
USMCA	US–Mexico–Canada Agreement
WBCSD	World Business Council on Sustainable Development
WCO	World Customs Organization
WEEE	Waste Electrical and Electronic Equipment
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

Endnotes

1 Deere Birkbeck, C. (2019), Environment and Trade 2.0, London: Hoffmann Centre for Sustainable Resource Economy, Chatham House, https://hoffmanncentre.chathamhouse.org/article/environment-and-trade-20/ (accessed 15 April 2021).

2 Benton, T., Bieg, C., Harwatt, H., Pudasaini, R. and Wellesley, L (2021), Food system impacts on biodiversity loss: Three levers for food system transformation in support of nature, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/default/files/2021-02/2021-02-03-food-system-biodiversity-loss-benton-et-al_0.pdf (accessed 26 Feb. 2021).

3 Bacchus, J. (2019) The Willing World: Shaping and Sharing a Sustainable Global Prosperity, Cambridge University Press (accessed 28 Apr. 2021).

4 UNCTAD (2020), Chair's Draft Negotiating Text: Submitted by the Chair of the Preparatory Committee for the 15th session of UNCTAD, https://unctad.org/system/files/official-document/tdxv_pc_l1_en.pdf (accessed 26 Feb. 2021); UNCTAD, (2020), Transforming Trade and Development in a Fractured Post-Pandemic World, https://unctad.org/system/files/official-document/osg2020d2_en.pdf (accessed 26 Feb. 2021).

5 Deere Birkbeck, C. and Denton, J. (2020), 'We need better alignment between climate and trade. Here's a roadmap', https://www.weforum.org/agenda/2020/01/how-can-we-align-climate-and-trade/ (accessed 21 Feb. 2021); The Economist Intelligence Unit (2019), 'Climate change and trade agreements Friends or foes?', London: The Economist Intelligence Unit, https://iccwbo.org/content/uploads/sites/3/2019/03/icc-report-trade-and-climate-change.pdf (accessed 21 Feb. 2021); Oeuwehand, J. and M. Layton (2021), '4 ways to improve trade rules and support climate action, World Economic Forum Agenda', https://www.weforum.org/agenda/2021/03/4-ways-improve-trade-rules-support-climate-action/ (accessed 1 March 2021).

6 Deere Birkbeck (2019), Environment and Trade 2.0.

7 Stiglitz, J. and Norton, A. (2005), Fair Trade for All: How Trade Can Promote Development, Oxford University Press: New York. (accessed 28 Apr. 2021)

8 UNEP (2018), Issue Brief SDG12. Ensuring sustainable consumption and production patterns, United Nations, https://wedocs.unep.org/bitstream/handle/20.500.11822/25764/SDG12_Brief.pdf?sequence=1&isAllowed=y (accessed 24 Feb. 2021).

9 Akenji, L. et al. (2015), Sustainable Consumption and Production. A Handbook for Policymakers, https://sustainabledevelopment.un.org/content/documents/1951Sustainable%20Consumption.pdf, United Nations,(accessed 24 Feb. 2021).

10 United Nations Secretary General and UNEP (2018), Progress report on the 10-year framework of programmes on sustainable consumption and production patterns: Note by the Secretary-General, United Nations, https://digitallibrary.un.org/record/1627351?ln=en (accessed 26 Feb. 2021) p.3.

11 UNEP (2018), 'Second oceans forum on trade-related aspects of SDG 14', https://www.unenvironment.org/events/conference/second-oceans-forum-trade-related-aspects-sdg-14 (accessed 24 Feb. 2021).

12 UN-DESA (2018), Sustainable Development Goal 15: Progress and Prospects, United Nations, https://sustainabledevelopment.un.org/content/documents/18501SDG15_EGM_background_noteFinal.pdf (accessed 24 Feb. 2021).

13 UN-DESA (2021), 'Sustainable Development Goal 17', United Nations https://sdgs.un.org/goals/goal17 (accessed 29 Apr. 2021)

14 Bellmann, C. and Tipping, A. (2016), The Role of Trade and Trade Policy in Advancing the 2030 Development Agenda, International Development Policy, Geneva: The Graduate Institute, https://journals.openedition.org/poldev/2149 (accessed 24 Feb. 2021).

15 UNCTAD (2020), 'Multilateralism for trade and development', SDG Pulse, https://sdgpulse.unctad.org/multilateralism-for-trade-and-development/ (accessed 24 Feb. 2021); SDG Knowledge Platform, 'Biodiversity and ecosystem', https://sustainabledevelopment.un.org/topics/biodiversityandecosystems (accessed 24 Feb. 2021).

16 ISO, 'Goal 12: responsible production and consumption', https://www.iso.org/sdg/SDG12.html (accessed 24 Feb. 2021).

17 FAO, 'Sustainable Development Goals. Ensure sustainable consumption and production patterns', http://www.fao.org/sustainable-development-goals/goals/goal-12/en/(accessed 24 Feb. 2021).

18 C. P. Baldé, V. Forti, V. Gray, R. Kuehr, P Stegmann (2017), The Global E-waste Monitor 2017, United Nations University, International Telecommunications Union, and International Solid Waste Association, https://www.itu.int/en/ITU-D/Climate-Change/Documents/GEM%202017/Global-E-waste%20Monitor%202017%20.pdf (accessed 24 Feb. 2021).

19 UNCTAD, 'Trade, Environment, Climate Change and Sustainable Development', https://unctad.org/en/Pages/DITC/Trade-and-Environment.aspx?Pu=161,4,,&Me=91,20,,&Ne=6,5,, (accessed 24 Feb. 2021).

20 Hickel, J. (2019), The contradiction of the sustainable development goals: Growth versus ecology on a finite planet, Sustainable Development, 2 (5), p. 873-884.

21 Fernández-Amador, O. and Francois, J. and Tomberger, P. (2016), Carbon dioxide emissions and international trade at the turn of the millennium, Ecological Economics (125): 14-26, https://www.sciencedirect.com/science/article/abs/pii/S0921800916000069 (accessed 26 Feb. 2021); Arce, G., Antonio López, L. and Guan, D. (2016), Carbon emissions embodied in international trade: The post-China era, Applied Energy (184): p. 1063-1072, https://www.sciencedirect.com/science/article/abs/pii/S030626191630681X (accessed 26 Feb. 2021).

22 IEA (2020), Tracking Transportation 2020, International Energy Agency, May 2020, https://www.iea.org/reports/tracking-transport-2020 (accessed 25 March 2021); IEA (2021), Global Energy Review: CO2 Emissions in 2020: Understanding the impacts of COVID-19 on global CO2 emissions, International Energy Agency, 2 March 2021, https://www.iea.org/articles/global-energy-review-co2-emissions-in-2020 (accessed 25 March 2021); Wang, S. and Ge, M. (2019), 'Everything You Need to Know About the Fastest-Growing Source of Global Emissions: Transport', https://www.wri.org/blog/2019/10/everything-you-need-know-about-fastest-growing-source-global-emissions-transport#:~:text=1.,emissions%20from%20burning%20fossil%20fuels (accessed 19 Feb. 2021).

23 Deere Birkbeck, C. (2021), A Trade Ministers' Coalition for Climate Action: Priorities for the Climate-trade Agenda in 2021, London: Royal Institute for International Affairs; Esty, D.C. and Biniaz, S. (eds) (2020), Cool Heads in a Warming World: How Trade Policy Can Help Fight Climate Change, New Haven: Yale Center for Environmental Law & Policy; Deere Birkbeck and Denton (2020), We need better alignment between climate and trade. Here's a roadmap.

24 European Commission (2019), 'A European Green Deal: Striving to be the first climate-neutral continent', https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en (accessed 26 Feb. 2021).

25 European Commission (2021), 'EU Green Deal (carbon border adjustment mechanism): About this initiative', https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12228-EU-Green-Deal-carbon-border-adjustment-mechanism (accessed 24 Feb. 2021); Lamy et al. (2020).

26 Lamy, P, Pons, G. and P. Leturcq (2020), Greening EU trade 3. A European Border Carbon Adjustment proposal, Paris: Europe Jacques Delors, https://institutdelors.eu/wp-content/uploads/2020/06/PP_200603_Greeningtrade3_Lamy-Pons-Leturcq_EN-1.pdf (accessed 26 Feb. 2021).

27 Deere Birkbeck (2021): A Trade Ministers' Coalition for Climate Action: Priorities for the Climate-trade Agenda in 2021.

28 Stoltz, S. and S. Jungblut (2019) "Our Digital Carbon Footprint: What's the Environmental Impact of the Online World?" RESET Editorial, August, https://en.reset.org/knowledge/our-digital-carbon-footprint-whats-the-environmental-impact-online-world-12302019 (accessed 20 Apr. 2021).

29 World Economic Forum (2021), 'Rapid Roll-out of Carbon Trading including Natural Climate Solutions Critical to Reaching Net Zero', WEF News Release, 27 January 2021, https://www.weforum.org/press/2021/01/rapid-roll-out-of-carbon-trading-including-natural-climate-solutions-critical-to-reaching-net-zero/ (accessed 5 April 2021).

30 Gallagher, K. and Kozul-Wright, R. (2019), A New Multilateralism for Shared Prosperity: Geneva Principles for a Global Green New Deal, UNCTAD and Boston University, http://www.bu.edu/gdp/files/2019/04/A-New-Multilateralism-GDPC_UNCTAD.pdf (accessed 26 Feb. 2021).

31 UNCTAD (2019), Trade and Development Report 2019: Financing a Global Green New Deal, United Nations Conference on Trade and Development, https://unctad.org/webflyer/trade-and-development-report-2019 (accessed 26 Feb. 2021); United Nations (2019), Financing for Sustainable Development Report 2019, United Nations, https://developmentfinance.un.org/fsdr2019 (accessed 26 Feb. 2021).

32 Charveriat, C. and Deere Birkbeck, C. (2020), Greening Trade for a Global, Green, and Just Recovery, Geneva: Global Governance Centre, London: Hoffmann Centre for Sustainable Resource Economy, and Brussels: the Institute for European Environmental Policy (IEEP), https://ieep.eu/uploads/articles/attachments/10a0999c-06d5-4972-914a-251b2b02b3ef/Greening%20trade%20for%20a%20green%20recovery.pdf?v=63756597346 (accessed 15 Mar. 2021).

33 OECD (2020), 'Government policies providing more than USD 500 billion to farmers every year distort markets, stifle innovation and harm the environment', https://www.oecd.org/agriculture/news/government-policies-providing-more-than-usd-500-billion-to-farmers-every-year-distort-markets-stifle-innovation-and-harm-the-environment.htm (accessed 30 March 2021).

34 Secretariat of the Convention on Biological Diversity (2020), Global Biodiversity Outlook 5, United Nations Environment, https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf (accessed 24 Feb. 2021); The Wildlife Society (2018), 'WWF finds global wildfire has declined 60 percent since 1970', https://wildlife.org/wwf-finds-global-wildlife-has-declined-60-percent-since-1970/ accessed 26 Feb. 2021); United Nations (2019), UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating', https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/ (accessed 26 Feb. 2021).

35 Convention on Biological Diversity (2020), 'Preparations for the Post-2020 Biodiversity Framework', https://www.cbd.int/conferences/post2020 (accessed 24 Feb. 2021).

36 Shahahan, M. (2020), 'Explainer: COP15, the biggest biodiversity conference in a decade', https://chinadialogue.net/en/nature/11873-explainer-cop15-the-biggest-biodiversity-conference-in-a-decade/#:~:text=The%20UN%20Biodiversity%20Conference%20was,of%20the%20Covid%2D19%20pandemic. (accessed 24 Feb. 2021).

37 Deere Birkbeck, C. (2021), Biodiversity and International Trade Policy Primer: A Scoping of Issues, Opportunities, Challenges, UNEP Policy Brief, May 2021. Geneva: UNEP.

38 Brack, D. (2013), Combatting Illegal Logging: Interaction with WTO Rules, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/default/files/public/Research/Energy%2C%20Environment%20and%20Development/0513bp_brack.pdf (accessed 24 Feb. 2021); Gulbrandsen, L. and O. Fauchald (2015), 'Assessing the New York Declaration on Forests from a trade perspective', BRIDGES BioRes, 9 (4) https://ictsd.iisd.org/bridges-news/biores/news/assessing-the-new-york-declaration-on-forests-from-a-trade-perspective (accessed 24 Feb. 2021).

39 IPBES (2019), 'Global Assessment Report on Biodiversity and Ecosystem Services', https://ipbes.net/global-assessment (accessed 24 Feb. 2021).

40 Brack, D., Wellesley, L. and A. Grover (2016) Agricultural Commodity Supply Chains: Trade, Consumption and Deforestation, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/default/files/publications/research/2016-01-28-agricultural-commodities-brack-glover-wellesley.pdf (accessed 24 Feb. 2021); UNEP (2015), 'Global Material Flows and Resource Productivity: Assessment Report for the UNEP International Resource Panel', United Nations Environment, https://www.resourcepanel.org/reports/global-material-flows-and-resource-productivity-database-link (accessed 24 Feb. 2021); Koellner, T. (2013), Ecosystem Services and Global Trade of Natural Resources: Ecology, Economics and Policies, https://www.routledge.com/Ecosystem-Services-and-Global-Trade-of-Natural-Resources-Ecology-Economics/Koellner/p/book/9780415821353 (accessed 24 Feb. 2021); Viñuales, J. (2015), International Investment Law and Natural Resource Governance, International Centre for Trade and Sustainable Development and World Economic Forum, http://e15initiative.org/wp-content/uploads/2015/07/Extractive-Vinuales-FINAL1.pdf (accessed 24 Feb. 2021); Collier, P. and Venables, A. (2010), International Rules for Trade in Natural Resources, WTO Staff Working Paper ERSD-2010-06, World Trade Organization, https://www.wto.org/english/res_e/reser_e/ersd201006_e.pdf (accessed 24 Feb. 2021).

41 Lenzen, M., Moran, D., Kanemoto, K., Foran, B., Lobefaro, L. and Geschke, A. (2012), International Trade Drives Biodiversity Threats in Developing Nations, Nature, 486(7401) https://www.nature.com/articles/nature11145 (accessed 24 Feb. 2021); European Commission (2012), Science for Environment Policy: International trade drives nearly a third of threats to species, European Commission, https://ec.europa.eu/environment/integration/research/newsalert/pdf/299na3_en.pdf (accessed 24 Feb. 2021).

42 Ibid.

43 Tropical Forest Alliance and World Economic Forum (2018), The Roadmap to Financing Deforestation-Free Commodities, World Economic Forum, https://www.tropicalforestalliance.org/assets/Uploads/The-Roadmap-to-Financing-Deforestation-Free-Commodities.pdf (accessed 24 Feb. 2021); Kleymann, H. (2019), Deforestation and Conversion-free Supply Chains: What is Needed Now, http://sdg.iisd.org/commentary/guest-articles/deforestation-and-conversion-free-supply-chains-what-is-needed-now/ (accessed 24 Feb. 2021).

44 UNEP (2015), International Trade in Resources: A Biophysical Assessment, Report of the International Resource Panel, United Nations Environment, https://www.resourcepanel.org/sites/default/files/documents/document/media/-international_trade_in_resources_full_report_english_0.pdf (accessed 24 Feb. 2021).

45 Bellmann, C., B. Lee and J. Hepburn (2019), Delivering Sustainable Food and Land Use Systems: The Role of International Trade, London: Hoffmann Centre for Sustainable Resource Economy, Chatham House; Needelman, A. (2014), 'Whose Century Is It? The Trans-Pacific Partnership, Food and the 21st Century Trade Agreement', https://www.iatp.org/documents/whose-century-is-it-the-trans-pacific-partnership-food-and-the-%E2%80%9C21st-century-trade-agreeme (accessed 25 Feb. 2021).

46 Westphal, M., Browne, M., MacKinnon, K. and Noble, I. (2008), The link between international trade and the global distribution of invasive alien species, Biological invasions 10, p. 391-398. https://link.springer.com/article/10.1007/s10530-007-9138-5 (accessed 25 Feb. 2021)

47 IUCN (2021), Invasive alien species and sustainable development, https://www.iucn.org/resources/issues-briefs/invasive-alien-species-and-sustainable-development (accessed 25 Feb. 2021); Standards and Trade Development Facility (2013), International Trade and Invasive Alien Species, https://www.ippc.int/static/media/files/publication/en/2016/10/STDF_IAS_EN.pdf (accessed 25 Feb. 2021).

48 UNEP (2019), 'Nature's Dangerous Decline 'Unprecedented' Species Extinction Rates 'Accelerating'', https://www.unenvironment.org/news-and-stories/press-release/natures-dangerous-decline-unprecedented-species-extinction-rates (accessed 25 Feb. 2021).

49 Harvey, R. (2020), 'What is the wildlife trade? And what are the answers to managing it?', The Conversation, 23 Apr. 2020, https://theconversation.com/what-is-the-wildlife-trade-and-what-are-the-answers-to-managing-it-136337 (accessed 13 March 2021).

50 UNEP and IRP (2020), 'Sustainable Trade in Resources: Trade, Global Material Flows, Circularity, and Trade', https://www.resourcepanel.org/reports/sustainable-trade-resources (accessed 25 Feb. 2021).

51 Ibid.

52 UNEP (2020), International Resource Panel Global Material Flow Database, https://www.resourcepanel.org/global-material-flows-database (accessed 25 Feb. 2021).

53 UNEP (2020), 'Global Trade in Used Vehicles Report', https://www.unep.org/resources/report/global-trade-used-vehicles-report (accessed 25 Feb. 2021).

54 Ibid.

55 OECD (2021), 'Trade and Environment', https://www.oecd.org/trade/topics/trade-and-the-environment/ (accessed 21 March 2021).

56 Ibid.

57 Van der Ven, C. (2020), The Circular Economy, Trade, and Development: Addressing spillovers and leveraging opportunities, Geneva: TULIP, https://ea7f30b3-6555-4bf7-9210-2805bebede4d.filesusr.com/ugd/433d0a_aa1c0bf1aa11424881a33b9cea9c565e.pdf (accessed 25 Feb. 2021);

58 Deere Birkbeck, C. (2020), Strengthening international cooperation to tackle plastic pollution: Options for the WTO, Geneva: Global Governance Centre, The Graduate Institute, https://static1.squarespace.com/static/5b0520e5d274cbfd845e8c55/t/5e25683a556e15498ad1e73f/1579509842688/Plastic_Trade_WTO_Final.pdf (accessed 25 Feb. 2021).

59 World Trade Organization Analytical Index (1994), WTO Agreement-Preamble (Jurisprudence), https://www.wto.org/english/res_e/publications_e/ai17_e/wto_agree_preamble_jur.pdf (accessed 25 Feb. 2021).

60 Ibid.

61 World Trade Organization (2021), 'WTO rules and environmental policies: GATT exceptions', https://www.wto.org/english/tratop_e/envir_e/envt_rules_exceptions_e.htm (accessed 26 Feb. 2021).

62 World Trade Organization (2021), Short Answers to Big Questions on the WTO and the Environment, https://www.wto.org/english/res_e/booksp_e/envirqapublication_e.pdf (accessed 5 March 2021).

63 World Trade Organization (2021), 'Regional Trade Agreements', https://www.wto.org/english/tratop_e/region_e/region_e.htm (21 March 2021).

64 Monteiro, J. (2016), Typology of Environment-related provisions in Regional Trade Agreements, WTO Staff Working Paper ERSD-2016-13, World Trade Organization Economic Research and Statistics Division, https://ideas.repec.org/p/zbw/wtowps/ersd201613.html (accessed 25 Feb. 2021).

65 Trade and Environment Database (2021), 'TREND ANALYTICS: Environmental Provisions in Preferential Trade Agreements', https://klimalog.die-gdi.de/trend/about-trend.html (accessed 21 March 2020).

66 World Economic Forum (2016), White Paper: Will the Trans-Pacific Partnership Agreement Reshape the Global Trade and Investment System? What's In and What's New: Issues and Options, WEF Global Agenda Council on Trade & FDI, http://www3.weforum.org/docs/WEF_White_Paper_Whats_in_and_whats_new.pdf (accessed 26 Feb. 2021).

67 WWF (2020), Commodity Market Intelligence Update No. 8, COVID, Trade Agreements, and Palm Oil in Latin America, November, WWF US: Washington, D.C.

68 Ibid.

69 Ibid.

70 Secretariat of the Convention on Biological Diversity United Nations (2011), Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, United Nations, https://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf (accessed 25 Feb. 2021).

71 Ibid.

72 RCEP (2021), Regional Comprehensive Economic Partnership Agreement, https://rcepsec.org/legal-text/ (accessed 26 Feb. 2021).

73 Van der Ven (2021), Environment Provisions in the AfCFTA, Brookings Institution: Washington, D.C, https://www.brookings.edu/wp-content/uploads/2019/05/Keys_to_success_for_AfCFTA.pdf (accessed 28 Apr. 2021).

74 Tabuchi, H., M. Corkerey and C. Mureithi (2020), 'Big Oil Is in Trouble. Its Plan: Flood Africa With Plastic', The New York Times, 30 August 2020, https://www.nytimes.com/2020/08/30/climate/oil-kenya-africa-plastics-trade.html (accessed 26 February 2021).

75 OECD (2017), Joint Working Party on Trade and Environment: Assessing Implementation of Environmental Provisions in Regional Trade Agreements, Organisation for Economic Co-operation and Development http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=COM/TAD/ENV/JWPTE(2016)4/FINAL&docLanguage=En (accessed 26 Feb. 2021).

76 SECO (2021), 'Indonesia', https://www.seco.admin.ch/seco/en/home/Aussenwirtschaftspolitik_Wirtschaftliche_Zusammenarbeit/Wirtschaftsbeziehungen/Freihandelsabkommen/partner_fha/partner_weltweit/indonesien.html (accessed 31 March 2021); Sieber-Gassser, C. (2021), 'EFTA-Indonesia: Accelerating the Transition to (More) Sustainable Trade?',

https://sieber-consulting.ch/2021/03/03/efta-indonesia-accelerating-the-transition-to-more-sustainable-trade/ (accessed 29 March 2021).

77 Leal-Campos, S. (2021), Novel and existing approaches included in trade agreements to reduce deforestation and conserve forests, Presentation for webinar on Reducing Deforestation and Enhancing Forest Conservation Through International Trade Policy, Geneva: IISD.

78 Morin, J.-F., Dur, A. and Lechner, L. (2018), Mapping the Trade and Environment Nexus: Insights from a New Data Set, Global Environmental Politics 18(1), p. 122–139. https://www.researchgate.net/publication/318865914_Mapping_the_Trade_and_Environment_Nexus_Insights_from_a_New_Data_Set (accessed 25 Feb. 2021)

79 Blot and Kettunen, (2021), Environmental credentials of EU trade policy.

80 Ibid; Heyl, K., F. Ekardt, P. Roos, J. Stubenrauch, B. Garske, (2021), Free Trade, Environment, Agriculture, and Plurilateral Treaties: The Ambivalent Example of Mercosur, CETA, and the EU–Vietnam Free Trade Agreement, Sustainability, 13(6), pp. 3153. https://doi.org/10.3390/su13063153 (accessed 28 Apr. 2021).

81 Umwelt, OECD and UNEP (2020), Building environmental resilience and responding to global crises through supply chain due diligence, Background Note, OECD Global Forum on Responsible Business Conduct: Partner Side Session, https://mneguidelines.oecd.org/globalpartnerships/responsible-supply-chains-asia/background-note-building-environmental-resilience-and-responding-to-global-crises-through-supply-chain-due-diligence.pdf (accessed 26 Feb. 2021).

82 OECD (2005), Environment and OECD Guidelines for Multinational Enterprises. Corporate Tools and Approaches, https://www.oecd.org/env/34992954.pdf (accessed 26 Feb. 2021).

83 OECD (2016), 'OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas', OECD Publishing, http://www.oecd.org/corporate/mne/mining.htm (accessed 26 Feb. 2021).

84 European Commission, 'Sustainable supply from global markets', https://ec.europa.eu/growth/sectors/raw-materials/policy-strategy/sustainable-supply-global_en (accessed 26 Feb. 2021).

85 European Commission (2017), 'Study on the support system for SME supply chain due diligence', https://op.europa.eu/en/publication-detail/-/publication/67a2c448-fb38-11e7-b8f5-01aa75ed71a1/language-en/format-PDF/source-67264534 (accessed 26 Feb. 2021).

86 G7 (2015), Leaders' Declaration, G7 Summit, 7-8 June 2015, p.6., https://www.g7germany.de/Content/EN/_Anlagen/G7/2015-06-08-g7-abschluss-eng_en___blob=publicationFile&v=3.pdf (accessed 26 March 2021).

87 OECD (2015), OECD Due Diligence Guidance for Responsible Business Conduct, Paris: OECD, http://mneguidelines.oecd.org/OECD-Due-Diligence-Guidance-for-Responsible-Business-Conduct.pdf (accessed 26 March 2021).

88 Collinet, J. (2020), 'Due diligence: has France really laid the foundations to end corporate impunity?', Equal Times, 19 February 2020, https://www.equaltimes.org/due-diligence-has-france-really#.X6rZCZNKhTY (accessed 26 Feb. 2021).

89 Osborne, Z. (2020), 'Calls for European Companies to Focus on Human Rights Abuses in Supply Chain', Steptoe, 3 June 2020, https://www.steptoe.com/en/news-publications/calls-for-european-companies-to-focus-on-human-rights-abuses-in-supply-chain.html (accessed 26 Feb. 2021); Norton Rose Fulbright (2020), 'Proposal for an EU wide mandatory human rights due diligence law', May 2020, https://www.nortonrosefulbright.com/en/knowledge/publications/1a58997f/proposal-for-an-eu-wide-mandatory-human-rights-due-diligence-law (accessed 26 Feb. 2021).

90 European Commission (2020), 'Study on due diligence requirements through the supply chain', https://op.europa.eu/en/publication-detail/-/publication/8ba0a8fd-4c83-11ea-b8b7-01aa75ed71a1/language-en/format-PDF/source-search (accessed 26 Feb. 2021).

91 Department for Environment, Food and Rural Affairs (2020), 'Due diligence on forest risk commodities', https://consult.defra.gov.uk/eu/due-diligence-on-forest-risk-commodities/ (accessed 26 Feb. 2021); WWF-UK (2020), 'WWF Environmental Bill Report Stage briefing – due diligence and deforestation', https://www.wwf.org.uk/sites/default/files/2020-12/WWF%20Environment%20Bill%20Report%20Stage%20briefing%20-%20final.pdf (accessed 26 March 2021).

92 Eastwood, S, A. Gharibian, and L. Reynolds (2021), 'Business and Human Rights – Germany Adopts Draft Mandatory Human Rights Due Diligence Law; https://www.lexology.com/library/detail.aspx?g=64b9373c-140a-4989-ab05-8ae1a62e4afd (accessed 12 April 2021).

93 Wilde-Ramsing , J., M. Wolfkamp, & D. Olivier de Leth (2021), 'The Next Step for Corporate Accountability in the Netherlands: The New Bill for Responsible and Sustainable International Business Conduct', Business and Human Rights Resource Centre, https://www.business-humanrights.org/en/latest-news/the-next-step-for-corporate-accountability-in-the-netherlands-the-new-bill-for-responsible-and-sustainable-international-business-conduct/ (accessed 28 March, 2021).

94 Illien, N. (2020), 'Swiss to Vote on Tougher Responsibility Proposal for Companies', The New York Times, 27 November 2020, https://www.nytimes.com/2020/11/27/world/europe/swiitzerland-referendum-corporate-responsibility.html (accessed 26 Feb. 2021).

95 Ibid.

96 WTO (2021), 'WTO Matrix on Trade-Related Measures Pursuant to Selected Multilateral Environmental Agreements (MEAs)' https://www.wto.org/english/tratop_e/envir_e/envir_matrix_e.htm (accessed 26 Feb. 2021).

97 UN Environment (2021), 'Minamata Convention on Mercury', United Nations, https://www.unep.org/resources/report/minamata-convention-mercury (accessed 29 Apr. 2021).

98 UN Environment (2021), 'Basel Convention', http://www.basel.int/Implementation/MercuryWastes/Overview/tabid/3890/Default.aspx (accessed 28 Apr. 2021).

99 UN Environment (2012), 'Recommendation of the POPRC on Hexabromocyclododecane', http://chm.pops.int/TheConvention/POPsReviewCommittee/Meetings/POPRC8/POPRC8Followup/HBCDRecommendation/tabid/2912/Default.aspx (accessed 28 Apr. 2021).

100 Hosch, G. (2016), Trade Measures to Combat IUU Fishing – Comparative Analysis of Unilateral and Multilateral Approaches, https://www.researchgate.net/publication/309013233_Trade_Measures_to_Combat_IUU_Fishing_Comparative_Analysis_of_Unilateral_and_Multilateral_Approaches (accessed 25 Feb. 2021).

101 Ibid.

102 FAO and World Trade Organization (2017), Trade and Food Standards, World Trade Organization, https://www.wto.org/english/res_e/booksp_e/tradefoodfao17_e.pdf (accessed 25 Feb. 2021).

103 WWF-US (2016), 'Codex Planetarius: Maintaining the Environmental Sustainability of Food Production', https://c402277.ssl.cf1.rackcdn.com/publications/1426/files/original/Codex_Planetarius_white_paper.pdf?1611682012 (accessed 14 March 2021).

104 OHCHR (2020), 'States must stop exporting unwanted chemicals to poorer countries, says UN expert', United Nations Human Rights, (July 2020, https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=26063&LangID=E (accessed 15 March 2021); Committee on Economic, Social and Cultural Rights (2021), 'General Comment No. 24 of the Committee on Economic, Social and Cultural Rights', United Nations, 10 August 2017, http://docstore.ohchr.org/SelfServices/FilesHandler.ashx?enc=4slQ6QSmlBEDzFEovLCuW1a0Szab0oXTdImnsJZZVQcIMOuuG4TpS9jwIhCJcXiuZ1yrkMD/Sj8YF%2BSXo4mYx7Y/3L3zvM2zSUbw6ujlnCawQrJx3hlK8Odka6DUwG3Y (accessed 29 Apr. 2021).

105 UNEP (2004), Economic Instruments in Biodiversity-related Multilateral Environmental Agreements, UNEP, September 2004, https://www.cbd.int/financial/fiscalenviron/g-fiscalmea-unep.pdf (accessed 25 Feb. 2021); World Trade Organization Secretariat (2005), 'Matrix on Trade Measures Pursuant to Selected Multilateral Environmental Agreements', https://www.wto.org/english/tratop_e/envir_e/envir_matrix_e.htm (accessed 25 Feb. 2021); World Trade Organization Secretariat (2003), 'Compilation of Submissions Under Paragraph 31(i) of the Doha Declaration', TN/TE/S/3/Rev.1., https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S006.aspx?Language=ENGLISH&SourcePage=FE_B_009&Context=Script&DataSource=Cat&Query=((%40Symbol%3DTN%2FTE%2F*+OR+JOB*)+AND+%40Title%3Denvironment+AND+special+AND+(tariff*+OR+%22environmental+goods%22+OR+%2231(iii)%22+OR+energy))&DisplayContext=popup&languageUIChanged=true# (accessed 25 Feb. 2021).

106 World Trade Organization (2021), 'The Doha Mandate on multilateral environmental agreements', https://www.wto.org/english/tratop_e/envir_e/envir_neg_mea_e.htm (accessed 21 March 2021).

107 BBC News (2019), 'Amazon fires: Brazil threatened over EU trade deal', 23 August 2019, https://www.bbc.com/news/world-latin-america-49450495 (accessed 26 Feb. 2021).

108 Ambassade de France aux Pays-Bas (2020), 'Non-paper from the Netherlands and France on trade, social economic effects and sustainable development', https://nl.ambafrance.org/Non-paper-from-the-Netherlands-and-France-on-trade-social-economic-effects-and (accessed 26 Feb. 2021); Brunsden, J. and Mallet, V. (2020), 'France and Netherlands call for tougher EU trade conditions', Financial Times, 4 May 2020, https://www.ft.com/content/e14f082c-42e1-4bd8-ad68-54714b995dff (accessed 26 Feb. 2021).

109 World Trade Organization (2021), Short Answers to Big Questions on the WTO and the Environment.

110 ESRI (2021), 'The Effects of Plastic on Biodiversity', https://www.arcgis.com/apps/MapJournal/index.html?appid=af7640b46fed46259699a664d2534fbc (accessed 25 Feb. 2021).

111 Katz, C. (2019), 'Piling Up: How China's Ban on Importing Waste Has Stalled Global Recycling', Yale School of the Environment, 7 March 2019, https://e360.yale.edu/features/piling-up-how-chinas-ban-on-importing-waste-has-stalled-global-recycling (accessed 25 Feb. 2021).

112 ST&R (2020), 'Foreign Fisheries to be Subject to Regulatory Requirements for Exports to U.S.', https://www.strtrade.com/trade-news-resources/str-trade-report/trade-report/foreign-fisheries-to-be-subject-to-regulatory-requirements-for-exports-to-u-s-en#:~:text=Under%20the%20import%20provisions%20of,in%20excess%20of%20U.S.%20standards (accessed 25 Feb. 2021).

113 European Commission (2020), 'Forests: Illegal logging/FLEGT Action Plan', https://ec.europa.eu/environment/forests/illegal_logging.htm (accessed 25 Feb. 2021).

114 Forestry Commission (2020), 'Importing and exporting wood and timber products', https://www.gov.uk/government/collections/importing-and-exporting-wood-and-timber-products (accessed 26 Feb. 2021).

115 Shen, Y., Moomy, R., Eggert, R. (2020), 'China's public policies towards rare earths, 1975-2018', Mineral Economics, 33(3): pp.127-151, doi:10.1007/s13563-019-00214-2 (accessed 25 Feb. 2021).

116 Karapinar, B. (2010), Export restrictions on natural resources: policy options and opportunities for Africa, Bern: World Trade Institute, https://www.wti.org/media/filer_public/f8/7b/f87b3b8c-1865-402f-b8dd-60256732570c/trapca_paper_submitted1711_bk.pdf (accessed 25 Feb. 2021).

117 Winqvist, T. (1999), Trade in Domestically Prohibited Goods, Winnipeg: International Institute for Sustainable Development, https://www.iisd.org/sites/default/files/publications/viet_dpg.pdf (accessed 28 Apr. 2021).

118 United Nations Human Rights (2020), 'States must stop exporting unwanted toxic chemicals to poorer countries, says UN expert', 9 July 2020,https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=26063&LangID=E (accessed 28 Apr. 2021); UN Human Rights (2018), United Nations Human Rights, 'Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes', https://ap.ohchr.org/documents/dpage_e.aspx?si=A/73/567 (accessed 30 Apr. 2021).

119 World Trade Organization (2003), 'Agreement reached on WTO waiver for "conflict diamonds"', 26 February 2003, https://www.wto.org/english/news_e/news03_e/goods_council_26fev03_e.htm (accessed 26 Feb. 2021).

120 World Trade Organization (2003), 'General Council, Waiver Concerning Kimberley Process Certification Scheme for Rough Diamonds, Decision of 15 May 2003, WTO Doc. WT/L/518', (27 May 2003).

121 European Commission (2016), Trade Sustainability Impact Assessment on the Environmental Goods Agreement: Final Report, Brussels: European Commission, https://trade.ec.europa.eu/doclib/docs/2016/august/tradoc_154867.pdf (accessed 26 Feb. 2021).

122 UK Government (2020), 'UK statement to the WTO's Council for Trade in Services – Special Session', 22 October 2020, https://www.gov.uk/government/news/uk-statement-to-the-wtos-council-for-trade-in-services-special-session (accessed 25 Feb. 2021).

123 De Melo, J. and Solleder, J. (2019), 'What's wrong with the WTO's Environmental Goods Agreement: A developing country perspective', VoxEU column, 13 March 2019, https://voxeu.org/article/what-s-wrong-wto-s-environmental-goods-agreement (accessed 26 Mar. 2021).

124 World Economic Forum (2020), White Papers, 'Facilitating Trade Along Circular Electronics Value Chains', https://www.weforum.org/whitepapers/facilitating-trade-along-circular-electronics-value-chains (accessed 25 Feb. 2021); World Economic Forum (2020), White Papers, 'Plastics, the Circular Economy and Global Trade', https://www.weforum.org/whitepapers/plastics-the-circular-economy-and-global-trade (accessed 28 Apr. 2021).

125 Bellmann, C. and Van der Ven, C. (2020), OECD Trade and Environment Working Papers 2020/04, 'Greening regional trade agreements on non-tariff measures through technical barriers to trade and regulatory co-operation', https://www.oecd-ilibrary.org/docserver/dfc41618-en.pdf?expires=1615940213&id=id&accname=guest&checksum=E8C7D8026AEA342947A1E038D5561EDD (accessed 21 Feb. 2021).

126 Low, P. and Tijaja, J. (2013), Global Value Chains and Industrial Policies, Geneva: International Centre for Trade and Sustainable Development and Geneva: World Economic Forum, http://e15initiative.org/wp-content/uploads/2015/09/E15-GVCs-Low-and-Tijaja-Final-1.pdf (accessed 29 Apr. 2021); Cosbey, A. (2017), 'Trade and Investment Law and Green Industrial Policy', in Altenburg, T. and Assmann, C. (eds.) (2017), Green Industrial Policy: Concept, Policies, Country Experiences, Geneva, Bonn: UN Environment and German Development Institute (DIE); UNCTAD (2019), Trade and Development Report 2019 Financing a Global Green New Deal, Geneva: UNCTAD, https://unctad.org/system/files/official-document/tdr2019_en.pdf (accessed 29 Apr. 2021).

127 Cosbey, A. (2013), Green Industrial Policy and the World Trading System Issue Brief 17, Stockholm: Entwined, https://www.iisd.org/system/files/publications/entwined_brief_green_industrial.pdf (accessed 29 Apr. 2021).; Rodrik, D. (2014), 'Green Industrial Policy', Oxford Review of Economic Policy, 30(3): pp. 469–91, doi.org/10.1093/oxrep/gru025 (accessed 29 Apr. 2021); ICTSD (2016), Trade Policies and Sustainable Development in the Context of Global Value Chains: Framework Paper, Geneva: ICTSD, https://www.tralac.org/images/docs/10543/trade-policies-and-sustainable-development-in-the-context-of-global-value-chains-ictsd-september-2016.pdf (accessed 29 Apr. 2021).

128 Häberli, C. (2018), Potential Conflicts between Agricultural Trade Rules and Climate Change Treaty Commitments, Rome: FAO, https://boris.unibe.ch/113255/1/SSRN-id3123036.pdf (accessed 26 Feb. 2021).

129 National Board of Trade (2014), Making Green Trade Happen – Environmental Goods and Indispensable Services, Stockholm: National Board of Trade, https://www.kommerskollegium.se/globalassets/publikationer/rapporter/2016-och-aldre/making-green-trade-happen_webb.pdf (accessed 26 Feb. 2021).

130 Nordås, H. and Steenblik, R. (2021), 'Trade in Environmental Services: The Quiet Revolution', Council on Economic Policies Blog, 29 March 2021, https://www.cepweb.org/trade-in-environmental-services-the-quiet-revolution/ (accessed 8 Apr. 2021).

131 Tamminen et al. (2020), Trading Services for a Circular Economy.

132 Hoekman, B. and Fiorini, M. (2017), 'Services Trade Policy and Sustainable Development', Robert Schuman Centre for Advanced Studies, Research Paper No. RSCAS 2017/41, pp.1-31, http://dx.doi.org/10.2139/ssrn.3033851 (accessed 25 Feb. 2021).

133 World Trade Organization News (2020), 'Members discuss proposals on trade in environmental and agricultural services', 21 October 2020, https://www.wto.org/english/news_e/news20_e/serv_23oct20_e.htm (accessed 29 Apr. 2021).

134 Monteiro (2016), Typology of Environment-related provisions in Regional Trade Agreements; Ortino, F. (2015), 'Regional Trade Agreements and Trade in Services', in Lester, S., Mercurio, B., and Bartels, L. (eds.) (2015), Bilateral and Regional Trade Agreements – Commentary and Analysis, Cambridge: Cambridge University Press; Adlung, R. (2016), 'International Rules Governing Foreign Direct Investment in Services: Investment Treaties versus the GATS', The Journal of World Investment and Trade, 17(1): pp.447–485, doi.org/10.1163/22119000-01701002 (accessed 25 Feb. 2021).

135 Asia-Pacific Economic Cooperation (2018), 2018 CTI Report to Ministers, Appendix 5: Environmental Services Action Plan (ESAP) Interim Review, Singapore: Asia-Pacific Economic Cooperation, http://mddb.apec.org/Documents/2018/MM/AMM/18_amm_011app05.pdf (accessed 25 Mar. 2021); Nordås, H. and Steenblik, B. (2021), Environmental Services in the APEC Region: Definition, Challenges and Opportunities, Singapore: Asia-Pacific Economic Cooperation (APEC), forthcoming.

136 Hoekstra, A. (2010), The relation between international trade and freshwater scarcity WTO Staff Working Paper ERSD-2010-05, Geneva: World Trade Organization, https://www.wto.org/english/res_e/reser_e/ersd201005_e.pdf (accessed 25 Feb. 2021); and Institute for Agriculture and Trade Policy (2003), Water Services under the World Trade Organization, Minneapolis: Institute for Agriculture and Trade Policy, https://www.files.ethz.ch/isn/115083/2003-08-18_Water_Services.pdf (accessed 25 Feb. 2021); Bates, R. (2018). The Trade in Water Services: Improving Certainty With Respect to Drinking Water, Geneva: UNCTAD, https://unctad.org/system/files/non-official-document/c1mem2018_S2_Bates_paper.pdf (accessed 25 Feb. 2021).

137 Sifonios, D. (2018), Environmental Process and Production Methods (PPPMs) in WTO Law, New York: Springer.

138 Wilkinson, R. (2020), 'Modernising Trade Rules: A New Way of Opening Markets', 9 June 2020, LinkedIn, https://www.linkedin.com/pulse/modernising-trade-rules-new-way-opening-markets-derrick-wilkinson/ (accessed 7 Apr. 2021).

139 Meléndez-Ortiz, R. (2020), 'Cracking the Hard Nut: Differentiated Treatment of Products Under Existing Trade Law', in Esty, D.C. and Biniaz, S. (eds) (2020), Cool Heads in a Warming World: How Trade Policy Can Help Fight Climate Change, New Haven: Yale Center for Environmental Law & Policy, https://envirocenter.yale.edu/sites/default/files/files/CoolHeads_MelendezOrtiz(2).pdf (accessed 19 Feb. 2021); Meléndez-Ortiz, R. (2020), 'Trade and Equity in a World Where Goods Carry Carbon Passports', in Esty, D. and Biniza, S. (eds) (2020), Cool Heads in a Warming World: How Trade Policy Can Help Fight Climate Change, New Haven: Yale Center for Environmental Law and Policy, DOI:10.2139/ssrn.3741549 (accessed 30 Apr. 2021).

140 Ibid.

141 Ibid.

142 OECD (2017), Environmental Fiscal Reform: Progress, Prospects and Pitfalls, Paris: OECD, https://www.oecd.org/tax/tax-policy/environmental-fiscal-reform-G7-environment-ministerial-meeting-june-2017.pdf (accessed 25 Feb. 2021).

143 World Trade Organization (2021), Trade And Environmental Sustainability Structured Discussions (TESSD): Communication by New Zealand INF/TE/SSD/W/1, Geneva: World Trade Organization, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/INF/TESSD/W1.pdf&Open=True (accessed 21 Feb. 2021); Permanent Mission of Norway in Geneva (2017), 'MC11 Ministerial Declaration on Fossil Fuel Subsidy Reform', https://www.norway.no/en/missions/wto-un/our-priorities/trade/wto-world-trade-organization/mc11-ministerial-declaration-on-fossil-fuel-subsidy-reform/ (accessed 21 Feb. 2021).

144 Wu, M. (2021), E15 Initiative Trade Policy, 'Re-examining 'Green Light' Subsidies in the Wake of New Green Industrial Policies', https://e15initiative.org/publications/re-examining-green-light-subsidies-in-the-wake-of-new-green-industrial-policies-2/ (accessed 29 Apr. 2021).

145 World Trade Organization (2020), Advancing Sustainability Goals through Trade Rules to Level the Playing Field: Draft Ministerial Decision WT/GC/W/814, Geneva: World Trade Organization, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/GC/W814.pdf&Open=True (accessed 1 Mar. 2021).

146 Behboodi, R. and Hyner, C. (2019), 'Countervailing Climate Change: Emissions

Trading And The SCM Agreement', Georgetown Journal Of International Law, 50, pp.599-623, https://www.law.georgetown.edu/international-law-journal/wp-content/uploads/sites/21/2019/10/GT-GJIL190041.pdf (accessed 28 Apr. 2021); Rubini, L. (2017), 'ASCM Disciplines and Recent WTO Case Law Developments: What Space for 'Green' Subsidies?', in Cottier. T and Espa. I (eds.) (2017), International Trade in Sustainable Electricity: Regulatory Challenges in International Economic Law, Cambridge: Cambridge University Press.

147 Casier, L. (2019), 'How Can Public Procurement in Canada's Trade Agreements Contribute to Sustainable Development?', IISD Blog, 4 April 2019, https://www.iisd.org/blog/sustainable-public-procurement-trade (accessed 26 Feb. 2021).

148 World Economic Forum (2020), How Can Trade Rules Support Environmental Action?: Global Future Council on International Trade and Investment, Geneva: World Economic Forum, http://www3.weforum.org/docs/WEF_GFC_Briefing_on_Trade_and_Environment_Report_2020.pdf (accessed 25 Feb. 2021).

149 UNCTAD (2020), Scaling up Voluntary Sustainability Standards through Sustainability Public Procurement and Trade Policy, 4th Flagship Report of the United Nations Forum on Sustainability Standards, Geneva: UNCTAD, https://unctad.org/system/files/official-document/unfss_4th_2020_en.pdf (accessed 28 Apr. 2021).

150 Casier, L. (2019), Canada's International Trade Obligations: Barrier or opportunity for sustainable public procurement?: Unpacking Canada's WTO GPA and CETA commitments in relation to sustainable procurement, Winnipeg: International Institute for Sustainable Development, https://www.iisd.org/sites/default/files/publications/canada-international-trade-spp.pdf (accessed 26 Feb. 2021); Sinclair, S., Trew, S. and Mertins-Kirkwood, H. (eds) (2014), Making sense of the CETA: An analysis of the final text of the Canada-European Union Comprehensive Economic and Trade Agreement, Ottawa: Canadian Centre for Policy Alternatives, https://www.policyalternatives.ca/sites/default/files/uploads/publications/National%20Office/2014/09/Making_Sense_of_the_CETA.pdf (accessed 26 Feb. 2021).

151 World Trade Organization (2021), 'Parties, observers and accessions', https://www.wto.org/english/tratop_e/gproc_e/memobs_e.htm (accessed 26 Feb. 2021).

152 World Trade Organization (2012), Annex E: Decision of the Committee on Government Procurement on a Work Programme on Sustainable Procurement, Geneva: World Trade Organization, https://www.wto.org/english/tratop_e/gproc_e/annexe_e.pdf (accessed 26 Feb. 2021).

153 Bermudez, S. (2021), 'How Can Voluntary Sustainability Standards Drive Sustainability in Public Procurement and Trade Policy', https://www.iisd.org/ssi/publications/how-can-voluntary-sustainability-standards-drive-sustainability-in-public-procurement-and-trade-policy/ (accessed 28 Apr. 2021); United Nations Forum on Sustainability Standards (2020), Scaling up Voluntary Sustainability Standards through Sustainable Public Procurement and Trade Policy, Geneva: United Nations Forum on Sustainability Standards, https://unfss.org/wp-content/uploads/2020/10/UNFSS-4th-Report_revised_12Oct2020.pdf (accessed 28 Apr. 2021); Corvaglia, M. A. (2016), 'Public Procurement and Private Standards: Ensuring Sustainability Under the WTO Agreement on Government Procurement', Journal of International Economic Law, 19(3): pp.607-621, doi.org/10.1093/jiel/jgw053 (accessed 25 Feb. 2021).

154 UNCTAD (2015), Local Content Requirements and the Green Economy, Geneva: UNCTAD, https://unctad.org/system/files/official-document/ditcted2013d7_en.pdf (accessed 15 Apr. 2021).

155 Johnson, O. (2013), Exploring the Effectiveness of Local Content Requirements in Promoting Solar PV Manufacturing in India, Bonn: German Development Institute, https://www.die-gdi.de/uploads/media/DP_11.2013.pdf (accessed 29 Apr. 2021).

156 Bellmann and Van der Ven (2020), 'Greening regional trade agreements on non-tariff measures through technical barriers to trade and regulatory co-operation'; Casier (2019), Canada's International Trade Obligations: Barrier or opportunity for sustainable public procurement? Unpacking Canada's WTO GPA and CETA commitments in relation to sustainable procurement.

157 Deere. C. (2009), The Implementation Game: The TRIPS Agreement and the Global Politics of Intellectual Property Reform in Developing Countries, Oxford: Oxford University Press, p.1.

158 Khor, M. (2012), Climate Technology and Intellectual Property Rights: Context and Recent Negotiations, Geneva: South Centre, https://www.southcentre.int/wp-content/uploads/2013/05/RP45_Climate-Change-Technology-and-IP_EN.pdf (accessed 25 Feb. 2021); Lee, B., Iliev, I. and Preston, F. (2009), Who Owns Our Low Carbon Future? Intellectual Property and Energy Technologies, London: Royal Institute of International Affairs,https://www.chathamhouse.org/sites/default/files/public/Research/Energy,%20Environment%20and%20Development/r0909_lowcarbonfuture.pdf (accessed 29 Apr. 2021); and Barton, J. (2007), 'Patenting and Access to Clean Energy Technologies in Developing Countries', ICTSD Biores, 1 December 2007, https://ictsd.iisd.org/bridges-news/biores/news/patenting-and-access-to-clean-energy-technologies-in-developing-countries (accessed 25 Feb. 2021).

159 Farrella, Brown and Martell LLP (2020), Breaking up the Patent Monopoly for the Benefit of Batteries, PV Magazine, 23 July 2020, https://www.jdsupra.com/legalnews/breaking-up-the-patent-monopoly-for-the-87273/ (accessed 5 Apr. 2021); UK Intellectual Property Office (2009), Patent landscape analysis of recycling and separation technologies, p. 3-4 and p. 9-14,

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/312291/informatic-recycleseparate.pdf (accessed 25. Feb 2021); Earl, A. (2019), 'Intellectual property could be the key to success in plastics', Recycling & Waste World, 11 January 2019, https://www.recyclingwasteworld.co.uk/in-depth-article/intellectual-property-could-be-the-key-to-success-in-plastics/201858/ (accessed 28 Apr. 2021).

160 UK Intellectual Property Office (2009), Patent landscape analysis of recycling and separation technologies, p. 9.

161 United Nations Environment Programme (UNEP), European Patent Office (EPO) and International Centre for Trade and Sustainable Development (ICTSD) (2010), Patents and clean energy: bridging the gap between evidence and policy: Final report, Geneva: UNEP and Munich: EPO and Geneva: ICTSD, http://documents.epo.org/projects/babylon/eponet.nsf/0/cc5da4b168363477c12577ad00547289/$FILE/patents_clean_energy_study_en.pdf (accessed 21 Mar. 2021).

162 Ibid.

163 UNCTAD (2019), Trade and Development Report 2019 Financing a Global Green New Deal.

164 Deere. C. (2009), The Implementation Game: The TRIPS Agreement and the Global Politics of Intellectual Property Reform in Developing Countries.

165 Moon, S. (2008), Does TRIPS Art. 66.2 Encourage Technology Transfer to LDCs? An Analysis of Country Submissions to the TRIPS Council (1999-2007), Geneva: International Centre for Trade and Sustainable Development (ICTSD), https://unctad.org/system/files/official-document/iprs_pb20092_en.pdf (accessed 25 Feb. 2021).

166 World Trade Organization (2021), 'Working Group on Trade and Transfer of Technology', https://www.wto.org/english/tratop_e/devel_e/dev_wkgp_trade_transfer_technology_e.htm (accessed 1 Jan. 2021).

167 Rimmer, M. (2019), 'Beyond the Paris Agreement: Intellectual Property, Innovation Policy, and Climate Justice', Laws, 8(1): pp. 7-31, doi.org/10.3390/laws8010007 (accessed 29 Apr. 2021).

168 Ruiz Muller, M., Votel, J., Angerer, K. and Pauchard, N. (2019), 'Access to Genetic Resources and Benefit-Sharing in the Post-2020 Global Biodiversity Framework', Trade for Development News, https://trade4devnews.enhancedif.org/en/op-ed/access-genetic-resources-and-benefit-sharing-post-2020-global-biodiversity-framework (accessed 7 Apr. 2021).

169 World Trade Organization (2021), 'TRIPS; Review, Article 27.3 (b) and related issues', https://www.wto.org/english/tratop_e/trips_e/art27_3b_background_e.htm (accessed 25 Feb. 2021).

170 Oxfam (2018), The Status of Patenting Plants in the Global South, The Hague: Oxfam Novib, https://oxfam.app.box.com/s/f5l0b0wtcko2ifeksm9xuaso4dhbpg9r (accessed 29 Apr. 2021).

171 World Trade Organization (2021), 'Article 27.3b', https://www.wto.org/english/tratop_e/trips_e/art27_3b_e.htm (accessed 25 Feb. 2021).

172 World Trade Organization (2021), 'TRIPS: Reviews, Article 27.3(b) and Related Issues'.

173 Convention Biological Diversity (2011), Access and benefit-sharing, 'The Nagoya Protocol on Access and Benefit Sharing', https://www.cbd.int/abs/ (accessed 25 Feb. 2021).

174 Morin, J-F and Gauquelin, M. (2016), Trade Agreements as Vectors for the Nagoya Protocol's Implementation CIGI Paper No. 115, Waterloo: Centre for International Governance Innovation, https://www.cigionline.org/sites/default/files/documents/Paper%20no.115.pdf (accessed 25 Feb. 2021).

175 Ibid.

176 Hoekman, B. and Mavroidis, P. (2015), Regulatory Spillovers and the Trading System: From Coherence to Cooperation, Geneva: ICTSD and Geneva: World Economic Forum, http://e15initiative.org/wp-content/uploads/2015/04/E15-Regulatory-OP-Hoekman-and-Mavroidis-FINAL.pdf (accessed 25 Feb. 2021).

177 Cottier, T. (2006), 'From progressive liberalization to progressive regulation in WTO law', Journal of International Economic Law, 9(4): pp.779-821, doi:10.1093/jiel/jgl029 (accessed 25 Feb. 2021); Mavroidis, P. (2015), 'Opposites attract? Bringing the trade and regulatory communities together', http://e15initiative.org/blogs/opposites-attract-bringing-the-trade-and-regulatory-communities-together/ (accessed 25 Feb. 2021).

178 OECD (2019), Directorate for Public Governance, 'Facilitating Trade through Regulatory Cooperation: The Case of the WTO's TBT/SPS Agreements and Committees', https://www.oecd.org/gov/facilitating-trade-through-regulatory-co-operation-ad3c655f-en.htm (accessed 22 Feb. 2021); OECD (2021), 'International regulatory cooperation and trade policy', https://www.oecd.org/gov/regulatory-policy/international-regulatory-cooperation-and-trade-policy.htm (accessed 22 Feb. 2021); ASEAN (2017) ASEAN Guidelines on Good Regulatory Practices, Jakarta: Association of southeast Asian Nations (ASEAN), https://asean.org/storage/2017/09/ASEAN-Guidelines-on-Good-Regulatory-Practices.pdf (accessed 22. Feb. 2021).

179 IISD, UNEP and Environment and Trade Hub (2017), 'A Sustainability Toolkit for Trade Negotiators: Trade and investment as vehicles for achieving the 2030 Sustainable Development Agenda', https://www.iisd.org/toolkits/sustainability-toolkit-for-trade-negotiators/about-us/ (accessed 25 Feb. 2021).

180 Sauvant, K. and Mann, K. (2017), Towards an Indicative List of FDI Sustainability Characteristics, Geneva: International Centre for Trade and Sustainable Development (ICTSD) and Geneva: World Economic Forum, http://e15initiative.org/wp-content/uploads/2015/09/E15-Investment-Sauvant-and-Mann-Final-1.pdf (accessed 29 Apr. 2021); UNCTAD (2021), International Investment Agreements Navigator, https://investmentpolicy.unctad.org/international-investment-agreements (accessed 26 Feb. 2021); UNCTAD (2020), World Investment Report 2020, 'World Investment Report 2020. International Production Beyond the Pandemic', https://unctad.org/webflyer/world-investment-report-2020 (accessed 26 Feb. 2021).

181 Brauch, M. (2017), 'A Risky Tango? Investment facilitation and the WTO Ministerial Conference in Buenos Aires', IISD Commentary, 20 December 2017, https://www.iisd.org/articles/risky-tango-investment-facilitation-and-wto-ministerial-conference-buenos-aires (accessed 29 Apr. 2021); Baliño, S., and Bernasconi-Osterwalder, N. (2019), 'Investment facilitation at the WTO: An attempt to bring a controversial issue into an organization in crisis', Investment Treaty News, 27 June 2019, https://www.iisd.org/itn/2019/06/27/investment-facilitation-at-the-wto-an-attempt-to-bring-a-controversial-issue-into-an-organization-in-crisis-sofia-balino-nathalie-osterwalder/ (accessed 20 Dec. 2020).

182 Mann, H., and Brauch, M. (2019), Columbia FDI Perspectives, 'Investment facilitation for sustainable development: Getting it right for developing countries', http://ccsi.columbia.edu/files/2018/10/No-259-Mann-and-Brauch-FINAL.pdf (accessed 24 Feb. 2021).

183 IISD (2021), 'International Investment Law and Sustainable Development', https://cf.iisd.net/itn/isds-investment-arbitration-sustainable-development/ (accessed 26 Feb. 2021); Bernasconi-Osterwalder, N., Brewin, S., and Maina, N. (2020), Protecting Against Investor–State Claims Amidst COVID 19: A call to action for governments, Winnipeg: International Institute for Sustainable Development (IISD), https://www.iisd.org/sites/default/files/publications/investor-state-claims-COVID-19.pdf (accessed 25 Feb. 2021).

184 Reuters (2021), 'RWE seeks compensation for Dutch plans to shut coal-fired plant', 4 February 2021, https://www.reuters.com/article/rwe-netherlands-coal-idUSL8N2KA5SU (accessed 26 Feb. 2021).

185 UNCTAD (2019), Taking Stock of IIA Reform: Recent Developments, Geneva: UNCTAD, https://unctad.org/en/PublicationsLibrary/diaepcbinf2019d5_en.pdf (accessed 26 Feb. 2021).

186 IISD (2021), 'Responsible Business', http://www.bsdglobal.com/sites/default/files/publications/comments-proposals-amendment-icsid-arbitration-rules.pdf (accessed 26 Feb. 2021).

187 UN Commission on International Trade Law (2021), 'Investor-State Dispute Settlement Reform: On-line Resources', https://uncitral.un.org/en/library/online_resources/investor-state_dispute (accessed 25 Feb. 2021).

188 Bernasconi-Osterwalder, N. and Baliño, S. (2019), 'Investor-State Dispute Settlement Reform Talks Resume at UNITRAL', IISD Blog, 29 March 2019, https://www.iisd.org/articles/isds-reform-talks-resume-uncitral (accessed 26 Feb. 2021); Sachs, L. (2019), 'ISDS Reform at UNCITRAL: Two Guiding Principals', Columbia Center on Sustainable Investment Blog, 16 October 2019, http://ccsi.columbia.edu/2019/10/17/isds-reform-at-uncitral-two-guiding-principles/ (accessed 26 Feb. 2021); UNCTAD (2015), Investment Policy Framework for Sustainable Development, Geneva: UNCTAD, https://unctad.org/en/PublicationsLibrary/diaepcb2015d5_en.pdf (accessed 26 Feb. 2021); UNCTAD (2019), Promoting Investment in the Sustainable Development Goals, 'Promoting Investment in the Sustainable Development Goals. Investment Advisory Series A, Number 8', https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2382 (accessed 26 Feb. 2021).

189 Ibid.

190 Dietrich Brauch, M. (2019), 'Modernizing the Energy Charter Treaty: A make-or-break moment for sustainable, climate-friendly energy policy', IISD Blog, 13 November 2019, https://www.iisd.org/articles/modernizing-energy-charter-treaty-make-or-break-moment-sustainable-climate-friendly-energy (accessed 26 Feb. 2021).

191 Skovgaard Paulsen, L. and Geertz, G. (2021), Reforming the investment treaty regime: A 'backward-looking' approach, Briefing, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/default/files/2021-03/2021-03-10-reforming-investment-treaty-regime-poulsen-gertz.pdf (accessed 29 Mar. 2021).

192 Ibid.

193 Ibid.

194 UNCTAD (2019), The Changing IIA Landscape: New Treaties and Recent Policy Developments, Geneva: UNCTAD, https://unctad.org/en/PublicationsLibrary/diaepcbinf2020d4.pdf (accessed 26 Feb. 2021).

195 UNCTAD (2018), UNCTAD's Reform Package for the International Investment Regime, Geneva: UNCTAD, https://investmentpolicy.unctad.org/uploaded-files/document/UNCTAD_Reform_Package_2018.pdf (accessed 26 Feb. 2021).

196 UNEP (2019), 'Investors make unprecedented commitment to net zero emissions', 23 September 2019, https://www.unep.org/news-and-stories/press-release/investors-make-unprecedented-commitment-net-zero-emissions (accessed 26 Feb. 2021).

197 Task Force on Climate Related Financial Disclosures (2021), 'Task Force on Climate-related Financial Disclosures', https://www.fsb-tcfd.org (accessed 21 Feb. 2021).

198 OECD (2018), China's Belt and Road Initiative in the Global Trade, Investment and Finance Landscape, OECD Business and Finance Outlook, Paris: OECD, https://www.oecd.org/finance/Chinas-Belt-and-Road-Initiative-in-the-global-trade-investment-and-finance-landscape.pdf (accessed 5 Feb. 2021).

199 Teo, H.C., Lechner, A.M., Walton, G.W., Chan, F.K.S., Cheshmehzangi, A., Tan-Mullins, M., Chan, H.K., Sternberg, T., and Campos-Arceiz, A. (2019), 'Environmental Impacts of Infrastructure Development under the Belt and Road Initiative', Environments, 6(6), doi.org/10.3390/environments6060072 (accessed 26 Feb. 2021); Coenen, J., Bager, S., Meyfroidt, P., Newig, J. and Challies, E. (2020), 'Environmental Governance of China's Belt and Road Initiative', Environmental Policy and Governance, 31(1): pp.3-17, doi.org/10.1002/eet.1901 (accessed 26 Feb. 2021); Hale, T., Liu, C. and Urpelainen, J. (2020), Belt and Road decision-making in China and recipient countries: How and to what extent does sustainability matter?, Oxford: BSG and Washington, D.C.: ISEP and San Francisco: ClimateWorks Foundation, https://sais-isep.org/wp-content/uploads/2020/04/ISEP-BSG-BRI-Report-.pdf (accessed 26 Feb. 2021); World Resources Institute (2018), Working Paper, 'Moving the green belt and road initiative: from words to actions', https://www.wri.org/publication/moving-green-belt-and-road-initiative-from-words-to-actions (accessed 26 Feb. 2021); City of London (2019), 'Green Belt and Road principles receive industry backing', 24 April 2019, https://news.cityoflondon.gov.uk/green-belt-and-road-principles-receive-industry-backing/ (accessed 26 Feb. 2021).

200 WWF (2015), Market Transformation Initiative: Why Commodity Markets Matter, Gland: WWF, http://awsassets.panda.org/downloads/how_wwf_market_transformation_works.pdf (accessed 15 Mar. 2021).

201 UNCTAD (2016), Agricultural commodity value chains: The effects of market concentration on farmers and producing countries - the case of cocoa, Note by the UNCTAD Secretariat, Geneva: UNCTAD, https://unctad.org/system/files/official-document/tdb63d2_en.pdf (accessed 15 Mar. 2021).

202 Hendrickson, M., Howard, P., Miller, E., and Constance, D. (2020), The Food System: Concentration and its Impacts: A Special Report to the Family Farm Action Alliance, Missouri: Family Farm Action Alliance, p.4, https://farmactionalliance.org/wp-content/uploads/2020/11/Hendrickson-et-al.-2020.-Concentration-and-Its-Impacts-FINAL.pdf (accessed 15 Apr. 2021).

203 UNCTAD (2015), The role of competition policy in promoting sustainable and inclusive growth: Note by the UNCTAD Secretariat, TD/RBF/Conf.8/6, Geneva: UNCTAD, https://unctad.org/meetings/en/SessionalDocuments/tdrbpconf8d6_en.pdf (accessed 2 Apr. 2021).

204 Pérez Motta, E. (2016), Competition Policy and Trade in the Global Economy: Towards and Integrated Approach, E15 Expert Group on Competition Policy and the Trade System – Policy Options Paper, Geneva: ICTSD and World Economic Forum, http://www3.weforum.org/docs/E15/WEF_Competitition_Policy_Trade_Global_Economy_Towards_Integrated_Approach_report_2015_1401.pdf (accessed 14 Apr. 2021).

205 Murphy, S. (2017), 'The end of the WTO as we know it? We can only hope', IATP Blog, 21 December 2017, https://www.iatp.org/blog/201712/end-wto-we-know-it (accessed 29 Apr. 2021); Loecker, I. and Eeckhout, J. (2018), NBER Working Papers, 'Global Market Power', https://www.nber.org/papers/w24768 (accessed 29 Apr. 2021).

206 UNCTAD (2020), Report of the Eighth United Nations Conference to Review All Aspects of the Set of Multilaterally Agreed Equitable Principles and Rules for the Control of Restrictive Business Practices TD/RBP/CONF.9/9, Geneva: UNCTAD, https://unctad.org/system/files/official-document/tdrbpconf9d9_en.pdf (accessed 21 Mar. 2021).

207 Deere Birkbeck, C. (2021), Green Aid for Trade and beyond: Trade, green economic transformation, and developing countries, Winnipeg: IISD and Forum on Trade, Environment and the SDGs, forthcoming.

208 UNEP and Environment and Trade Hub (2020), Aid for Trade: A vehicle to green trade and build climate resilience, Geneva: UNEP, https://wedocs.unep.org/bitstream/handle/20.500.11822/32204/AfT.pdf?sequence=1&isAllowed=y (accessed 25 Feb. 2021); World Trade Organization and OECD (2019), Aid for trade, 'Aid for Trade at a Glance 2019: Economic Diversification and Empowerment', https://www.oecd.org/dac/aft/aid-for-trade-at-a-glance-22234411.htm (accessed 26 Feb. 2021); World Trade Organization (2018), 'Support remains solid for Aid for Trade financing, WTO members told', 3 July 2018, https://www.wto.org/english/news_e/news18_e/aid_03jul18_e.htm (accessed 26 Feb. 2021).

209 World Trade Organization (2001), 'Doha WTO Ministerial 2001 Implementation issues and concerns, WT/MIN(01)/17', https://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_implementation_e.htm (accessed 25 Feb. 2021).

210 UNCTAD (2008), Aid for Trade and Development: Global and Regional Perspectives, Geneva: UNCTAD, https://unctad.org/system/files/official-document/ditc20082_en.pdf (accessed 25 Feb. 2021).

211 World Trade Organization (2005), Doha Work Programme: Ministerial Declaration, World Trade Organization Ministerial Conference Sixth Session, WT/MIN(05)/DEC, Geneva: World Trade Organization, www.wto.org/english/thewto_e/minist_e/min05_e/final_text_e.pdf (accessed 25 Feb. 2021).

212 World Trade Organization (2021), 'Aid for Trade', https://www.wto.org/english/tratop_e/devel_e/a4t_e/aid4trade_e.htm (accessed 25 Feb. 2021); Antonio Alonso, J. (2016), Aid for Trade: Building productive and trade capacities in LDCs, New York: UN Committee for Development Policy, https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/CDP-review-2016-1.pdf (accessed 25 Feb. 2021); Basnett, Y., Engel, J., Kennan, J., Kingombe, C., Massa, I. and Willem te Velde, D. (2012), Increasing the effectiveness of Aid for Trade: the circumstances under which it works best, London: Overseas Development Institute, https://cdn.odi.org/media/documents/7793.pdf (accessed 25 Feb. 2021).

213 World Trade Organization (2021), 'Trade Facilitation', https://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm (accessed 26 Feb. 2021).

214 World Trade Organization (2021), 'Aid for Trade Workshops', https://www.wto.org/english/tratop_e/devel_e/a4t_e/a4tworkshop50219_e.htm#sustainable (accessed 26 Feb. 2021).

215 ITC (2013), ITC at the WTO's 4th Global Review of Aid for Trade, 'Mainstreaming environment into aid for trade: improving sustainability of global value chains', http://www.intracen.org/Mainstreaming-environment-into-aid-for-trade-improving-sustainability-of-global-value-chains/ (accessed 26 Feb. 2021).

216 ITC (2015), 'Environmental Mainstreaming: A Guide for Project Managers', ITC News, 17 October 2016, http://www.intracen.org/news/Environmental-Mainstreaming---A-Guide-for-Project-Managers/ (accessed 25 Feb. 2021); ITC (2018), Publications Catalogue, 'SME Competitiveness Outlook 2018: Business Ecosystems for the Digital Age', https://www.intracen.org/publication/SME-Competitiveness-Outlook-2018-Business-Ecosystems-for-the-Digital-Age/ (accessed 25 Feb. 2021).

217 UNEP and Environment and Trade Hub (2020), Aid for Trade: A vehicle to green trade and build climate resilience.

218 OECD, The World Bank, UN Environment (2018), Financing Climate Futures: Rethinking Infrastructure, Paris: OECD https://www.oecd.org/environment/financing-climate-futures-9789264308114-en.htm (accessed 26 Feb. 2021); Oil Change International, Friends of the Earth and WWF (2017), Financing Climate Disaster: How Export Credit Agencies are a Boon for Oil and Gas, Washington, D.C.: Oil Change International and Washington: Friends of the Earth U.S and Brussels: WWF European

Policy Office, http://priceofoil.org/content/uploads/2017/10/Financing-Climate-Disaster.pdf (accessed 26 Feb. 2021); Export Credit Agency Watch (2021), 'Welcome to ECA Watch', https://www.eca-watch.org/ (accessed 26 Feb. 2021).

219 Export Credit Agency Watch (2021), 'Publications', https://www.eca-watch.org/newsletter (accessed 29 Mar. 2021).

220 UK Prime Minister's Office (2020), 'PM announces the UK will end support for fossil fuel sector overseas', Press release, 12 December 2020, https://www.gov.uk/government/news/pm-announces-the-uk-will-end-support-for-fossil-fuel-sector-overseas (accessed 21 Mar. 2021).

221 Atkins, J. (2021), 'New European export credit alliance nixes fossil fuel support', Global Trade Review, 14 April 2021, https://www.gtreview.com/news/europe/94353/ (accessed 15 Apr. 2021).

222 Shishlov, I., Weber, A., Stepchuk, I., Darouich, L. and Michaelowa, A. (2020), Study on external and internal climate change policies for export credit and insurance agencies, Freiburg: Perspectives Climate Group, https://unfccc.int/sites/default/files/resource/20-03-11_Perspectives_ECA_Study_Final_revised.pdf (accessed 22 Feb. 2021).

223 Bronswijk, A., R. Gabriel, T. Hale, and A. Klasen (2020), Working Toward a Commitment to Net Zero, Berne Union Yearbook 2020, Berne Union, pp. 153-157.

224 Robertson, A. (2020), European Banks Financing Trade of Controversial Amazon Oil to the US, Stand.earth and Amazon Watch https://www.stand.earth/sites/stand/files/eu-banks-financing-amazon-oil-standearth-amazonwatch.pdf; Dupraz-Dobias, P. (2021), 'Are Swiss banks really chopping environmental devastation from trade financing?', Swissinfo.ch, 15 March 2021,

https://www.swissinfo.ch/eng/are-swiss-banks-really-chopping-environmental-devastation-from-trade-financing-/46442678 (accessed 25 Feb. 2021)

225 Zabielski, K. (2021), Sustainability: A key part of our due diligence work, Berne Union Yearbook 2020, Berne Union, pp. 158-159.

226 United Nations (1992), Chapter 2: International Cooperation to Accelerate Sustainable Development In Developing Countries and Related Domestic Policies, Report of The United Nations Conference On Environment And Development, A/CONF.151/26, United Nations: New York.

227 World Trade Organization (2021), 'Working Group on Trade, Debt and Finance', https://www.wto.org/english/tratop_e/devel_e/dev_wkgp_trade_debt_finance_e.htm (accessed 5 April 2021).

228 Clarke, T. (2020), 'Now, more than ever, we must keep our promise to help Africa trade out of poverty', TheHouse, 6 May 2020, https://www.politicshome.com/thehouse/article/now-more-than-ever-we-must-keep-our-promise-to-help-africa-trade-out-of-poverty (accessed 30 May 2020).

229 Picolotti, R. and A. Miller (2020), 'Debt-for-climate swaps can help developing countries make a green recovery', IISD News, 13 November 2020, https://www.iisd.org/sustainable-recovery/debt-for-climate-swaps-can-help-developing-countries-make-a-green-recovery/ (accessed 17 April 2021).

230 Ibid.

231 UNCTAD (2019), Trade and Development Report 2019 Financing a Global Green New Deal.

232 UNCTAD (2018), TRAINS: The Global Database on Non-Tariff Measures User Guide (Version 2), United Nations, https://unctad.org/system/files/official-document/ditctab2017d3_en.pdf (accessed 1 Feb. 2021)

233 FAO and United Nations (2021), 'Role of the HS in the United Nations' 2030 Agenda for Sustainable Development', WCO News, https://mag.wcoomd.org/magazine/wco-news-86/role-of-the-hs-in-the-united-nations-2030-agenda-for-sustainable-development/ (accessed 26 Feb. 2021).

234 World Customs Organization (2021), 'What is the Harmonized System (HS)?', http://www.wcoomd.org/en/topics/nomenclature/overview/what-is-the-harmonized-system.aspx (accessed 26 Feb. 2021).

235 Ibid.

236 Steenblik, R. (2020), 'Code Shift: The environmental significance of the 2022 amendments to the Harmonized System', International Institute for Sustainable Development (IISD), 4 May 2020, https://www.iisd.org/publications/code-shift-environmental-significance-2022-amendments-harmonized-system (accessed 26. Feb 2021).

237 Grooby, G. (2018), 'Is the HS still fit for purpose?', https://mag.wcoomd.org/magazine/wco-news-86/is-the-hs-still-fit-for-purpose/ (accessed 26 Feb. 2021).

238 UNCTAD (2021), Towards a harmonized international trade classification for the development of sustainable ocean-based economies, Geneva: UNCTAD,

https://unctad.org/system/files/official-document/ditcted2020d4_en.pdf (accessed 17 March 2021).

239 UNEP (2019), Report on the status of the work of the World Customs Organization on the Harmonized Commodity Description and Coding System on proposals related to the Basel Convention: Note by the Secretariat, UNEP/CHW.14/INF/14, Geneva: UNEP,

240 World Customs Organization (2021), 'Amending the HS', http://www.wcoomd.org/en/topics/nomenclature/activities-and-programmes/amending_hs.aspx (accessed 26 Feb. 2021).

241 Grooby, (2018), 'Is the HS still fit for purpose?'.

242 Ibid.

243 Green Customs, 'Who We Are', https://www.greencustoms.org/who-we-are (accessed 26 Feb. 2021).

244 Blot and Kettunen, (2021), Environmental credentials of EU trade policy.

245 Aldersgate Group (2020), Aligning the UK's Trade Policy with Its Environment and Climate Goals, Aldersgate Group, https://www.aldersgategroup.org.uk/asset/1671 (accessed 26 Feb. 2021); Greener UK (2020), Putting Climate Change at the Heart of Trade Policy, https://greeneruk.org/sites/default/files/download/2020-06/GreenerUK_Putting_climate_change_at_the_heart_of_trade_policy.pdf (accessed 26 Feb. 2021).

246 Blot and Kettunen, (2021), Environmental credentials of EU trade policy.

247 Kuik, O. and Kettunen, M. (2018), Trade Liberalisation and Biodiversity, European Commission and Institute for Environmental Studies and Institute for European Environmental Policy, February 2018, https://ieep.eu/uploads/articles/attachments/81fc8203-11a8-40db-8a63-e5751f030991/Trade%20and%20biodiversity%20-%20final%20report%20(published)%20-%20Feb%202018.pdf?v=63691176035 (accessed 26 Feb. 2021).

248 Zerk, J. (2019), Human Rights Impact Assessment of Trade Agreements, London: Royal Institute of International Affairs, https://www.chathamhouse.org/sites/default/files/2019-02-18HumanRightsTradeAgreements.pdf (accessed 26 Feb. 2021).

249 USMCA, Chapter 24 'Environment', https://ustr.gov/sites/default/files/IssueAreas/Environment/USMCA_Environment_Chapter_24.pdf (accessed 21 March 2021).

250 USTR (2021), 'CAFTA-DR Final texts', https://ustr.gov/archive/Trade_Agreements/Regional/CAFTA/CAFTA-DR_Final_Texts/Section_Index.html, (accessed 15 Mar. 2021).

251 RTRS (2021), 'Roundtable for Responsible Soy', https://responsiblesoy.org/?lang=en (accessed 15 March 2021).

252 Fairtrade International (2021), 'Fair Trade International', https://www.fairtrade.net/about/fairtrade-system.(accessed 28 Apr. 2021)

253 World Fair Trade Organization (2021), 'World Fair Trade Organization', https://wfto.com (accessed 30 March 2021)

254 GLOBALG.A.P (2021), 'GLOBALG.A.P. - The Worldwide Standard for Good Agricultural Practices', www.globalgap.org (accessed 15 March 2021)

255 Ibid.

256 UNFSS (2020), Scaling up Voluntary Sustainability Standards through Sustainable Public Procurement and Trade Policy: 4th Flagship Report of the United Nations Forum on Sustainability Standards (UNFSS), https://unfss.org/wp-content/uploads/2020/09/UNFSS-4th-Report_31Aug2020_rev2.pdf (accessed 26 Feb. 2021).

257 Blankenbach, J. (2020), Voluntary Sustainability Standards and the Sustainable Development Goals; in Negi, A., J. Pérez-Pineda and J. Blankenbach (eds) Sustainability Standards and Global Governance: Experiences of Emerging Economies, Springer, pp. 19-38.

258 ITC (2018), The State of Sustainable Markets – Statistics and Emerging Trends 2018, International Trade Centre (ITC), International Institute for Sustainable (IISD), Research Institute of Organic Agriculture (FiBL), 30 September 2018 https://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/Sustainibility%202018%20layout-FIN-web2.pdf (accessed 29 Apr. 2021).

259 Greenpeace International (2021), Publications, 'Destruction: Certified', https://www.greenpeace.org/international/publication/46812/destruction-certified/ (accessed 12 Mar. 2021); RTRS (2021), 'RTRS Comments about Greenpeace report on voluntary certifications', 11 March 2021, https://responsiblesoy.org/rtrs-comments-about-greenpeace-report-on-certification?lang=en (accessed 17 Mar. 2021).

260 Fair Trade Advocacy Office (2021), 'The International Fair Trade Charter', https://www.fair-trade.website (accessed 30 Mar. 2021).

261 ITC (2017), Publications catalogue, 'The State of Sustainable Markets: Statistics and Emerging Trends 2017', https://www.intracen.org/publication/The-State-of-Sustainable-Markets-2017-Statistics-and-Emerging-Trends/ (accessed 25 Feb. 2021).

262 UNFSS (2018), 'United Nations Conference on Trade and Development (UNCTAD)', https://unfss.org/home/projects-of-partner-agencies/the-united-nations-conference-on-trade-and-development-unctad/#1530519098499-7cfbb901-28a2 (accessed 25 Feb. 2021).

263 ITC (2021), Standards Map, https://standardsmap.org/ (accessed 1 Apr. 2021).

264 IISD (2020), 'State of Sustainability Initiatives', https://www.iisd.org/ssi/ (accessed 26 Feb. 2021).

265 FAO (2009), Guidelines for the ecolabelling of fish and fishery products from marine and capture fisheries: Revision 1, Rome: FAO, http://www.fao.org/3/i1119t/i1119t.pdf (accessed 15 Mar. 2021); Deere, C. (1999), Ecolabelling and Sustainable Fisheries, Washington, D.C: IUCN and the Food and Agriculture Organisation (FAO): Rome, http://www.iucn.org/places/usa/webdocs/publications/english_ver.pdf (accessed 1 Apr. 2021).

266 Tropical Forest Alliance and World Economic Forum (2015), Tropical Forest Alliance 2020, Geneva: World Economic Forum, http://www3.weforum.org/docs/WEF_Tropical_Forest_Alliance_2020.pdf (accessed on 17 Mar. 2021).

267 NYDF Assessment Partners (2019), Protecting and Restoring Forests: A Story of Lage Commitments yet Limited Progress: New York Declaration on Forests Five-Year Assessment Report, Berlin: Climate Focus, https://forestdeclaration.org/images/uploads/resource/2019NYDFReport.pdf (accessed 26 Feb. 2021).

268 Thomson, E. (2020), Time for change: delivering deforestation-free supply chains,Oxford: Global Canopy, https://forest500.org/sites/default/files/forest500_2021report.pdf (accessed 5 Mar. 2021); Forest 500 (2021), 'Ranking the most influential companies driving tropical deforestation', https://forest500.org (accessed 5 Mar. 2021).

269 Union for Ethical BioTrade (UEBT) (2021), 'Who we are', https://www.ethicalbiotrade.org/about-uebt (accessed 26 Feb. 2021).

270 TRASE (2021), 'What is trase?', https://trase.earth/about (accessed 26 Feb. 2021).

271 Ibid.

272 UNECE (2021), 'Traceability for Sustainable Garment and Footwear', https://unece.org/trade/traceability-sustainable-garment-and-footwear (accessed 26 Feb. 2021).

273 UNECE (2021), 'Policy shift and game-changing tech will enable sustainable and circular economy at scale', 26 March 2021, https://unece.org/circular-economy/news/policy-shift-and-game-changing-tech-will-enable-sustainable-and-circular (accessed 1 Apr. 2021).

274 UNECE (2019), 'Transparency in fashion – UNECE mobilizing industry and experts to develop blockchain traceability tool and policy framework under EU-funded project', 8 November 2019, https://www.unece.org/info/media/news/trade/2019/transparency-in-fashion-unece-mobilizing-industry-and-experts-to-develop-blockchain-traceability-tool-and-policy-framework-under-eu-funded-project/doc.html (accessed 26 Feb. 2021).

275 Ganne, E. (2019), 'Why blockchain could become the new container of international trade', International Trade Centre, 3 June 2019, https://www.intracen.org/news/Why-blockchain-could-become-the-new-container-of-international-trade/ (accessed 20 Jan. 2021); UNECE (2020), White Paper. Blockchain in Trade Facilitation, Geneva: UNECE, http://www.unece.org/fileadmin/DAM/cefact/GuidanceMaterials/WhitePaperBlockchain.pdf (accessed 20 Jan. 2021).

276 Sulkowski, A. and Mayer, D. (2018), 'Blockchain, Business Supply Chains, Sustainability, and Law: The Future of Governance, Legal Frameworks and Lawyers?', Delaware Journal of Corporate Law (DJCL), 43: pp. 303-345, DOI:10.2139/ssrn.3262291, (accessed 30 Apr. 2021).

277 UNCTAD Automated System for Customs Data (Ayscuda) (2021), 'Home page', https://asycuda.org/en/ (accessed 5 Apr. 2021).

278 UNECE (2021), 'UN/CEFACT standards help to tighten the net on illegal fishing', 25 February 2021, https://unece.org/circular-economy/press/uncefact-standards-help-tighten-net-illegal-fishing (accessed 1 Apr. 2021); UNECE (2021), 'UNECE's e-Basel standard set to support sound international movement of hazardous and plastic waste', 28 January 2021, https://unece.org/circular-economy/news/uneces-e-basel-standard-set-support-sound-international-movement-hazardous (accessed 15 Feb. 2021).

279 Rathke, S., Thomas, D., Garbett, S., and Berger, M. (2015), 'Litigation Fallout from All This Supply Chain Transparency Legislation (Or, These Things Have Teeth!) (Or, The Cycle of Misfortune)', National Law Review, 26 August 2015, https://www.natlawreview.com/article/litigation-fallout-all-supply-chain-transparency-legislation-or-these-things-have (accessed 5 Apr. 2021); Rathke, S. (2015), 'The Problem with Palm Oil (Or, The Next Wave of Supply Chain Class Actions', Squire Patton Boggs Global Supply Chain Law Blog, 9 December 2015, https://www.globalsupplychainlawblog.com/consumer-products/the-problem-with-palm-oil-or-the-next-wave-of-supply-chain-class-actions/ (accessed 26 Feb. 2021).

280 BBC News (2019), 'Court rules Zambians can seek compensation for pollution', 10 April 2019, https://www.bbc.com/news/business-47881230 (accessed 26 Feb. 2021).

281 Eastwood, S., Ford, J. and Reynolds, L. (2021), 'Business and Human Rights – UK Launches Modern Slavery Statement Registry', Mayer Brown Eye on ESG: Tracking the Transition to Sustainable Business and Finance, 16 March 2021, https://www.eyeonesg.com/2021/03/business-and-human-rights-uk-modern-slavery-registry-launch/ (accessed 15 Mar. 2021).

282 Samuel, H. (2020), 'Toxic pesticides made in France and banned in Europe 'must not be sold abroad', court rules', The Telegraph, 31 January 2020, https://www.telegraph.co.uk/news/2020/01/31/toxic-pesticides-made-france-banned-europe-must-not-sold-abroad/ (accessed 15 Mar.2021).

283 Ibid.

284 Bezerra, L. and Gomes, G. (2021), 'Climate and Stakeholder Litigation: Why Does it Matter to Companies Operating in Brazil?', Mayer Brown Eye on ESG: Tracking the Transition to Sustainable Business and Finance, 8 March 2021, https://www.eyeonesg.com/2021/03/climate-and-stakeholder-litigation-why-does-it-matter-to-companies-operating-in-brazil/ (accessed 15 Mar. 2021).

285 Coke Hamilton, P. and Nkurunziza, J. (2020), 'COVID-19 and food security in vulnerable countries', UNCTAD, 14 April 2020, https://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=2331 (accessed 26 Feb. 2021).

286 FAO (2020), Small Island Developing States. Response to COVID-19: Highlighting food security, nutrition and sustainable food systems, Rome: FAO, http://www.fao.org/3/ca8994en/CA8994EN.pdf (accessed 26 Feb. 2021); Rashid, H., Lynn Ng, P. and Wai Jackie Cheng, H. (2020), 'UN/DESA Policy Brief #64: The COVID-19 pandemic puts Small Island Developing economies in dire straits', UN/DESA, 1 May 2020, https://www.un.org/development/desa/dpad/publication/un-desa-policy-brief-64-the-COVID-19-pandemic-puts-small-island-developing-economies-in-dire-straits/ (accessed 26 Feb. 2021).

287 Espitia, A., Rocha, N. and Ruta, M. (2020), 'Trade and the COVID-19 crisis in developing countries', VoxEU Column, 9 April 2020, https://voxeu.org/article/trade-and-COVID-19-crisis-developing-countries (accessed 26 Feb. 2021); UN Committee for the Coordination of Statistical Activities (2020), How COVID-19 is changing the world: a statistical perspective, Geneva: UNCTAD, https://unstats.un.org/unsd/ccsa/documents/covid19-report-ccsa.pdf (accessed 26 Feb. 2021); Escaith, H., Khorana, S., MacGregor, J., Vickers, B. and Ali, S. (2020), The Potential Impact of COVID-19 on Commonwealth Trade, Recovery and Resilience, London: Trade, Oceans and Natural Resources Directorate of the Commonwealth Secretariat, https://www.thecommonwealth.io/wp-content/uploads/2020/07/COVIDTradeRecoveryResilience_THT161.pdf (accessed 26 Feb. 2021).

288 George, L. (2020), 'COVID-19 is exacerbating food shortages in Africa', World Economic Forum Global Agenda, 27 April 2020, https://www.weforum.org/agenda/2020/04/africa-coronavirus-covid19-imports-exports-food-supply-chains (accessed 20 Apr. 2021).

289 Bellmann, C. (2020), 'Privileging Local Food is Flawed Solution to Reduce Emissions', Chatham House Expert Comment, 23 April 2020, https://www.chathamhouse.org/2020/04/privileging-local-food-flawed-solution-reduce-emissions (accessed 30 Apr. 2021).

290 La Via Campesina (2021), ''Outdated model, fails the planet' Civil Society, Social Movements in Europe slam EU-Mercosur deal', 18 March 2021, https://viacampesina.org/en/outdated-model-fails-the-planet-civil-society-social-movements-in-europe-slam-eu-mercosur-deal/ (accessed 28 March 2021); Borrows, J. and R. Schwartz (eds) (2020), Indigenous Peoples in International Trade: Building Equitable and Inclusive International Trade and Investment Agreements, Cambridge: Cambridge University Press.

291 World Trade Organization (2020), 'New initiatives launched to intensify WTO work on trade and the environment', WTO News, 17 November 2020, https://www.wto.org/english/news_e/news20_e/envir_17nov20_e.htm (accessed 16 Mar. 2021); World Trade Organization (2021), 'First meeting held to advance work on trade and environmental sustainability', WTO News, 8 March 2021, https://www.wto.org/english/news_e/news21_e/tessd_08mar21_e.htm (accessed 16 Mar. 2021).

292 UNCTAD (2021), Trade and Environment Review 2021: Trade-climate readiness for developing countries, Geneva: UNCTAD, https://unctad.org/system/files/official-document/ditcted2020d3_en.pdf (accessed 1 Mar. 2021).

293 Steenblik, R. and Droege, S. (2019), 'Time to ACCTS? Five countries announce new initiative on trade and climate change', IISD Blog, 25 September 2019, https://www.iisd.org/articles/time-accts-five-countries-announce-new-initiative-trade-and-climate-change (accessed 26 Feb. 2021).

294 Charveriat and Deere Birkbeck (2020), Greening Trade for a Global, Green, and Just Recovery.

295 OECD (2018), International Trade and the Transition to a More Resource Efficient and Circular Economy – Concept Paper. COM/TAD/ENV/JWPTE(2017)3/FINAL, Paris: OECD, 25 September 2018, http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=COM/TAD/ENV/JWPTE(2017)3/FINAL&docLanguage=En (accessed 21 Mar. 2021).

296 UNECE and UNESCAP (2019), Principles of Sustainable Trade, Special Program for the Economies of Central Asia, Fourteenth Session of the Governing Council, United Nations, 19 November 2019, https://unece.org/fileadmin/DAM/SPECA/documents/gc/session14/Principles_of_Sustainable_Trade__Trade__English.pdf (accessed 15 April 2021).

297 Economic Commission for Africa (2021), 'ATPC embarks on first ever environmental assessment of the AfCFTA to usher in green-friendly trade on the continent', 8 April 2021, https://www.uneca.org/stories/atpc-embarks-on-first-ever-environmental-assessment-of-the-afcfta-to-usher-in-green-friendly (accessed 28 Apr. 2021).

298 AUDA-NEPA (2021), 'Environmental Sustainability', https://www.nepad.org/areas-of-work/environmental-sustainability (accessed 15 April 2021); AUDA-NEPA (2021), 'Economic Integration', https://www.nepad.org/areas-of-work/economic-integration (accessed 15 April 2021).

299 European Commission (2021), Annex to the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Trade Policy Review – An Open, Sustainable and Assertive Trade Policy, European Commission, 18 February 2021, https://trade.ec.europa.eu/doclib/docs/2021/february/tradoc_159439.pdf (accessed 26 Feb. 2021).

300 Blot and Kettunen (2021), 'Trade policy review: How green is the future of EU trade'.

301 European Commission (2020), European Commission non-paper on possible trade and climate initiative in WTO, European Commission, 30 October 2020, https://trade.ec.europa.eu/doclib/docs/2020/november/tradoc_159117.pdf (accessed 28 Feb. 2021); European Commission (2021), Reforming the WTO: Towards a Sustainable and Effective Multilateral Trading System (accessed 28 Feb. 2021).

302 USTR (2021), 2021 Trade Policy Agenda and 2020 Annual Report Of The President of the United States on the Trade Agreements Program, USTR, March 2021, p.3. https://ustr.gov/sites/default/files/files/reports/2021/2021 Trade Agenda/Online PDF 2021 Trade Policy Agenda and 2020 Annual Report.pdf (accessed 3 March 2021).

303 US Department of State (2021), 'U.S.-China Joint Statement Addressing the Climate Crisis', 17 April 2021, https://www.state.gov/u-s-china-joint-statement-addressing-the-climate-crisis/ (accessed 20 April 2021).

304 World Trade Organisation (2020), WTO Informal Dialogue on Plastic Pollution and Environmentally Sustainable Plastics Trade, WT/CTE/W/250, Geneva: WTO; Deere Birkbeck, C. (2021), Strengthening international cooperation to tackle plastic pollution: Options for the WTO, Global Governance Centre Brief 20/1, Global Governance Centre, The Graduate Institute, January 2020 https://static1.squarespace.com/static/5b0520e5d274cbfd845e8c55/t/5e25683a556e15498ad1e73f/1579509842688/Plastic_Trade_WTO_Final.pdf ; Deere Birkbeck, C. and M. Sugathan (2021), How can trade policy support international cooperation to tackle plastics pollution? Challenges, opportunities and policy options, Geneva: Global Governance Centre and the Forum on Trade, Environment and the SDGs, Graduate Institute.

305 UNCTAD (2021), 'Trade and Environment Review 2021: Trade-climate readiness for developing countries'.

306 United Nations (2018), One Plan for One Planet. 5 Year Strategy 2018-2022, https://spaces.oneplanetnetwork.org/system/files/strategy_one_planet.pdf (accessed 24 Feb. 2021).

307 United Nations High-Level Political Forum on Sustainable Development, The 10 Year Framework of Programs on Sustainable Consumption and Production Patterns (10YFP), United Nations Knowledge Platform, https://sustainabledevelopment.un.org/content/documents/1444HLPF_10YFP2.pdf (accessed 24 Feb. 2021).

308 UNEP (2018), Indicators of Success: Demonstrating the shift to Sustainable Consumption and Production: Principles, processes and methodology, United Nations Environment, p. 5, https://spaces.oneplanetnetwork.org/system/files/10yfp_indicators_of_success_2017_pdf.pdf (accessed 24 Feb. 2021); UN (2018), Five Years In: The One Planet network 2012-2017, United Nations One Planet Network, https://www.oneplanetnetwork.org/sites/default/files/one_planet_network_mid-term_magazine.pdf (accessed 24 Feb. 2021).

309 UNEP, 'About resource efficiency', https://www.unenvironment.org/explore-topics/resource-efficiency/about-resource-efficiency (accessed 24 Feb. 2021).

310 World Trade Organization (2021), The Legal Status of "Joint Statement initiatives" and their Negotiated Outcomes – submission by India and South Africa to the WTO General Council, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/GC/W819.pdf&Open=True (accessed 5 April 2021).

311 Lowe, S. (2019), 'The EU Should Reconsider its Approach to Trade and Sustainable Development', Centre for European Reform, 31 October 2019, https://www.cer.eu/insights/eu-should-reconsider-its-approach-trade-and-sustainable-development (accessed 26 Feb. 2021).

312 Harrison, J. and S. Paulini (2020), The Trade and Sustainable Development Chapter in the EU-Mercosur Association Agreement Is it fit for purpose?, Client Earth, https://www.documents.clientearth.org/wp-content/uploads/library/2020-07-15-the-trade-and-sustainable-development-chapter-in-the-eu-mercosur-association-agreement-ext-en.pdf (accessed 10 March 2021); IEEP (2020), Green trade for green recovery IEEP's response to the European Commission's public consultation 'A renewed trade policy for a stronger Europe', Institute for European Environmental Policy, http://minisites.ieep.eu/assets/2697/IEEP_s_response_to_the_EU_Trade_Policy_Review_Nov_2020_.pdf (accessed 5 March 2021); Blot, E. and Kettunen, M. (2021), 'Trade policy review: How green is the future of EU trade?', Institute for European Environmental Policy, 4 March 2021, https://ieep.eu/news/trade-policy-review-how-green-is-the-future-of-eu-trade (accessed 10 March 2021).

313 Leal-Campos (2021), Novel and existing approaches included in trade agreements to reduce deforestation and conserve forests, Presentation for webinar on Reducing Deforestation and Enhancing Forest Conservation Through International Trade Policy.

314 Simon, F. (2020), 'Leaked EU-Mercosur trade deal lacks teeth on climate, activists say', Euractiv, 9 October 2020, https://www.euractiv.com/section/climate-environment/news/leaked-eu-mercosur-trade-deal-lacks-teeth-on-climate-activists-say/ (accessed 17 March 2021).

315 European Commission (2021), 'Strong EU trade enforcement rules enter into force',

https://ec.europa.eu/commission/presscorner/detail/en/IP_21_601 (accessed 26 March 2021).

316 European Commission (2021), 'Cambodia loses duty-free access to the EU market over human rights concerns', European Commission, 12 August 2020, https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1469 (accessed 26 March 2021).

317 Blot, E. and Kettunen, M. (2021), 'Environmental credentials of EU trade policy – A comparative analysis of EU free trade agreements', Brussels and London, Institute for European Environmental Policy, https://ieep.eu/publications/environmental-credentials-of-eu-trade-policy (accessed 15 April 2021).

318 SECO (2021), Indonesia; Sieber-Gassser, C. (2021), EFTA-Indonesia: Accelerating the Transition to (More) Sustainable Trade?; Leal-Campos (2021).

319 Government of Canada, 'Comprehensive and Progressive Agreement for Trans-Pacific Partnership', https://www.international.gc.ca/trade-commerce/trade-agreements-accords-commerciaux/agr-acc/cptpp-ptpgp/text-texte/cptpp-ptpgp.aspx?lang=eng (accessed 15 April 2021).

320 Treat, S. (2021), 'Will new NAFTA block Biden's progress regulatory policies', The Hill, 19 March 2021, https://thehill.com/opinion/international/544044-will-new-nafta-block-bidens-progressive-regulatory-policies (accessed 26 Feb. 2021).

321 USTR (2020), USMCA Fact Sheet: Environment, https://ustr.gov/sites/default/files/files/Press/fs/USMCA/USMCA_Environment.pdf (accessed 25 March 2021); B. Malkawi and S. Kazmi (2020), 'Dissecting and Unpacking the USMCA Environmental Provisions: Game-Changer for Green Governance?',JURIST – Academic Commentary, 5 June 2020, https://www.jurist.org/commentary/2020/06/malkawi-kazmi-USMCA-environment/ (accessed 28 Apr. 2021).

322 USTR (2020), 'Benefits for the Environment in the United States-Mexico-Canada Agreement', https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement (accessed 25 March 2021).

323 USTR (2009), 'United States and Peru, Chapter Eighteen: Environment', https://ustr.gov/sites/default/files/uploads/agreements/fta/peru/asset_upload_file953_9541.pdf (accessed 26 Feb. 2021).

324 USTR (2021), 'Benefits for the Environment in the U.S.-Peru TPA', https://ustr.gov/peru-tpa/environment (accessed 25 Feb. 2021).

325 Ibid.

326 USTR (2019), 'USTR Successfully Resolves Concerns Raised in First-Ever Environment Consultations Under the US-Peru Trade Promotion Agreement (PTPA)', 4 September 2019, https://ustr.gov/about-us/policy-offices/press-office/press-releases/2018/april/ustr-successfully-resolves-concerns (accessed 25 Feb. 2021).

327 OECD (2021), 'Extended Producer Responsibility', http://www.oecd.org/environment/waste/extended-producer-responsibility.htm (accessed 26 Feb. 2021).

328 Ibid.

329 Ibid.

330 European Commission (2021), 'EU Waste Legislation', https://ec.europa.eu/environment/waste/legislation/ (accessed 26 Feb. 2021); European Commission DG Environment (2014), Development of Guidance on Extended Producer Responsibility (EPR): Final Report, European Commission, https://ec.europa.eu/environment/archives/waste/eu_guidance/pdf/report.pdf (accessed 26 Feb. 2021).

331 Ibid.

342 Ibid.

343 FAO and WHO (2021), 'About Codex Alimentarius', http://www.fao.org/fao-who-codexalimentarius/about-codex/en/ (accessed 26 Feb. 2021).

344 FAO, "Are Codex Standards Mandatory?" http://www.fao.org/fao-who-codexalimentarius/about-codex/faq/faq-detail/en/c/454753/ (accessed 15 April 2021).)

339 WWF-UK (2021), WWF briefing on the UK's role in building environmental standards for trade and agriculture, https://www.wwf.org.uk/sites/default/files/2021-03/WWF%20Parliamentary%20Briefing_twin%20track%20approach.pdf (accessed 1 April 2021).

340 Ibid.

341 Trade and Agriculture Commission (2021), Trade and Agriculture Commission: Final Report March 2021, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/965756/Trade-and-Agriculture-Commission-final-report.pdf (accessed 1 April 2021).

332 ISO (2021), 'ISO 14000 Family: Environmental Management', https://www.iso.org/iso-14001-environmental-management.html (accessed 26 Feb. 2021).

333 ISO (2015), 'ISO 14001: 2015 Environmental management systems – Requirements with guidance for use', https://www.iso.org/standard/60857.html (accessed 26 Feb. 2021).

334 ISO (2016), 'ISO 14004:2016 Environmental management systems – General guidelines on implementation', https://www.iso.org/standard/60856.html (accessed 26 Feb. 2021).

335 ISO (2021), 'ISO 26000 Social Responsibility', https://www.iso.org/iso-26000-social-responsibility.html (accessed 26 Feb. 2021).

336 ISO (2017), 'ISO 20400:2017. Sustainable procurement – Guidance', https://www.iso.org/standard/63026.html (accessed 26 Feb. 2021).

337 ISO (2018), 'ISO 14080: 2018 Greenhouse gas management and related activities – framework and principles for methodologies on climate actions', https://www.iso.org/standard/67452.html (accessed 26 Feb. 2021).

338 Naden, C. (2020), 'Putting Sustainability at the Heart of the Standards Agenda', ISO, 28 July 2020, https://www.iso.org/news/ref2538.html (accessed 21 Feb. 2021); Baumann, T. (2017), PRIMER: ISO Climate-Related Standards, Updates, and Choosing the Right Committee, Washington, D.C.: Greenhouse Gas Management Institute, https://ghginstitute.org/wp-content/uploads/2017/05/GHGMI-ISO-climate-standards-primer-TB.pdf (accessed 21 Feb. 2021).

345 OECD (2018), RE-CIRCLE. Resource Efficiency and Circular Economy Project, Paris: OECD, p.3, https://www.oecd.org/environment/indicators-modelling-outlooks/brochure-recircle-resource-efficiency-and-circular-economy.pdf (accessed 25 Feb. 2021); Börkey, P. (2017), OECD work on the circular economy: Driving towards Circularity Bratislava 6-7 November 2017, Paris: OECD, http://www.t2ge.eu/sites/www.t2ge.eu/files/attachments/9s1-borkey-presentation.pdf (accessed 25 Feb. 2021).

346 Ibid.

347 European Commission (2020), EUR-Lex, 'Communication from the commission to the European Parliament, the Council, the European economic and social committee, and the committee of the regions: A new Circular Economy Action Plan: For a cleaner and more

competitive Europe', https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN (accessed 25 Feb. 2021).

348 European Commission (2017), 'Internal Market, Industry, Entrepreneurship and SMEs: Sustainability', https://ec.europa.eu/growth/industry/sustainability/circular-economy_en (accessed 25 Feb. 2021).

349 Chatham House (2021), Circular Economy Policies, https://circulareconomy.earth/ (accessed 28 Apr. 2021).

350 World Trade Organization (2020), Working Papers, 'Trade Policies for a Circular Economy: what can we learn from WTO experience', https://www.wto.org/english/res_e/reser_e/ersd202010_e.htm (accessed 25 Feb. 2021); Van der Ven, C. (2020), The Circular Economy, Trade, and Development: Addressing spillovers and leveraging opportunities; Yamaguchi, S. (2018), International Trade and the Transition to a More Resource Efficient and Circular Economy, Paris: OECD Publishing, https://www.oecd.org/environment/waste/policy-highlights-international-trade-and-the-transition-to-a-circular-economy.pdf (accessed 25 Feb. 2021); OECD (2018), International Trade and the Transition to a More Resource Efficient and Circular Economy – Concept Paper - Joint Working Party on Trade and Environment, COM/TAD/ENV/JWPTE(2017)3/FINAL, Paris: OECD Publishing, http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=COM/TAD/ENV/JWPTE(2017)3/FINAL&docLanguage=En (accessed 25 Feb. 2021).

351 World Business Council for Sustainable Development (2020), 'The circular bioeconomy is a USD $7.7 trillion opportunity for business and a key element in the fight against climate change, biodiversity loss and resource scarcity', 23 November 2020, https://www.wbcsd.org/Programs/Circular-Economy/Factor-10/News/The-circular-bioeconomy-is-a-USD-7.7-trillion-opportunity-for-business-and-a-key-element-in-the-fight-against-climate-change-biodiversity-loss-and-resource-scarcity (accessed 1 Feb. 2021).

352 Kettunen, M., Gionfra,S. and Monteville, M. (2019), EU Circular Economy and Trade: Improving Policy Coherence for Sustainable Development, Brussels and London: Institute for European Environmental Policy, https://ieep.eu/uploads/articles/attachments/bdcfb1ce-e9b8-4226-8bef-4c60e4fa5250/EU%20trade,%20CE%20and%20sustainable%20development%20(IEEP%202019)%20FINAL.pdf?v=63750442959 (accessed 30 Nov. 2020); Tamminen, S., Sell, M., Forslund, T., Tipping, A., Soprana, M. and Bellmann, C. (2020), Trading Services for a Circular Economy, Winnipeg: International Institute for Sustainable Development, https://www.iisd.org/system/files/2020-10/trading-services-circular-economy.pdf (accessed 25 Feb. 2021).

353 Zero Waste Europe (2021), European waste trade impacts on Malaysia's zero waste future: Case study, Brussels: Zero Waste Europe, https://zerowasteeurope.eu/wp-content/uploads/2021/01/zwe_case-study_european-waste-trade-impacts-on-malaysias-zero-waste-future_en.pdf (accessed 25 Mar. 2021).

354 Ellen MacArthur Foundation (2013), Towards the Circular Economy: Economic and business rationale for an accelerated transition, Cowes: Ellen MacArthur Foundation, https://www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf (accessed 26 Feb. 2021).

359 Bacchus, J. (2017), The Case for a WTO Climate Waiver, Waterloo: Center for International Governance Innovation, https://www.cigionline.org/sites/default/files/documents/NEWEST%20Climate%20Waiver%20-%20Bacchus.pdf (accessed 15 Apr. 2021).

360 World Trade Organization (2003), Implementation of paragraph 6 of the Doha Declaration on the TRIPS Agreement and public health WT/L/540 and Corr. 1, Geneva: World Trade Organization, https://www.who.int/medicines/areas/policy/WT_L_540_e.pdf (accessed 29 Apr. 2021).

361 Ibid.

355 Marcu, M. and Dybka, D. (2021), Status of the Border Carbon Adjustments' international developments, Brussels: European Roundtable on Climate Change and Sustainable Transition, https://secureservercdn.net/160.153.137.163/z7r.689.myftpupload.com/wp-content/uploads/2021/03/20210311-international-BCAs-ERCST-update-1.pdf (accessed 1 Apr. 2021).

356 European Parliament (2021), Texts Adopted, 'European Parliament resolution of 10 March 2021 towards a WTO-compatible EU carbon border adjustment mechanism', https://www.europarl.europa.eu/doceo/document/TA-9-2021-0071_EN.html (accessed 1 Apr. 2021).

357 Mehling, M. and Marcu, A. (2021), Ensuring the Acceptability of Border Carbon Adjustments, Brussels: European Roundtable on Climate Change and Sustainable Transition, https://secureservercdn.net/160.153.137.163/z7r.689.myftpupload.com/wp-content/uploads/2021/03/20210329-Acceptability-of-BCAs.pdf; (accessed 1 Apr. 2021); Mehling, M., Van Asselt, H., Das, K., Droege, S., Verkuijl, C., (2017), Designing BCAs for Enhanced Climate Action, London: Climate Strategies, https://climatestrategies.org/wp-content/uploads/2017/12/CS_report-Dec-2017-4.pdf (accessed 21 Feb. 2021); and Cosbey, A., Droege, S., Fischer, K. (2019), 'Developing Guidance for Implementing Border Carbon Adjustments: Lessons, Cautions, and Research Needs from the Literature', Review of Environmental Economics and Policy, 13(1): pp. 3-22, doi.org/10.1093/reep/rey020 (accessed 29 Apr. 2021).

358 Victor, D.G. (2015), The Case for Climate Clubs, Geneva: International Centre for Trade and Sustainable Development (ICTSD) and Geneva: World Economic Forum, https://e15initiative.org/wp-content/uploads/2015/09/E15-Climate-Change-Victor-FINAL.pdf (accessed 29 Apr. 2021); Nordhaus, W.D. (2015), 'A New Solution: The Climate Club' New York Review of Books, 4 June 2015, https://www.nybooks.com/articles/2015/06/04/new-solution-climate-club (accessed 29 Apr. 2021).

362 Global Footprint Network (2021), 'Measure what you treasure', https://www.footprintnetwork.org/ (accessed 26 Feb. 2021).

363 WWF (2020), Carbon Footprint: Exploring the UK's contribute to climate change, March 2020, https://www.wwf.org.uk/sites/default/files/2020-04/FINAL-WWF-UK_Carbon_Footprint_Analysis_Report_March_2020%20%28003%29.pdf (accessed 26 Feb. 2021).

364 Lamay, P., Pons, G., and Leturcq, P. (2019), Greening the European Union's Trade Policy: The Economic of Trade and the Environment, Paris: Jacques Delors Institute, https://institutdelors.eu/wp-content/uploads/2019/12/PP245_Verdirlecommerce2-EN_PL-GP-PLT.pdf (accessed 19 Feb. 2021).

365 Global Footprint Network (2021), 'Ecological Footprint', https://www.footprintnetwork.org/our-work/ecological-footprint/ (accessed 26 Feb. 2021).

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