## **Transforming Trade:** A reform agenda towards sustainable food and land use systems

November 2021





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The Food and Agriculture Organization of the United Nations (FAO) estimates that global trade in food reached \$1.53 trillion in 2020, more than twice its level twenty years before.<sup>1</sup> Trade in food is essential to meeting the needs of growing cities and food insecure countries worldwide. It enables a significant source of jobs and revenues for exporting countries. The importance of trade is set to rise further with climate change, as supply shocks become more frequent, and more people come to depend on imports. The early signs of this are visible. In 2021 alone, droughts on all inhabited continents have contributed to global food price increases of over a third, an upward trend that predates the COVID-19 pandemic.<sup>2,3</sup>

Global trade of food magnifies some of the challenges of the food system, such as greenhouse gas emissions, deforestation and biodiversity loss, as well as health and social inclusion costs. Food and land use systems generate "hidden" environmental, health and poverty costs estimated at almost \$12 trillion a year, a number larger than the value of the system's global output measured at market prices.<sup>4</sup> Trade in

food is heavily implicated in some of these costs, especially for tropical forest commodities like soya and palm oil, which are mostly exported and drive deforestation.

At the same time, sustainable trade is essential to protecting food security and livelihoods in an increasingly unstable, warming world. Rather than reversing the globalisation of food production and trade, the challenge is to reduce the costs and distortions associated with the current trade system, and align it with global goals, such as those articulated in the Paris Agreement and the Sustainable Development Goals (SDGs). To this effect, the Food and Land Use Coalition (FOLU) has proposed a definition for "sustainable trade" of food and agriculture products as a basis for setting sustainability standards in the multilateral trade system, government policies and corporate voluntary standards.

**Several barriers must be addressed in order to move towards this proposed vision of sustainable trade.** They include: 1) a lack of positive incentives to encourage greater adoption of sustainable practices; 2) market concentration and power dynamics between value chain actors; 3) market leakage; 4) sensitivities around price of food and affordability; and finally 5) lack of traceability and transparency systems to support sustainability aims.

There are a range of trade and market mechanisms that can be reoriented to achieve greater sustainability aims. These include the use of due diligence systems, free trade agreements, tariffs, and other market mechanisms that have been applied to nature-related issues. Trade policies must comply with the World Trade Organization's (WTO) "most-favoured nations principle", requiring fair and even treatment of like products imported to any WTO member country. Further impact can be achieved where measures involve mutual benefits rather than impositions.

#### We suggest nine actions to overcome these barriers, grouped under two overarching objectives:

(A) Integrate sustainability and climate objectives into trade policy to deliver stable, affordable, and resilient food systems. Trade, climate, nature, and people are inextricably linked. Policymakers should therefore do more to align trade policy with domestic objectives and international commitments relating to food security, health, and environment. Multilateral institutions such as the WTO and the United Nations Conference on Trade and Development (UNCTAD) can play a critical role in fostering such integration. At the same time, it should be possible to demonstrate the potential for making trade sustainable through bi- and plurilateral 'coalitions of the willing'.

**(B)** Align underlying domestic policies to support more sustainable trade. It is also important to revise domestic policies that contribute to the unsustainable production of tradable commodities. These include perverse agricultural subsidies and a lack of data accessibility that prevents greater transparency. A further action is to raise minimum sustainability standards across corporate value chains and provide technical and financial support to producers who face more demanding trading standards, so that small producers and producing countries are not put at a disadvantage.

The globalised nature of our trade system means that no one country can achieve food security and resilience on its own. It is in our collective interest to work together via global coordinated action to discuss and align on ways forward. FOLU seeks to demonstrate that, through such interventions, it is possible to achieve the multiple aims of accelerating trade, creating new development opportunities, ensuring food security, and protecting biodiversity, climate and nature.

## Transforming Trade: A reform agenda towards sustainable food and land use systems



## Introduction

Sustainable cacao grower in Uraba, Colombia (Chris de Bode for Panos Pictures, commissioned by FOLU)

The Food and Land Use Coalition (FOLU) is a community of organisations and individuals committed to the urgent need to transform the way humankind uses land and produces, processes, trades, distributes and consumes food for people, nature and climate. In 2019, FOLU published its Global Consultation Report, *Growing Better: Ten Critical Transitions to Transform Food and Land Use*, which was the first integrated assessment of the social, economic and environmental benefits of transforming food and land use systems. Implementing *Growing Better*'s reform agenda – centred around ten critical transitions – aims to deliver a societal return that is more than 15 times the related investment cost (estimated at less than 0.5 percent of global GDP) and create new business opportunities worth up to \$4.5 trillion a year by 2030.<sup>i</sup>

i Trade was a key part of the integrated modelling that underpinned this work. The "Better Future" scenario described in the Growing Better report maintained a moderate and open approach to global trade while facilitating increased interregional trade, particularly within sub-Saharan Africa due to greater investments in connectivity across the continent.

The FOLU Growing Better report underscored the critical role of international trade in the sustainable transition of food and land use systems, not only for food security but also for biodiversity and climate mitigation. However, while trade can help countries access a greater variety of foods and can reduce the price of food through comparative advantage, trade flows can also magnify environmental costs and expand access to unhealthy and ultra-processed foods. In fact, many of the features of today's trading and investment system do not contribute to environmental, health and inclusion objectives, and may even undermine food security itself. As such, FOLU calls for both strengthening of local food markets as well as international cooperation between relevant national actors and international bodies to modify international trade regimes.

**Recognising the importance of trade policymakers and multilateral trade bodies in food and land use systems transformation, FOLU has drafted this discussion paper specifically for these actors.** The paper is informed by ongoing consultation with trade experts, desk-based research and a number of FOLU initiatives that relate to trade (see Box 3 in Conclusion). We believe that this paper is also particularly timely, since there is an important window of opportunity for reform of the global trade system with the appointment of Dr. Ngozi Okonjo-Iweala – a long standing Ambassador of the Food and Land Use Coalition – as the new Director General of the World Trade Organization.

Section 1 of this paper sets out why food and land use systems transformation is critical to trade policymakers who are primarily focused on export-driven growth and stability of strategic imports. Simply put, trade policymakers should care because climate change and natural resource depletion create disruptions throughout supply chains, impacting production and creating volatility. This is true for all forms of trade but is particularly relevant in the case of agricultural and fishery products since the increase in frequency, intensity and impacts of extreme weather events will place chronic stress on food systems.

Section 2 puts forth a definition and vision for "sustainable trade" of food, ocean and land use-related products and services. This definition is important because it a) fosters alignment among actors at different scales (global, national, sub-national) and from different sectors (trade policy, agriculture and environment policy, health policy, business, civil society, finance) around a shared vision of the future of trade and food and land use systems, and b) establishes measurable goals and outcomes of progressing towards that shared vision.

Section 3 is a discussion of the barriers that need to be addressed in order to move towards this proposed vision of sustainable trade. Barriers include: 1) lack of positive incentives and financial support to encourage greater adoption of sustainable practices; 2) market concentration and power dynamics between value chain actors; 3) market leakage; 4) sensitivities around price of food and affordability; and finally 5) lack of traceability and transparency systems to support sustainability aims.

Section 4 discusses the various applications of trade and market mechanisms that have previously been utilised to deliver on sustainability outcomes. The use of specific mechanisms – including the bundling of policies together – must be evaluated within specific national, bilateral and in some cases multilateral contexts.

#### Section 5 then sets out nine actions for policymakers, centered around two high level objectives:

- Integration of sustainability and climate objectives into trade policy
- Align domestic policies to target underlying trade conditions

## Section 1: Why food and land use systems transformation is central to trade interests

A farmer harvests bananas in fields which incorporate Jain micro-irrigation techniques at Tandalwadi village in Jalgaon, Maharashtra, India (Atul Loke for Panos Pictures, commissioned by FOLU)

#### Food and land use systems

The term "food and land use systems" covers every factor in the ways land is used and food is produced, stored, packed, processed, traded, distributed, marketed, consumed, and disposed of. It embraces the social, political, economic, and environmental systems that influence and are influenced by those activities. It also includes food from aquatic systems (both marine and freshwater), as well as land use for non-food purposes, such as bioenergy, fibres for textiles and plantation forestry products.

**Food and land use systems – and the international trade of products and services related to these systems – are important elements of the global economy.** Over the past two decades, trade in agricultural products has more than tripled to reach \$1.53 trillion,<sup>1</sup> driven primarily by demand growth in large emerging economies and greater south-south trade, which now accounts for roughly a quarter of total agricultural trade flows.<sup>5</sup> Agriculture, forestry and fishing now account for just under 3.5 percent of the global economy, while food and land use systems as a whole account for around ten percent.<sup>6,ii</sup> Generally, these sectors are more important to a country the lower its income; in low-income countries, the agricultural sector on average accounts for around 25 percent of gross domestic product (GDP), 40 percent of net exports and over 60 percent of employment.<sup>7</sup>

Table 1 provides an overview, based on standard indicators, of the importance of agriculture, forestry and fisheries to economies at different income levels.

	Low-income countries	Middle-income countries	High-income countries
Share of GDP	25%	8%	1%
Share of employment	63%	30%	3%
Value add/employee versus national average	37%	21%	52%
Share of investment	8%	5%	2%
Share of exports	40%	13%	9%
Share of imports	16%	9%	8%
Percentage of global food production	3%	72%	26%

#### Table 1: Overview of the Agriculture, Forestry and Fishing Economy(percent per country per category)

Source: World Bank data, 2019<sup>8</sup>

iii This larger figure includes all the downstream processing and distribution of food, amounting to around two-thirds of endto-end economic value creation (as measured by GDP) in total food and land use systems. All that downstream activity depends on well-functioning agricultural production on farms, whose economic significance is therefore arguably understated in conventional measures.

**Food and land use systems are in urgent need of transformation.** Not only do these systems make inefficient use of resources but they generate "hidden" environmental, health and poverty costs estimated at almost \$12 trillion a year, a number larger than the value of the system's global output measured at market prices.<sup>4</sup> This inefficiency undermines global food security and with harvests and food prices increasingly affected by climate-related volatility, the world cannot afford not to change.

**Transformation of food and land use systems means the delivery of climate mitigation, nature protection and restoration, food and nutritional security and more inclusive and resilient rural economies.** FOLU's 2019 Global Consultation report – *Growing Better: Ten Critical Transitions to Transform Food and Land Use* – describes a reform agenda centred around ten critical transitions which would deliver a societal return that is more than 15 times the related investment cost (estimated at less than 0.5 percent of global GDP) and create new business opportunities worth up to \$4.5 trillion a year by 2030.<sup>III</sup> This includes revenues from new markets and products across the ten critical transitions and system savings derived from a reduction in land use, less food loss and waste and a range of other efficiency gains in the system.

#### Trade and food and land use systems

International trade plays a critical role in the functioning of food and land use systems, for example by helping countries access a greater variety of foods and reducing the price of food. This is critical for food security; at least 80 percent of the world population depends on imports for some food and nutrition needs.<sup>5</sup> Trade can also support biodiversity protection and climate mitigation through more efficient and strategic use of land for food production (i.e. allowing for the protection and restoration of high value ecosystems and carbon stocks).

However, many features of today's trading and investment system do not contribute to environmental, health and inclusion objectives, and in certain instances actually undermine food security itself. Agricultural production of globally traded commodities is the primary driver of land conversion and conversion of other natural ecosystems such as tropical forests, grasslands, and peatlands.<sup>4</sup> This culminates in the contribution of the land sector to almost 50 percent of all anthropogenic GHGs flowing into and out of the atmosphere, driving climate change and nature loss, in turn undermining production.<sup>9</sup> Countries with high import dependency are therefore exposed to increased risk of supply disruption, which can be further compounded by protectionist impulses, as was the case in 2007–08 and to a lesser extent in 2010–12.<sup>10</sup> Global trade is also reducing local variation in diets and contributing to the reliance on ultra-processed foods, with adverse consequences for health.

iii Trade was a key part of the integrated modelling that underpinned this work. The "Better Future" scenario described in the Growing Better report maintained a moderate and open approach to global trade while facilitating increased interregional trade, particularly within sub-Saharan Africa due to greater investments in connectivity across the continent.

#### But why should this matter to a trade minister whose primary focus is on economic growth driven by exports and a secure and stable supply of strategic imports?

**First, trade systems are increasingly at risk of pricing volatility and likelihood of supply chain disruption due to climate impacts and the destruction of nature.** Climate change is increasing both the variability of weather patterns and the frequency and severity of extreme weather events, impacting food production and supply. Despite important agricultural advancements to feed the world in the last 60 years, a study shows that global farming productivity is 21% lower than it could have been without climate change. This is the equivalent of losing about seven years of farm productivity increases since the 1960s.<sup>11</sup> As of November 2021, there are currently droughts severe enough to cause widespread crop losses, water shortages and elevated fire risk in every inhabited continent.<sup>2</sup> Food prices are the highest they have been in a decade, with 2021 marking a nearly 33 percent increase from 2020 levels year on year.<sup>12</sup> This global trend was on the rise even before the COVID-19 pandemic further pressed supply chains.<sup>3</sup> Since land use change (often driven by globally traded commodities such as timber, beef, soy and palm oil) is a primary driver of zoonotic disease spillover there is also a link between trade and pandemic risk. <sup>13,14</sup>



Second, trade systems are at risk of decreased global agriculture output as a result of chronic and acute climate change and nature loss impacts at a time when demand is expected to rise from population growth. For example, soil degradation resulting from conventional farming practices increases food risk and undermines yield, with negative consequences for farmers' livelihoods and the economy overall. The effects on yields are likely to be more adverse in regions where food demand growth is highest and food security

lowest.<sup>15</sup> Additionally, the near extinction of certain pollinators jeopardises five to eight percent of agricultural production and \$235 billion to \$577 billion worth of annual output.<sup>16</sup> The rising risk of multiple breadbasket failures is also particularly concerning – these are simultaneous shocks to food production due to acute climate events in a sufficient number of breadbaskets to affect global supply and food security. Research suggests that there is an 18 percent likelihood of such a failure at least once in the decade prior to 2030.<sup>17</sup>

At the same time, scientists warn that the world is close to nine critical tipping points where climate change could push parts of the Earth system into abrupt or irreversible change.<sup>18</sup> A closer look at just one of these tipping points demonstrates what is at stake for food production. In the Amazon, a combination of deforestation, climate change, and widespread fires could push a further 3–8 percent rainforest loss and potentially cause some large areas to flip into a savannah-like ecosystem.<sup>19</sup> The implications of this would not just impact Brazil, but millions of people in the rainforest region, and rainfall and climate regulation patterns globally. The interdependence of the Amazon and global rainfall patterns hence connects this to the issue of multi-breadbasket failures, which would cause a ripple effect in terms of pricing, instability of markets, and countless other societal impacts.

**Rising demand from emerging markets is also shaping trade relations of the future.** Demand for beef, soy, palm oil, and pulp and paper from emerging markets (China, India, Brazil and Indonesia) is expected to increase 43 percent by 2025, and could lead to an intensification of associated deforestation by 16 percent under business as usual scenarios.<sup>20</sup> Demand from emerging markets is growing at the same time that prices are sky rocketing. In 2021, rising food costs were most significant in emerging markets where inflation rates tend to be higher, and thus most likely to worsen malnutrition and hunger rates. As such, the role of policymakers in major consumer countries (defined throughout this paper as countries that are predominantly net importers of soft commodities) is just as critical to achieving a more sustainable, food secure world, as the role of producer-centred countries (defined throughout this paper as countries that are predominantly net exporters of soft commodities).





**Despite this, few governments are integrating climate and environmental policy with trade policy.** One interesting example which highlights this was the Australian Prime Minister's, Scott Morrison, response to scrutiny regarding the removal of climate parameters from the UK–Australia free trade deal ahead of the 2021 G7 Summit: "in trade agreements, I deal with trade issues. In climate agreements, I deal with climate issues."<sup>21</sup>

**Trade policies put in place the rules that guide long-term economic decision-making, and therefore need to also consider the long-term implications on the supporting communities and environment.** Take, for instance, the China–US trade war, where a drastic reverse in trade policy dynamics introduced new tariffs on a suite of products including soya beans. To fill this void, Chinese imports of soya quickly shifted to Brazil, which in 2020 recorded a 12-year high in deforestation rates to make way for increased soya production as well as for beef and other goods.<sup>22</sup> Trade policy decisions like these showcase how trade interconnects with all other aspects of domestic and international policymaking, and often come with worldwide implications. As such, trade policy decisions have rippled consequences for farmers, food security, and costs for consumers worldwide well after implementation. This discussion paper outlines how a redefinition of trade policy is needed to support more sustainable outcomes for people, nature, and planet.

# Section 2: Defining sustainable trade of food and land use-related products and services

Kakataima agroecology school and sustainable coffee growing in Quindío, Colombia (Chris de Bode for Panos Pictures, commissioned by FOLU)

Transforming Trade: A reform agenda towards sustainable food and land use systems November 2021 A comprehensive and universally accepted definition of what it means to have "sustainable trade" does not currently exist. The World Trade Organization (WTO) and United Nations Conference on Trade and Development (UNCTAD) refer to "trade" and "environment" or "trade" and "development" but do not currently have a working definition for how to integrate these concepts in practice. In a recent presentation, WTO Director General Dr. Ngozi Okonjo-Iweala stated, "The future of trade is green." What does it mean to be "green" and how do we progress towards this future?

A definition of sustainable trade of food and land use-related products is necessary to recognise the ways in which trade and food systems are deeply interconnected and the long-term objectives we collectively want from our global trade system. Without such alignment of definition and long-term objectives, policies will continue to work in opposition. More specifically, a commonly accepted definition of sustainable trade in food and land use systems is necessary to: a) align actors at different scales (global, national, sub-national) and from different sectors (trade policy, agriculture and environment policy, health policy, business, civil society, finance) around a shared vision of the future of trade and food systems; and b) establish measurable goals and outcomes of progressing towards that shared vision.

**Definition setting can serve as a pathway to more ambitious and coordinated action.** Multilateral environmental agreements (MEAs) have helped to establish non-legally binding principles that then can be considered when forming legally binding actions.<sup>23</sup> For instance, the Montreal Protocol established criteria for international cooperation on addressing the substances that cause ozone depletion and is largely regarded as the most impactful environmental agreement. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) similarly established a framework for international trade of endangered plants and animals that was later adopted into domestic legislation by participating parties.<sup>24</sup>

FOLU's proposed definition for sustainable trade of products and services related to food and land use is as follows: The commercial exchange of products and services related to food and land use within and between countries which supports food and nutritional security, human and indigenous rights, fair wages for labour, and a world within planetary boundaries.<sup>iv</sup>

#### Specifically, sustainable trade in food and land use-related products and services should:

- Promote access to healthy and nutritious food available at affordable prices
- Be free of illegal practices in accordance with local and international law. This includes not only environmental considerations, but also labour and other potential human rights violations (i.e. slavery, child labour, etc.)
- Be inclusive of indigenous peoples and local communities, particularly of women and youth, in decision-making including around resource management
- Guarantee living wages for producers and workers across the food value chain, including local agricultural and fishing communities
- Support a world within planetary boundaries <sup>25,v</sup>

iv The Food and Land Use Coalition seeks to provide a clear definition for the sustainable trade of products and services derived from and relating to food and land use systems, not for all goods and services currently traded. The definition includes food products and other agricultural and fishery products such as bioenergy, fibres for textiles and plantation forestry products.

v 'Planetary boundaries' is a concept involving Earth system processes that contain environmental boundaries.

Trade policy should support these outcomes, but that does not mean trade on its own can achieve these objectives, as many of these issues such as involvement of indigenous and local communities in resource management extend beyond the responsibilities of trade departments. Other policies and actions will also be required.

In order for this definition to be implemented, it should be measurable. For this to happen, we need to build a way of measuring sustainable production. For example, a world within planetary boundaries is measured by environmental limits (or a "safe operating space") but is currently not enforceable by any legal measures. The Science Based Targets Network (SBTN) is working in conjunction with the Earth Commission to define what this means for corporates with regards to freshwater, land use, oceans and biodiversity. This will be imperative for tracking progress of traded agricultural commodities which are currently putting the world on a trajectory of exceeding environmental limits. There are also national efforts to assess sustainable production, but these are often specific to commodities such as the Indonesian Sustainable Palm Oil standard. By increasing trade of agricultural and land use-related products that are produced more regeneratively, trade can contribute towards reduced phosphorous and nitrogen use, better use of freshwater resources, reduced land use change, reduced habitat conversion and reduced greenhouse gas emissions. Linked to this, trade systems must ensure "hidden costs" of the food and land use system are accounted for.

While metrics enable measurement of a sustainable trade system, it is also critical that there are enforceability mechanisms in place. This requires deeper exploration of legal and regulatory institutions beyond the scope of this paper.



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## **Section 3:** Barriers to achieving sustainable trade



Aerial view of international shipping cargo

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 Lack of positive incentives and financial support to encourage greater adoption of sustainable practices

The existence of a sustainable trade system, as defined in Section 2, ultimately relies upon the existence of sustainable production systems and sustainable consumption patterns. One of the most significant barriers in this regard is the cost of the required transition – estimated to be between \$300 to \$350 billion each year through 2030.<sup>4</sup> Yet, when considering this is a tiny fraction of current investment in food and land use systems this becomes more attainable. Nevertheless, current food and land use systems are riddled with perverse incentives and market externalities, which lock-in unsustainable production and consumption patterns that drive nature loss, climate change, inequality, and harm to human health. On the flip side, there is often a lack of adequate disincentives for unsustainable production and consumption through regulation, transparency, and enforcement. Smallholders and other farmers are often left with the burden of compliance and transition costs at the end of the value chain.

The most pertinent example of perverse incentives relates to global subsidy regimes. Government subsidies and public support for agriculture are overwhelmingly driving damage to people and to the planet with just 13 percent of the \$540 billion of public support distributed in global agriculture subsidies supporting public goods.<sup>26</sup> These subsidies are often designed to perpetuate business as usual in the short term, but can lead to unsustainable and uneconomical resource use in the longer term. Take the example of global fisheries, of which 34 percent are considered critically overfished.<sup>27</sup> Certain types of government support to fisheries (estimated at \$9.4 billion a year), intended to preserve market share, encourages excess capacity and leads to overfishing and illegal, unreported and unregulated (IUU) fishing.<sup>28,29</sup> This in turn results in shortages and, at worse, the collapse of fish stocks, with devasting implications for local communities that rely on fish stocks for their main sources of food and income. This is a classic example of the tragedy of the commons.

These market distortions as a result of subsidies and other policy interference mechanisms are often linked to the externalisation of costs relating to labour rights, greenhouse gas emissions, biodiversity loss and natural capital depletion, from market prices. The scale of hidden costs related to food and land use systems is striking – estimated at \$12 trillion, compared to the \$10 trillion market value of the food system.<sup>4</sup>

Without adequate incentivisation or disincentivisation through subsidies, tariffs, regulation and other policy mechanisms, private financial flows compound the issue further. For example, the \$3 billion of private finance invested in sustainable commodity production and conservation in developing countries is just a tiny fraction of the \$13 trillion of capital invested in agriculture, fishing and forestry in these same countries.<sup>30</sup> To date there has been limited pressure from policymakers for investors or companies to consider the financial risk related to nature loss when allocating capital. In a 2020 survey of 24 capital providers with exposure to tropical deforestation-linked commodities not one had screened their loan books and/or investments for agricultural transition risks.<sup>31</sup> And yet the risks are sizeable – one estimate suggests that global palm, beef, and soy producers face at least \$19 billion in additional costs annually as a result of future greenhouse gas pricing and/or regulations.<sup>31</sup>

**Consumers also lack adequate incentives for more sustainable consumption.** This is arguably because of a lack of transparency across food value chains and confusion and a lack of trust of food labels.<sup>32</sup> Consumers are calling for progress on this front; more than 1.1 million people urged the EU to introduce due diligence legislation for companies in forest-risk supply chains,<sup>33</sup> and a recent WWF-UK poll found 67 percent of British respondents want the government to do more to tackle illegal deforestation and 81 percent want greater transparency about the origins of products imported into the UK.<sup>34</sup>



#### 2. Market concentration and power dynamics between value chain actors

The global food system has seen a trend of consolidation with mergers and acquisitions occurring throughout the supply chain – including agricultural seed and chemicals industry, trading companies, banks and global retailers. For instance, in many domestic producer markets including the US, Brazil and Indonesia, a handful of firms hold 80 percent or more of market share of key crop seeds.<sup>35</sup> Further, global agricultural commodity trading is dominated by four primary companies: ADM, Bunge, Cargill and Louis-Dreyfus – also known as the "ABCDs".<sup>36</sup> The result of a few firms dominating the market is that they tend to have more influence over how the market operates, including how goods are priced, technological and innovation agendas, as well as policy and governance frameworks.<sup>35</sup>

This trend towards market concentration demonstrates the opportunity that such influential value chain actors have to shape global markets in support of sustainable trade. To date, their commitment to supporting sustainable trade has been modest, with some commitments towards halting deforestation, but limited action to enact sustainable sourcing requirements and establish transparency mechanisms. This has meant there is also little incentive for other smaller market actors to follow suit. At the United Nations Framework Convention on Climate Change (UNFCCC) COP26 in Glasgow, ten global commodity companies signed the Agricultural Commodity Companies Corporate Statement of Purpose, recognising the shared responsibility of the sector to support achieving net zero by 2050, halting biodiversity loss and supporting sustainable livelihoods.<sup>37</sup> This is an important step forward in signalling industry-wide commitment. However, a shared roadmap detailing action to achieve this goal will not be prepared until COP27. In order to be effective at reshaping the market, this roadmap must include ambitious goals such as commitments to sustainable sourcing and provide financial support for producers to comply.

While some value chain actors have outsized influence over markets for traded goods, smallholder farmers are often disempowered and unable to comply with changing market requirements. This results in adverse impacts on livelihoods and a disincentive to shift practices towards sustainable production and reduced deforestation.<sup>4</sup> Smallholder farmers (operating on farms of less than two hectares) account for approximately 84 percent of all 600+ million farms.<sup>4</sup> Smallholders already face many barriers to being integrated into formal and internationally traded value chains, such as inability to access credit, secure land title or access extension services.<sup>4</sup> To the extent that they are able to participate, they often have limited bargaining power to negotiate preferential longer-term contracts and secure better prices,

including through a market premium on sustainably produced goods. As a result, many trade standards lean towards large producers and traders who are able to meet quality, reliability and phytosanitary import requirements.



#### 3. Market leakage

**Recent efforts to target specific geographies or commodities with regulatory requirements has led to market leakage, i.e. displacement of unsustainable production from one geographic market to another.** We have seen this previously after the establishment of the Brazilian Amazon Soy Moratorium, which

was acknowledged with helping to decrease deforestation in the Amazon by 84 percent from 2004 to 2012, <sup>38</sup> but also simultaneously displaced land expansion to the neighbouring Cerrado's biodiversity-rich ecosystem.

**Fragmented market-entry criteria and the absence of global import production standards also facilitate leakage.** For example, Brazil is hedging on the prominent rise of China and other emerging markets that will not place the environmental conditionality on trade in the way that the EU has been seeking through the EU–Mercosur Trade Agreement (see Box 1). Emerging markets (China, India, Brazil, and Indonesia) currently account for around 40 percent of global demand for four deforestation-linked commodities (soy, beef, palm oil and wood products) and are expected to further increase in market share by 2025.<sup>20</sup> Without dominant market share, proponents of environmental trade criteria may find it difficult to convince producer countries to comply.

From the perspective of a producer country, the absence of aligned product standards further disincentivises sustainable production. If the US, EU and UK all pursue different versions of what is a "sustainable" good, for different types and sizes of corporations, relying on different frameworks, it would be difficult for producers to achieve volumes needed to meet these various standards. Global production standards can also disadvantage low-income countries and producers within those countries who face significant costs of meeting high export standards.

From the consumer country perspective, collective action towards sustainable trade is necessary, but will have limited impact on global sustainable production and consumption unless such countries have sizeable market share. For example, New Zealand has recently championed cooperation with countries' trade agreements via the Agreement on Climate Change, Trade and Sustainability (ACCTS) together with Costa Rica, Fiji, Iceland, Norway, and Switzerland. In trade talks with the EU, New Zealand called for sanctionable green provisions to be included in the trade provisions, which the EU refused.<sup>39</sup> New Zealand's relatively small market share globally is limited compared to the EU's, which demonstrates how geopolitical balances power dynamics can impact the ability for a country to pursue sustainability aims within international trade arrangements.

#### **Box 1: EU-Mercosur Trade Agreement**

The EU-Mercosur Trade Agreement between the EU and the South American trading bloc of Argentina, Brazil, Paraguay, and Uruguay stalled in 2019 over issues of forest governance. While the free trade agreement (FTA) never included significant environmental commitments, tensions rose from the 2018 Amazon forest fires and failure of Brazil to abide by the Paris Agreement. France and later Ireland, Luxembourg, and Austria refused to sign the deal and while the terms have since been completed, it remains unratified. This is significant as the EU-Mercosur deal is one of the biggest trade deals in the world and includes more than 40 billion euros of imports and export value.<sup>40</sup>



#### 4. Price of food and affordability

A key barrier to achieving sustainable food and land use systems is the need to keep food affordable.

Some argue that shifting diets towards healthier and sustainable diets will increase the price of food.<sup>41</sup> However, studies are showing that shifting diets and better accounting for "hidden costs" of food need not necessarily lead to costlier, less affordable food.<sup>42</sup> Further, what matters is not only the affordability of food in different regions but also the distributional impacts of any changes to food price across population groups. The distributional impact depends on the extent to which any increases in food prices are offset by compensating government transfers, but it is likely to be unpopular, especially in countries and regions that rely heavily on imports. Just as the "gilets jaunes" protests in France stymied attempts to raise carbon taxes on fuel, we can expect strong resistance to attempt to raise the price of food categories considered to be necessary or culturally important. On the other hand, the experience of Chile, Mexico and the UK amongst others, suggest that taxes on salt, sugar and fat can be raised without a consumer backlash, as long as the industry takes the lead in reformulating products to reduce the incidence of the tax. Consumers should not bear the full responsibility for paying for the hidden costs of food; the burden should also fall on companies to alter their formulations, sourcing and investment decisions to reduce food-related externalities.<sup>43</sup>

While the global trade system does well at managing availability, food prices remain volatile. A report by the UN demonstrates that COVID-19 has contributed to food prices reaching their highest level since 2008–09, a period associated with "food riots" in countries across Africa and the Middle East.<sup>3</sup> Food price volatility mostly affects low-income households, particularly in low-income countries and urban areas where large shares of disposable income are spent on food and growing it yourself is not an option.<sup>44,3</sup>

**Climate change is likely to exacerbate this volatility**. Chatham House estimates that staple crop yields could fall by nearly a third by 2050 if the world fails to curb rising emissions in the next decade, which could lead to further price increases.<sup>45</sup> A study by the UN Economics Commission for Africa found that some African nations are already spending more on climate adaptation than on healthcare and education.<sup>46</sup> In the long run, higher food prices and accounting for externalities could help the industry raise its productivity and shift to lower-emission practices and products; in the short run, it is a brave policymaker who tries to raise taxes on a politically salient set of products whose price is already rising.



## 5. Lack of transparency and traceability

The rise of food trade has facilitated the expansion of supply chains and made them more complex. This has created numerous new productive opportunities, but also made it more difficult to make supply chains fully transparent and traceable. For processed food products with multiple ingredients, companies may not know where all the ingredients come from or how they were produced. Well-functioning and robust transparency and traceability systems form the foundation of what is needed to advance sustainable food systems at scale.

Existing channels that capture trade statistics (including private and public customers data, port information and import and export statistics) are currently disaggregated, anonymised, and/or privatised for purchase. Current data systems also lack access and coverage for vital nature-based indicators. To be able to fully assess how the food system interacts with nature aims, data systems must also expand to include land tenure, land use planning, legal compliance (including operating permits/licences), and a census of assets (i.e. infrastructure) – some of which are captured by existing certification systems. Most of this data, however, is collected and owned by public governments but often is not operationalised for public use.

**Transparency of supply chains also requires data and active participation from food producers.** However, many small farmers do not have the ability to access or interpret data, thus without support and training they will be further excluded from market access and other livelihood enhancing opportunities. Data systems require a degree of capacity for technological implementation and application, which may be difficult from a cost and logistical perspective. It can also be difficult to reach smallholders, particularly the most vulnerable in rural communities. A lack of law enforcement, corruption, or other illegal practices can hamper efforts for a transparent and traceable data collection system.

# **Section 4:** Applications of trade policy mechanisms in support of sustainability

Banana growing using Jain micro-irrigation systems in Maharashtra, India (Atul Loke for Panos Pictures, commissioned by FOLU)

There is a suite of trade policies and market mechanisms that have been utilised by governments in support of climate and sustainability aims (both in food and land use systems and beyond). We provide a brief overview of these mechanisms in Table 2 before offering a few observations about their use in practice. This table is not necessarily an endorsement nor is it intended to showcase the most successful applications. Rather, it is intended to demonstrate the toolkit of options available for trade policymakers. The use of specific mechanisms – including the bundling of policies together – must be evaluated within specific national, bilateral and in some cases multilateral contexts.

#### Table 2: Overview of trade policy toolkit being used by governments insupport of climate and sustainability aims

Trade Policy Toolkit	Definition/Application	Example of Sustainable Trade
1. Bilateral, Multilateral and Preferential Free Trade Agreements (FTAs)	Trade agreements set the legally binding rules between countries to promote exchange of goods and services between the parties. Bilateral trade agreements are between two countries, whereas multilaterals apply to three or more countries. Preferential agreements between two or more countries grant a select subset of goods the right to access.	US–Peru Free Trade Agreement included considerations and provisions for the protection of forests. The US also provided financial and capacity building support for pro-forest activities as part of the bilateral US– Peru FTA. <sup>47</sup>
2. Multilateral Environmental Agreements (MEAs)	A multilateral environmental agreement (MEA) is a legally binding agreement among three or more nations which allows them to reach an environmental goal. <sup>23</sup>	Signed in 1987, the Montreal Protocol is an international treaty designed to protect the ozone layer by phasing out the production of numerous substances that are responsible for ozone depletion. It includes trade measures (bans on trade in the products controlled by the treaty) against non-parties and non- complying parties, and an export and import licensing system designed to combat illegal trade. <sup>48</sup>
3. Tariffs	A tax or duty placed on imports or exports by a national party on other countries. Often used in trade to fix pricing or demand for products.	The Comprehensive Economic Partnership Agreement between EFTA and Indonesia allows for "tariff differentiation" to apply to certain imports, including palm oil. This scheme permits lower tariffs for palm oil imports that meet set environmental standards. Switzerland was the first (and so far only) EFTA state to implement a system to ensure imports meet the agreement's criteria.

4. Due Diligence	An obligation on companies to scrutinise their operations and supply chains for the presence of activities or products associated with factors such as human rights abuses or environmental harms, and to take action to assess and mitigate risks, provide remediation and communicate their activities. Widely used on a voluntary basis, it increasingly features in regulations, either as a general corporate obligation or a market-focused requirement applying to specified products.	The EU Timber Regulation (part of EU-FLEGT) aims to combat illegal logging by ensuring that no illegal timber or timber products can be sold in the EU. <sup>49</sup> It requires mandatory due diligence systems to be implemented in order to assess the risk of illegally logged timber products entering EU supply chains. The forthcoming UK and EU deforestation regulation will apply a similar system to a range of forest risk commodities.
5. Market Premiums	Refers to a price paid above a base intrinsic value. Premiums can be placed between transactions of government, private sector, traders, consumers, or a combination of these purchasing players.	In 2019, Cote d'Ivoire and Ghana introduced the Living Income Differential (LID) that placed a premium of \$400 a tonne on the export price of cocoa to support farmers' livelihoods. <sup>50</sup>
6. Voluntary Partnership Agreements (VPA)	A Voluntary Partnership Agreement is a legally binding trade agreement that was developed as part of the agreement between the European Union and a timber-producing country outside the EU. <sup>51</sup>	EU-FLEGT (Forest Law Enforcement, Governance and Trade) established a licensing system (through VPAs) so that only timber verified as legal from the partner country can enter the EU. VPAs are unique as they allow for producer- country commitments to determine improvements in governance and law enforcement, including establishing a traceability system, plus offer in exchange capacity-building assistance and market access requirements from the EU. VPAs serve as an interesting model that could be replicated for other goods and commodities. <sup>51</sup>
7. Disclosures	Regulation that stipulates what type of information must be displayed or provided by companies.	Global accounting standards are used to regulate corporate disclosures to ensure transparency and legal compliance of the private sector. The same principles are being applied to voluntary standards such as the Taskforce on Climate-Related Financial Disclosures (TCFD) and other Environmental, Social, Governance (ESG) standards which seek to influence the allocation of capital by financiers to account for sustainability risks and opportunities.

8. Other Economic Sanctions (Prohibitions, Quotas, Embargos, Nontariff barriers) These types of mechanisms introduce a market barrier into the trade system. A sanction is a penalty applied to another country. Sanctions can include bans/prohibitions on certain goods. Other applications could take the form of tariffs (tax on good), quotas (limit on goods imported/exported), embargos (a country cannot trade with another), non-tariff barriers (restrictions on imported goods such as packaging/licensing requirements). <sup>52</sup>	The United States' Lacey Act prohibits the trade of wildlife or plants that have been obtained illegally, including illegally logged woods. <sup>53</sup> Laws like these often encourage the voluntary adoption of due diligence systems to verify compliance.
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#### **Box 2:** Discussion of trade and sustainable policy alignment within the World Trade Organization

#### Up for debate: Are sustainability considerations in trade agreements protectionist?

Some believe that the imposition of production standards from one country on another is discriminatory and anti-trade. WTO members do follow the principle of "non-discrimination", which stipulates that members shall not discriminate on like products from different trading partners. However, the WTO also recognises certain environmental, health and conservation policy aims if measures comply with the General Agreement of Tariffs and Trade (GATT) rules, or if the measure falls under the exceptions to GATT, which allow WTO members "to justify GATT-inconsistent measures if these are either necessary to protect human, animal or plant life or health, or if the measures relate to the conservation of exhaustible natural resources, respectively".<sup>57</sup> This enables countries to trade while legitimately considering protection of human health, animals, or nature. Disputes are not solely being raised by wealthy, developed countries. In 2018, just over half (51 percent) of environmental-related trade disputes came from developing and least developed countries.<sup>58,59</sup>

Some may view legitimate efforts to curb environmental damage as protectionist. This very argument followed from French President Emmanuel Macron's vow to ban deforestation-linked imports from Brazil, with Brazil countering that France's strong agribusiness lobbying arm was using environmental aims as a cover for continued market dominance. Issues like these can be raised via WTO dispute resolutions and are analysed accordingly. Where clear, non-discriminatory policy goals such as protecting biodiversity and preventing climate change exist, these are fair measures to incorporate into trade arrangements.

Four observations can be drawn about the use of these measures in practice:

Not all countries can make equal use of trade and market policy tools in the global system. The use of some mechanisms, for example lowering import duties for sustainably produced products, is limited or not possible for some low- and middle-income countries, because imports from them are generally free of import duties. It is difficult for importing countries to raise import duties for non-compliant products as this would breach their WTO commitments to 'tariff binding' (maximum levels of import duty). Fairness to market access is a pillar of the WTO's "most-favoured nations principle" and requires countries to grant equivalent treatment to the same (or "like") products imported from any WTO member country and the 'national treatment' principle, requiring imports to be treated no differently from domestically produced like products. This is a key viewpoint of many developing countries as they have the right to access markets to pursue development, poverty alleviation, and secure livelihoods.

**Integrating environmental goals into FTAs is important, but insufficient as a stand-alone measure in driving sustainable trade.** For instance, the US-Peru free trade agreement is an example of where environmental goals were integrated into bilateral and multilateral trade agreements. However, the commitments included were mostly rhetorical and had no connection to the rest of the FTA and thus no consequences if parties do not meet them. Perhaps it is not surprising then that since its signing in 2009, Peruvian deforestation rates have increased.<sup>47</sup> In this case, bilateral pressure was not enough to force overall compliance, and it illustrates that domestic interests must also align in support of trade aims.

The strongest environmental provisions are found within domestic and international policy that aligns with national interests and deliver mutual benefits. The EU-FLEGT offers lessons learned in this regard to the EU's approach to illegal timber in sourcing and supply chains. Despite the long record of implementation, FLEGT's Voluntary Partnership Agreements (VPAs) with participating countries has been an interesting case study. VPAs give a "green lane" to the EU for timber imports from exporting countries with functioning timber legality assurance and export licensing schemes to the EU. Fifteen tropical countries are negotiating or implementing VPA agreements, accounting for 25 percent of the world's tropical forest cover and 80 percent of the EU's tropical timber imports.<sup>54</sup> While to date only one – Indonesia – has managed to establish a timber legality assurance and export licensing schemes, other partner countries, such as Ghana, have seen improvements in forest governance and falls in illegal logging.<sup>49</sup> By linking improved national forest governance to trade policy, FLEGT VPAs have managed to enhance local forest governance and trade legislation that has helped to reduce tropical deforestation.<sup>55</sup>

**Carbon border adjustment mechanisms (CBAM) are also increasingly being discussed as options for reconciling climate policy and international trade.** The EU is considering placing a new tax on carbon associated with certain imports to level the playing field for European businesses, which are subject to higher carbon taxes domestically than its international counterparts. Early research suggests that CBAM has the potential to lower leakage rates and increase the overall emissions reduction by as much as five percent.<sup>56</sup> The proposed CBAM does not currently apply to food or other agricultural products, though it is conceivable that if successfully implemented it could expand into other sectors. Non-carbon metrics should also be considered in future CBAM that more directly relate to food, such as water, soil health, biodiversity, fertiliser/pesticide inputs, which may be a greater indicator of sustainable production practices than carbon, particularly for beef.

## **Section 5:** Action areas for policymakers

Man and woman buying fresh fruits and vegetables

In Section 5, we set out 9 action areas, grouped by two overarching objectives for policy makers to overcome the barriers previously discussed and deliver on a vision for sustainable trade. These are summarised below.



## A. Integrate sustainability and climate objectives into trade policy

Barriers addressed	Principal actors/ targets of recommendation
1. Lack of incentives in current system	✓ Trade ministers and negotiators
2. Market concentration and power dynamics	<ul> <li>Domestic policymakers, including Ministers of Trade, Agriculture/ Rural Affairs, Finance, Environment, Health)</li> </ul>
3. Market leakage	✓ WTO Officials and parties to WTO

#### Overview of the way forward

Section 4 presents an array of trade and market mechanisms available for policymakers to utilise in reconciling trade and sustainability objectives. If governments are committed to achieving global goals of climate and the Sustainable Development Goals, greater alignment across domestic policies, especially trade policies, is essential. Climate priorities are cross-cutting in nearly every branch of government – from finance to commerce, agriculture to health, and as such policy approaches should address these interlinkages. However, national policymaking is often developed and implemented in silos.

To achieve this cross-government alignment, ministries can:

**ACTION 1:** Pursue institutional reform to promote collaboration and utilisation of trade and market policy tools

ACTION 2: Expand methodologies for achieving sustainable trade through multilateral solutions

**ACTION 3:** Promote ambitious national standards and a coordinated global effort for sustainable production, trade, and consumption

ACTION 4: Make greater use of bi- and plurilateral "coalitions of the willing"

Illipe nut butter and palm sugar project with local communities in Indonesia (Kemal Juffri for Panos Pictures, commissioned by FOLU)

#### **ACTION 1:** Pursue institutional reform to promote collaboration and utilisation of trade and market policy tools

As discussed, there are a suite of trade policy and market mechanisms (see Table 2) that have been utilised by governments in support of climate and sustainability aims (both in food and land use systems and beyond). Applications will vary from national, to bilateral, to multilateral contexts, but the tools are available to generate more sustainable outcomes and diverge from business as usual. The complexity of combining the trade, climate and nature agendas creates the need for greater policy collaboration across domestic institutions. This institutional collaboration can take the form of coalitions, task forces, or other convening mechanisms, but most importantly must: 1) draw on an array of expertise across government; 2) have authority to make integrated policy decisions;<sup>60</sup> and 3) be inclusive of key stakeholders including private sector, producers, and local communities.

For example, Colombia recently developed an institute for convening the Agriculture, Finance and Environmental Ministries to work together on healthy and nutritious diets and sustainable environment. The Institute's prominence was significantly raised with support from Colombia's President and First Lady, helping break down silos between different ministries to find new and innovating ways to move the country's food policy agenda forward.

Germany's Chancellor, Angela Merkel, took a similar step when she created a "climate cabinet" including ministers across industries, to provide holistic recommendations for policy plans to achieve 2030 climate targets.<sup>61</sup> Involving trade ministers helps to signal the link between domestic and foreign policies, or at least ensure that trade does not undercut domestic policy ambitions. These examples helped to raise the level of ambition for climate and sustainability objectives alongside other national interests for a more integrated approach.

A broader example of where and how sustainability objectives are becoming better integrated with trade policy is in the European Union. In 2021 the EU set out a new trade trade policy strategy, which places support for the climate transition and the European Green Deal at the centre of its strategy.<sup>62</sup> This strategy calls for supporting implementation through multilateral institutions like the WTO, improving the EU's regulatory environment and strengthening collaboration and partnerships.

## **ACTION 2: Expand methodologies for achieving sustainable trade through multilateral solutions**

As discussed in Section 2, "Defining Sustainable Trade of Food and Land Use-Related Products and Services", no universal definition or methodology currently exists for how to achieve more sustainable trade. Without a workable legal definition for what counts as "deforestation" or "sustainable production", it will be difficult to manage these through trade agreements. The Food and Agriculture Organization (FAO) and Organisation for Economic Cooperation and Development (OECD) co-produced corporate guidance for responsible agricultural supply chains, which outlines the standards companies should follow to achieve a set definition of responsible supply chains.<sup>63</sup> A similar collaborative mapping for sustainable trade is urgently needed, with a view to producing a standard that is legally enforceable and provides a level, sustainable playing field for trade without undermining national sovereignty.



WTO Director Ngozi Okonjo-Iweala in a recent interview noted that fragmented approaches will not work: "International institutions, the WTO, the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), the World Bank, should come together and try to see how we can put a methodology forward."<sup>64</sup> While trying to align so many development agencies risks slowing the process down, the recent progress made on international taxation at the OECD demonstrates how "norm setting" work by UN agencies can be translated into more substantive legal work if the political support is there.

#### **ACTION 3:** Promote ambitious national standards and a global effort for sustainable production, trade, and consumption

Enhancing global coordination to achieve sustainable trade requires going beyond trade policies to other areas of international cooperation. Many such coordinated efforts already exist as exemplified in food safety standards, human trafficking, drugs and illegal weapons, and other practices widely deemed unacceptable. This same logic needs to be applied to extractive and harmful practices connected with trade in food and agricultural products.

The UK, EU and US are variously at separate stages of developing due diligence legislation to ensure companies are not importing soft commodities linked to deforestation (such as beef, palm oil, soy, timber products, or cocoa). As individual countries (or a bloc in the case of the EU), they can move faster and be more ambitious than going down a multilateral route. However, the proliferation of standards will make it difficult for producers to comply, so these should best be seen as positive first steps towards integrated multilateral solutions. World Wildlife Fund for Nature for instance advocates a "twin-track" approach to standards whereby national parties can both be a champion at multilateral levels for global standards, while simultaneously beginning development on its own national environmental standards.<sup>65</sup>

A strong national environmental standard can set the foundation for more ambitious action at the global level. For instance, in 1972 the US instituted the US Marine Mammal Protection Act (MMPA), to promote the conservation of marine life and ocean ecosystems. Specifically, the MMPA wanted to eliminate dolphin bycatch in tuna sold in the US. This extended into imports from other countries, and thus was raised at the WTO via dispute settlements. The programme was amended to become WTO compliant with a certification process that applies both to domestic fishing as well as imports. The US gave countries ample time to transition, consulted with private sector and partnered governmental agencies, and offered technical assistance to impacted parties in exchange for guaranteed market access. This leverage of mutual benefits paired with enforceable recommendations offers an ideal way forward in tackling environment and sustainability aims without greatly disrupting trade.

Once more ambitious national standards are established, the second step would be a move towards unifying standards at a global level. One of the game-changing ideas being proposed around standard setting is Codex Planetarius. Codex Planetarius is a concept created by the WWF-US to develop a set of minimum environmental requirements on all internationally traded food commodities with an accompanying set of measurable global indicators to ensure that planetary health is prioritised.<sup>66</sup> This approach mimics the existing standards of Codex Alimentarius around food safety and quality that already serves as a precondition in the trade system. <sup>66</sup> Codex Planetarius could build from domestic approaches to establish a much-needed universal baseline metric for how environmental standards could operate in trade. Codex Planetarius would rely on consistent and publicly available data from around the world and thus the concept is underpinned by a focus on consistent transparency mechanisms.

A coherent domestic approach could set both higher domestic ambition for sustainable trade while simultaneously advocating for global standards, such as Codex Planetarius, at multilateral forums such as the WTO.

#### ACTION 4: Make greater use of bi- and plurilateral "coalitions of the willing"

The WTO and its member states have made limited progress on multilateral trade liberalisation in recent years. For example, as of late 2021 the US is still withholding appointments of judges to serve on the Appellate Body, the settlement dispute mechanism of the WTO. However, linking trade with sustainability does not need to wait for a WTO reform. Rather than aiming for global consensus around issues relating to sustainable trade, WTO rules allow for the formation of plurilateral agreements, which bring together a sub-set of "coalition of the willing" countries. This strategy was exemplified in 2020 with 50 WTO members establishing an initiative on trade and the environment, which aims to provide information sharing, areas of collaboration, and supporting capacity building and technical assistance.<sup>67</sup>

Another multinational effort was recently profiled at the United Nations Framework Convention on Climate Change's (UNFCCC's) COP26 summit. Introduced by the UK, the Forest, Agriculture, and Commodity Trade (FACT) Dialogue has been convened with a view to achieving more sustainable trade of deforestation-linked soft commodities. The FACT Dialogue represents the first time governments from major food producer and consumer nations have come together to discuss ways forward in achieving forest protection alongside economic development and trade. FACT included representation from 28 nations, including many of the major producer nations (Brazil, Indonesia, Ghana, US, Côte d'Ivoire) and consumer countries (EU, UK, Japan) to provide a roadmap of action. Multinational movements garner strength from collaboration and follow-through on regulatory commitment, which will be an important next step for the FACT Dialogues in the coming years through both UNFCCC and potentially other multilateral spaces like the WTO.

## B. Align domestic policies to target underlying trade conditions

	Barriers addressed		Principal actors/ targets of recommendation	
<ul> <li>1. Lack of incentives for sustainability</li> <li>2. Market concentration and power dynamics</li> <li>4. Price and affordability</li> <li>5. Lack of transparency and traceability</li> </ul>	<ul> <li>1. Lack of incomplete</li> <li>2. Market condition</li> <li>dynamics</li> <li>4. Price and a</li> <li>5. Lack of trans</li> </ul>	ntives for sustainability eentration and power fordability sparency and traceability	<ul> <li>Domestic policymakers, including Ministers of Trade, Agriculture/ Rural Affairs, Finance, Environment, Health</li> <li>Standard setters for company disclosures (e.g. accounting standards boards, ESG certification bodies)</li> </ul>	

#### Overview of the way forward

Beyond trade and economic policy, there are additional underlying domestic policies that are still relevant when we consider a holistic and integrated approach to achieving sustainable trade.

Actions that various policymakers can take include:

ACTION 5: Remove perverse subsidies and repurpose to promote environmental objectives

ACTION 6: Standardise and open-source government-held data

**ACTION 7:** Raise minimum sustainability standards across corporate value chains and enhance engagement with the private sector

**ACTION 8:** Incentivise sustainable production with financial support for producers

**ACTION 9:** Foster inclusive collaboration with local communities, producers, smallholders, and indigenous peoples

#### **ACTION 5:** Remove perverse subsidies and repurpose to promote environmental objectives

Subsidies on tradeable goods change the ratio between domestic and international prices, so trade negotiations often provide for the mutual repurposing of subsidies. Since its inception, the WTO has managed to reduce average tariff rates to less than four percent, though they remain significantly higher for agricultural products than industrial ones.<sup>68</sup> The same dynamic can be observed in subsidy reform, where market distortions often persist for decades. One pressing issue to be discussed at the upcoming WTO General Council is subsidies for fisheries. An estimated 34 percent of global fish stocks are being overexploited.<sup>27</sup> Yet many countries are continuing to subsidise and incentivise overfishing practices, which in a fair market would eliminate themselves due to lack of profitability. The WTO continues to push for countries to reduce or eliminate harmful fisheries subsidies, but there is little political appetite or sign of a willing coalition for this.

On land, a report by the FAO found that 87 percent of the \$540 billion in agricultural subsidies are harmful to the planet, defined as promoting the overuse of fertiliser and agrochemicals, unsustainable land expansion, and skewed income distribution.<sup>28</sup> In many cases, subsidies also fell short of policy objectives to boost yields, improve farmer incomes, and develop rural economies.<sup>69</sup>

The World Resources Institute found that about \$400 billion of existing agricultural subsidies could be repurposed to better serve farmers and the environment.<sup>69</sup> In return, it is estimated that every \$1 invested in restoring agricultural land can generate \$7-\$30 in economic benefits.<sup>70</sup> These economic benefits include yield improvements, lower input costs, and the restoration of degraded land, amongst other social and economic benefits.<sup>69</sup> Linking trade and subsidy reform has the potential to create win-wins for food security, rural development, and environmental sustainability.

#### **ACTION 6: Standardise and open-source government-held data**

Enhanced transparency and traceability systems are critical to achieving sustainable trade. While some countries and individual private sector actors have made tremendous advancements in these areas, there is still much room for improvement.

Governments should allow for open access to public sector data to be accessible to a wider array of stakeholders within the supply chain. Not all government data is open by default. For example, customs data is essential to tracking the origin and routing of shipments, as well as the identity and owner of the vessel, but is rarely published by customs authorities. Greater transparency of this kind of data can be used to strengthen traceability systems to identify the sources and destinations of food and other agricultural products.

Beyond customs data, other useful data sources include land tenure data, indigenous and traditional people's protected areas, legality/illegality of land conversion, supply chain asset locations, land cover and land cover change, and maps of asset flows.<sup>71</sup> Creating and adhering to data standards for publicly held trade and land use data would facilitate the expansion and reach of traceability and transparency systems globally.

#### ACTION 7: Raise minimum sustainability standards across corporate value chains and enhance engagement with the private sector and other critical stakeholders

In the absence of regulation, many companies are taking voluntary action consistent with meeting the Sustainable Development Goals (SDGs), goals for climate in particular. One prominent example is through commitment to the Science Based Target Initiative (SBTi) where companies set targets in line with the temperature goals of the Paris Agreement. At the end of 2020, companies with science-based targets made up 20 percent of the total global market capitalisation.<sup>72</sup> The number of committed companies has doubled in size during 2021, now totalling more than 2,000 companies from over 60 countries and 50 sectors.<sup>73</sup> Similarly, companies are increasingly calling on their government to act; for example, more than 1,000 businesses from over 65 countries with revenues totalling \$4.7 trillion and employing more than 11.2 million people are calling on governments to adopt policies now to reverse nature loss by 2030.<sup>74</sup>

Another useful example of the private sector taking voluntary action on sustainable trade is the China Meat Association (CMA). In response to growing consumer pressure and volatility of the price and availability of soy used for feed, the CMA is developing a voluntary specification for Meat Industry Green trade, that establishes a baseline for ensuring food safety, consistency, and stability of food supplies.<sup>75</sup>

However, the sectors whose emissions are harder to abate are lagging behind, as well as companies which are not consumer facing. For example, Cargill is the only one of the dominant global agricultural commodity trading companies (ADM, Bunge, Cargill, and Louis-Dreyfus – the "ABCDs") to have set a science-based target for reducing greenhouse gas emissions. Governments can help raise the bar on corporate action through promoting voluntary standards and signalling that they are prepared to follow this up with regulation if needed. The prospect of regulation helps level the playing field and stops companies from undercutting each other, provided that the sustainability targets are capable of being met and are independently monitored to prevent "greenwashing".

## **ACTION 8:** Incentivise sustainable production through financial and investment support for farmers

A call to shift to more sustainable practices without enabling conditions places an undue burden on producers, particularly for smallholders. To create a just and equitable transition in agricultural practices, we must develop transition pathways for farmers and smallholders both to secure livelihoods and elevate smallholders' position in the food system. Food producers must be considered at the centre of reform efforts with adequate financial, technological, and knowledge sharing support. The Food and Land Use Coalition has estimated that a shift to sustainable agriculture and strengthened forest protection is estimated to unlock over \$5.7 trillion of economic benefits by 2030,<sup>4</sup> generate millions of jobs, primarily in the developing world, reduce food loss and waste, and improve food security.<sup>76</sup>

In support of these aims, safety nets, insurance, and other risk management tools can help to protect and strengthen rural livelihoods. These tools help provide a crucial missing incentive to adaption to more sustainable production methods by offering coverage for any loss, upfront capital to implementation, and critical financial stability for farmers in a notoriously volatile sector. For example, in 2019 Côte d'Ivoire and Ghana introduced the Living Income Differential (LID) that placed a premium of \$400 a tonne (paid by manufacturers) to the price of cocoa to support farmers' livelihoods. While COVID-19's supply chain complications has made it difficult to evaluate the success of the LID after one year of implementation, one estimate suggests that farmgate prices would have been about 25 percent lower without the LID in place.<sup>77</sup> Payment for ecosystem services are also becoming increasingly common, and support farmers looking to diversify their income sources by managing land for climate or biodiversity, as well as production.

Another suggestion is to set up a fund to aid producers in meeting sustainable production standards, funded by a levy on the price of goods sold, as proposed by Jason Clay at the World Wide Fund for Nature (WWF) Such an idea can be deployed by a number of regulatory or private actors in the food system, provided that the institution in question has the credibility and track record to give producers and traders confidence that the funds raised will go directly to commodity producers to fund the cost of transitioning to sustainable production methods not included in today's prices.<sup>78</sup>

Ideas like these can be elevated by governments and aligned with private sector interests through public-private partnerships. A global fund for smallholders and other agribusiness constituents helps to alleviate the financial burden of the transition and ensures safety and security of food stocks. This in turn protects the future business of traders and processing facilities further in the supply chain, and ultimately benefits consumers and retailers with enhanced stability.

## ACTION 9: Foster inclusive collaboration with local communities, producers, smallholders, and indigenous peoples.

Existing business sand trade approaches are typically crafted by a narrow set of actors and interest groups and thus may exclude other stakeholders who have a bested interest but less of a prominent voice. These stakeholders include sub-national governments, civil society, farmers, smallholders, indigenous peoples, and local communities, all of whom can support the development of sustainable value chains and help information flow along them. For example, jurisdictional approaches that are inclusive of a broad range of stakeholders are generally accepted to have the greatest chance of success.<sup>4</sup> Inclusion also helps to ensure that local producers and communities are paid fairly and transparently for the ecosystem services they provide.<sup>4</sup>

When tackling inclusivity, we must take into consideration the critical role that indigenous peoples play in forest stewardship. A study of Brazilian collective land tenure rights showed a significant decrease in deforestation linked to land security for indigenous peoples, thus demonstrating positive impacts of human rights and cost-effective forest governance approaches.<sup>79</sup> Indigenous communities are eager to play a role in supporting these efforts. In the recent COP26 Leaders' Summit Event on Forests and Land Use, Tuntiak Katan, Vice Coordinator of the Indigenous Organisations of the Amazon River Basin, reiterated the call for inclusion and consent of indigenous voices in activities impacting their territories.<sup>80</sup> This supports the established Declaration of the Rights of Indigenous Peoples, which requires states to "consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them."<sup>81</sup> These groups, particularly civil society and local communities, can help to provide an accountability mechanism for the private sector, to ensure that high-level trade goals are not achieved at the expense of local interests or in contravention of a democratic process.

## Section 6: Conclusion

Sustainable, regenerative and organic rice and duck farming, Guangzhou, China (Ian Teh for Panos Pictures, commissioned by FOLU) The COVID-19 pandemic has shone a light on where the global trade system is fragile and where it is resilient. The effect of climate change is comparable to dealing with a pandemic every year – extreme weather will disrupt supply, and unpredictable political responses will amplify the effects of those supply shocks on price. Building sustainability into the trade system is therefore essential to both food security and the achievement of climate and nature goals. Trade can help smooth out supply shocks, but it has also contributed to deforestation and the dominance of heavily processed foods that are detrimental to health. The challenge is for countries and farmers to act on the climate and nature emergency without losing the benefits of trade for reducing poverty and food insecurity.

The international trade architecture was not designed with sustainability in mind, but this report has demonstrated ways in which it can be improved to meet important socioeconomic, climate, and nature goals. These include building environmental standards into trade policy and aligning on definitions, metrics and data sharing protocols that make it possible to trace and verify the climate and nature impact of food commodities. Equally important are measures that countries can take to link their trade policies to domestic climate policies, such as subsidy reform, and joined-up policymaking. Finally, corporate and philanthropic actors need to improve the quality and reach of voluntary standards, especially for data sharing, and step up their support to smallholders so that they are not shut out of export markets by them. The prospect of fair, healthy, and sustainable trade in food is within reach: it is the shared responsibility of governments, the private sector and international standards and regulatory bodies to seize it.

#### Box 3: Be sure to follow us for more on FOLU's trade related work including:

- The Food Agriculture Biodiversity Land and Energy (FABLE) Consortium: FABLE represents a network of interdisciplinary teams of researchers from more than 20 countries, which develop integrated national pathways towards sustainable land use and food systems to inform national strategies and the international community on domestic policies and trade patterns that would facilitate the achievement of global objectives.
- Forest, Agriculture, and Commodity Trade (FACT) Dialogue: As part of the FACT Dialogues featured at COP26's Nature agenda, FOLU's Secretariat and WRI co-led a working group on Traceability and Transparency within the FACT Multistakeholder Task Force. FOLU and WRI will continue to work toward the implementation of the FACT Roadmap for Action that defines how 28 participating countries will deliver on forest conservation alongside sustainable trade and development.
- The World Business Council for Sustainable Development: WBCSD, a core FOLU partner, has published several reports that highlight the impacts of trade on food systems including Vital Supply Chains, which underscores the impact of COVID-19 on supply chains, the Food and Agriculture Roadmap, which includes recommendations from a producer, consumer and equity perspective, and The True Value of Food, exceptional evidence for the accounting of externalities in the value of food a critical component to consider in assessing trade arrangements.
- The Food Systems Economic Commission (FSEC): FOLU is a co-convener of FSEC, an independent academic commission set up to equip political and economic decision makers with tools and evidence to shift food and land use systems. In 2022, FSEC is producing an assessment titled *Trade Policy Reform for Food System Transformation* that seeks to examine the tension between national interests and multilateral trade rules in areas such as climate and environment, and nutrition.

## References

- 1. FAO News Article: Global food trade is buoyant, as are prices. FAO https://www.fao.org/news/story/en/item/1410675/icode/ (2021).
- 2. Laje, D., Faiola, A. & Herrero, A. V. South America drought: Argentina, Brazil, Chile, Bolivia suffer climate change The Washington Post. *The Washington Post* (2021).
- 3. de Sousa, A. & Durisin, M. Global Food Costs Jump Back Near Decade-High on Harvest Woes Bloomberg. *Bloomberg* https://www.bloomberg.com/news/articles/2021-09-02/global-food-prices-jump-back-near-decade-high-on-harvestwoes?cmpid=BBD092421\_TRADE&utm\_medium=email&utm\_source=newsletter&utm\_term=210924&utm\_campaign=trade (2021).
- 4. FOLU. Growing Better : Ten Critical Transitions to Transform Food and Land Use. *Glob. Consult. Rep. Food L. Use Coalit.* 1–237 (2019).
- Lee, B., Hepburn, J. & Bellmann, C. Delivering Sustainable Food and Land Use Systems: The Role of International Trade by Bernice Lee, Jonathan Hepburn and Christophe Bellmann | Sustainability Accelerator. Sustainability Accelerator - Chatham House https://accelerator.chathamhouse.org/article/delivering-sustainable-food-and-land-use-systems-the-role-ofinternational-trade/ (2019).
- 6. van Nieuwkoop, M. Do the costs of the global food system outweigh its monetary value? *World Bank Blogs* https://blogs.worldbank.org/voices/do-costs-global-food-system-outweigh-its-monetary-value (2019).
- 7. The World Bank. World Development Indicators | DataBank.
- 8. World Development Indicators (WDI). World Bank https://datacatalog.worldbank.org/search/dataset/0037712 (2017).
- 9. Benson, S. & Lanel, V. Why Nature? Why Now? How nature is key to achieving a 1.5°C world . https://www.foodandlandusecoalition. org/wp-content/uploads/2021/10/Why-Nature-PDF-FINAL\_compressed.pdf (2021).
- Arvis, J.-F., Duval, Y., Shepherd, B., Utoktham, C. & Raj, A. Trade Costs in the Developing World: 1995 2012. https://developing-trade.com/wp-content/uploads/2015/03/Working-Paper-DTC-2015-2.pdf (2015).
- 11. Ortiz-Bobea, A., Ault, T. R., Carrillo, C. M., Chambers, R. G. & Lobell, D. B. Anthropogenic climate change has slowed global agricultural productivity growth. *Nat. Clim. Chang.* 11, 306–312 (2021).
- 12. FAO Food Price Index | World Food Situation | Food and Agriculture Organization of the United Nations. Food and Agriculture Organisation of the United Nations https://www.fao.org/worldfoodsituation/foodpricesindex/en/ (2021).
- 13. Gibb, R. et al. Zoonotic host diversity increases in human-dominated ecosystems. Nat. 2020 5847821 584, 398–402 (2020).
- 14. Tollefson, J. Why deforestation and extinctions make pandemics more likely. Nature 584, 175–176 (2020).
- Rosegrant, M. W. et al. Food security in a world of natural resource scarcity The role of agricultural technologies. Research Institute (IFPRI), International Food Policy https://ebrary.ifpri.org/digital/collection/p15738coll2/id/128022 (2014) doi:10.2499/9780896298477.
- 16. The regional assessment report on BIODIVERSITY AND ECOSYSTEM SERVICES FOR EUROPE AND CENTRAL ASIA. https://ipbes.net/ sites/default/files/2018\_eca\_full\_report\_book\_v5\_pages\_0.pdf (2018).
- 17. Will climate change decrease the food security of the world's breadbaskets? | McKinsey. *McKinsey Global Institute* https://www. mckinsey.com/business-functions/sustainability/our-insights/will-the-worlds-breadbaskets-become-less-reliable (2020).
- McSweeney, R. Explainer: Nine 'tipping points' that could be triggered by climate change | Carbon Brief. Carbon Brief https:// www.carbonbrief.org/explainer-nine-tipping-points-that-could-be-triggered-by-climate-change (2020).
- 19. Amigo, I. The Amazon's Fragile Future. Nature 578, (2020).
- 20. GREENING COMMODITY SUPPLY CHAINS IN EMERGING MARKETS: CHALLENGES & OPPORTUNITIES. (2018).
- Coates, S. Australia and UK governments at odds over why key climate targets were stripped out of future trade deal | Politics News | Sky News. Sky News https://news.sky.com/story/australia-and-uk-governments-at-odds-over-why-key-climate-targets-were-stripped-out-of-future-trade-deal-12402967 (2021).
- 22. Brazil's Amazon: Deforestation 'surges to 12-year high' BBC News. BBC News https://www.bbc.co.uk/news/world-latinamerica-55130304 (2020).
- 23. Multilateral Environmental Agreements. https://www.eac.int/environment/multilateral-environmental-agreements.
- 24. What is CITES? | CITES. https://cites.org/eng/disc/what.php.
- 25. Rockström, J. et al. A safe operating space for humanity. Nat. 2009 4617263 461, 472–475 (2009).
- 26. Carrington, D. Nearly all global farm subsidies harm people and planet UN | Farming | The Guardian. *The Guardian* https:// www.theguardian.com/environment/2021/sep/14/global-farm-subsidies-damage-people-planet-un-climate-crisis-natureinequality (2021).
- 27. WTO | Factsheet: Negotiations on fisheries subsidies. *World Trade Organization* https://www.wto.org/english/tratop\_e/ rulesneg\_e/fish\_e/fish\_intro\_e.htm (2021).

- A MULTI-BILLION-DOLLAR OPPORTUNITY: Repurposing agricultural support to transform food systems. https://www.fao.org/3/ CB6683EN/CB6683EN.pdf (2021) doi:10.4060/cb6683en.
- 29. OECD Review of Fisheries 2020. OECD https://www.oecd-ilibrary.org/agriculture-and-food/oecd-review-of-fisheries-2020\_7946bc8a-en (2020) doi:10.1787/7946BC8A-EN.
- 30. Protecting and Restoring Forests FIVE-YEAR ASSESSMENT REPORT. https://forestdeclaration.org/wp-content/ uploads/2021/10/2019NYDFReport.pdf (2019).
- 31. Orbitas. Agriculture in the Age of Climate Transitions: Stranded Assets. Less Land. New Costs. New Opportunities. https:// orbitas.finance/2020/12/03/ag-climate-transitions-risk-opportunities/ (2020).
- 32. Sønderskov, K. M. & Daugbjerg, C. The state and consumer confidence in eco-labeling: Organic labeling in Denmark, Sweden, The United Kingdom and The United States. *Agric. Human Values* 28, 507–517 (2011).
- 33. One million plus people demand EU legislation to protect forests | Forest 500. Forest 500 https://forest500.org/analysis/ insights/one-million-plus-people-demand-eu-legislation-protect-forests (2020).
- 34. McGrath, M. Climate change: New UK law to curb deforestation in supply chains BBC News. (2020).
- 35. Clapp, J. The problem with growing corporate concentration and power in the global food system. *Nat. Food* 2, 404–408 (2021).
- Clapp, J. Section IV Corporate Role in Food and Agriculture Special Issue: Mapping the Global Food Landscape ABCD and beyond: From grain merchants to agricultural value chain managers. 2, 126–135 (2015).
- Agricultural Commodity Companies Corporate Statement of Purpose UN Climate Change Conference (COP26) at the SEC Glasgow 2021. https://ukcop26.org/agricultural-commodity-companies-corporate-statement-of-purpose/.
- Heilmayr, R., Rausch, L. L., Munger, J. & Gibbs, H. K. Brazil's Amazon Soy Moratorium reduced deforestation. Nat. Food 2020 112 1, 801–810 (2020).
- 39. Institute for European Environmental Policy. A cup of Trade-and-Environment Agreement TEA? https://ieep.eu/news/a-cupof-trade-and-environment-agreement-tea (2021).
- 40. Van Den Berghe, A. What's going on with the EU-Mercosur agreement? . *ClientEarth* https://www.clientearth.org/latest/latest-updates/news/what-s-going-on-with-the-eu-mercosur-agreement/ (2021).
- 41. Hirvonen, K., Bai, Y., Headey, D. & Masters, W. A. Affordability of the EAT-Lancet reference diet: a global analysis. Lancet. Glob. Heal. 8, e59–e66 (2020).
- 42. Springmann, M., Clark, M. A., Rayner, M., Scarborough, P. & Webb, P. The global and regional costs of healthy and sustainable dietary patterns: a modelling study. *Lancet. Planet. Heal.* (2021) doi:10.1016/S2542-5196(21)00251-5.
- 43. The True Value of Food A powerful aid to business decision-making. https://www.wbcsd.org/contentwbc/download/12974/190792/1 (2021).
- 44. MANAGING FOOD PRICE VOLATILITY: Policy Options to Support Healthy Diets and Nutrition in the Context of Uncertainty. file:///C:/ Users/ElizabethPetykowski/Downloads/Food-Price-Volatility-Brief.pdf (2016).
- 45. Quiggin, D., De Meyer, K., Hubble-Rose, L. & Froggatt, A. Climate change risk assessment 2021 The risks are compounding, and without immediate action the impacts will be devastating. https://www.chathamhouse.org/sites/default/files/2021-09/2021-09-14-climate-change-risk-assessment-quiggin-et-al.pdf (2021).
- 46. Africa spending more than its fair share for climate adaptation, a new study reveals . *United Nations Economic Commission* for Africa https://archive.uneca.org/stories/africa-spending-more-its-fair-share-climate-adaptation-new-study-reveals (2017).
- 47. Peinhardt, C., Kim, A. A. & Pavon-Harr, V. Deforestation and the United States–Peru trade promotion agreement. *Glob. Environ. Polit.* 19, 53–76 (2019).
- 48. About Montreal Protocol. United Nations Environment Programme https://www.unep.org/ozonaction/who-we-are/about-montreal-protocol.
- 49. What is the EU Timber Regulation? | FLEGT. https://www.euflegt.efi.int/what-is-the-eu-timber-regulation-.
- 50. Uncommon Cacao. An Introduction to the Newly Implemented Living Income Differential (LID) in Ghana & Cote d'Ivoire. Uncommon Cacao (2020).
- 51. VPAs | FLEGT. https://www.euflegt.efi.int/vpa.
- 52. Radcliffe, B. How Economic Sanctions Work. *Investopedia* https://www.investopedia.com/articles/economics/10/economic-sanctions.asp (2021).
- 53. Lacey Act. United State Fish and Wildlife Service https://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/lacey-act.html.
- 54. Illegal logging and the EU FLEGT Action plan | FLEGT. https://www.euflegt.efi.int/illegal-logging-media.
- 55. Fripp, E. FLEGT AND TRADE What will the impacts be? https://www.chathamhouse.org/sites/default/files/public/Research/ Energy, Environment and Development/efnov04.pdf (2004).

- 56. Branger, F. & Quirion, P. Would border carbon adjustments prevent carbon leakage and heavy industry competitiveness losses? Insights from a meta-analysis of recent economic studies. *Ecol. Econ.* 99, 29–39 (2014).
- 57. WTO rules and environmental policies: introduction. WTO https://www.wto.org/english/tratop\_e/envir
- Bapna, M., Taylor, R. & Solheim, E. Global Green Value Chains: China's Opportunities, Challenges and Paths in the Current Economic Context. China Council for International Cooperation on Environment and Development (CCICED) Special Policy Study https://cciced. eco/wp-content/uploads/2021/09/4-2-Global-Green-Value-Chains-1.pdf (2021).
- 59. WTO | 2019 News items Speech DDG Alan Wolff DDG Wolff: Acceding governments are in the vanguard of WTO reform. WTO https://www.wto.org/english/news\_e/news19\_e/ddgaw\_05dec19\_e.htm.
- 60. Dubash, N. K. Varieties of climate governance: the emergence and functioning of climate institutions. https://doi.org/10.1080/ 09644016.2021.1979775 30, 1–25 (2021).
- 61. Climate cabinet to put Germany back on track for 2030 targets . *Clean Energy Wire https://www.cleanenergywire.org/dossiers/climate-cabinet-put-germany-back-track-2030-targets* (2021).
- 62. EU Trade Strategy Supports Climate Neutrality . *IISD SDG Knowledge Hub* https://sdg.iisd.org/news/eu-trade-strategy-supports-climate-neutrality/ (2021).
- 63. OECD & FAO. OECD-FAO Guidance for Responsible Agricultural Supply Chains. https://www.oecd-ilibrary.org/docserver/9789264251052-en. pdf?expires=1605025949&id=id&accname=guest&checksum=7E10675FFFFA4065715A40E3AEA7DD13 (2016).
- 64. Harding, L. WTO director-general says trade critical in solving pandemic and climate change. Yahoo News https://uk.news. yahoo.com/wto-director-general-ngozi-okonjo-iweala-trade-critical-solving-pandemic-climate-change-144145161.html (2021).
- 65. Francis, A. & Clay, J. 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 Parliamentary Briefing\_twin track approach.pdf (2021).
- 66. Clay, J. Codex Planetarius Maintaining the Environmental Sustainability of Food Production. https://files.worldwildlife.org/ wwfcmsprod/files/Publication/file/8mj9cpjhqi\_Codex\_Planetarius\_white\_paper\_updated.pdf (2016).
- 67. WTO | 2020 News items New initiatives launched to intensify WTO work on trade and the environment. https://www.wto. org/english/news\_e/news20\_e/envir\_17nov20\_e.htm (2020).
- 68. WTO | Understanding the WTO principles of the trading system. *World Trade Organization* https://www.wto.org/english/ thewto\_e/whatis\_e/tif\_e/fact2\_e.htm#seebox (2021).
- 69. Ding, H., Anderson, W. & Zamora Cristales, R. Smarter Farm Subsidies Can Drive Ecosystem Restoration. *World Resources Institute* https://www.wri.org/insights/how-farm-subsidies-combat-land-degradation (2021).
- 70. Verdone, M. & Seidl, A. Time, space, place, and the Bonn Challenge global forest restoration target. *Restor. Ecol.* 25, 903–911 (2017).
- 71. Force, F. M. T. Forest, Agriculture and Commodity Trade (FACT) Dialogue Transparency and Traceability suggestions to the Chairs Proposal draft. (2021).
- 72. HOW COMPANIES ARE REDUCING EMISSIONS AT SCALE WITH SCIENCE-BASED TARGETS. https://sciencebasedtargets.org/ resources/files/SBTiProgressReport2020.pdf (2021).
- 73. Companies taking action Science Based Targets. https://sciencebasedtargets.org/companies-taking-action.
- 74. Call to Action Business For Nature. https://www.businessfornature.org/call-to-action.
- 75. TFA at NYCW: Flagship Roadmap for a more sustainable, safe and productive Brazil-China beef trade YouTube. Youtube https://www.youtube.com/watch?v=D4TX1f8igJg&t=673s (2021).
- 76. The New Climate Economy. UNLOCKING THE INCLUSIVE GROWTH STORY OF THE 21ST CENTURY: ACCELERATING CLIMATE ACTION IN URGENT TIMES. https://newclimateeconomy.report/2018/wp-content/uploads/sites/6/2018/09/NCE\_2018\_FULL-REPORT.pdf (2018).
- 77. Fountain, A. & Hütz-Adams, F. The Cocoa Barometer 2020. Voice Organ. Cocoa 51 (2020).
- 78. Clay, J. Markets Institute Weekly: Should we put everything on 32 black? Spreading our bets. Markets Institute Weekly (2021).
- 79. Baragwanath, K. & Bayi, E. Collective property rights reduce deforestation in the Brazilian Amazon. Proc. Natl. Acad. Sci. U. S. A. 117, 20495–20502 (2020).
- 80. Leader's event: Action on Forests and Land-use YouTube. Youtube https://www.youtube.com/watch?v=ijxOLiU32FU (2021).
- 81. Free, Prior and Informed Consent of Indigenous Peoples. https://www.ohchr.org/Documents/Issues/ipeoples/

freepriorandinformedconsent.pdf (2013).

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