

BIODIVERSITY AND INTERNATIONAL TRADE POLICY PRIMER

HOW DOES NATURE FIT
IN THE SUSTAINABLE
TRADE AGENDA?





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INTRODUCTION

Humanity's social and economic welfare are intrinsically connected to nature. Evidence of the accelerating decline of nature is spurring growing calls for international action. Not only does the mismanagement of nature threaten food security, it also undermines the resilience of ecosystems to climate change, the potential for nature-based solutions to the climate crisis and the welfare of millions of people worldwide who rely on ecosystem health for their livelihoods. According to the most recent international biodiversity assessments, "negative trends in biodiversity and ecosystems will undermine progress towards 80 percent (35 out of 44) of the assessed targets of the Sustainable Development Goals, related to poverty, hunger, health, water, cities, climate, oceans, and land (SDGs 1, 2, 3, 6, 11, 13, 14 and 15). Loss of biodiversity is therefore shown to be not only an environmental issue, but also a developmental, economic, security, social and moral issue."¹

In 2021, links between the origins of the Covid-19 pandemic and wildlife trade have underscored the consequences of production and consumption patterns that are out of sync with nature and the huge economic, social and health costs associated with degraded ecosystems. Concerns about biodiversity loss and deforestation are a key factor driving government policies toward more sustainable food systems and natural resource management.

At the same time, the push for a greener, global economy is spurring renewed interest in how trade policy can better support economic transformation toward environmental sustainability and safeguard efforts to improve environmental performance. This includes rising interest in the relevance of trade and trade policies to biodiversity protection, sustainable use and restoration, both in terms of threats to nature arising from current trade trends and policies, and the potential of trade policies to support greener supply chains and global biodiversity goals. Trade policy implications are also increasingly discussed with reference to the oceans, which are home to most of earth's biodiversity, and currently store 90 percent of heat from global warming.²

Biodiversity has been on the agenda of international trade-environment diplomacy for almost three decades. The earliest environment-trade disputes

at the GATT/WTO, for instance, emerged from environmental policies that aimed to protect specific species affected by trade (e.g., dolphins, turtles). Efforts to protect forests – and related biodiversity – have resulted in a variety of trade-related measures aimed at restricting or banning trade in unsustainably sourced timber products. Biodiversity related safeguards and goals also feature in a broad range of bilateral and regional trade arrangements, though with varying degrees of ambition, specificity, and enforceability. Alongside a growing number of private environmental standards and eco-labels supporting biodiversity conservation, there are many initiatives focused on improving transparency and environmental performance in 'biodiversity-risk' supply chains. Growing awareness of physical links between climate change and biodiversity loss is spurring a focus among some governments on policies to promote 'deforestation-free' imports as a pathway to address both biodiversity and climate goals.

In 2021, the newly launched 'Structured Discussions on Trade and Environmental Sustainability,' cosponsored by 53 WTO Members, offers the potential to advance discussions on the linkages between trade, nature loss, and ecosystem health, most notably in the context of agricultural and commodities trade.³ Notably, the crisis of nature is not a stand-alone issue. It is deeply intertwined with two other global environmental crises – climate change and pollution. Today, climate change represents the third most important driver of global biodiversity loss.⁴ Biodiversity is also seriously threatened by all forms of pollution, which contribute to ecosystem dysfunction. Marine plastic pollution, for instance, exacerbates marine ecosystem decline. For example, nutrient overloads in aquatic ecosystems can cause algal blooms, leading to a loss of oxygen, and ultimately aquatic life.⁵ Therefore, greening international trade will require attention to the linkages between these crises and solutions that cut across them.⁶

Similarly, social sustainability is closely intertwined with environmental considerations. Solutions to biodiversity loss will rely on closer attention to issues of fair trade, equity, and justice, and to the perspectives and solutions advanced by rural communities and indigenous peoples, who rely on nature for their livelihoods and are most directly impacted by land degradation. Solutions will furthermore require attention to critical political issues at the local level, ranging from land tenure to worker's rights.

This scoping paper aims to serve as a primer for policymakers and stakeholders seeking to better understand the relationship between biodiversity, trade, and trade policy, and identify ways forward. To do so, this paper maps the intersections between nature, trade and trade policy, and highlights options and opportunities for policy-making to better align trade with the international biodiversity agenda.

OUTLINE

Part 1 of this paper introduces readers to the state of the world's biodiversity, as well as drivers and impacts of biodiversity loss. Part 2 then reviews international commitments, instruments, nature-related priorities, and the state of play on relevant international policymaking. In Part 3, the paper explores linkages between trade flows and biodiversity. Part 4 focuses on the intersection of trade policy and biodiversity goals, while Part 5 reviews supply-chain initiatives, including those led by stakeholders across the wider trade and biodiversity landscape. Finally, the paper proposes a number of priority areas for enhanced policy dialogue, research and action.

1. THE STATE OF BIODIVERSITY AND GLOBAL GOVERNANCE OF BIODIVERSITY

1.1. THE BIODIVERSITY CRISIS: KEY TRENDS

The world's natural species are facing extinction at the highest rate in human history, with 1 million plants and animal species threatened.⁷ According to the International Union for the Conservation of Nature (IUCN) Red List, the proportion of species currently threatened with extinction has risen considerably over the past 40 years, with an estimated 25 percent of species across different

biodiversity groups – terrestrial, freshwater, marine vertebrate and invertebrate as well as plant groups now threatened with extinction.⁸ There are 36 'biodiversity hotspots' around the world that house exceptional concentrations of endemic species and which face an exceptional loss of habitat (mainly due to human activity).⁹ Further, according to the 2021 Dasgupta Review of the Economics of Biodiversity, judged by what is known about relatively well studied groups (terrestrial vertebrates, plants), "some 20 percent of the species could become extinct within the next several decades, perhaps twice as many by the end of the century."¹⁰

In 2020, governments recognised that they had failed to meet the Aichi biodiversity targets agreed to in Japan in 2010,¹¹ making it the second decade that governments have failed to meet targets to slow biodiversity loss. The UN's 2020 Global Biodiversity Outlook found that, overall, little progress had been made over the previous decade to reform or eliminate incentives that are harmful to biodiversity, observing that human activities were causing natural habitats to disappear and threatening natural species with extinction. The report also observed that governments are still spending over USD 500 billion on environmentally harmful subsidies in contrast to the USD 80-90 billion available in financing for biodiversity preservation.¹² In 2021, a joint UNEP-UNDP-FAO report also emphasised the impact of agricultural subsidies for producers on nature, climate, nutrition, health and equity, calling on governments to phase out the most distorting and environmentally and socially harmful producer support, and the direction of resources redirected towards investments for the provision of public goods and services for agriculture.¹³

1.2. THE VALUE OF BIODIVERSITY AND IMPACTS OF NATURE LOSS

The Earth is home to approximately 9 million species of plants, animals and fungi, that form complex ecosystems, which maintain and stabilize the functioning of the natural world, and ultimately help to sustain human life.¹⁴ The diversity of life is the underlying foundation of the earth's 'natural capital' (the stocks of natural assets, including geology, soil, air, water and all living things)¹⁵ from which vital ecosystem goods and services are derived (i.e. food, drinkable water, plant materials used for fuels).¹⁶ Biodiversity also offers nature-based solutions to mitigate climate change.¹⁷

In the last decades, the earth's natural capital has been harvested and degraded at a rate that threatens to undermine both human wellbeing and economic growth. Currently, around 20 percent of the planet's vegetated surface shows declining trends in productivity due to fertility losses linked to depletion, pollution and erosion.¹⁸

Natural ecosystems such as forests, grassland, wetlands, inland waterways and coral reefs provide essential services that support food security.¹⁹ Biodiversity loss greatly affects nature's ability to sustain people by impacting agriculture, fisheries and aquaculture. Declines in productivity are already affecting food security and livelihoods, especially in poor communities.²⁰ At the same time, loss of genetic diversity and wild species closely related to food crops undermines agricultural system resilience to both pathogens and climate change.²¹ In regions that already experience food security challenges, land degradation and climate change are predicted to further reduce crop yields by an average of 11 percent by 2050.²² The destruction of mangroves, peatlands and tropical forests for agriculture and other uses contributes to 13 percent of total human CO₂ emissions,²³ and undermines nature-based solutions to climate change.²⁴

According to research by the WEF and PricewaterhouseCoopers, USD 44 trillion of economic value generation – more than half of the world's GDP – is dependent on nature and its services.²⁵ Nature is an essential ally in addressing the most pressing challenges faced by the international community today. Nature plays a key role, for instance, in helping countries defend themselves against natural disasters and coastal erosion by contributing to soil and sand formation,²⁶ regulation of climate and diseases, and nutrient cycling.²⁷ According to UN estimates, the restoration of 350 million hectares of degraded land could generate USD 9 trillion in ecosystem services by 2030, and significantly aid efforts to reduce greenhouse gas emissions.²⁸

According to latest estimates, healthy ecosystems can provide over one third of greenhouse gas mitigation needs to limit global temperature rise.²⁹ In fact, nature's mitigation potential is estimated at 10-12 gigatons of CO₂ per year, including the role of forests in absorbing CO₂ emissions.³⁰ This realization has encouraged growing interest in fostering so-called nature-based solutions to climate change, which can be defined as “actions to protect,

sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.”³¹ In practical terms, this includes policies and projects that advance ecological restoration and engineering, ecosystem-based climate mitigation and adaptation, as well as natural and green infrastructure.³²

Further, the need for restoration of deforested and degraded lands has also been highlighted in the context of climate negotiations, where governments have called for engagement at all levels through a Landscape Restoration Initiative.³³ One such prominent example of action to address desertification and support biodiversity³⁴ is the work to support the ‘Great Green Wall’, a project involving a range of international organisations that aims to revive desertified and degraded land in the Sahel region of Africa.³⁵

1.3. DRIVERS OF BIODIVERSITY LOSS

Almost all the most significant drivers of biodiversity loss are human made (i.e., anthropogenic). Direct drivers – including land and sea use change, direct nature exploitation (felling of forests for timber & consumption of wildlife and wild plants), climate change, pollution, and invasive alien species – are all linked to underlying, indirect drivers underpinned by societal values and behaviors (Figure 1).^{37,6}

Drivers that are the focus of current policy attention include:

Land-use conversion toward intensive agricultural use, natural resource extraction, and forestry production. Since 1990, some 420 million hectares of forest have been lost due to conversion to other land uses in the process eliminating habitat for wildlife and damaging air, water, and soil resources.³⁷ Notably, food production already occupies half of the habitable land on Earth. The expansion of agricultural products converts natural habitats, resulting in a loss of biodiversity and carbon sinks, while agricultural intensification typically uses more inputs, often with adverse impacts on soil and water quality and on biodiversity.³⁸ Though the intensity and drivers of deforestation – and its significance for the world's biodiversity – vary by year and location,³⁹ large scale commercial production of agricultural commodities such as palm oil, soybean and beef are estimated to have accounted for 76 percent of the deforestation associated with agriculture between

1990 and 2008.⁴⁰ Notably, the world's use of natural resources, such as water and material resources, has tripled since 1970. Unsustainable natural resource extraction and processing has added major pressures on biodiversity and natural systems, spurring calls for a shift towards efficient management and consumption of natural resources.⁴¹

Climate change: The UN's 2020 Biodiversity Outlook noted that in a ‘business as usual scenario,’ biodiversity will continue to decline until 2050 and beyond, with climate change as a major cause.⁴³ The effects of climate change are already visible across marine, freshwater and terrestrial ecosystem.⁴⁴ The Intergovernmental Panel on Climate Change (IPCC) has estimated that the degree of biodiversity loss depends on whether global temperature will be around 1.5°C, or whether they will exceed 2°C above pre-industrial level.⁴⁵ Recent estimates show that by 2050 climate change could reduce crop yields by 50 percent in certain regions and 10 percent globally.⁴⁶ At the same time, deforestation negates the ability of forests to absorb harmful CO₂ emissions from the atmosphere, thus exacerbating climate change.⁴⁷

Pollution: Pollution has far-reaching negative impacts on nature, with pollutants such as sulfur and

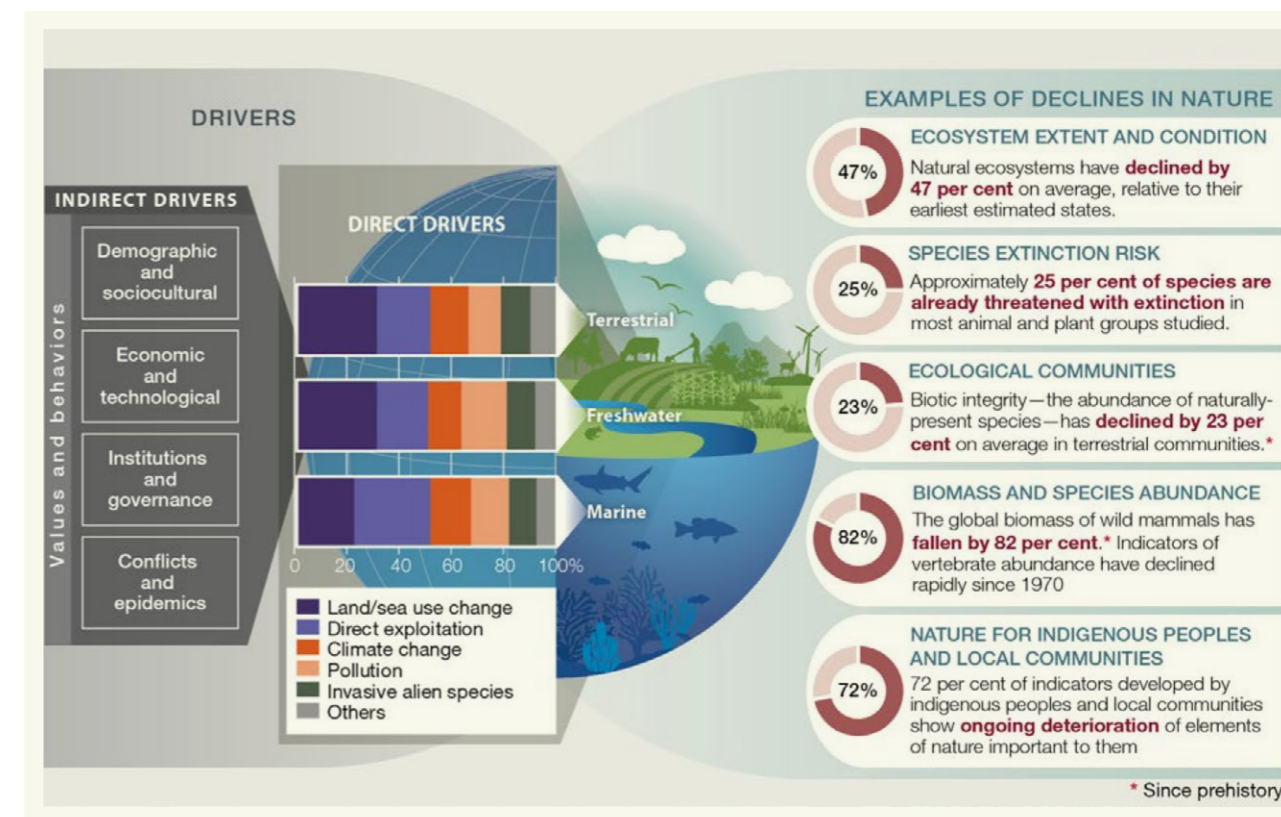
nitrogen causing damage to ecosystems, especially lakes; pesticides and fertilizers contaminating soil; and plastic pollution damaging marine ecosystems and spreading toxic chemicals through soil and water systems. For example, marine plastic pollution, which has grown tenfold since 1980, has affected already 267 species, of which 43 percent are marine mammals, 86 percent are marine turtles and 44 percent are seabirds.⁴⁸

Another driver noted in Figure 1 is the degradation of land and habitats (as opposed to conversion) due to factors such as soil erosion and salinization, and the encroachment of invasive alien species.

2. STATE OF PLAY IN THE GLOBAL GOVERNANCE OF BIODIVERSITY

Governments have been pursuing cooperation on biodiversity at the international, regional and bilateral level (Box 1). Shared international priorities are reflected in a range of international instruments, which together represent the evolving global governance landscape for biodiversity.

FIGURE 1. DRIVERS OF BIODIVERSITY LOSS



Source: IPBES (2019)⁴²

BOX 1. BIODIVERSITY-RELATED TREATIES AND CONVENTIONS

TREATY / CONVENTION	OBJECTIVES AND ACTIVITIES
Convention on Biological Diversity	The objectives of the CBD are the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising from commercial and other utilization of genetic resources. The agreement covers all ecosystems, species, and genetic resources.
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	The CITES aims to ensure that international trade in specimens of wild animals and plants does not threaten survival of the species. Through its three appendices, the Convention accords varying degrees of protection to more than 37,000 plant and animal species. ⁵⁰ International wildlife trade involves hundreds of millions of plants and animals, and if not regulated, this trade can lead to exploitation of these species and consequently their depletion.
Convention on the Conservation of Migratory Species of Wild Animals	The CMS, or the Bonn Convention aims to conserve terrestrial, marine and avian migratory species throughout their range. Parties to the CMS work together to conserve migratory species and their habitats by providing strict protection for the most endangered migratory species, by concluding regional multilateral agreements for the conservation and management of specific species or categories of species, and by undertaking co-operative research and conservation activities.
The International Treaty on Plant Genetic Resources for Food and Agriculture	The objectives of the Treaty are the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security. The Treaty covers all plant genetic resources for food and agriculture, while its Multilateral System of Access and Benefit-sharing covers a specific list of 64 crops and forages. The Treaty also includes provisions on Farmers' Rights.
Convention on Wetlands (popularly known as the Ramsar Convention)	The Ramsar Convention provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The convention covers all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities.
World Heritage Convention (WHC)	The primary mission of the WHC is to identify and conserve the world's cultural and natural heritage, by drawing up a list of sites whose outstanding values should be preserved for all humanity and to ensure their protection through a closer co-operation among nations.
International Plant Protection Convention (IPPC)	The IPPC aims to protect world plant resources, including cultivated and wild plants by preventing the introduction and spread of plant pests and promoting the appropriate measures for their control. The convention provides the mechanisms to develop the International Standards for Phytosanitary Measures (ISPMs), and to help countries to implement the ISPMs and the other obligations under the IPPC, by facilitating the national capacity development, national reporting and dispute settlement. The Secretariat of the IPPC is hosted by the Food and Agriculture Organization of the United Nations (FAO).
International Whaling Commission (IWC)	The purpose of the IWC is to provide for the proper conservation of whale stocks and thus to make possible the orderly development of the whaling industry. This is an international body set up by the terms of the International Convention for the Regulation of Whaling.
United Nations Convention to Combat Desertification (UNCCD)	The UNCCD is the sole legally binding international agreement linking environment and development to sustainable land management. The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found. ⁵¹

Authors' compilation, adapted from CBD website: <https://www.cbd.int/brc>.

Among the most prominent cross-cutting priorities noted in these instruments are:

- Conservation of biodiversity, as well as prevention and reversal of species loss;⁴⁹
- Sustainable use of biodiversity;
- Fair and equitable sharing of the benefits arising from the use of genetic resources and national sovereignty over genetic resources within national jurisdiction;
- Restoration of damaged ecosystems;
- Nature-based climate solutions; and
- Ensuring ecosystem health for food security.

The following discussion reviews the overarching relevance of the UN Sustainable Development Goals (SDGs) to biodiversity as well as the key aspects of the Convention on Biological Diversity (CBD), followed by an overview of other key international developments relevant to the global governance of biodiversity.

2.1. BIODIVERSITY IN THE CONTEXT OF THE 2030 SUSTAINABLE DEVELOPMENT GOALS

Biodiversity underpins the delivery of the SDGs.⁵² Conversely, current negative trends in biodiversity loss considerably undermine progress towards SDGs.⁵³

Building on the understanding of nature's role in underpinning sustainability (see 1.2 above), SDGs 14 and 15 are explicitly targeted to conserve, sustainably use, and restore life under water and on land. Biodiversity and well-functioning ecosystems are also key to delivering SDGs 6 and 13 on water security and climate action, by providing nature-based solutions for conservation, availability, and quality of water, and for climate mitigation and adaptation.⁵⁴

Healthy ecosystems help to maintain environmental stability, act as a buffer against environmental risks, and underpin a number of food security, nutrition, livelihoods and jobs linked to the fisheries, tourism, agriculture and forestry sectors.⁵⁵ Consequently, biodiversity conservation, sustainable use and restoration directly support the objectives of SDG 1 on ending poverty, SDG 2 on ending hunger, achieving food security, improving nutrition and promoting sustainable agriculture, SDG 8 on decent work and economic growth, SDG 11 on sustainable cities and communities, and SDG 16 on peaceful and inclusive societies.^{56,57}

As physical and mental health are directly linked to access to nature and green spaces, biodiversity conservation also underpins the delivery of SDG 3 on good health and wellbeing.⁵⁸ Furthermore, intact and biodiverse ecosystems can slow the transmission of vector-borne diseases and reduce the risks of zoonotic disease transmission from wildlife and livestock to people.⁵⁹

In addition, SDGs 5 and 10 on improving gender, socioeconomic and political inequality among countries are relevant to the CBD's objective of equitable benefit-sharing (discussed below).⁶⁰ And, the achievement of SDG 12, which includes a focus on sustainable consumption and production patterns, will rely on cross-cutting attention to biodiversity conservation and sustainable use.

2.2. THE CONVENTION ON BIOLOGICAL DIVERSITY AND THE 2030 GLOBAL BIODIVERSITY GOALS

The centerpiece of global biodiversity governance is the CBD, which entered into force in 1993 and has 193 signatories.⁶¹ Its objectives are the conservation and sustainable use of biological diversity, as well as the fair and equitable sharing of benefits arising from the use of biological diversity.⁶² Targets related to the sustainable use of biodiversity include: i) ensuring that the trade and use of wild species of fauna and flora are at sustainable levels, ii) the sustainable use of ecosystems, iii) integrating biodiversity values into policies and development strategies, and iv) eliminating unsustainable consumption patterns.⁶³ Article 3 of the CBD affirms that states have the "sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."⁶⁴

Article 15 of the CBD provides that benefits arising from the utilization of genetic resources as well as subsequent applications, and commercialization shall be shared in a fair and equitable way with the Party that is the country of origin of such resources (or a Party that has acquired the genetic resources in accordance with the Convention), and that such sharing shall be upon mutually agreed terms. To provide a transparent legal framework for the effective implementation of this objective, parties to the CBD adopted the *Nagoya Protocol on*

Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the CBD, in 2010, which entered into force in 2014.⁶⁵ While the Nagoya Protocol addressed some concerns of developing countries related to intergovernmental arrangements for access and benefit sharing for genetic resources,⁶⁶ developing countries continue to call for updated international trade and intellectual property (IP) rules at the WTO and WIPO⁶⁷ to better address the trade and IP dimensions of access and benefit-sharing for genetic resources as well as the use of knowledge related to biogenic information (discussed in Part 3).⁶⁸

In 2021, governments are advancing a post-2020 Global Biodiversity Framework, which aims to outline, “what countries need to do, individually and collectively, in the next decade and beyond, to set humanity on course for achieving the CBD’s overall vision of ‘living in harmony with nature’ by 2050.”⁶⁹ In October 2021, at the first segment of the 15th meeting of the CBD Conference of the Parties, governments adopted a Kunming Declaration which called for urgent and integrated action to reflect biodiversity considerations in all sectors of the global economy (see Box 2). Meanwhile, work on a post-2020 Global Biodiversity Framework continues and will be taken up at the second part of the Conference in late April 2022.⁷⁰ The draft framework outlines four long-term goals on ecosystem integrity, nature’s contributions to wellbeing, fair and equitable sharing of benefits, and supporting financing and capacity for 2050, with a number of corresponding milestones to assess progress in 2030. In comparison to its predecessor, the new framework provides quantified goals and targets with a view to improve monitoring or the progress.

Among the key priorities expressed by environmental advocates for this new framework are the transformation of economic sectors with the greatest responsibility for biodiversity loss and stronger focus on accountability and monitoring of the implementation of commitments.⁷¹ Meanwhile, the G77, a coalition of developing countries in the UN arena has called for the mobilisation of financial resources from developed countries and the private sector to support biodiversity action and transition, in accordance with the principle of common but differentiated responsibilities.⁷²

In September 2020, the UN convened a Summit on Biodiversity, alongside the UN General Assembly to mark the end of the UN Decade on Biodiversity 2011-2020. The Summit acknowledged insufficient

progress towards the 2020 global biodiversity targets⁷³ and underscored the urgent need to accelerate action to address biodiversity loss.⁷⁴ Political statements at the Summit underlined the growing recognition by leaders of the links between action for biodiversity and climate, the lessons of the COVID-19 pandemic in terms of the importance of a more balanced relationship between people and natural resources. Many countries also highlighted the importance of deeper attention to ocean issues in the CBD context.

To step up global ambitions and ensure that biodiversity is back on the political agenda, a Leaders’ Pledge for Nature was launched in 2020, in the lead up to the UN Biodiversity Summit. A diversity of political leaders from 78 countries and the European Union (EU) committed to take ten actions to reverse biodiversity loss by 2030 (Box 3).⁷⁵ The UK government, for instance, promised to protect 30 percent of UK’s land by 2030,⁷⁶ and the Prime Minister of Norway proposed the creation of a coalition of governments and businesses to meet the USD one billion annual financial gap needed to end tropical deforestation by 2030.⁷⁷ At the regional level, the EU has already made progress by adopting its Biodiversity Strategy for 2030, in which the EU commits to protecting a minimum of 30 percent of its land area and 30 percent of its sea area by 2030, and to develop legally binding EU nature restoration targets.

The G7 under the UK Presidency in 2021 has pledged explicit high-level political support to accelerating the biodiversity agenda. Both the G7 Trade and Environment Ministers explicitly recognized the role of biodiversity and called for promoting, enabling and supporting transition to sustainable commodities markets and supply chains. The G7 Environment Ministers pledged to “increase support for sustainable supply chains that decouple agricultural production from deforestation and forest degradation,”⁷⁸ whereas the Trade Ministers acknowledged the significant role of a “specific group of traded agricultural commodities” in global deforestation.⁷⁹ Ministers further committed to develop trade policy approaches supporting sustainable supply chains for fisheries, forest and agricultural commodities, in the WTO and beyond.

Finally, in 2021 at the 26th Conference of Parties (COP26) of the UN climate convention (UNFCCC) governments of over 100 countries – including major producer and consumer countries such as Brazil, China, the EU, Russia and the US – signed a Glasgow Leaders’ Declaration on Forest and

BOX 2. KUNMING DECLARATION OF PARTIES TO THE CBD (2021)

1. Ensure the development, adoption and implementation of an effective post-2020 global biodiversity framework, that includes provision of the necessary means of implementation, in line with the Convention, and appropriate mechanisms for monitoring, reporting and review, to reverse the current loss of biodiversity and ensure that biodiversity is put on a path to recovery by 2030 at the latest, towards the full realization of the 2050 Vision of “Living in Harmony with Nature”;
2. Support, as appropriate, the development, adoption and implementation of an effective post-2020 Implementation Plan, and Capacity Building Action Plan, for the Cartagena Protocol on Biosafety;
3. Work across our respective governments to continue to promote the integration, or “mainstreaming” of the conservation and sustainable use of biodiversity into decision-making including through the integration of the multiple values of biodiversity into policies, regulations, planning processes, poverty reduction strategies and economic accounting, and strengthen cross-sectoral coordinating mechanisms on biodiversity;
4. Accelerate and strengthen the development and update of the National Biodiversity Strategies and Action Plans, to ensure the effective implementation of the post 2020 global biodiversity framework at national level;
5. Improve the effectiveness, and increase the coverage, globally, of area-based conservation and management through enhancing and establishing effective systems of protected areas and adopting other effective area-based conservation measures, as well as spatial planning tools, to protect species and genetic diversity and reduce or eliminate threats to biodiversity, recognizing the rights of indigenous peoples and local communities and ensuring their full and effective participation;
6. Strengthen sustainable use of biodiversity for meeting the needs of people;
7. Actively enhance the global environmental legal framework and strengthen environmental law at national level, and its enforcement, to protect biodiversity and to combat its illegal use, and to consider, respect, and promote human rights obligations when taking actions to protect biodiversity;
8. Step up our efforts to ensure, through the Convention, the Nagoya Protocol and other agreements as appropriate, the fair and equitable benefit-sharing from the use of genetic resources, including associated traditional knowledge, taking into account the context of digital sequence information on genetic resources;
9. Strengthen measures, and their implementation, for the development, assessment, regulation, management, and transfer, as appropriate, of relevant biotechnologies, with a view to promote the benefits and to reduce the potential risks, including those associated with the use and release of living modified organisms which are likely to have adverse environmental impacts;
10. Increase the application of ecosystem-based approaches to address biodiversity loss, restore degraded ecosystems, boost resilience, mitigate and adapt to climate change, support sustainable food production, promote health, and contribute to addressing other challenges, enhancing One Health and other holistic approaches and ensuring benefits across economic, social, and environmental dimensions of sustainable development, through robust safeguards for environmental and social protection, highlighting that such ecosystem-based approaches do not replace the priority actions needed to urgently reduce greenhouse gas emissions in a way that is consistent with the goals of the Paris Agreement;
11. Step up actions to reduce the negative effects of human activities on the ocean to protect marine and coastal biodiversity and strengthen the resilience of marine and coastal ecosystems to climate change;
12. Ensure that post-pandemic recovery policies, programmes and plans contribute to the conservation and sustainable use of biodiversity, promoting sustainable and inclusive development;
13. Work with ministries of finance and economy, and other relevant ministries, to reform incentive structures, eliminating, phasing out or reforming subsidies and other incentives that are harmful to biodiversity, while protecting people in vulnerable situations, to mobilize additional financial resources, and align all Ecosystem-based approaches may also be referred to as “Nature based solutions” as per SBSTTA recommendation 23/2, paragraph 4”. financial flows in support of the conservation and sustainable use of biodiversity;
14. Increase the provision of financial, technological and capacity building support to developing countries necessary to implement the post 2020 global biodiversity framework and in line with the provisions of the Convention;
15. Enable the full and effective participation of indigenous peoples and local communities, women, youth, civil society, local governments and authorities, academia, the business and financial sectors, and other relevant stakeholders, and encourage them to make voluntary commitments in the context of the Sharm el Sheikh to Kunming Action Agenda for Nature and People, and to continue to build the momentum for the implementation of the post 2020 global biodiversity framework;
16. Further develop communication, education and public awareness tools on biodiversity to support changes in behaviour towards the conservation and sustainable use of biodiversity;
17. Further enhance collaboration and coordinate actions with ongoing multilateral environmental agreements, such as the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification, and the biodiversity-related conventions, as well as the 2030 Agenda for Sustainable Development and other related international and multilateral processes, to promote the protection, conservation, sustainable management and restoration of terrestrial, freshwater and marine biodiversity, while contributing to other sustainable development goals, aligned to the 2030 Agenda for Sustainable Development.

Land Use in which they committed to “working collectively to halt and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation.”⁸¹ The political declaration also included an explicit pledge to new financing to protect forest ecosystem and a promise to promote trade and development policies that do not drive deforestation and land degradation. In addition, 28 partners – including Brazil, the EU and several of its Member States, Indonesia, the Republic of Congo, the UK and the US – published a joint roadmap for cooperation on trade in forest and agricultural commodities.⁸² The roadmap identified four key areas of work including trade and market development, smallholder support, traceability and transparency, and research, development and innovation. The roadmap was developed as part of the dialogue on Forests, Agriculture and Commodity Trade (FACT) co-chaired by the UK and Indonesia (See section 2.3 below).

In 2021, governments are preparing a post-2020 Global Biodiversity Framework, which aims to outline “what countries need to do, individually and collectively, in the next decade and beyond, to set humanity on course for achieving the CBD’s overall vision of ‘living in harmony with nature’ by 2050.”⁸³ Postponed due to the Covid-19 pandemic to 2022, the 15th meeting of the CBD Conference of the Parties, is anticipated to adopt a process for the preparation of the new global framework, with a first detailed draft released in July 2021.⁸⁴ Among the key priorities expressed by environmental advocates for this new Framework are the transformation of economic sectors with the greatest responsibility for biodiversity loss and stronger focus on accountability and monitoring of the implementation of commitments.⁸⁵ Meanwhile, the G77, a coalition of developing countries in the UN arena, has called for the mobilisation of financial resources from developed countries and the private sector to support biodiversity action and transition, in accordance with the principle of common but differentiated responsibilities.⁸⁶

To mobilize action on the biodiversity agenda, stakeholder organizations such as WWF and the World Economic Forum also advanced a “New Deal for Nature” in 2020. The Deal identified a set of ‘science-based targets’ for actions on nature, calling for contributions from all stakeholders – businesses, investors, NGOs, cities and governments.⁸⁷

2.3. FURTHER INTERNATIONAL DEVELOPMENTS RELEVANT TO BIODIVERSITY-TRADE INTERSECTIONS

A key development in international governance of biodiversity was the commitment made at the 2012 UN Conference on Sustainable Development (Rio +20) to address the issue of the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.⁸⁸

In 2017, the UN General Assembly adopted Resolution 72/249 that launched the process for negotiations for a legally binding instrument under the United Nations Convention on the Law of Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.⁸⁹ Negotiations for a treaty on Biodiversity Beyond National Jurisdiction (BBNJ) have been underway since 2018, although progress has been delayed due to Covid-19.⁹⁰

Several recent policy announcements demonstrate the growing importance that countries attach to restoring degraded ecosystems and landscapes, as well as improving landscape management as part of the global biodiversity agenda. In 2019, the UN Decade on Ecosystem Restoration was launched by UN Environment and FAO with the aim of scaling up the restoration of damaged ecosystems in order to tackle climate change and ensure food security, water supply and biodiversity.⁹¹ Further, several stakeholder groups highlight the importance of paying attention to the most marginal lands and at-risk landscapes.

In 2021, the UN Food Systems Summit focused on transforming food systems to become safe, healthy, and sustainable in light of the UN Sustainable Development Goal. The Summit drew attention to a range of issues related to biodiversity and agriculture,⁹² as well as the role of trade in creating both challenges and opportunities for the achievement of sustainable food systems.⁹³ In this context, WWF International is working to build support for a new *Codex Planetarius*, which would

develop minimum environmental standards to regulate food production and ensure that globally traded food respects and remains within planetary boundaries.⁹⁴ This Codex is proposed as a sister to the FAO’s *Codex Alimentarius*, which focuses primarily on food safety standards.

In the EU, which has committed to supporting the global transition toward more sustainable food systems, there are also calls for the region to make sustainable food systems an explicit goal of its trade policy.⁹⁵ Notably, public health experts advocate for a stronger trade policy focus on sustainable food – highlighting trade as an important consideration in improving nutrition and reducing non-communicable diseases (such as obesity) and anti-microbial resistance.⁹⁶

In 2021, biodiversity is also on the climate agenda for COP26. There is growing attention on the potential for nature-based solutions to support climate mitigation and adaptation strategies developed by countries and the need to support these financially.⁹⁷ In addition, there are calls to focus on ‘nature positive’ climate action, noting that efforts to decarbonize should be pursued in ways that support wider environmental goals, such as biodiversity conservation (e.g., efforts to abate greenhouse gas emissions through reforestation or afforestation should support biodiversity goals).

In 2021, there are ongoing efforts to improve the governance of the world’s forests, building on the 2011 Bonn Challenge to restore 150 million hectares of degraded land by 2020,⁹⁸ and the New York Declaration on Forests (NYDF).⁹⁹ The NYDF, endorsed at the United Nations Climate Summit in September 2014, is a voluntary and non-binding international declaration to take action to halt global deforestation,¹⁰⁰ endorsed by over 200 supporters, including national government, sub-national governments, private companies, non-governmental organizations and groups representing indigenous communities.¹⁰¹ The targets of the NYDF included ending natural forest loss by 2030, with a 50 percent reduction by 2020, this 2020 target was not reached.¹⁰²

Meanwhile, there are numerous national and regional efforts to better control international timber trade, to improve the governance of ‘deforestation-risk’ commodities and promote ‘deforestation-free’ supply chains (discussed below).¹⁰³

BOX 3. LEADERS’ PLEDGE ON LIVING IN HARMONY WITH NATURE BY 2050 ⁸⁰

1. Put biodiversity, climate, and the environment at the heart of COVID-19 recovery strategies and investments as well as national and international development and cooperation;
2. Develop and implement an ambitious and transformational post-2020 global biodiversity framework for adoption at the 15th meeting of the Conference of the Parties (COP 15) to the UN Convention on Biological Diversity (CBD) in Kunming, China, as a key instrument to reach the SDGs;
3. Address the interrelated and interdependent challenges of biodiversity loss, land, freshwater and ocean degradation, deforestation, desertification, pollution, and climate change in an integrated and coherent manner;
4. Transition to sustainable patterns of production and consumption and sustainable food systems that meet people’s needs while remaining within planetary boundaries;
5. Raise ambition and align domestic climate policies with the Paris Agreement on climate change, with enhanced nationally determined contributions (NDCs) and long-term strategies consistent with the temperature goals of the Paris Agreement, and the objective of net zero greenhouse gas (GHG) emissions by mid-century, and strengthen climate resilience of economies and ecosystems;
6. End environmental crimes which can seriously impact efforts to tackle environmental degradation, biodiversity loss, and climate change and undermine security, the rule of law, human rights, public health, and social and economic development;
7. Mainstream biodiversity into relevant sectoral and cross-sectoral policies at all levels, including in food production, agriculture, fisheries and forestry, energy, tourism, infrastructure and extractive industries, and trade and supply chains, as well as into key international agreements and processes;
8. Integrate a “One-Health” approach in all relevant policies and decision-making processes at all levels;
9. Strengthen financial and non-financial means of implementation by, inter alia, incentivizing the financial system to align financial flows to environmental commitments and the SDGs to take into account the value of nature and biodiversity and promote biodiversity conservation, restoration, and sustainable use in investment and financing decisions; and
10. Use a science-based, whole-of-society approach that recognizes the crucial role of traditional and indigenous knowledge as well as science and research in the fight against ecosystem degradation, biodiversity loss, and climate change.

For instance, a number of European countries joined the Amsterdam Declarations Partnership, which is committed to a fully sustainable palm oil supply chain in Europe, and to supporting private-sector driven commitments towards “100 percent sustainable palm oil in Europe by 2020.”¹⁰⁴ Another initiative to promote transition to deforestation-free supply chains is the Tropical Forest Alliance (TFA). Hosted by the World Economic Forum, TFA is a multistakeholder partnership platform that gathers some 170+ partners including companies, government entities, civil society, indigenous peoples, local communities and international organizations, working on the global transition to deforestation-free supply chains for commodities including palm oil, soy, beef, and paper/pulp.¹⁰⁵ (A range of further stakeholder-led initiatives exist, some of which are noted in Part 5).

Alongside, the International Tropical Timber Organization (ITTO), is working to promote sustainable management of tropical forest resources. An intergovernmental organisation, its members represent about 90 percent of the global tropical timber trade and more than 80 percent of the world’s tropical forests. Operating under the mandate of the Tropical Timber Agreement 2006 and its predecessor agreements, the ITTO works with the CBD via the Collaborative Initiative for Tropical Forest Biodiversity and published the ITTO/IUCN Guidelines for the Conservation and Sustainable Use of Biodiversity in Tropical Timber Production Forests (2009).¹⁰⁶

Further, in the context of climate action at the UNFCCC, there has been a long-standing interest in the use of carbon-trading to reduce deforestation and forest degradation. The UNFCCC’s mechanism for ‘reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries’ (REDD+) has spurred a growing array of government-backed carbon offset projects.¹⁰⁷ The focus of REDD+ activities is both on reducing greenhouse gas emissions by slowing down deforestation and forest degradation, and removing greenhouse gases through afforestation and forest regeneration (sometimes referred to as carbon sinks). The REDD+ process has stimulated a range of voluntary carbon offset projects based on ‘nature-based solutions’ hosted by companies, investors and NGOs, some involving credits traded

on the international voluntary carbon market. However, there are numerous challenges related to the measurement, monitoring and verification of the climate benefits of the carbon offsets that governments, companies, and individuals are paying for (e.g., what share of benefits of reforestation occurred naturally or were enhanced through intervention? How much of predicted future logging was prevented due to an offset project?).

UNFCCC discussions also include an agricultural work stream,¹⁰⁸ where trade policy considerations are of high relevance.¹⁰⁹ In the lead up to COP26, the UK launched a global dialogue on sustainable supply chains on Forest, Agriculture and Commodity Trade (FACT) with the aim of bringing together government ministers from producer countries and stakeholders from business and civil society to shift global trade in forestry and agricultural commodities away from deforestation, and towards sustainability.¹¹⁰ The FACT initiative led to adopting a roadmap of actions shared by 28 countries (see section 2.2 above), with the dialogue and cooperation foreseen to continue beyond COP26.

Finally, in the context of the COVID-19 pandemic, there has been growing interest in mechanisms to better regulate wildlife trade nationally and internationally, including in the role of CITES. Given the suggested links between the consumption of pangolins (or other wild animals) and COVID-19 pandemic, the CITES Secretariat clarified that matters regarding zoonotic diseases are outside the CITES mandate.¹¹¹ It also noted that all species of pangolin are included in CITES Appendix I, which means that international commercial trade is generally prohibited under the Convention, but that trade in CITES-listed species within a country is governed by the relevant laws of that jurisdiction. The CITES Secretariat also issued a notification of China’s decision to eliminate the consumption of wild animals to safeguard people’s lives and health, which came into force with immediate effect in March 2020.¹¹² Meanwhile, the CITES Secretariat continues its ongoing work with source, transit and destination countries on compliance and enforcement of CITES, including with the five partners of the International Consortium on Combating Wildlife Crime (ICWC) (i.e., the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Secretariat, the International Criminal Police Organization (INTERPOL), the United Nations Office on Drugs and Crime (UNODC), the World Bank, and the World Customs Organization (WCO)).

The UN Office of Drugs and Crime (UNODC) is also working with the wildlife law enforcement community to ensure that wildlife crime, illegal logging, and related crimes are treated as serious transnational organized crimes, including through a targeted UNODC Global Programme for Combating Wildlife and Forest Crime (GP), which aims to link existing efforts in a global system, to the wildlife law enforcement networks and capacities at regional and sub-regional levels.¹¹³ Also relevant to wildlife trafficking is the ongoing work by the international NGO TRAFFIC to monitor international wildlife trade.

3. TRADE AND BIODIVERSITY INTERLINKAGES: CHALLENGES AND OPPORTUNITIES

Growing trade flows in renewable and non-renewable natural resources – from water, forest and fisheries to arable land, fuels, minerals, and ocean resources – represent a significant share of total natural resource exploitation and are closely linked to biodiversity loss.¹¹⁴ The most direct trade-related challenge in this regard is illegal trade in environmentally sensitive goods, such as threatened wildlife, timber and hazardous waste, and underreported or unregulated fishing.¹¹⁵ Further, international trade – spurred by international demand and consumption patterns – often results in changes in land- and resource use with possible negative impacts on ecosystems and biodiversity. For example, it can intensify unsustainable

production and extraction of natural resources in the face of inadequate environmental management, and thus promote biodiversity loss.¹¹⁶

3.1 TRADE IN AGRICULTURAL COMMODITIES AND NATURAL RESOURCES

Trade in natural resources and commodities has significant impacts on biodiversity and ecosystem health.¹¹⁷ International trade coupled with rising demand can play a central role in spurring unsustainable use of natural resources and growth, which are direct causes of biodiversity loss.¹¹⁸

Trade in natural resources, agricultural commodities and wildlife can, for instance, spur growth in production associated with unsustainable resource use, deforestation, environmentally harmful production processes and pollution, which in turn have cumulative impacts of trade on ecosystem health and biodiversity. By some accounts “some 30 percent of global species threats” can be attributed to international trade.¹¹⁹ The links are especially strong in relation to trade of commodities such as coffee, tea, soy, palm oil and sugar that have a large biodiversity footprint at origin.¹²⁰

Trade policies in agricultural commodities and products – ranging from fruit, vegetables, and meat to palm oil and grains – have an array of environmental impacts as well as implications for efforts to support more sustainable, regenerative agriculture and food systems.¹²¹

International trade in agricultural commodities has been identified as an important driver of deforestation,¹²² habitat and biodiversity loss,¹²³ land degradation, soil erosion and desertification (see Box 4).¹²⁴

BOX 4. COMMODITY TRADE EXPANSION AND DEFORESTATION ¹³⁰

Tropical deforestation, a major driver of biodiversity loss and the second largest source of anthropogenic greenhouse gas emissions, is largely driven by expanding forestry and agriculture to cater to rising international demand for agricultural commodities. The value of cross-border trade in agricultural and forestry commodities increased threefold between 2000 and 2018, reaching US\$1.5 trillion. The rate of deforestation linked directly and indirectly to commodity expansion remains high and is even increasing in many parts of the tropics.

Data released on Global Forest Watch in 2020 recorded an increase of 2.8 percent in the loss of primary forest in 2019 compared to the previous year, which was the third-highest rate since 2000. A third of the total tropical forest loss recorded in 2019 across was in Brazil. According to TRASE, the emergence of new agricultural frontiers, including the expansion of palm oil plantations in West Papua and Colombia of soy production in the Gran Chaco region in Latin America, raises the prospect of further increases in deforestation in the coming years.

Source: TRASE (2020), “The state of forest-risk supply chains”, TRASE Yearbook 2020, http://resources.trase.earth/documents/Trase_Yearbook_Executive_Summary_2_July_2020.pdf.

Nearly 70 percent of tropical deforestation is linked, for instance, to commercial agriculture, mostly due to the production of four soft (grown, not mined) ‘forest risk’ commodities: palm oil, soy, cattle products (beef and leather) and timber products (including paper).¹²⁵ Further, the environmental challenges facing the agriculture sector underline the intersections between multiple crises—in energy, food, forests, and water—and between efforts to regulate international markets and trade in each area.¹²⁶

Trade in agricultural commodities contributes not only to biodiversity loss but also to the climate crisis; the global food industry constitutes around 22 percent of greenhouse gas emissions and 30 percent of the world’s total annual energy consumption.¹²⁷ At the same time, climate change-induced shifts in agricultural productivity highlight the need for climate-resilient food production and attention to how climate impacts will shift production trends, biodiversity impacts and trade flows, all of which will impact food security.¹²⁸

UNEP has also highlighted that, since the 1970s, some 40 percent of the materials extracted around the globe have been channeled to export-related purposes.¹²⁹ While exporters and importers of natural resources that are traded internationally vary widely, challenges of sustainable use and management of natural resources arise in most countries and are especially pronounced in developing countries where resources and institutions for effective environmental governance are often weakest. For developing countries that depend on natural resource-based commodity production and exports, volatile world commodity prices further compound difficulties associated with environmental management.

A key consideration relevant to efforts to promote the protection, sustainable use and restoration of biodiversity relates to the livelihoods, knowledge and cultural practices of local communities and indigenous peoples. The need to integrate local communities, including small-scale farmers, and indigenous peoples into decision-making on land use, forest protection and biodiversity conservation and sustainable use of natural resources has been widely recognized, as this not only improves the chances of success, but also promotes social justice. A further social dimension that is deeply relevant to agricultural production relates to worker rights, where many producers around the world engage workers illegally in unsafe and exploitative working conditions without minimum wages or social benefits.

3.2. TRADE IN MATERIAL RESOURCES AND THE CIRCULAR ECONOMY

Over the past two decades, trade in material resources – biomass, fossil fuels, metals, and non-metallic minerals – grew by more than 90 percent.¹³¹ Since 1970, the volume of physically traded material resources rose at a faster pace (3.2 percent per year) than the rate of growth of extracted resources (2.6 percent per year). In 2017, one third of the total volume of materials extracted in the world (92 billion tonnes in 2017) was linked to the production of traded goods.¹³²

Recent analysis of the material footprint of trade highlight that resource-intensive processes have shifted environmental burden from high-income importing countries to low-income exporting countries, with a corresponding shift in associated environmental burdens. Importantly, in 2017, the indirect or “embodied” materials (that is, the materials, energy, water, and land used in the extraction and production of traded goods but left behind as wastes and emissions in the exporting country) in trade amounted to 35 billion tons, exceeding direct volume of resources traded across nations (11 billion tons) by factor of three.¹³³

Circular economy strategies that promote greater efficiency of material resource use – and indeed dematerialization – are relevant to biodiversity.¹³⁴ Reduced demand for and extraction of material resources will also reduce impacts on biodiversity. Some recent work on circular economy modelling aims to introduce attention to conservation and sustainable use of nature and ecosystem services as a more central component of ‘nature positive’ circular economy models.¹³⁵ Alongside growing interest in a transition to a more circular, resource efficient economy, there is also interest in how trade policy can support circular economies nationally and globally.¹³⁶

In its work on Building Resilient Societies after the COVID-19 Pandemic, the UN’s International Resources Panel (IRP) highlighted that more sustainable and smarter use of natural resources can support economic development through “diversification towards circular economy business models and jobs, [and] reduced waste flows and emissions.”¹³⁷ Among a broad diversity of environmental groups, the IRP thus stresses the importance of adopting green stimulus and recovery packages in the context of Covid-19 that offer strong consideration to resource efficiency. Similarly, trade policy that supports resource-smart food systems and land restoration will also support nature.¹³⁸

3.3. TRADE-RELATED INFRASTRUCTURE

Infrastructure development – including trade-related infrastructure for roads, shipping ports and airports – have long been associated with the destruction and degradation of natural habitats and ecosystems.¹³⁹

Recognition of the need to protect and restore natural habitats and ecosystems, and to transition to a low carbon global economy, is hastening a growing focus on ‘green infrastructure.’ This broad term covers efforts focused on using “natural ecosystems and habitats, sometimes combined with bio-engineered solutions to provide infrastructure services,” commitments to building rail infrastructure over road developments, and infrastructure that is adapted to climate risks (e.g. climate-resilient port infrastructure),¹⁴⁰ as well as traditional infrastructure implemented in a more environmentally-sensitive way (i.e., avoiding destruction of ecosystems to construct new infrastructure).¹⁴¹ The EU Green Infrastructure Strategy, for instance, includes the goal of making biodiversity “more tangible across the infrastructure development process.”¹⁴²

Aid for Trade (Part 4.5) plays an important role in supporting the development of trade-related infrastructure in developing countries. There is growing attention to mainstreaming environmental sustainability in Aid for Trade, and to providing more support and assistance to countries to transition to greener trade.¹⁴³ Aid for Trade can be harnessed to promote investment in renewable energy deployment, and the adoption and promotion of cleaner and more energy efficient technologies in production processes. It can also support sustainable infrastructure development through the inclusion of comprehensive and integrated environmental protection and management components.

A major international development in terms of trade-related infrastructure is China’s Belt and Road Initiative (BRI).¹⁴⁴ Involving over eighty countries, the BRI is estimated to generate overall investments in infrastructure worth between USD 1 to USD 8.5 trillion – generating both a significant opportunity to modernize infrastructure in line with environmental priorities, as well as considerable risks in terms of potential environmental impacts on climate and biodiversity.¹⁴⁵

3.4. TRADE IN BIODIVERSITY PRODUCTS

In recent years, enhanced trade in biodiversity-derived products and services has been pursued as one of the ways to support biodiversity goals through trade. With a 15 percent annual growing demand worldwide, natural ingredients have significant business potential, especially in high-end markets where customers are willing to pay more for sustainably produced and ‘fair-trade’ goods.¹⁴⁶ For instance, between 2003 and 2015, the export value of sustainable plant and animal products increased from USD 40 million to USD 4.5 billion, generating both jobs and income, while protecting biodiversity.

The 183 Parties to CITES have adopted several Resolutions over the years that acknowledge the benefits of well-regulated sustainable trade in wildlife for conservation.¹⁴⁷ Here, the argument is that giving value to wildlife and other forms of biodiversity through opportunities for sustainable use and trade in its derived products and services, can not only support sustainable livelihoods and economic development opportunities, but also generate support for biodiversity conservation and management measures that support the goals of the CBD.¹⁴⁸

UNCTAD has been an important supporter of developing country-led efforts to seize opportunities in bio-based trade through its work on ‘BioTrade’ – that is, activities related to the collection or production, transformation, and commercialization of goods and services derived from biodiversity (genetic resources, species, and ecosystems) under environmental, social and economic sustainability criteria.¹⁴⁹ The Biodiversity Criteria, first created in 2007 and updated in 2021, contain principles to address issues of conservation, restoration and sustainable use of biodiversity, equitable sharing of benefits of BioTrade between different actors, and respect for the rights of indigenous peoples and local communities.¹⁵⁰ BioTrade activities are implemented by UNCTAD and partners in over 70 countries in Asia, Africa, Latin America and the Caribbean and Europe.¹⁵¹ UNCTAD also underscores that a core challenge is to ensure that all “trade in biodiversity-based products and services, including wildlife trade, is legal, sustainable and traceable.”¹⁵²

In October 2021, the Bridgetown Covenant approved by governments at the 15th UN Conference on Trade and Development observed that “the grave threat of climate change, and the immense challenge of biodiversity loss and environmental degradation, have become key challenges for sustainable development.”¹⁵³ In the declaration, governments recognised that “[t]he past and ongoing overexploitation of resources and expansion of unsustainable economic activities are resulting in the degradation of habitats, the progressive loss of biodiversity, through accelerated extinction of plant and animal varieties and species, and the potential destruction of entire ecosystems.” Governments noted that this biodiversity loss “compromises necessities that make civilization possible such as the availability of safe drinking water, clean air and food,” and highlighted links between this problem, climate change, desertification and deforestation. Notably, governments also highlighted the relevance of trade, noting that “[i]nternational cooperation and instruments to promote and mainstream biodiversity in policies, strategies, and practices of global value chains is important to ensuring the necessary conservation and sustainable use of biodiversity and ecosystems. This includes cooperation between major producers and major consumers of products that are associated with biodiversity loss.”

3.5. TRADE AND INVASIVE ALIEN SPECIES

Invasive alien species (IAS) – or species introduced into places outside their natural environment – are a significant component of human-induced global environmental change and have important negative impacts on native biodiversity.¹⁵⁴ The UN has estimated that since the 1970, the number of invasive alien species has increased by 70 percent across 21 countries.¹⁵⁵ A study published in *Global Change Biology* has projected that a further 20–30 percent increase in invasive species until mid-21st century, is expected to cause massive impact on global biodiversity intactness.¹⁵⁶

International trade plays an important role in facilitating the introduction of IAS beyond the borders of their indigenous habitat, through trade in wildlife, agricultural commodities, and non-native seeds and plants, as well as transportation

and shipping.¹⁵⁷ The introduction of IAS can, for instance, be a “byproduct” of trade, where they are transported from one region to another in ballast water of ships or as a “hitchhiker” on traded products.

To restrict trade and the introduction of IAS, the parties to the CBD established a set of non-binding “Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species” in 2002.¹⁵⁸ At the regional level, an example of trade-related policies in this area is the EU’s Regulation 1143/2014, which contains measures designed to stop invasive alien species of concern from entering the EU.¹⁵⁹ Numerous measures on IAS also appear in EU’s 2030 Biodiversity Strategy. Meanwhile, in the context of that Strategy, environmental organisations have emphasized the need to prioritize attention to most harmful invasive species with highest impact on biodiversity.¹⁶⁰

To minimize the risk of IAS introduction via trade, one topic for further discussion relates to the coherence of principles of the CBD and provisions of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) regarding the design and implementation of trade-related measures.¹⁶¹

4. TRADE POLICY AND TOOLS RELEVANT TO BIODIVERSITY

Recognition of the links between trade and threats to biodiversity is spurring growing interest in how trade policies and tools can play a more supportive role.

This Part of the paper reviews how multilateral trade, regional and bilateral trade agreements; environment-related trade measures; trade monitoring and impact assessments; and trade finance are relevant to and can support biodiversity goals. Trade-related topics such as voluntary sustainability standards and private supply chain commitments; biodiversity-related eco-labels and sustainability standards; transparency and traceability of supply chains; and civil society campaigns are discussed in Part 5.

4.1. MULTILATERAL TRADE RULES AND BIODIVERSITY

Biodiversity goals feature in the WTO’s ongoing negotiations on the removal of environmentally harmful fisheries subsidies, which also represent the most prominent aspect of the WTO’s ongoing work on environmental issues. WTO negotiations on fisheries subsidies were launched in 2001 at the Doha Ministerial Conference, with a mandate to “clarify and improve” existing WTO disciplines on fisheries subsidies, which currently put significant pressures on the world’s fish populations. SDG 14.6 affirmed the WTO’s role in reforming environmentally harmful fisheries subsidies. At the 11th WTO Ministerial Conference in 2017, WTO Members reaffirmed their commitment to work towards adopting a far-reaching agreement at the 12th WTO Ministerial meeting to eliminate subsidies for illegal, unregulated and underreported fisheries (IUU), and prohibit certain forms of fisheries subsidies that contribute to overcapacity and overfishing, with special and differential treatment for developing and least-developed countries.¹⁶² In mid-2021, WTO Members held a dedicated Ministerial Meeting to bolster resolve to conclude a meaningful deal in advance of the WTO Ministerial Conference at the end of 2021.¹⁶³

Apart from fisheries subsidies negotiations, biodiversity has not featured prominently as an issue in WTO discussions but does emerge in relation to several specific ongoing negotiations.¹⁶⁴

The WTO TRIPS Agreement requires a review of its Article 27.3(b), which deals with patentability or non-patentability of plant and animal inventions, as well as the protection of plant varieties. Further, the 2001 Doha mandate launched WTO negotiations on the relationship between the TRIPS Agreement and the CBD. The demise of the Doha Round put an indefinite pause on these negotiations, despite support from over 100 developing countries for action on this agenda item.¹⁶⁵ Furthermore, even though the review of Article 27.3(b) has featured as a standing agenda item in all meetings of the TRIPS Council, the number of interventions on this topic have decreased over time and a conclusion of the review process has yet to emerge.

Meanwhile, biodiversity-related concerns regularly arise in the regular meetings of the WTO Committee on Trade and Environment, where governments, for example, exchange views on the impacts of timber trade on tropical forests

and biodiversity, and the biodiversity impacts of land conversion for internationally traded soy and palm oil. Several governments regularly raise concerns about deforestation linked to trade in agricultural commodities as well. In the WTO TESSD discussions, some governments have called for a focus on ways to support deforestation-free supply chains for internationally traded commodities. There have also been calls to frame the issues of sustainable agriculture – and related concerns about deforestation and biodiversity loss – under a wider umbrella of trade policy issues relevant to sustainable agriculture, which would also address issues such as environmentally-harmful subsidies, market access constraints, standards and other non-tariff barriers to trade that may impact the incentives for environmentally sustainable agriculture, especially in developing countries.¹⁶⁶ Other topics of high political salience in WTO Member-driven trade and environment discussions include trade in plastics, interlinkages between trade and the circular economy. Trade-related concerns on biodiversity also arise in ongoing dispute resolution procedures initiated by Member States, such on measures affecting trade in palm oil.¹⁶⁷

Further, WTO discussions on the liberalization of environmental goods and services are relevant.¹⁶⁸ In the 2001 Doha WTO Ministerial Declaration, Members agreed to launch negotiations on the reduction and elimination of tariff and non-tariff barriers on environmental goods and services.¹⁶⁹ After the Doha negotiations collapsed, a sub-group of WTO Members decided to launch plurilateral negotiations on environmental goods, which have been stalled since 2016. In these negotiations, developing countries have expressed their frustration with the prevailing views on what should count as an ‘environmental good.’ Although some agricultural goods derived from sustainable agricultural practices and biodiversity-based goods were proposed for consideration in negotiations for liberalization, most developed countries preferred for negotiations to focus more narrowly on industrial environmental goods (like clean energy and waste management technologies).

In addition, there is growing interest in the importance of ocean-based economies (sometimes referred to as the ‘Blue Economy’) and marine biodiversity to the economic and trade strategies of developing countries, including their fisheries and tourism sectors.

BOX 5. SAMPLE OF MULTILATERAL TRADE PROVISIONS RELEVANT TO BIODIVERSITY

AGREEMENT	PROVISION RELEVANT TO BIODIVERSITY	EFFECT
General Agreement on Tariffs and Trade (GATT)	The provisions in the GATT impose a number of requirements that measures relevant to trade in goods must comply with, including not to raise tariffs exceeding countries' bound tariffs, and non-discrimination (both visa-a-vis like foreign products and between like domestic and foreign products), and the prohibition to impose quantitative restrictions. However, Article XX establishes exceptions to the provisions set out in the GATT, providing some flexibility for Members to implement measures relevant to biodiversity – provided they abide by the non-discrimination principle and are not disguised restrictions on trade.	Enables Members to adopt trade-restrictive biodiversity measures – provided they comply with a number of parameters, though these have in practice typically proven difficult for countries to meet.
Agreement on Agriculture	This agreement disciplines export and trade-distorting domestic subsidies for agricultural products (forestry and fish products are not covered under this agreement). However, measures that fall under the so-called “green box” are allowed. This includes government services such as research, disease control, infrastructure and food security and certain forms of direct income support including direct payments under environmental and regional assistance programmes.	Members are allowed to subsidize to support environmental programs. This can include programs related to biodiversity preservation.
Sanitary and Phytosanitary (SPS) Agreement	This agreement disciplines export and trade-distorting domestic subsidies for agricultural products (forestry and fish products are not covered under this agreement). However, measures that fall under the so-called “green box” are allowed. This includes government services such as research, disease control, infrastructure and food security and certain forms of direct income support including direct payments under environmental and regional assistance programmes. <ul style="list-style-type: none"> The Codex Alimentarius, which provides standards, guidelines and recommendations relating to food additives, veterinary drug and pesticide residues, contaminants, methods of analysis and sampling and codes and guidelines of hygienic practice. The International Plant Protection Convention (IPPC), which aims to protect cultivated and wild plant resources from pests The World Organization for Animal Health (formerly the International Office of Epizootics) (OIE), which sets out standards, guidelines, and recommendations for animal health and zoonoses. 	The SPS Agreement enables Members to adopt measures to protect animal and plant life and health in their countries.
Technical Barriers to Trade (TBT)	The TBT Agreement enables Members to adopt technical regulations to fulfil a legitimate objective, provided that they are not more trade restrictive than necessary. Legitimate objectives include: protection of animal or plant life, health or the environment.	The TBT Agreement enables Members to adopt technical standards and regulations – provided they comply with certain parameters – to advance biodiversity-related objectives. At the same time, it seeks to ensure that technical regulations and standards do not create unjustified barriers to trade. In this regard, it encourages harmonization, equivalence and mutual recognition of technical standards and regulations.
Agreement on Subsidies and Countervailing Measures (ASCM)/ WTO fisheries negotiations	The WTO ASCM sets out categories for subsidies that are prohibited, and subsidies that are actionable. Subsidies provisions can be relevant for biodiversity in two different ways: 1) they can discipline subsidies that harm biodiversity, such as fossil fuels or fisheries subsidies; and 2) they can exempt subsidies that advance biodiversity objectives from the disciplines. Article 8 of the ASCM contains such a safe harbour provision, including for environmental purposes, but that provision expired in 2000. This article provided a ‘safe harbour’ available to all Members for particular forms of subsidies, including certain types of research subsidies, subsidies providing assistance to disadvantaged regions, and subsidies promoting the adaptation of existing facilities to environmental requirements. Since the expiry of Article 8.2 in 1999, subsidies that favour green products have been subject to the same WTO disciplines as any other industrial good.	The SCM provisions could be used to advance the biodiversity agenda if they are used to discipline environmentally-harmful subsidies, such as those that encourage overfishing, production and consumption of fossil fuels, pesticides, and energy- and water-intensive agriculture. At the same time, there are proposals to re-instate exceptions as envisioned in Article 8.2. of the WTO ASCM ‘green light’ subsidies under Article 8 and expansion of the scope for subsidies to green industries and production could support the transition to more environmentally sound agriculture production that supports biodiversity.
Trade-related Intellectual Property Rights (TRIPS)	The TRIPS Agreement is directly relevant to biodiversity. It contains provisions that seek to establish adequate and effective levels of protection for intellectual property rights, and to reduce distortions and impediments to international trade from differing standards of protection. Specifically, Article 27.3 allows countries to exclude some inventions involving plants, animals and essential biological processes from patenting, but requires an effective protection for plant varieties – by patent or another system specifically created for this purpose. Paragraph 19 of the 2001 Doha Declaration also called on the TRIPS Council should also look at the relationship between the TRIPS Agreement and the UN Convention on Biological Diversity and at the protection of traditional knowledge and folklore. Most recently discussed are proposals on disclosing the source of biological material and associated traditional knowledge.	There are concerns from developing country governments that the TRIPS Agreement, by allowing biological resources to be patented, encourages unsustainable use of genetic resources and promotes “biopiracy”. Developing countries have submitted proposals to amend the TRIPS Agreement to address such concerns.
General Agreement on Trade in Services (GATS)	Under the GATS, Members have committed to different degrees of market access and national treatment commitments for a variety of different services sectors and sub-services – and for different “modes of supply.”	There are different ways GATS commitments could be relevant to the biodiversity agenda: (i) they could directly promote service suppliers in activities relevant to biodiversity preservation, such as ecotourism; and (ii) they could incentivize investment in services ancillary to biodiversity preservation.

Source: Authors' elaboration based on review of WTO agreements

UNCTAD's Blue BioTrade and Oceans Economy Initiative are particularly noteworthy in this respect.¹⁷⁰ The Joint Plan of Action on SDG 14 by UNCTAD, FAO and UNEP, for instance, underlines the need to consider trade-related aspects of ocean health,¹⁷¹ and to support developing countries with the implementation of new WTO disciplines on fisheries subsidies, once in place.

4.1.1 RESTRICTING TRADE TO SUPPORT BIODIVERSITY

A number of WTO agreements and provisions are relevant to biodiversity (a sample of these is summarized in Box 5). These provisions enable Members to adopt measures to advance environmental objectives, including biodiversity, provided these measures adhere to key principles – as laid out in the provision – including non-discrimination, ensuring that measures are not more trade-restrictive than necessary, and that they do not constitute disguised restrictions on trade.

The policy space available to WTO Members to adopt biodiversity-related measures has been clarified through jurisprudence. Indeed, several of the most significant and controversial WTO disputes have been linked to biodiversity concerns:

In 2014, the WTO Appellate Body issued its report in the *EC-Seal Products* dispute, which arose from the complaints by Norway and Canada against the EU Seal Regime, a legislative scheme adopted by the EU in 2009 to prohibit the trade of seal products.¹⁷² The Appellate body found that the EU Seal Regime was inconsistent with GATT Article I:1, as it did not extend the same market access advantage to Canadian and Norwegian seal products that it accords to seal products originating from Greenland. It further found that the measure could not be justified under the exceptions set out in GATT Article XX. While the Appellate Body considered the EU Seal Regime to be “necessary to protect public morals”, within the meaning of Article XX(a), it also found that the EU failed to justify the measure under Article XX as the regime was applied in arbitrary or unjustifiable discriminatory manner. The seal dispute confirmed the right for countries to regulate to promote animal welfare, providing they respect established WTO disciplines.¹⁷³

Another WTO case related to biodiversity concerned the protection of sea turtles. In the “shrimp-turtle case,” India, Malaysia, Pakistan and

Thailand challenged a US ban on the importation of certain shrimp and shrimp products from their countries.¹⁷⁴ While the Appellate Body stressed that Members have the right to adopt measures that protect the environment and that measures to protect sea turtles fell within the scope of the Article XX exceptions, it ultimately found the US ban to be WTO-inconsistent due to certain discriminatory aspects in its application.

However, after the United States amended certain aspects of the measure, the Appellate Body found that in the context of compliance proceedings the US measure was applied in a manner that met the requirements of Article XX. This case is often cited to illustrate that WTO Members do have important policy space within WTO rules to adopt WTO consistent environmental measures.¹⁷⁵

A further case that has attracted a lot of attention due to its implications for environmental disputes was *US-Tuna Dolphin (II)*.¹⁷⁶ This was a case brought on by Mexico in 2008, challenging the US approach to the labelling of tuna products as “dolphin-safe.” A key point that was underscored in the rulings on this case was that the US could indeed introduce a dolphin safe label, but that it should do so in an “even handed” manner: that is, the measure should be “calibrated” to address different risks to dolphins arising from different fishing methods in different areas of the ocean. Most importantly, after several amendments of the measure, the US brought the measure in compliance with its WTO obligations while maintaining its dolphin safe label regime.¹⁷⁷

In comparison to trade-related measures to protect animal health or food safety, relatively few WTO disputes have considered animal welfare related measures.¹⁷⁸ In some countries, however, animal welfare constituencies have been a powerful voice within wider calls for stronger environmental commitments in trade agreements. It can be expected that consumer pressures for ethical food production will continue to feature prominently within wider discussion on sustainable farming and food systems.

Meanwhile, several governments are taking measures to ban or restrict trade in certain items deemed harmful for biodiversity. For instance, in 2018, Canada banned the import of toiletries that contain plastic microbeads, because of the detrimental effects that microbeads can have on marine biodiversity.¹⁷⁹

In 2020, with the introduction of the provision of the Marine Mammal Protection Act, the United States banned the import of fish or fish products from commercial fishing operations that result in the mortality of marine creatures.¹⁸⁰ In 2003, the EU enabled the Forest Law Enforcement Governance and Trade Action Plan aimed to support efforts to stop illegal logging and the associated trade in illegal timber globally.¹⁸¹

Moreover, bans on exports of certain natural resources have also been deployed, though these bans sometimes serve strategic or economic purposes rather than for environment purposes. For instance, China banned the exports of certain rare earths in 2012.¹⁸² There are also various forms of export restrictions in resource-rich countries in Africa, such as Cameroon, Chad and Sierra Leone.¹⁸³

4.2. BIODIVERSITY IN BILATERAL AND REGIONAL TRADE AGREEMENTS

Across the world, governments have concluded a broad array of bilateral and regional trade agreements over the last two decades. Many of these agreements go beyond the WTO both in scope and in depth, and a growing number of agreements feature environmental provisions, including provisions directly related to biodiversity.

TABLE 1. COUNTRIES WITH THE GREATEST NUMBER OF AGREEMENTS AND PROVISIONS REFERRING TO BIODIVERSITY

COUNTRY	NO. AGREEMENTS	NO. PROVISIONS
The EU and its predecessors	55	162
United States of America	19	124
Peru	16	76
Switzerland	34	75
Canada	13	73
Norway	31	71
Liechtenstein	31	71
Iceland	31	71

Source: TREND database

Drawing on a survey of over 300 trade agreements, the TREND database identifies several categories of provisions that directly address biodiversity.¹⁸⁴ The database reveals that the EU and the US have by far the greatest number of biodiversity-related provisions in their trade agreements, followed by Peru, Canada, and other non-EU European countries (Table 1). Colombia's regional trade agreements (RTA) also feature many specific biodiversity provisions. Table 2 highlights those trade agreements with the greatest number of biodiversity provisions. Among these, the trade agreement between the EU and Central America (2012) is the agreement with the highest number of provisions related to biodiversity. It includes eleven provisions related to biodiversity, with seven related to environmental protection and four multilateral environmental agreements (MEA) (Table 3). The EU's RTA with Colombia and Peru contains the highest number of provisions related to biodiversity and traditional knowledge. Figure 2 shows the frequency of RTAs with provisions related to biodiversity and traditional knowledge (between 2001 and 2015), showing the growth from 2008 with 19 North-South RTAs and 9 South-South RTAs featuring biodiversity provisions.¹⁸⁵

RTAs differ from one another regarding the types of biodiversity provisions they feature. Notably, many, but not all, bilateral, regional and plurilateral agreements include clauses that recognize the importance of MEAs, such as the CBD and CITES.¹⁸⁶

TABLE 2. TRADE AGREEMENTS WITH THE GREATEST NUMBER OF PROVISIONS REFERRING TO BIODIVERSITY

AGREEMENTS	PARTICIPANTS	NO. PROVISIONS
Central America-EU (2012)	CR, EU, GT, HN, NI, PA, SV	11
Colombia-Peru-EU (2012)	CO, EU, PE	9
EC-EAC (2016)	BL, EU, KE, RW, SS, TZ, UG	7
EC-Japan (2018)	EU, JP	6
EC-Armenia (2013)	AM, EU	6
EU-Vietnam (2016)	EU, VN	6
EU-Moldova (2014)	EU, MD	6
EU-Georgia (2014)	EU, GE	6

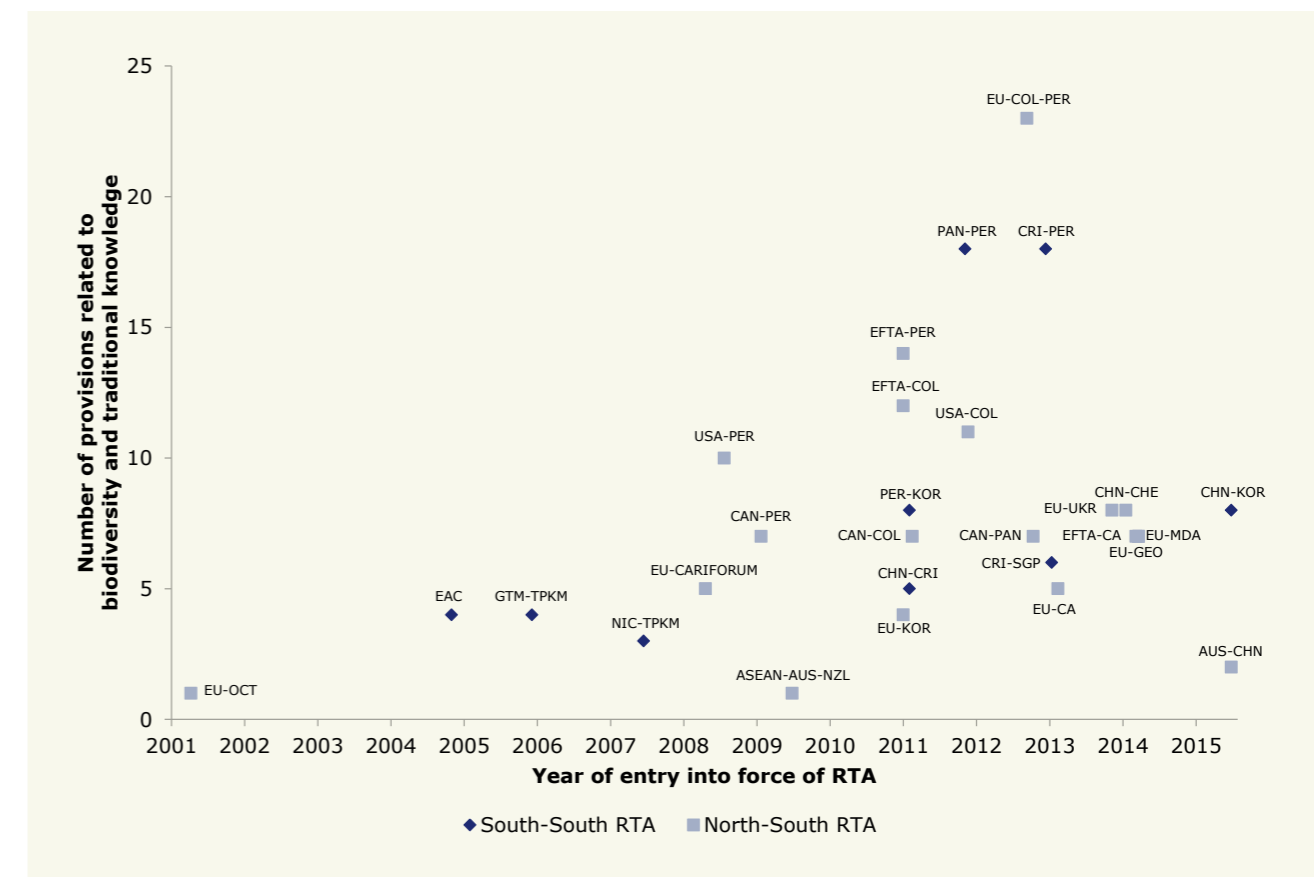
Source: TREND database

TABLE 3. SAMPLE OF PROVISIONS IN THE EU-CENTRAL AMERICA RELEVANT TO BIODIVERSITY

CATEGORY	PROVISION
Environmental Protection	Protection of migratory species
	Other norms on biodiversity
	Conservation of fishery resources
	Protected areas, parks and natural reserves
	Endangered species and their illegal trade
	Protection of coastal areas
	Protection of shared species
MEAs	Implementation of a specific parts of CITES
	Other references to the CBD
	Implementation of the whole of CITES
	Other references to CITES

Source: https://www.wto.org/english/res_e/reser_e/ersd201613_e.pdf

FIGURE 2. EVOLUTION OF NUMBER OF PROVISIONS RELATED TO BIODIVERSITY AND TRADITIONAL KNOWLEDGE



Source: https://www.wto.org/english/res_e/reser_e/ersd201613_e.pdf

For instance, in the EU-Japan Economic Partnership Agreement, both the EU and Japan commit themselves to ensure that their trade policy and trade agreements support biodiversity by combating illegal trade in wildlife.¹⁸⁷

Several bilateral trade arrangements also include environment and sustainable development chapters, where biodiversity features as one of the topics for cooperation.¹⁸⁸ Of the existing agreements, the US-Peru FTA has the most explicit provisions on biodiversity, with its specific Annex on forest protection.¹⁸⁹

In the EU RTAs, several recent Sustainable Development Chapters include specific commitments related to deforestation, including to:

- Encourage trade in forest products from sustainably managed forests and harvested in accordance with the law of the country of harvest (e.g., deals with Canada and Mercosur)
- Develop systems and mechanisms to verify the legal origin of timber products (deals with Colombia, Peru and Ecuador)
- Develop certification schemes for sustainably harvested products (deals with Central America).¹⁹⁰

Several European Free Trade Association (EFTA) agreements also include commitments to develop and use certification schemes for forest products from sustainably managed forests (EFTA-Ecuador, EFTA-Indonesia). The EFTA-Indonesia Comprehensive Economic Partnership Agreement (CEPA) grants preferential tariff treatment where importers of the palm oil and palm oil derivatives can prove compliance with one of three voluntary sustainability standards,¹⁹¹ thereby making an explicit distinction between conventional and sustainable production.

Concerns about biodiversity loss, along with climate concerns, are gaining momentum in the trade context. Such concerns are, for instance, at the heart of the opposition of many European environmental groups to the tariffication of the EU-Mercosur RTA, for which a political agreement was reached in 2019. Such concerns have played an important role in blocking support for the agreement in the European Parliament, with opponents arguing that the Agreement must do more to ensure that Mercosur countries, and Brazil in particular, do more to prevent deforestation of the Amazon.¹⁹²

Biodiversity concerns in the context of RTAs are not only linked to whether specific provisions exist or

not – but also how comprehensive they are and how their implementation is monitored and/or enforced. A recent review concluded that none of the most recent EU FTAs provides fully adequate provisions for protecting the environment, including biodiversity, either in terms of mitigating negative impacts of trade or in terms of using trade to boost environmental sustainability.¹⁹³ One of the key shortcomings noted is that existing provisions are not accompanied with clear targets and milestones against which implementation can be systematically monitored. Further, EU environmental groups argue that processes for dealing with sustainability-related disputes lack sufficient teeth.

In ongoing negotiations for a modernised EU-Chile Association Agreement, the EU is proposing a dedicated chapter focused on cooperation on sustainable food systems, such as on reducing the environmental and climate impacts of food production, improving animal welfare standards and reducing food loss.¹⁹⁴ If adopted, this Sustainable Food Systems Chapter will provide a more explicit framework for cooperation on trade and sustainability than previously seen in the EU trade space, including a detailed list of areas for foreseen collaboration and an annual work plan – with objectives and milestones – to guide the implementation.

Notably, the inclusion of environment provisions in trade agreements, including provisions relevant to biodiversity, is by no means guaranteed. One of the most significant trade agreements concluded in recent years, the Regional Comprehensive Economic Partnership (RCEP), for instance, does not contain any separate environmental or sustainable development chapter, and only a single reference to an environmental issue across its individual chapters. Interestingly, the only environmental provision found in the agreement affirms the rights and responsibilities of each party under the CBD (found in Chapter 17 on General provisions and Exceptions).¹⁹⁵

Another example is the recently concluded African Continental Free Trade Area (AfCFTA). The agreement features an environmental exceptions clause, as found in GATT Article XX (General Exceptions), according to which certain environmental measures that government's take may be exempted from the agreement's provisions. The AfCFTA does not, however, have a separate chapter on the environment and has few other

specific environment-related provisions.¹⁹⁶ In 2021, the UN Regional Economic Commission for Africa is conducting work in support of an environmental review of the AfCFTA, which is expected to yield recommendations for the integration of environmental considerations into future revisions and implementation of the AfCFTA. In 2021, UNCTAD also published policy and regulatory recommendations on how AfCFTA could be transformed into an enabler of legal and sustainable trade in biodiversity/BioTrade as drivers of sustainable development in Africa.¹⁹⁷

4.3. ENVIRONMENT-RELATED TRADE MEASURES AND FLANKING APPROACHES

4.3.1. NATIONAL REGULATIONS AND INTERNATIONAL ENVIRONMENTAL STANDARDS

High ambition environmental laws and institutions, at both the national and international level, are a prerequisite for aligning trade flows and policies with biodiversity goals. A related challenge is to promote coordination and coherence among government regulations and the multitude of voluntary standards, which is vital to reduce confusion of consumer, reducing the burden of adopting standards for businesses and producers, and to ensure their transparency and environmental credibility (see Part 5.1 for discussion of voluntary standards). In addition, important legal questions remain about the relationship between WTO rules and environmental regulations and standards. For instance, there is ongoing debate about whether environmental measures that discriminate among imported products based on process and production methods that do not leave a “trace” in the final product should be considered WTO consistent or not.¹⁹⁸

International standards developed by recognized standard-setting bodies have an important standing in WTO rules. While the WTO does not set international standards, WTO rules do make specific reference to standards developed by governments through inter-governmental processes like the Codex Alimentarius hosted by the UN Food and Agriculture Organization (FAO), as well as standards set by the International Organisation for Standardisation (ISO) (which, while international in scope, does not have the status of an ‘intergovernmental’ organisation) and the World

Organization for Animal Health (OIE) (which sets standards on animal health and zoonotic diseases). In each case, the Codex, OIE and ISO standards are voluntary and do not have binding effect on national legislation. Governments can draw on these and other international standards to devise standards and regulations at the national level, and are also free to go above and beyond the level of protection of the standard in question. Under WTO rules, when government measures are more stringent than those defined in these standards, they must be justified on the basis of a risk assessment.

In 2021, a proposed *Codex Planetarius* was tabled for discussion at the UN Food Systems Summit. Developed by WWF, the proposal aims to create an open and transparent platform for setting minimum international environmental standards for food and agricultural production.¹⁹⁹ The new Codex would be a sister agreement to the Codex Alimentarius, which is one of three international standards (along with the OIE and IPPC) listed in the WTO's SPS Agreement.

Another international tool relevant to biodiversity standards is the *Biodiversity Impact Indicators for Commodity Production* (BIICP) developed under the guidance of the CBD.

4.3.2. DUE DILIGENCE REGULATIONS

A key development relevant to biodiversity and international supply chains is the emergence of national laws on due diligence.

In 2017, France introduced a law on due diligence, which sets out an obligation of states and governments to identify, prevent and mitigate the human rights and environmental related risks linked to business activities in international supply chains.²⁰⁰ Similarly, the UK has a legislation under consideration that would require some businesses to carry out supply chain due diligence regarding compliance with local environmental laws.²⁰¹

The EU is also expected to propose supply chain due diligence legislation in 2021 to address abuses of human rights, as well as environmental damage, including with respect to climate,²⁰² which will include the possibility of sanctions for non-compliant EU companies.²⁰³ Due diligence is also foreseen as a key element of EU efforts to ensure deforestation free imports to the EU, with a proposal pending for autumn 2021.²⁰⁴

4.4. TRADE MONITORING AND IMPACT ASSESSMENTS TO SUPPORT BIODIVERSITY

The absence of mechanisms for regular and independent assessment of environmental and biodiversity-related impacts of trade and trade policies represents a significant barrier for ensuring that trade policies and rules support the conservation, sustainable use and restoration of nature.²⁰⁵

The EU is considered as a leader in best practices when it comes to carrying out trade-related sustainability impact assessments (SIAs). Although the EU has been carrying out SIAs on all negotiated FTAs with non-EU countries since 1999, these lack a systematic approach for assessing the biodiversity impact of trade and a limited number of indicators of impact.²⁰⁶ Existing EU SIAs and ex-post assessments focus on assessing the biodiversity impacts on a limited number of sectors and provide only qualitative information of the impacts.²⁰⁷ This shortfall arises from both to limited resources for carrying out the assessments and methodological challenges.

To address such challenges, the EU published a dedicated methodology in 2021 for assessing biodiversity impacts of trade agreements, focusing in particular on improving the quantitative assessment of biodiversity impacts of trade and the use of a broader, more complete set of biodiversity indicators.²⁰⁸ The new EU methodology is intended for use as part of the European Commission's overall trade impact assessment process for all types of (non-EU) trade agreements and with different trade partner countries. It has been applied *ex post* assessments in the context of EU-Andean and EU-Mexico trade agreements.

While methodologies and models for assessment of the trade impacts are improving, further work is needed on the design and use of more comprehensive and robust metrics and models, focusing on both the provisions of trade agreements and of supply chains. The ongoing work of TRADE Hub, for instance, aims to improve the general understanding on which indicators 'add value' when used in combination with one other across different 'at risk' agricultural landscapes.²⁰⁹

A further challenge related to trade impact assessments is the ability of governments to accurately track trade flows relevant to biodiversity and acquire

information about the about the environmental characteristics of biodiversity-based products traded internationally, including on the sustainability of their production and process methods.

At the international level, trade flows of goods are tracked using a classification defined by the World Customs Organization (WCO) Harmonized Commodity Description and Coding System, generally referred to as the 'Harmonized System' (HS). The HS is used by more than 200 countries, covering 98 percent of merchandise products traded internationally, as a basis for their customs tariffs and for the collection of international trade statistics.²¹⁰ The HS is also relied upon by governments in their efforts to negotiate tariff reductions and other trade policy measures. However, with some important exceptions, HS codes generally do not provide for the differentiation of products based on environmental characteristics, including those linked to process and production.

Several actors have therefore called for updating the HS classification.²¹¹ For example, research by UNCTAD on biodiversity and trade data is investigating how HS codes could be amended to provide specific information on the scope and importance of BioTrade flows in international trade, as well as the feasibility of complementary classification system for BioTrade products.²¹² In addition, existing tools used to map supply chains and trade flows (like the TRASE initiative on agricultural commodities) could be scaled up for a range of BioTrade products.

4.5. AID FOR TRADE AND TRADE FINANCE TO SUPPORT BIODIVERSITY

There is a growing interest in a more systematic greening of trade-related support for developing countries – by ensuring that existing resources support environmental sustainability,²¹³ including via effectively mainstreaming the SDGs and environmental sustainability in project planning and implementation,²¹⁴ and by adding new resources to support environmental sustainability. For instance, Aid for Trade projects focused on sustainable agriculture, natural resource value chains, and tourism,²¹⁵ as well as renewable power generation, all have the potential to support biodiversity objectives.²¹⁶

Launched in 2005, the Aid for Trade Initiative emerged through efforts to support developing countries, and in particular least developed countries (LDCs) to: (a) improve their capacity²¹⁷ to implement many WTO agreements;²¹⁸ (b) address obstacles that constrain their participation in international trade;²¹⁹ and (c) build the supply-side capacity and trade-related infrastructure countries need to implement and benefit from WTO Agreements.²²⁰ From an environmental sustainability perspective, key priorities expressed by developing countries include the need to enhance the competitiveness of MSMEs in sustainable production and trade, and address their lack of the investment and supply-side capacity, while strengthening organisational frameworks required to implement the wealth of new regulations linked to environmental standards.²²¹ A number of countries also call for support on trade-related climate change adaptation and resilience-building for key export sectors. In addition, there are calls for greater capacity building and support for customs administrations, which play a key role in monitoring flows of natural resources, wildlife and forestry products across borders, working to ensure these flows are legal, and implementing multilateral environmental agreements, such as CITES.

Further, there is growing interest in ensuring that export and import promotion activities of export credit agencies in developed countries, as well as loans and loan guarantees of multilateral and regional development banks properly consider and address biodiversity risks.²²² In the context of the climate crisis, governments are facing pressure to end support of their export credit agencies for fossil fuel projects and to strengthen the environmental criteria used in decision-making.²²³

Notably, a group of members of the International Union of Credit and Investment Insurers (known as the 'Berne Union,' which brings together both public and private export credit agencies, export import banks and political risk insurers) has called for transitioning to net zero portfolios before 2050.²²⁴ While much of the current attention to greening trade finance focuses on climate action, attention on environmental sustainability is relevant to – and could be expanded to include consideration of a range of nature and pollution-related criteria, as is underway in the wider field of green finance and investment.²²⁵

5. VOLUNTARY INTERNATIONAL SUPPLY CHAIN INITIATIVES

Public awareness and pressure on the importance of biodiversity is spurring a growing range of private sector commitments on the conservation and sustainable use of biodiversity, and ethical sourcing of natural ingredients across international supply chains.²²⁶

This includes uptake of a growing array of voluntary sustainability standards, certification and labelling schemes, as well as efforts to promote green procurement by companies around the world (e.g. refusing to source forestry products that do stem from a trusted, certified source) and initiatives to support the transparency of global supply chains and traceability of products.

Notably, several governments are taking regulatory action to ensure that companies boost environmental performance across international supply chains. Some have also joined or endorsed private-sector sustainable supply chain initiatives in the hope this will help galvanise and harmonise best practices.

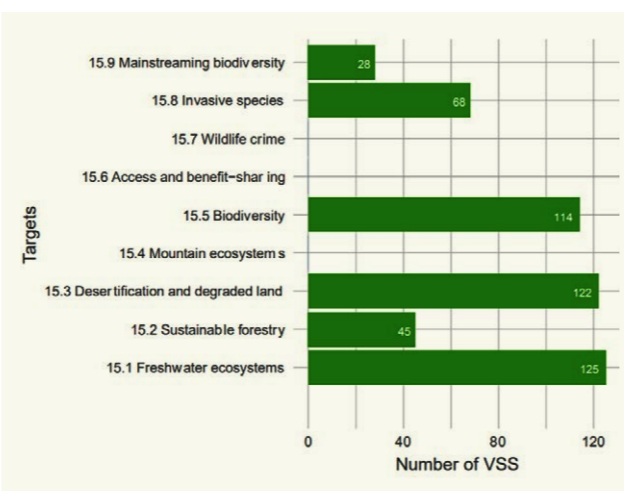
5.1. VOLUNTARY SUSTAINABILITY STANDARDS AND SUPPLY CHAIN COMMITMENTS

Across the world, a vast array of voluntary sustainability standards (VSS) relates to biodiversity. In 2020, a joint ITC and UNCTAD report, "Linking Voluntary Standards to Sustainable Development Goals,"²²⁷ found that some 114 standards relate specifically to biodiversity and 28 to the mainstreaming of biodiversity concerns (Figure 3 and Box 6).²²⁸ In 2020, IISD published a Standards and Biodiversity Report, analyzing the biodiversity dimensions of 15 voluntary sustainability standards.²²⁹ The report found that while most existing sustainability standards address many key biodiversity issues, the absence of performance requirements and impact data makes it challenging for policy makers to determine where standards are most effective in preventing biodiversity loss. This calls for a stronger engagement of policy makers, by setting ground rules and providing financial support, especially for developing country producers.

BOX 6. EXAMPLES OF VOLUNTARY STANDARDS AND LABELS ²³²

- Better Cotton Initiative
- Fairtrade Labelling Organizations International (FLO) –
- Forest Stewardship Council (FSC) – “FSC Pure Products”
- Responsible Jewelry Council Chain-of-Custody standard
- Roundtable for Sustainable Palm Oil (RSPO)
- Textile Exchange standards
- UTZ Certified
- Marine Stewardship Council (MSC)

FIGURE 3. VSS LINKED TO SDG 15



Source: Bissinger et al (2020) ²³⁰

BOX 7. EXAMPLES OF VOLUNTARY STANDARDS AND LABELS ²³¹

VSS	DESCRIPTION
Organic Agriculture	The International Federation of Organic Agriculture Movements (IFOAM) federates 750 member organizations (non-governmental organic certifying organizations, producer organizations, NGOs, importers and retailers) in more than 120 countries. The IFOAM Family of Standards operate as basic voluntary standards to harmonize the different organic certifications.
Rainforest Alliance	Founded in 1987, the Rainforest Alliance uses the Sustainable Agriculture Network (SAN) Standard, which is built around the guiding principles of effective farm planning and management, protection of biodiversity and natural resources, and improved livelihoods. The Sustainable Agriculture Network (SAN) is an association of non-profit conservation organizations (including the Rainforest Alliance) that promote the environmental and social sustainability of agricultural activities through standards for best practices, certification and training for farmers. Certifying producers of all sizes, 3.5 million hectares of agricultural land has currently achieved Rainforest Alliance certification, and 1.4 million people have been trained in sustainable land use practices.
Fairtrade International	Fairtrade International (FLO) is a not-for-profit multistakeholder association that develops Fairtrade standards. Founded in 1988 in Germany, the Fairtrade system includes 1.65 million farmers and workers in 1 226 producer organizations in 74 countries. Focuses on small farmer cooperatives and was originally oriented towards social criteria to guarantee fair trading relations and fair production conditions, increasingly incorporating environmental criteria over the years.
Global G.A.P.	The Global Partnership for Good Agricultural Practices was founded in 1997 and focuses on improvements in agricultural production processes. More than 400 member organizations such as producers, retailers, industry and service providers support the initiative in more than 100 countries

The majority of voluntary sustainability standards relate to specific products, and have been developed for products as diverse as coffee, bananas, fish and forest products. There are, however, also cross-cutting standards around farming and agricultural practices that are relevant to biodiversity (Box 7).

An example of a global forest governance-related stakeholder initiative is the Consumer Goods Forum Forest Positive Coalition, a CEO-led initiative of leading consumer goods companies working to remove deforestation, forest degradation and conversion from key commodity supply chains. The Coalition has commodity-specific working groups on beef, palm oil, soil, pulp and fibre-based packaging. In addition, a series of multi-stakeholder ‘roundtables’ have emerged to promote alignment and leadership by the private sector, including the Roundtable on Responsible Soy (RTRS), which aims to facilitate a global dialogue on soy production that is economically viable, socially equitable and environmentally sound.²³³ Alongside such multi-stakeholder efforts, civil society-led campaigns are a key force in promoting the push for supply chain commitments and voluntary sustainability standards (Part 5.5).

A range of challenges arise with regard to voluntary standards. The first cluster of challenges relates to concerns about who sets the standards, the inclusiveness of the standard-setting process, the degree to which the standard is embedded in science, and how the implementation of standards is certified, reviewed, and audited over time to ensure accountability and credibility.

Another set of challenges relates to the transparency and of standard-setting processes, and ensuring adequate opportunities for participation by developing countries and relevant constituencies in the development of VSS. Finally, there are challenges related to information sharing, transparency and financial support for implementation of standards and to acquiring relevant certification in the first place.

Importantly, there are concerns that the proliferation of standards can lead to confusion and fatigue among consumer and producers. The lack of consensus or shared criteria among a multitude of schemes can complicate efforts by businesses to adapt their production methods to qualify under different labelling schemes. The lack of consensus also complicates the work of governments to legislate based on defined environmental standards.

Another issue relates to the speed with which labelling initiatives can ‘respond’ to a highly heterogeneous (spatially and temporally) set of environmental impacts. The standard metrics used in life cycle analysis, for instance, typically provide a ‘snapshot’ value based on what might be very dated information. Thus, there is a danger that overdependence on standards may actually mask ‘realities’ of environmental degradation occurring on the ground or deflect attention from them.

To increase transparency in sustainability standards, the International Trade Centre (ITC) has created an online Standards Map,²³⁴ which provides comprehensive and verified information on over 300 standards for environmental protection, including many on biodiversity-related issues. In addition, the United Nations Forum on Sustainability Standards (UNFSS) aims to support decision makers in developing countries find information on VSSs and provide technical support.²³⁵

A further response to concerns about the impact, transparency, credibility, and enforcement of supply chain commitments from companies is the Accountability Framework Initiative,²³⁶ which aims to establish a common approach for ethical supply chains for agriculture and forestry commodities. It establishes 12 principles that serve as a guide for companies and others in setting, implementing, and monitoring effective commitments on deforestation, ecosystem conversion, and human rights in ethical supply chains.

Moreover, ambiguity in WTO rules presents yet another set of challenges for private standards. The WTO’s SPS and TBT Agreements call on Members to “take such reasonable measures as may be available to them”, to ensure that “non-governmental” entities or bodies within their territories” comply with certain principles set out in the Agreements.²³⁷ There is ongoing discussion at the WTO, however, on whether and to what extent provisions in the WTO’s TBT and SPS Agreements that apply to regulations introduced by governments also cover private standards.

5.2. BIODIVERSITY-RELATED ECO-LABELS

A broad array of biodiversity-related eco-labels and certification schemes exist, ranging from schemes that set standards and certify specific commodities such as forest products, palm oil and coffee, to those that address sustainability criteria across different production processes and sectors, such as biofuels.²³⁸

Prominent examples of labels with biodiversity-related goals are the Forest Stewardship Council (FSC) and the Marine Steward Council (MSC), along with ‘dolphin-free’ tuna labels. Following concerns about links to palm oil production and deforestation, the past several years have also seen a rise in ‘palm oil free’ labels on a range of food products as well as ‘deforestation free’ labels on a range of timber and food products.²³⁹

A further biodiversity-related label has been developed by the Union for Ethical BiTrade (UEBT), a non-profit association that promotes ethical sourcing of ingredients from biodiversity.²⁴⁰ At the heart of UEBT’s work is an Ethical BioTrade Standard, that defines “practices for sourcing of ingredients from biodiversity that seek to regenerate local ecosystems and secure a better future for producers, namely the farmers and pickers involved in cultivation and wild collection activities.”²⁴¹ UEBT sets guidelines for companies and their suppliers on harvesting, growing and collecting ingredients in a manner that respects biodiversity and local people, and working to reduce biodiversity loss. Companies that meet the criteria of the Ethical BioTrade Standard receive a UEBT ‘Sourcing with Respect’ Certification label.²⁴²

Notably, there are important debates about the effectiveness of environmental labels. As in the case of standards, there are concerns about consumer fatigue in the face of proliferating labels, competing claims and the limited credibility of some labels. There are also questions about the potential market share and penetration of products labelled under voluntary eco-labeling schemes.²⁴³ Another challenge is the potential for ‘problematic’ messaging. ‘Palm oil free’ labels, for instance, reinforce the notion that palm oil itself is the problem rather than the production context under which some palm oil is produced. Further, although products such as palm oil may be avoided by ‘environmentally conscious’ consumers, this does not prevent less-discerning markets from consuming the same palm oil (i.e., problem shifting or diversion of unsustainable products to other markets) nor does it necessarily help reduce the damaging practices.²⁴⁴

5.3. TRANSPARENCY AND TRACEABILITY INITIATIVES AND TECHNOLOGIES

As governments and stakeholders work to implement standards and labelling schemes, the complexity and lack of transparency of supply chains often poses major challenges.

Over the past decade, various food safety crises, ranging from mad cow disease to the Avian flu, have highlighted the importance of the traceability of products to issues of safety, security and product quality. In 2005, the European Commission implemented several directives on food safety, which included a focus on traceability in agricultural commodities. More recently, growing consumer demand for organic, fair trade and environmentally friendly products has spurred greater focus in standards and labelling systems on the traceability of products – so that consumers and supply chain managers can know more about the geographical source of products.²⁴⁵

A key traceability initiative relevant to trade and biodiversity is the TRASE initiative of the Stockholm Environmental Institute and Global Canopy, which works to increase transparency in order to improve the sustainability of agricultural commodity supply chains.²⁴⁶ The starting point for TRASE is that distinct sourcing patterns of consumer countries and trading companies result in substantially different impacts on endemic species and individual threatened species.²⁴⁷ TRASE helps address this challenge by using publicly available data to map the links between consumer countries, via trading companies, to the places of production with high detail. For instance, TRASE can show links between specific commodity exports and agricultural conditions in the places they are produced, allowing stakeholders to understand the risks and identify opportunities for shifting to more sustainable production.²⁴⁸

Recently, there has been growing attention to the potential of technologies such as satellite monitoring systems, blockchain and artificial intelligence to support companies in tracing products along international supply chains.²⁴⁹ To advance thinking in this space, the UN Economic Commission for Europe’s Centre for Trade Facilitation and Electronic Business (UN/CEFACT), has reviewed the use of blockchain to facilitate trade and business related processes.²⁵⁰ As focal point within the United Nations Economic and Social Council for trade facilitation, recommendations, and electronic business standards, it has also supported the development of e-standards that can support customs efforts to regulate trade in plastics waste,²⁵¹ trade in illegally harvested fishing products,²⁵² as well as traceability of agricultural supply chains.²⁵³

Meanwhile, organisations such as the Forest Stewardship Council use satellite monitoring of forests to support their efforts to certify products and monitor compliance with certification criteria. The potential utility of blockchain technologies to support traceability varies by products, with some products (such as fish) so far proving more amenable to the effective use of blockchain technologies than others (such as soy).²⁵⁴ The European Commission is advancing a proposal for digital product passports,²⁵⁵ containing standardized data on product resource characteristics, and/or information on reparability, replacement parts and proper disposal, from all phases of the product life cycle.²⁵⁶

The inclusion of biodiversity-relevant data could significantly improve supply chain transparency as regards biodiversity-impacts of products. However, challenges related to the credibility and environmental integrity of the underlying standards, data collection, and verification of data reflected in the digital passport, as well as ability to mainstream and harmonize approaches internationally, will require attention.

5.4. LINKS BETWEEN PRIVATE STANDARDS AND GOVERNMENT REGULATIONS

Not all private environmental standards remain voluntary; some are integrated into government policy frameworks and regulations. For instance, some countries have made certification under the Global Partnership for Good Agricultural Practices (GLOBAL G.A.P.) mandatory for agricultural production, including products destined for export markets.²⁵⁷ Some government procurement schemes call for the use of private environmental sustainability standards as criteria for green procurement decision-making.

Moreover, at least one international trade agreement (EFTA-Indonesia) refers to compliance with specific private environmental standards (for palm oil production) as a basis for preferential tariff treatment (discussed above). Some governments have also sought to guide the design and implementation of private environmental standards through the adoption of guidelines anchored in environment laws and regulations.

5.5. CIVIL SOCIETY CAMPAIGNS

Civil society campaigns play a central role in efforts to green the global economy and international trade.

Across the world, civil society groups use public campaigns to push governments to implement policies in support of greener and fairer trade. Such campaigns play an important role in providing a check on gaps between rhetoric and reality, the scale of action required to address urgent environmental challenges, and the importance of moving beyond conventional economic assumptions and business approaches. They also have a vital role to play in connecting and amplifying the voices of stakeholders, such as the rural poor, informal sector workers and low-income communities, which are widely marginalized from trade policy-making processes. Investigations and monitoring exercises that spotlight where and how the practices of companies and their suppliers contribute to environmental damages are a key component of such campaigns.

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

A growing number of civil society-led litigation efforts are also seeking to extend the legal responsibility of companies for negative environmental and social impacts that arise from their activities abroad, including those of their overseas subsidiaries and suppliers.²⁵⁸ In the UK, for instance, a 2019 Supreme Court judgement ruled that a Kenyan community had the right to sue a UK-based company for compensation related to pollution, opening up the prospect of further claims by local communities in developing countries.²⁵⁹

The double standard of allowing production for export of goods prohibited domestically has attracted attention in national courts. In 2020, France’s constitutional council banned companies from selling pesticides (such as the pesticide Paraquat) that are banned in the EU, in countries where they are still permitted.²⁶⁰ In what is widely considered a ground-breaking development, the council rejected a legal appeal from a coalition of major agribusiness and chemical businesses, including Bayer, Syngenta and BASF, recognising for the first time in French courts that “the protection of the environment, human beings’ shared heritage, constitutes a goal” with sufficient constitutional value to justify “infringing the freedom of enterprise...”²⁶¹ Further, in the wake of laws requiring companies to disclose environmental risks as part of their financial reporting, some environmental groups are pursuing legal claims against companies that fall short of these environmental requirements.²⁶²

6. TRADE AND BIODIVERSITY: OPTIONS FOR POLICY DIALOGUE, RESEARCH AND ACTION

At the multilateral level, a new opportunity to advance policy dialogue, information-sharing and building knowledge on biodiversity and trade has emerged through the launch of Structured Discussions on Trade and Environmental Sustainability (TESSD) at the WTO. The statement launching the discussions explicitly mentions the CBD and the UN SDGs, and there is strong potential for a group of like-minded WTO members to ensure that biodiversity is one of the key work streams of attention. In TESSD discussions to date, for instance, biodiversity and ecosystem considerations have arisen in the context of discussions of sustainable agriculture, deforestation-free supply chains, plastic pollution, and the circular economy.

There are also opportunities to advance dialogue and action on the intersection of trade and biodiversity issues in the context of ongoing work related to the Global Biodiversity Framework, the UN Food Systems Summit and the G7 and G20 Summits. Notably, across these forums, the potential framings and entry points most likely to achieve traction vary, and there are significant differences in their appeal to the diversity of governments and stakeholders. At the research level, there is considerable ongoing work on building knowledge on the impacts of trade on biodiversity and propose impactful policy interventions.

To conclude this paper, following is a set of questions clustered under five themes that were identified through expert consultations and dialogue over the past year as especially worthy of further focused policy research, dialogue and action.

POTENTIAL THEMES FOR FOCUSED POLICY RESEARCH, DIALOGUE AND ACTION

BIODIVERSITY AND TRADE POLICY

1. BIODIVERSITY AND SUSTAINABLE AGRICULTURE IN THE MULTILATERAL TRADE POLICY MAKING
 - What are the options for multilateral trade rules, negotiations and policy dialogue on agriculture and non-agricultural commodities to better foster protection, sustainable use and restoration of nature, along with sustainable food systems and land management? How could agriculture trade negotiations be reframed to incorporate a stronger focus on environmentally sustainable, resilient foods systems and regenerative agriculture? What progress has been made to date and what are the key entry points going forward? What is the potential for stronger links between environment, public health considerations (such as intersections of trade, nutrition and health) and animal welfare concerns (such as challenges of anti-microbial resistance) in agricultural trade?
2. BIODIVERSITY IN RTAS
 - How could RTAs be harnessed to support biodiversity goals? What environmental provisions already exist that could be drawn upon and what are future opportunities, drawing on experience?
 - How can biodiversity considerations be better integrated across the main texts of trade agreements? How could the CBD, as the key multilateral agreement on biodiversity, be better harnessed to promote safeguards for biodiversity and implementation of biodiversity provisions within the core of trade agreements?
 - How effective have environmental cooperation and sustainable development chapters in RTAs been as tools for biodiversity protection? How effective have Annexes to RTAs (such as on Forest Protection) been? How could their impact be improved?
3. TRADE COOPERATION ON ENVIRONMENTALLY-HARMFUL SUBSIDIES
 - What are the key environmentally-harmful subsidies that impact biodiversity? What are the options for using trade cooperation to reduce environmentally harmful agricultural subsidies and repurpose subsidies to support of land management that nurtures and restores biodiversity? What lessons can be learned from efforts to use trade disciplines to reduce fisheries subsidies? What are the opportunities and challenges with respect to ‘green box’ subsidies for biodiversity?
4. TRADE POLICY FOR A MORE RESOURCE EFFICIENT, NATURE POSITIVE, CIRCULAR ECONOMY
 - What are the links between efforts to support biodiversity, material resource efficiency and the circular economy in the context of trade and trade policy? Which trade policy interventions would support more circular and nature positive trade? Are revisions, updates or clarifications related to specific trade rules necessary? What is the scope for other forms of trade cooperation, such as guidelines on circular economy and trade?
5. TRADE RESTRICTIONS AS TOOLS FOR BIODIVERSITY ACTION
 - What are the options, opportunities and challenges related to the use of trade restrictions and bans to limit imports of products that were illegally harvested, extracted or produced, or where the sustainability at origin is uncertain? What is the evidence on the extent do import restrictions or bans spur or incentivize more sustainable production in countries of origin? What is the evidence on whether unsustainably produced goods are diverted to domestic or other international markets? What are the range of regulatory tools being deployed by governments to regulate access to markets on the basis of biodiversity concerns, including through trade rules and through flanking domestic regulations and technical measures?
6. IMPROVING MONITORING AND EVIDENCE BASE ON TRADE IMPACTS ON BIODIVERSITY
 - Where are the methodological gaps with in impact assessments of trade, both ex ante and ex post, with regard to biodiversity? How can recommendations of recent reports on the biodiversity aspects of trade impact assessments be taken forward? How can impact assessments better incorporate impacts on trade and trade policies on biodiversity in trading partners?
 - How widely and at which stages of trade policy cycle are impact assessments used? How could the use of assessments be extended to a broader variety of countries? How could the assessment cycle better support monitoring of the impacts associated with the implementation of trade agreements?

SUPPLY CHAIN SUSTAINABILITY, STANDARDS AND LABELS

7. TRADE POLICY COOPERATION ON TRANSPARENT AND SUSTAINABLE SUPPLY CHAINS

- How significant are recent private and public sector efforts toward sustainable sourcing, transparency, and traceability in terms of reducing the impacts of global supply chains on biodiversity loss? How could trade policy frameworks and cooperation better support efforts to boost transparency of supply chains? How could new technologies, such as blockchain and GPS monitoring, support these efforts?
- How effective are voluntary schemes that aim to boost more sustainable production and consumption along supply chains? What has been learned from existing roundtables, private sector partnerships and multi-stakeholder initiatives to support biodiversity goals through greener supply chains?
- What are the challenges facing developing countries and their producers in the context of efforts to boost transparent and supply chains, and how can these be addressed?²⁶³

8. POLICY FRAMEWORKS RELEVANT TO NATURE-POSITIVE SUPPLY CHAINS

- What is the state of play in national, regional and international efforts by stakeholders and governments to promote nature-positive and deforestation-free supply chains? Where are the greatest opportunities and challenges and what are the strongest needs for international cooperation?
- How could trade policy better support such efforts? Which international processes could be most useful (the G7, G20, WTO, the FACT Dialogue)? What non-trade international processes are most promising and how could trade dimensions be better integrated into the follow up to the UN Food Systems Summit and in the post-2020 Global Biodiversity Framework?
- How effective are national and regional supply chain due diligence policies anticipated to be – and what is the scope for stronger international cooperation?

9. BIODIVERSITY-RELATED STANDARDS AND LABELS:

- What is the range of standards relevant to biodiversity? Through what processes are these developed – e.g., industry partnerships, NGO-industry collaborations, national or regional standard-setting bodies, or international standard-setting bodies?
- What are the key opportunities and limitations of standards related to biodiversity?
- What role do labels play and what is the scope for improving guidance on ‘good’ versus problematic labels? How can voluntary standards and labels related to biodiversity-based product or products with a vast biodiversity footprint be made more inclusive and transparent? How can standards and labels better support developing countries to transition to more environmentally sustainable production, especially in regard to products and sectors with an especially high biodiversity footprint? How can commitments and certification be made more accountable?
- How can initiatives by international organisations, such as the ITC’s Sustainability Standards Map and the UN Forum on Sustainability Standards, better support developing countries and environmental advocates? How much has the International Standards Organization focused on biodiversity standards and where could further work best be undertaken?
- To what extent do trade rules on PPMs present a barrier to differentiation among products in relation to the sustainability of production and process methods? What are the most politically feasible pathways for addressing such barriers (e.g., through international standard-setting; through updated trade rules; or through innovations such as digital passports)? What are the possibilities and challenges related to using trade policies to support differentiation of imported products (such as through differentiated tariffs) based on the compliance of products with international sustainability standards?

10. INTERNATIONAL STANDARD-SETTING THAT SUPPORTS BIODIVERSITY AND TRADE IMPLICATIONS

- What are the range of options for improved cooperation on environmental standards for food and agriculture? What gaps could such cooperation fill and how important is such cooperation to the prospects for more sustainable trade? Are minimum international environmental standards, agreed by governments, needed to build and improve on private voluntary standards for food and agriculture? What trade related considerations and implications warrant attention in the context of proposals for such minimum environmental standards?
- As a proposed sister initiative to Codex Alimentarius, what are the political options and prospects for a Codex Planetarius, negotiated at the FAO, that addresses issues spanning biodiversity, pollution, carbon footprint and natural resource use (including of water and soil resources) and what trade-related issues would such a Codex need to address?

TRADE IN BIODIVERSITY

11. TRADE IN SUSTAINABLE BIODIVERSITY-BASED PRODUCTS AND ECOSYSTEM SERVICES

- How could trade policy and negotiations better support BioTrade and biodiversity-based exports?
- What are the prospects for incorporating stronger biodiversity goals into efforts to promote trade in environmental goods and services at the bilateral, regional and multilateral level? What is the prospect of expanding the scope of discussion of environmental goods and services to include agricultural environmental goods (such as organic products) and ecosystem services? What are the key issues at stake that limit trade in such goods (e.g., tariff and non-tariff barriers, access to investment and trade finance)?

12. GENETIC RESOURCES, ACCESS AND BENEFIT-SHARING, AND INTELLECTUAL PROPERTY

- What is the status of WTO and CBD negotiations on access and benefit sharing and genetic resources? Does the agenda need updating and how? What is the level of interest in reviving this discussion and what concrete difference could this make to developing countries? How concretely has the issue been addressed in RTAs and with what impacts? Have some issues already been addressed through national courts and related decisions? What is the status of work underway on biodiversity and traditional knowledge at the World Intellectual Property Organization (WIPO) and how is this relevant to trade policy?

TRADE-RELATED CAPACITY BUILDING AND INVESTMENT

13. GREENING AID FOR TRADE AND TRADE FINANCE AND BOOSTING ENVIRONMENTAL CAPACITY FOR BIODIVERSITY ACTION

- How could Aid for Trade and trade finance be ‘greened’ in ways that boost their contribution to biodiversity conservation, sustainable use and restoration? How specifically could green Aid for Trade contribute to more sustainable trade for specific commodities?
- How could greener Aid for Trade better support sustainable production and trade in the specific sectors and products that present the greatest biodiversity risk and potential for transition?
- What kinds of ‘green’ criteria could be introduced for Aid for Trade and how to ensure that there is adequate monitoring and reporting of the impacts of ‘aid for green trade’ in terms of positive biodiversity and social benefits?
- What issues already on regional biodiversity agendas are most likely to resonate in the trade context and how does the framing vary by region (e.g., Blue Economy in Caribbean context; desertification and wildlife conservation in the African context).
- How are private sector investment flows in biodiversity and nature-based solutions to climate change relevant to trade? How significant are private investment flows compared to public investments from governments, donors and international organizations? How much does financing to support biodiversity goals in developing countries consider trade-related dimensions?

MONITORING TRADE FLOWS

14. IMPROVING TRADE-RELATED DATA ON BIODIVERSITY

- Where are the needs for stronger trade-related data on biodiversity greatest? How can improved trade classifications and monitoring of trade flows enable better tracking of biodiversity impacts of trade, including through greater differentiation of the sustainability of production of commodities and agricultural products (e.g., from certified sustainable production or not)?
- How could monitoring of the volume of goods traded under specific standards improved? Are there opportunities to monitor and record trade in ‘sustainable’ products through customs records and what challenges would need to be overcome in terms of documenting or standardizing practices for monitoring such trad, given the diversity of different standards and certification schemes at hand)? What can be learned from existing efforts to measure the market penetration of sustainable versus non-sustainably produced products and to measure the proportion of trade from production certified as sustainable?
- How could work with customs authorities (such as through the Green Customs Initiative) be strengthened in ways that would support monitoring and regulation of biodiversity-related considerations and trade?



REFERENCES

¹ IPBES, *Nature's Dangerous Decline 'Unprecedented' Species Extinction Rates 'Accelerating'*. Media Release, Global assessment Report on biodiversity and ecosystem services of the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services. Available at [https://ipbes.net/news/Media-Release-Global-Assessment#:~:text=Nature%20is%20declining%20globally%20at,Services%20\(IPBES\)%2C%20the%20summary](https://ipbes.net/news/Media-Release-Global-Assessment#:~:text=Nature%20is%20declining%20globally%20at,Services%20(IPBES)%2C%20the%20summary)

² United Nations (2021), *The Second World Ocean Assessment (WOA II)*. Available at <https://www.un.org/regularprocess/woa2launch>

³ IISD (2020), *WTO Members preview Structured Discussions on Trade and Environmental Sustainability*. Available at: <https://sdg.iisd.org/commentary/policy-briefs/wto-members-preview-structured-discussions-on-trade-and-environmental-sustainability/>

⁴ IPBES, *ibid*

⁵ UNECE, *Air pollution, ecosystems and biodiversity*. Available at <https://unece.org/air-pollution-ecosystems-and-biodiversity>

⁶ Deere Birkbeck, C. (2021), *Greening International Trade: Pathways forward*, Forum on Trade, Environment and the SDGs and Global Governance Centre, Geneva. Available at https://www.graduateinstitute.ch/sites/internet/files/2021-07/Greening%20International%20Trade_18.07.2021.pdf

⁷ UNEP (2019), *Nature's Dangerous Decline 'Unprecedented' Species Extinction Rates 'Accelerating'*, UNEP: Geneva. Available at: <https://www.unenvironment.org/news-and-stories/press-release/natures-dangerous-decline-unprecedented-species-extinction-rates>. Also see, Wildlife Society (2018), *WWF finds global wildlife has declined 60 percent since 1970*. Available at <https://wildlife.org/wwf-finds-global-wildlife-has-declined-60-percent-since-1970/>; and United Nations (2019), *UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'*. Available at <https://www.un.org/sustainabledevelopment/blog/2019/05/nature-decline-unprecedented-report/>

⁸ IPBES (2019), *The global assessment report on biodiversity and ecosystem services: Summary for policymakers*, IPBES: Bonn. Available at https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf

⁹ Myers, N., Mittermeier, R. A., Mittermeier, C. G., Da Fonseca, G. A. B., & Kent, J. (2000). Biodiversity hotspots for conservation priorities. *Nature*, 403(6772), 853-858. Available at, <https://doi.org/10.1038/35002501>

¹⁰ Dasgupta, P. (2021), *The Economics of Biodiversity: The Dasgupta Review*, London. Available at: <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>.

¹¹ Greenfield, G. (2020), *World fails to meet a single target to stop destruction of nature – UN report*, *The Guardian*, 15 September. Available at: <https://www.theguardian.com/environment/2020/sep/15/every-global-target-to-stem-destruction-of-nature-by-2020-missed-un-report-aoe>.

¹² Secretariat of the Convention on Biological Diversity (2020), *Global Biodiversity Outlook*, Montreal. Available at: <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>.

¹³ FAO, UNDP and UNEP (2021), *A multi-billion-dollar opportunity – Repurposing agricultural support to transform food systems*, FAO: Rome, <https://doi.org/10.4060/cb6562en> (October 17, 2021).

¹⁴ Cardinale, B. J. et al. (2012), *Biodiversity loss and its impact on humanity*, *Nature*, 486, 59-67. Available at <https://doi.org/10.1038/nature11148>

¹⁵ World Forum on Natural Capital, *What is natural capital*. Available at: <https://naturalcapitalforum.com/about/#:~:text=Natural%20capital%20can%20be%20defined,which%20make%20human%20life%20possible>.

¹⁶ *Ibid*.

¹⁷ Seddon, N. et al. (2020). *Understanding the value and limits of nature-based solutions to climate change and other global challenges*, *Philosophical Transactions of the Royal Society B*, 375, 20190120. Available at <https://doi.org/10.1098/rstb.2019.0120>

¹⁸ UNEP (2019), *New UN Decade on Ecosystem Restoration offers unparalleled opportunity for job creation, food security and addressing climate change*, UNEP: Geneva. Available at: <https://www.unenvironment.org/news-and-stories/press-release/new-un-decade-ecosystem-restoration-offers-unparalleled-opportunity>.

¹⁹ Dasgupta, P. (2021), *The Economics of Biodiversity: The Dasgupta Review*, London. Available at: <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>; UNEP (2021), *Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies*, UNEP: Nairobi. Available at: <https://www.unep.org/resources/making-peace-nature>

²⁰ Benton, T. et al (2021), *Food system impacts on biodiversity loss: Three levers for food system transformation in support of nature*. Available at https://www.chathamhouse.org/sites/default/files/2021-02/2021-02-03-food-system-biodiversity-loss-benton-et-al_0.pdf

²¹ *Ibid*.

²² CBD (2020), *IDB 2020: Health and Food*. Available at: <https://www.cbd.int/idb/2020/Health-Food>; and Anila Jacob et al., (2020), *Incorporating natural ecosystems into global health and food security programmes*, WHO: Geneva. Available at: <https://www.who.int/bulletin/volumes/98/8/20-252098/en/>

²³ G. E. Jia, et al., 2019, *Land–climate interactions*, in IPCC, “Climate Change and Land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems.” Available at <https://www.ipcc.ch/site/assets/uploads/2019/11/1-SRCCL-Review-Editor-Reports-1.pdf>.

²⁴ Dasgupta, P. (2021), *The Economics of Biodiversity: The Dasgupta Review*, London. Available at: <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>.

²⁵ WEF, *Half of World's GDP Moderately or Highly Dependent on Nature, Says New Report*. Available at: <https://www.weforum.org/press/2020/01/half-of-world-s-gdp-moderately-or-highly-dependent-on-nature-says-new-report/#:~:text=%2444%20trillion%20of%20economic%20value%20generation%20%E2%80%93%20over%20half%20the%20world's,to%20risks%20from%20nature%20loss>

²⁶ Peduzzi P., et al., (2013), *Integrating the role of ecosystems in disaster risk and vulnerability assessments: Lessons from the Risk and Vulnerability Assessment Methodology Development Project (RiVAMP) in Negril, Jamaica*, in FG Renaud et al., (eds), “The role of Ecosystems in Disaster Risk Reduction,” United Nations University Press (ISBN 978-9280812213), 109-139.

²⁷ IISD (2015), *UNEP Manual Provides Guidance on Valuing SIDS' Ecosystem Services*. Available at: <http://sdg.iisd.org/news/unep-manual-provides-guidance-on-valuing-sids-ecosystem-services/>; UNFCCC (2007), *Vulnerability and adaptation to climate change in small island developing states*. Available at: https://unfccc.int/files/adaptation/adverse_effects_and_response_measures_art_48/application/pdf/200702_sids_adaptation_bg.pdf

²⁸ Ibid.

²⁹ United Nations (2019), *Preserving biodiversity vital to reverse tide of climate change, UN stresses on International Day*, UN. Available at: <https://news.un.org/en/story/2019/05/1038961>

³⁰ United Nations Global Compact, *Nature-Based Solutions to Address Climate Change*. Available at: <https://www.unglobalcompact.org/take-action/events/climate-action-summit-2019/nature-based-solutions#:~:text=Nature%2DBased%20Solutions%20are%20a,action%20for%20climate%20and%20biodiversity.&text=Nature%2DBased%20Solutions%20underpin%20the,security%20from%20sustainable%20food%20systems>.

³¹ IUCN, *Nature-based solutions*. Available at: [https://www.iucn.org/commissions/commission-ecosystem-management/our-work/nature-based-solutions#:~:text=Nature%2DBased%20Solutions%20\(NbS\),%2Dbeing%20and%20biodiversity%20benefits%E2%80%9D](https://www.iucn.org/commissions/commission-ecosystem-management/our-work/nature-based-solutions#:~:text=Nature%2DBased%20Solutions%20(NbS),%2Dbeing%20and%20biodiversity%20benefits%E2%80%9D).

³² European Commission (2020), *Biodiversity and Nature based solutions*. Available at: <https://op.europa.eu/en/publication-detail/-/publication/d7e8f4d4-c577-11ea-b3a4-01aa75ed71a1/language-en/format-PDF/source-139695433>; see also: IUCN (2020), *Global Standard for Nature-based Solutions. A user-friendly framework for the verification, design and scaling up of NbS*, First edition, Gland, Switzerland: IUCN. Available at <https://portals.iucn.org/library/sites/library/files/documents/2020-020-En.pdf>

³³ UNFCCC (2015), *Landscape Restoration - Engagement at All Levels to Restore Deforested and Degraded Lands*. Available at <https://unfccc.int/news/landscape-restoration-engagement-at-all-levels-to-restore-deforested-and-degraded-lands>

³⁴ UNEP (2019), *New UN Decade on Ecosystem Restoration offers unparalleled opportunity for job creation, food security and addressing climate change*, UNEP: Geneva. Available at <https://www.unep.org/news-and-stories/press-release/new-un-decade-ecosystem-restoration-offers-unparalleled-opportunity#:~:text=Ecosystems%20and%20Biodiversity,New%20UN%20Decade%20on%20Ecosystem%20Restoration%20offers%20unparalleled%20opportunity%20for,security%20and%20addressing%20climate%20change&text=The%20United%20Nations%20General%20Assembly,greenhouse%20gases%20from%20the%20atmosphere>

³⁵ United Nations, *Disasters, Resilience and Land Management*, UN: Geneva. Available at: <https://www.un.org/en/climatechange/climate-solutions/disasters-resilience-land-management>.

³⁶ IPBES (2019), *The global assessment report on biodiversity and ecosystem services: Summary for policymakers*, IPBES: Bonn. Available at https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf

³⁷ FAO (2020), *The State of the World Forest*. Available at: <http://www.fao.org/state-of-forests/2020/en/>.

³⁸ UNEP (2021), *Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies*, UNEP: Nairobi. Available at: <https://www.unep.org/resources/making-peace-nature>

³⁹ WEF (2017), *Commodities and Forests Agenda 2020: Ten priorities to remove tropical deforestation from commodity supply chains*. Available at: https://climatefocus.com/sites/default/files/TFA2020_CommoditiesandForestsAgenda2020_Sept2017_o.pdf.

⁴⁰ Brack, D. with Wellesley, L. and A. Grover (2016), *Agricultural Commodity Supply Chains: Trade, Consumption and Deforestation*, Chatham House Research Paper, January, Chatham House: London.

⁴¹ UNEP and IRP (2020), *Sustainable Trade in Resources: Global Material Flows, Circularity and Trade*, UNEP & International Resources Panel.

⁴² IPBES (2019), *Summary for Policymakers of the Global Assessment on Biodiversity and Ecosystem Services*. IPBES Secretariat: Bonn. Available at https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf.

⁴³ Secretariat of the Convention on Biological Diversity (2020), *Global Biodiversity Outlook*, Montreal. Available at: <https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf>.

⁴⁴ Ibid.

⁴⁵ IPCC (2018), *Special Report: Global Warming of 1.5°C. Summary for Policymakers*. Available at: <https://www.ipcc.ch/sr15/chapter/spm/>.

⁴⁶ Ibid.

⁴⁷ UN (2019), *Preserving biodiversity vital to reverse tide of climate change, UN stresses on International Day*, UN: Geneva. Available at: <https://news.un.org/en/story/2019/05/1038961>

⁴⁸ IPBES (2019), Chapter 2.1 Status and trends - Drivers of change, *IPBES Global Assessment on Biodiversity and Ecosystem Services*, IPBES Secretariat: Bonn. Available at: https://www.ipbes.net/sites/default/files/ipbes_global_assessment_chapter_2_1_drivers_unedited_31may.pdf

⁴⁹ United Nations, *Convention on Biological Diversity, key international instrument for sustainable development*, UN: Geneva. Available at <https://www.un.org/en/observances/biological-diversity-day/convention>

⁵⁰ CITES, *What is CITES*. Available at [https://www.cites.org/eng/disc/what.php#:~:text=CITES%20\(the%20Convention%20on%20International,does%20not%20threaten%20their%20survival](https://www.cites.org/eng/disc/what.php#:~:text=CITES%20(the%20Convention%20on%20International,does%20not%20threaten%20their%20survival)

⁵¹ *About the Convention*, available at: <https://www.unccd.int/convention/about-convention>

⁵² Kettunen et al. (2021), *Building on nature: Area-based conservation as a key tool for delivering SDGs*. Available at <https://ieep.eu/publications/global-challenges-and-sdgs/building-on-nature-area-based-conservation-as-a-key-tool-for-delivering-sdgs>

⁵³ IPBES (2019), *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. Available at: <https://ipbes.net/global-assessment>

⁵⁴ Kettunen et al. (2021), *Building on nature: Area-based conservation as a key tool for delivering SDGs*. Available at <https://ieep.eu/publications/global-challenges-and-sdgs/building-on-nature-area-based-conservation-as-a-key-tool-for-delivering-sdgs>

⁵⁵ IISD (2019), *Why Biodiversity Matters: Mapping the Linkages between Biodiversity and the SDGs*. Available at <https://sdg.iisd.org/commentary/policy-briefs/why-biodiversity-matters-mapping-the-linkages-between-biodiversity-and-the-sdgs/>

⁵⁶ Ibid.

⁵⁷ Kettunen et al. (2021), *Building on nature: Area-based conservation as a key tool for delivering SDGs*. Available at <https://ieep.eu/publications/global-challenges-and-sdgs/building-on-nature-area-based-conservation-as-a-key-tool-for-delivering-sdgs>

⁵⁸ Ibid

⁵⁹ IUCN WCMC (2019), *Six ways conserving and sustainably using nature could prevent future pandemics*. Available at <https://www.unep-wcmc.org/news/six-ways-conserving-and-sustainably-using-nature-could-prevent-future-pandemic>

⁶⁰ IISD, (2019), *Why Biodiversity Matters: Mapping the Linkages between Biodiversity and the SDGs*. Available at <https://sdg.iisd.org/commentary/policy-briefs/why-biodiversity-matters-mapping-the-linkages-between-biodiversity-and-the-sdgs/>.

⁶¹ www.cbd.int. Notably, the United States, one of the world's leading trading partners is one of the handful of countries that have not ratified the CBD.

⁶² Ibid. Also see CBD, *History of the Convention*, available at: <https://www.cbd.int/history/>.

⁶³ UNEP, (2020), *Summary of comments on targets related to the sustainable use of biological diversity, CBD/POST2020/WS/2020/4/1*, UNEP: Geneva. Available at <https://www.cbd.int/doc/c/9105/f3ba/f49587311dc6d3536b52f1aa/post2020-ws-2020-04-01-en.pdf>

⁶⁴ CBD, *CBD Article. Article 3. Principle*. Available at: <https://www.cbd.int/kb/record/article/6873?RecordType=article>

⁶⁵ Convention on Biological Diversity, *About the Nagoya Protocol*. Available at: <https://www.cbd.int/abs/about/>

⁶⁶ Ibid.

⁶⁷ Morin, J.F., Gauquelin, M. (2016), *Trade Agreements as Vectors for the Nagoya Protocol's Implementation, Center for International Governance Innovation Paper*. Available at <https://www.cigionline.org/publications/trade-agreements-vectors-nagoya-protocols-implementation>

⁶⁸ Ruiz, M. (2018), *How to improve the system on access to genetic resources and benefit sharing?*, ICTSD: Geneva. Available at <https://ictsd.iisd.org/opinion/how-to-improve-the-system-on-access-to-genetic-resources-and-benefit-sharing>

⁶⁹ Shahahan, M., (2020), *Explainer: COP15, the biggest biodiversity conference in a decade, China Dialogue*, 24 February. Available at: <https://chinadialogue.net/en/nature/11873-explainer-cop15-the-biggest-biodiversity-conference-in-a-decade/#:~:text=The%20UN%20Biodiversity%20Conference%20was,of%20the%20Covid%2D19%20pandemic>.

⁷⁰ Convention on Biodiversity (2021), *Conference of Parties – 15, Part I, Kunming Declaration*, Kunming China. <https://www.cbd.int/doc/c/df35/4b94/5e86e1ee09bc8c7d4b35aaf0/kunmingdeclaration-en.pdf>.

⁷¹ IDDRI (2018), *Post-2020 International Biodiversity Governance Initiative*. Available at <https://www.iddri.org/en/initiative/post-2020-international-biodiversity-governance-initiative>

⁷² IDDRI (2020), *The First UN Summit on Biodiversity, revealing the challenges on the road to COP 15*. Available at <https://www.iddri.org/en/publications-and-events/blog-post/first-united-nations-summit-biodiversity-revealing-challenges>

⁷³ CBD and UNEP, *Strategic Plan for Biodiversity 2011–2020 and the Aichi Targets*. Available at: <https://www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-EN.pdf>.

⁷⁴ United Nations, *United Nations Summit on Biodiversity*. Available at: <https://www.un.org/pga/75/united-nations-summit-on-biodiversity/>.

⁷⁵ Leaders' Pledge for Nature (2021), *Leaders' Pledge for Nature*, available at: <https://www.leaderspledgefornature.org/>; and UNDP, (2020), *World Leaders Pledge at the 'Nature for Life Hub' ahead of UN Biodiversity Summit*, 28 September, available at <https://www.undp.org/content/undp/en/home/news-centre/news/2020/world-leaders-pledge-at-the-nature-for-life-hub-ahead-of-un-biod.html>; IISD, (2020), *Leaders' Pledge for Nature Commits to Reverse Biodiversity Loss by 2030*, available at: <https://sdg.iisd.org/news/leaders-pledge-for-nature-commits-to-reverse-biodiversity-loss-by-2030/#:~:text=The%20Leaders%20Pledge%20for%20Nature%2C%20developed%20by%20the%20Alliance%20of,People%20on%2028%20September%2C%20in>.

⁷⁶ BBC, (2020), *Boris Johnson promises to protect 30% of UK's land by 2030*. Available at <https://www.bbc.com/news/uk-54320030>;

⁷⁷ UNDP, (2020), *World Leaders Pledge at the 'Nature for Life Hub' ahead of UN Biodiversity Summit*, 28 September. Available at: <https://www.undp.org/content/undp/en/home/news-centre/news/2020/world-leaders-pledge-at-the-nature-for-life-hub-ahead-of-un-biod.html>.

⁷⁸ G7 Environment and Climate Ministers', (2021), *The Joint Communiqué issued by the G7 countries at the G7 Environment Track on 20-21 May 2021*. Available at <https://www.g7uk.org/g7-climate-and-environment-ministers-communiqué/>

⁷⁹ Ibid.

⁸⁰ IISD, (2020), *Leaders' Pledge for Nature Commits to Reverse Biodiversity Loss by 2030*, 29 September. Available at: <https://sdg.iisd.org/news/leaders-pledge-for-nature-commits-to-reverse-biodiversity-loss-by-2030/#:~:text=The%20pledge%20outlines%20ten%20actions,by%202030%20for%20sustainable%20development>

⁸¹ UNFCCC COP26, (2021), *Glasgow Leaders' Declaration on Forest and Land Use*. Available at <https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/>

⁸² FACT Dialogue, (2021), *Forest, Agriculture and Commodity Trade Dialogue – A Roadmap for Action*. Available at <https://www.factdialogue.org/fact-roadmap>

⁸³ Mike Shahahan (2020), "Explainer: COP15, the biggest biodiversity conference in a decade," *China Dialogue*, 24 February available at: <https://chinadialogue.net/en/nature/11873-explainer-cop15-the-biggest-biodiversity-conference-in-a-decade/#:~:text=The%20UN%20Biodiversity%20Conference%20was,of%20the%20Covid%2D19%20pandemic>.

⁸⁴ CBD. 6.7.2021, "First Detailed Draft Of The New Post-2020 Global Biodiversity Framework", available at: <https://www.cbd.int/article/draft-1-global-biodiversity-framework>

⁸⁵ IDDRI (2018) *Post-2020 International Biodiversity Governance Initiative*, IDDRI.

⁸⁶ IDDRI (2020) "The First UN Summit on Biodiversity, revealing the challenges on the road to COP 15," IDDRI.

⁸⁷ WEF (2019), *In 2020, we need a new deal for nature*, available at: <https://www.weforum.org/agenda/2019/01/in-2020-we-need-a-new-deal-for-nature/>.

⁸⁸ IUCN, *Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ)*. Available at: <https://www.iucn.org/theme/environmental-law/our-work/oceans-and-coasts/marine-biodiversity-areas-beyond-national-jurisdiction-bbnj>

- ⁸⁹ United Nations, *Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdictions*. Available at: <https://www.un.org/bbnj/>.
- ⁹⁰ Ibid.
- ⁹¹ Ibid.
- ⁹² For a summary of outcomes, see <https://sdg.iisd.org/events/2021-un-food-systems-summit/> and <https://www.un.org/en/food-systems-summit/news/making-food-systems-work-people-planet-and-prosperity>. Also see World Food Summit, *About World Food Summit*. Available at: <https://bfmp.dk/themes/>.
- ⁹³ Ibid.
- ⁹⁴ World Wildlife Fund (2021), *Codex Planetarius*, WWF International, <https://www.worldwildlife.org/publications/codex-planetarius>; Clay, J., (2016), *Codex Planetarius Maintaining the Environmental Sustainability of Food Production*, WWF-US. Available at: https://c4o2277.ssl.cf1.rackcdn.com/publications/1426/files/original/Codex_Planetarius_white_paper.pdf?1611682012
- ⁹⁵ Ramp, F. et. al (2020) *EU Trade Policy for Sustainable Food Systems*, ECPDM and IPES Food, http://www.ipes-food.org/_img/upload/files/Brief_EU%20trade%20policy_ICDPM-IPES%281%29.pdf
- ⁹⁶ Thow, A. and N. Nisbett (2010), 'Trade, nutrition, and sustainable food systems,' *The Lancet*, Vol. 394, Issue 20200, pp. 716-718, [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31292-9/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31292-9/fulltext).
- ⁹⁷ UN Climate Change Conference UK, (2021), Campaigns. Available at <https://ukcop26.org/uk-presidency/campaigns/>.
- ⁹⁸ Restore our future, Bonn Challenge, *About the Challenge*. Available at: <https://www.bonnchallenge.org/about#:~:text=The%20Bonn%20Challenge%20is%20a,milestone%20of%20pledges%20in%202017>.
- ⁹⁹ New York Declaration on Forest, *What is the New York Declaration on Forests?*. Available at: [https://forestdeclaration.org/about#:~:text=The%20New%20York%20Declaration%20on%20Forests%20\(NYDF\)%20is%20a%20voluntary,Climat%20Summit%20in%20September%202014](https://forestdeclaration.org/about#:~:text=The%20New%20York%20Declaration%20on%20Forests%20(NYDF)%20is%20a%20voluntary,Climat%20Summit%20in%20September%202014)
- ¹⁰⁰ Ibid.
- ¹⁰¹ Ibid.
- ¹⁰² Ibid.
- ¹⁰³ European Commission, (2019), *Commission steps up EU action to protect and restore the world's forests*, European Commission: Brussels. Available at https://ec.europa.eu/commission/presscorner/detail/en/IP_19_4470.
- ¹⁰⁴ <https://askrspo.force.com/s/article/What-is-the-Amsterdam-Declarations-Partnership>
- ¹⁰⁵ <https://www.tropicalforestalliance.org/>
- ¹⁰⁶ ITTO, *ITTO/CBD Collaborative Initiative for Tropical Forest Biodiversity*. Available at <https://www.itto.int/cbd/>
- ¹⁰⁷ CDP, (2014), *Deforestation-free supply chains: From commitments to action*. Available at https://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/cdp-global-forests-report-2014.pdf (accessed on 25 April 2021).
- ¹⁰⁸ UNFCCC, (n.d), *Issues related to agriculture*. Available at <https://unfccc.int/topics/land-use/workstreams/agriculture> (accessed on 25 April 2021).
- ¹⁰⁹ Häberli, C., (2018), *Potential conflicts between agricultural trade rules and climate change treaty commitments: Background paper for The State of Agricultural Commodity Markets (SOCO) 2018*, Rome: FAO. Available at <http://www.fao.org/3/CA2345EN/ca2345en.pdf> (accessed 25 April 2021); Elbehri, A., Genest, A. and Burfisher, M., (2011), *Global Action on Climate Change in Agriculture: Linkages to Food Security, Markets and Trade Policies in Developing Countries*, Rome: FAO. Available at <http://www.fao.org/3/i2533e/i2533e00.pdf> (accessed 25 April 2021).
- ¹¹⁰ COP26, (2021), *The Forest, Agriculture and Commodity Trade Dialogue – Launch Event March*, video, 2 February 2021. Available at <https://www.youtube.com/watch?v=9gYWhVMJq4o&feature=youtu.be> (accessed 25 April 2021).
- ¹¹¹ See https://cites.org/eng/CITES_Secretariat_statement_in_relation_to_COVID19. Also see: Lieberman, S. (2020), *CITES, the Treaty that Regulates Trade in International Wildlife*, is not the answer to preventing another zoonotic pandemic, Scientific American. Available at <https://blogs.scientificamerican.com/observations/cites-the-treaty-that-regulates-trade-in-international-wildlife-is-not-the-answer-to-preventing-another-zoonotic-pandemic/>
- ¹¹² CBD, (2020), *Notification to Parties No. 2020/018 concerning China's urgent measures regarding wildlife trade regulation*. CBD: Geneva. Available at <https://cites.org/sites/default/files/notif/E-Notif-2020-018.pdf>
- ¹¹³ UNODC, (2021), *Wildlife and Forest Crime- Global Programme*. Available at <https://www.unodc.org/unodc/en/wildlife-and-forest-crime/global-programme.html>
- ¹¹⁴ UNEP, (2015), *International Trade in Resources: A Biophysical Assessment, Report of the International Resource Panel (IRP)*. Available at <https://www.resourcepanel.org/reports/global-material-flows-and-resource-productivity-database-link>; Koellner, T., (2013), *Ecosystem Services and Global Trade of Natural Resources: Ecology, Economics and Policies*, Routledge; Viñuales, J., (2015), *International Investment Law and Natural Resource Governance*. Geneva: ICTSD and WEF; and Collier, P. and A. Venables, (2010). *International Rules for Trade in Natural Resources*. WTO Staff Working Paper, ERS-2010-06, WTO: Geneva.
- ¹¹⁵ Karousakis, K. and Yamaguchi, S. (2020), *Trade policy and the post-2020 global biodiversity framework, Enhanced Integrated Framework*, 4 February. Available at <https://trade4devnews.enhancedif.org/en/news/trade-policy-and-post-2020-global-biodiversity-framework>
- ¹¹⁶ Ruiz Muller, M., (2018), *International trade and biodiversity: complementarity or conflict?*, *Policy Brief on Trade and Environmental Policy*, No. 2, Konrad Adenauer Stiftung: Bonn.
- ¹¹⁷ Deere Birkbeck, C. (2020), *Environment and Trade 2.0 and a Green Recovery: A Transformative Agenda for Greater Sustainability in Trade*.
- ¹¹⁸ Ibid.
- ¹¹⁹ Lenzen, M., Moran, D., Kanemoto, K., Foran, B., Lobefero, L. and Geschke, A., (2012), *International Trade Drives Biodiversity Threats in Developing Nations*, Nature, 486 (7401): 109; European Commission, (2012), *Science for Environment Policy. International trade drives nearly a third of threats to species*, European Commission: Brussels.
- ¹²⁰ Ibid.
- ¹²¹ Benton, T. and Bailey, (2019), op cit; Lee and Bellmann (2019) op cit; and Needelman, A., (2014), *Whose Century Is It? The Trans-Pacific Partnership, Food and the 21st Century Trade Agreement*, Institute for Agriculture and Trade Policy (IATP).
- ¹²² Brack, D., (2013), *Combating Illegal Logging: Interaction with WTO Rules*, Chatham House Briefing Paper, May 2013; Gulbrandsen, L. and O. Fauchald, (2015), *Assessing the New York Declaration on Forests from a trade perspective*, BRIDGES BioRes, 9 (4), May.
- ¹²³ IPBES, (2019), *2019 Global Assessment Report on Biodiversity and Ecosystem Services*, Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services (IPBES): Bonn; and Brack, D., Wellesley, L. and A. Grover, (2016), *Agricultural Commodity Supply Chains: Trade, Consumption and Deforestation*, Chatham House Research Paper, January, Chatham House: London.
- ¹²⁴ Ibid.
- ¹²⁵ See WEF, (2018), *The Roadmap to Financing Deforestation-Free Commodities*, Tropical Forest Alliance and World Economic Forum. Available at <https://www.tropicalforestalliance.org/assets/Uploads/The-Roadmap-to-Financing-Deforestation-Free-Commodities.pdf>; Also see; Kleymann, H., (2019), *Deforestation and Conversion-free Supply Chains: What is Needed Now*. Available at <http://sdg.iisd.org/commentary/guest-articles/deforestation-and-conversion-free-supply-chains-what-is-needed-now/>.
- ¹²⁶ Borgia, C., J. Evers, M. Kool, and F. van Steenberg, (2014), *Water, Food and Energy Nexus Challenges*, WBCSD Geneva.; Dubois, O. et al., (2014), *The water-energy-food nexus: A new approach in support of food security and sustainable agriculture*. UN Food and Agriculture Organization: Rome.
- ¹²⁷ Figures are drawn from <https://www.un.org/sustainabledevelopment/sustainable-consumption-production/>
- ¹²⁸ <https://www.sei.org/perspectives/pandemic-globalization-supply-chain-risk-and-climate-change-adaptation/>. Also see presentation by Kevin Adams at <https://www.sei.org/events/building-a-climate-resilient-and-just-future-for-all/>
- ¹²⁹ UNEP, (2015), *International Trade in Resources: A Biophysical Assessment, Report of the International Resource Panel*. Available at http://www.wforum.org/wp-content/uploads/2015/10/International_Trade_in_Resources_a_biophysical_assessment-2015EP_33_Trade_Report.pdf
- ¹³⁰ Pendrill et al., 2019, Available at <https://www.sciencedirect.com/science/article/pii/S0959378018314365>
- ¹³¹ UNEP and IRP, (2020), *Sustainable Trade in Resources: Global Material Flows, Circularity and Trade*.
- ¹³² Ibid
- ¹³³ Ibid
- ¹³⁴ Ibid.
- ¹³⁵ Schröder, P., (2020), *Promoting a Just Transition to an Inclusive Circular Economy*, Chatham House. Available at <https://www.chathamhouse.org/sites/default/files/2020-04-01-inclusive-circular-economy-schroder.pdf>.
- ¹³⁶ Steinfatt, K., (2020), *Trade Policies for a Circular Economy: what can we learn from WTO experience*, WTO: Geneva. Available at: https://www.wto.org/english/res_e/reser_e/ersd202010_e.pdf; Van der Ven, C., (2020), *The Circular Economy, Trade, and Development: Addressing spillovers and leveraging opportunities*, Study Commissioned by the Permanent Representation of the Netherlands to the WTO. Available at <https://eartf3ob3-6555-4bf7-9210-2805bebede4d.filesusr.com/ugd/433doaa1c0bf1aa11424881a33b9cea9c55e.pdf>
- ¹³⁷ UNEP and IRP, (2020), *Building resilient societies after the COVID-19 pandemic*; Also see UNEP, *The International Resource Panel*. Available at <https://www.unenvironment.org/explore-topics/resource-efficiency/what-we-do/international-resource-panel>
- ¹³⁸ Ibid.
- ¹³⁹ Oshani, P., and D. Uzsoki, (2017), *Infrastructure at Odds with Biodiversity*, IISD. Available at <https://www.cbd.int/financial/2017docs/wwf-infrastructuremain2017.pdf>
- ¹⁴⁰ Ibid.
- ¹⁴¹ Ibid.
- ¹⁴² Ibid.
- ¹⁴³ UNEP, (2020), *Aid for Trade: A vehicle to green trade and build climate Resilience*, Issue Brief, 2020. Available at <https://wedocs.unep.org/bitstream/handle/20.500.11822/32204/AfT.pdf?sequence=1&isAllowed=y>
- ¹⁴⁴ Hale, T., C. Liu, and J. Urpelainen, (2020), *Belt and Road decision-making in China and recipient countries: How and to what extent does sustainability matter?*, ISEP and BSG Report, April. Available at <https://sais-isep.org/wp-content/uploads/2020/04/ISEP-BSG-BRI-Report.pdf>
- ¹⁴⁵ Hoong Chen Teo et al., (2019), *Environmental Impacts of Infrastructure Development under the Belt and Road Initiative*, Environments 6(6). Available at <https://www.mdpi.com/2076-3298/6/6/72/html>; Coenen, J, S. Bager, P. Meyfroidt, J. Newig, and E. Challies., (2020), *Environmental Governance of China's Belt and Road Initiative, Environmental Governance of China's Belt and Road Initiative*. Available at <https://onlinelibrary.wiley.com/doi/full/10.1002/eet.1901>; Zhou et al., 2018, *Moving the green belt and road initiative: from words to actions*. Available at <https://www.wri.org/publication/moving-green-belt-and-road-initiative-from-words-to-actions>; Gallagher and Qi, (2018), *More recently*; City of London, (2019), *Green Belt and Road principles receive industry backing*. Available at <https://news.cityoflondon.gov.uk/green-belt-and-road-principles-receive-industry-backing/>
- ¹⁴⁶ UNCTAD, (2018), *Improving coordination on 'BioTrade and Access and Benefit Sharing' technical assistance for South-East Asia*. Available at <https://unctad.org/meeting/improving-coordination-biotrade-and-access-and-benefit-sharing-technical-assistance-south>
- ¹⁴⁷ See, for instance, Res. Conf. 8.3 (Rev. CoP13) on Recognition of the benefits of trade in wildlife and Resolution Conf. 15.2 on Wildlife trade policy reviews.
- ¹⁴⁸ UNCTAD, *BioTrade*, available at <https://unctad.org/topic/trade-and-environment/biotrade>; and UNCTAD, (2015), *BioTrade Initiative Inputs for its Strategic Direction 2020*, UN: Geneva. Also see UNCTAD, (2020), *Call to Action: Making BioTrade a lever for recovery and resilience under the COVID-19 pandemic*. Available at <https://unctad.org/system/files/information-document/ditc-ted-1410202-3scc-CallAction-2.pdf>
- ¹⁴⁹ UNCTAD, *About BioTrade*, available at: <https://unctad.org/en/Pages/DITC/Trade-and-Environment/BioTrade.aspx>. Also see https://unctad.org/system/files/official-document/ditcted2020d2_en.pdf
- ¹⁵⁰ UNCTAD, *UNCTAD updates principles to promote biodiversity-friendly trade*, published on 18 January 2021. Available at <https://unctad.org/news/unctad-updates-principles-promote-biodiversity-friendly-trade>
- ¹⁵¹ UNCTAD, (2017), *20 years of BioTrade. Connecting people, the planet and markets*. Available at https://unctad.org/system/files/official-document/ditcted2016d4_en.pdf
- ¹⁵² Ibid.
- ¹⁵³ UNCTAD (2021), *The Bridgetown Covenant: From inequality and vulnerability to prosperity for all*, Fifteenth Session of the United Nations Conference on Trade and Development, 6 October, 2021, https://unctad.org/system/files/official-document/td-1-435_en.pdf

- ¹⁵⁴ IUCN, *Invasive alien species and sustainable development*. Available at <https://www.iucn.org/resources/issues-briefs/invasive-alien-species-and-sustainable-development>; Also see, Greenfield, P., (2020), *Increase in invasive species poses dramatic threat to biodiversity – report*, The Guardian. Available at <https://www.theguardian.com/environment/2020/jul/15/increase-in-invasive-species-poses-dramatic-threat-to-biodiversity-report-aoe>
- ¹⁵⁵ UNEP, (2019), *Nature’s Dangerous Decline ‘Unprecedented’ Species Extinction Rates ‘Accelerating’*, UNEP: Geneva. Available at: <https://www.unep.org/news-and-stories/press-release/natures-dangerous-decline-unprecedented-species-extinction-rates>
- ¹⁵⁶ Essl, F., Lenzner, B., Bacher, S., Bailey, S., Capinha, C., Daehler, C., & Roura Pascual, N., (2020), *Drivers of future alien species impacts: An expert-based assessment*. *Global Change Biology*, 26(9), 4880–4893.
- ¹⁵⁷ Standards and Trade Development Facility, (2013), *International Trade and Invasive Alien Species*. Available at https://www.ippc.int/static/media/files/publication/en/2016/10/STDF_IAS_EN.pdf; Also see, Westphal, M., Browne, M., MacKinnon, K. and Noble, I. (2008), *The link between international trade and the global distribution of invasive alien species*, *Biological Invasions*, 10, 391–398.
- ¹⁵⁸ CBD, (2002), *Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species*. Available at <https://www.cbd.int/decision/cop/?id=7197>
- ¹⁵⁹ European Commission, (2014), *Invasive Alien Species*. Available at <https://ec.europa.eu/environment/nature/invasivealien/docs/ias-brochure-en-web.pdf>
- ¹⁶⁰ WWF, (2020), *Preliminary WWF analysis of the EU 2030 Biodiversity Strategy*. Available at https://d2ouvy59podg6k.cloudfront.net/downloads/2020_05_20_preliminary_wwf_analysis_eu_2030_biodiversity_strategy.pdf
- ¹⁶¹ Standards and Trade Development Facility, (2013), *International Trade and Invasive Alien Species*. Available at https://www.ippc.int/static/media/files/publication/en/2016/10/STDF_IAS_EN.pdf
- ¹⁶² World Trade Organization. (2017), *Fisheries subsidies ministerial decision of 13 December 2017*, document number: WT/MIN(17)/64 WT/L/1031. Available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:WT/MIN17/64.pdf&Open=True>
- ¹⁶³ WTO, *Negotiations on fisheries subsidies*. Available at https://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_e.htm
- ¹⁶⁴ Antoni, (2020), *The WTO Environment Week Nov 16-20: Why the WTO Environment Week is a big deal for global environmental governance (and the future of trade itself)*, published on tradehub.earth. Available at <https://tradehub.earth/2020/11/16/the-wto-environment-week-nov-16-20/>
- ¹⁶⁵ WTO, (2006), *The relationship between the TRIPS agreement and the convention on biological diversity: Summary of issues raised and points made*, Council for Trade-Related Aspects of Intellectual Property Rights. Available at https://www.wto.org/english/tratop_e/trips_e/ipcw368_e.pdf
- ¹⁶⁶ World Trade Organization (2021c). WTO Trade and Environment Structure Discussions, Meeting Held on 26, 27 and 28 May 2021: Informal summary by the Coordinators, INF/TE/SSD/R/2, Geneva: WTO Secretariat. <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:INF/TESSD/R2.pdf&Open=True>. Also see: FAO, UNDP and UNEP (2021), *A multi-billion-dollar opportunity – Repurposing agricultural support to transform food systems*, FAO: Rome, <https://doi.org/10.4060/cb6562en> (October 17, 2021).
- ¹⁶⁷ WTO, 19 January 2021, *Dispute Settlement: Malaysia initiates WTO dispute complaint against EU palm oil measures*. Available at https://www.wto.org/english/news_e/news21_e/ds60orfc_19jan21_e.htm
- ¹⁶⁸ Ibid.
- ¹⁶⁹ WTO, *Eliminating trade barriers on environmental goods and services*. Available at https://www.wto.org/english/tratop_e/envir_e/envir_neg_serv_e.htm
- ¹⁷⁰ UNCTAD, UNCTAD15 pre-event: *Harnessing the benefits of the ocean economy for sustainable development*. Available at <https://unctad.org/meeting/unctad15-pre-event-harnessing-benefits-ocean-economy-sustainable-development>
- ¹⁷¹ UNCTAD, (2019), *Inter Agency Joint Plan of Action for achieving the trade-related targets of SDG 14*. Available at <https://unctad.org/project/inter-agency-joint-plan-action-achieving-trade-related-targets-sdg-14>
- ¹⁷² EU-Seal Products, *Summary of the dispute*. Available at https://www.wto.org/english/thewto_e/whatis_e/tif_e/bey2_e.htm#:~:text=The%20WTO%20has%20no%20specific,provisions%20dealing%20with%20environmental%20concerns
- ¹⁷³ <https://www.e-elgar.com/shop/gbp/animal-welfare-and-international-trade-law-9781839109799.html>
- ¹⁷⁴ WTO, (1998), *India etc versus US: ‘shrimp-turtle’*. Available at https://www.wto.org/english/tratop_e/envir_e/edis08_e.htm
- ¹⁷⁵ WTO, (2020), *Short answers to big questions on the WTO and the environment*, WTO: Geneva. Available at https://www.wto.org/english/res_e/publications_e/envirqapublication_e.htm
- ¹⁷⁶ WTO, (2009), *US-TUNA II (Mexico)*. Available at https://www.wto.org/english/tratop_e/dispu_e/cases_e/1pagesum_e/ds381sum_e.pdf
- ¹⁷⁷ Ibid.
- ¹⁷⁸ <https://europepmc.org/article/med/32729577>
- ¹⁷⁹ ESRI, *The Effects of Plastic on Biodiversity*. Available at: <https://www.arcgis.com/apps/MapJournal/index.html?appid=af7640b46fed46259699a664d2534fbc>
- ¹⁸⁰ ST&R, (2020), *Foreign Fisheries to be Subject to Regulatory Requirements for Exports to U.S.* Available at <https://www.strtrade.com/trade-news-resources/str-trade-report/trade-report/foreign-fisheries-to-be-subject-to-regulatory-requirements-for-exports-to-u-s-en#:~:text=Under%20the%20import%20provisions%20of,in%20excess%20of%20U.S.%20standards>
- ¹⁸¹ European Commission, *Forests. Illegal logging/FLEGT Action Plan*. Available at https://ec.europa.eu/environment/forests/illegal_logging.htm
- ¹⁸² Shen, Y., Moomy, R., and R. Eggert, (2020), *China’s public policies towards rare earths, 1975–2018*, *Mineral Economics* 33, 127–151.
- ¹⁸³ Karapinar, B., (2010), *Export restrictions on natural resources: policy options and opportunities for Africa*, *World Trade Institute*. Available at https://www.wti.org/media/filer_public/f8/7b/f87b3b8c-1865-402f-b8dd-60256732570c/trapca_paper_submitted1711_bk.pdf
- ¹⁸⁴ TREND analytics is an innovative and interactive tool based on the Trade & Environment Database (TREND), which tracks around 300 different environmental provisions in the texts of 630 PTAS. See, German Development Institute, (2017), *Trade & Environment Database (TREND) analytics*, available at <https://klimalog.die-gdi.de/trend/>. Also see <https://www.die-gdi.de/en/briefing-paper/article/environmental-provisions-in-trade-agreements-promises-at-the-trade-and-environment-interface/> and OECD, (2007), *Environment and Regional Trade Agreements*, available at <http://www.oecd.org/env/environment-and-regional-trade-agreements.htm>
- ¹⁸⁵ Monteiro, J., (2016), *Typology of environment-related provisions in regional trade agreements*, WTO. Available at: https://www.wto.org/english/res_e/reser_e/ersd201613_e.pdf
- ¹⁸⁶ European Commission, (2015), *Trade and Biodiversity*. Available at https://ec.europa.eu/environment/efe/news/trade-and-biodiversity-2015-07-10_en
- ¹⁸⁷ EU and Japan, (2019), *An introduction to the EU-Japan Economic Partnership Agreement*, 1 February. Available at https://trade.ec.europa.eu/doclib/docs/2017/july/tradoc_155721.pdf
- ¹⁸⁸ Vivas-Eugui, D. and Oliva, M. J. (2010), *Biodiversity Related Intellectual Property Provisions in Free Trade Agreements*, ICTSD. Available at: https://ictsd.iisd.org/sites/default/files/event/2010/10/vivas-eugui_oliva.pdf
- ¹⁸⁹ U.S. Government Publishing Office, (2007), *United States-Peru Trade Promotion Agreement Implementation Act*. Available at <https://www.govinfo.gov/content/pkg/CRPT-110hrpt421/html/CRPT-110hrpt421.htm>
- ¹⁹⁰ Leal-Campos, S., (2021), *Novel and existing approaches included in trade agreements to reduce deforestation and conserve forests*, Presentation for webinar on Reducing Deforestation and Enhancing Forest Conservation Through International Trade Policy, March 24, 2021, IISD: Geneva.
- ¹⁹¹ SECO, (2021), Indonesia. Available at https://www.seco.admin.ch/seco/en/home/Aussenwirtschaftspolitik_Wirtschaftliche_Zusammenarbeit/Wirtschaftsbeziehungen/Freihandelsabkommen/partner_fha/partner_weltweit/indonesien.html (accessed 31 March 2021). Also see, Sieber-Gassser, C., (2021), *EFTA-Indonesia: Accelerating the Transition to (More) Sustainable Trade?*, 3 March 2021. Available at <https://sieber-consulting.ch/2021/03/03/efta-indonesia-accelerating-the-transition-to-more-sustainable-trade/> (accessed 29 March 2021). Also see Leal-Campos (2021), *op. cit.*
- ¹⁹² European Parliament, (2020), *Amazon deforestation and EU-Mercosur deal*. Available at [https://www.europarl.europa.eu/RegData/etudes/ATAG/2020/659311/EPRS_ATA\(2020\)659311_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/ATAG/2020/659311/EPRS_ATA(2020)659311_EN.pdf); Gonzales, J. (2020), *World’s biggest trade deal in trouble over EU anger at Brazil deforestation, Mongabay*. Available at <https://news.mongabay.com/2020/07/worlds-biggest-trade-deal-in-trouble-over-eu-anger-at-brazil-deforestation/>; Boadle, A. (2019), *Deforestation in Brazil, vote in Argentina endanger EU-Mercosur pact, Reuters*. Available at <https://www.reuters.com/article/us-eu-mercosur-trade-analysis/deforestation-in-brazil-vote-in-argentina-endanger-eu-mercosur-pact-idUSKCN1V61OZ>
- ¹⁹³ Blot, E. and Kettunen, M., (2021), *Environmental credentials of EU trade policy A comparative analysis of EU free trade agreements*. Available at <https://ieep.eu/publications/global-challenges-and-sdgs/environmental-credentials-of-eu-trade-policy>
- ¹⁹⁴ European Commission, (2021), *Proposal for a Chapter on Sustainable Food Systems in the modernized EU - Chile Trade Agreement*. Available at https://trade.ec.europa.eu/doclib/docs/2021/june/tradoc_159633.pdf
- ¹⁹⁵ Australia, Brunei, Cambodia, China, Indonesia, Japan, Laos, Malaysia, Myanmar, New Zealand, the Philippines, Singapore, South Korea, Thailand, Vietnam (2020), *Regional Comprehensive Economic Partnership Agreement*, 15th November. Available at: <https://www.mofa.go.jp/files/100114853.pdf>
- ¹⁹⁶ UNCTAD, (2016), *African Continental Free Trade Area: Policy and Negotiation Options for Trade in Goods*. Available at https://unctad.org/system/files/official-document/webditc2016d7_en.pdf.
- ¹⁹⁷ UNCTAD (2021) *Implications of the African Continental Free Trade Area for Trade and Biodiversity: Policy and Regulatory Recommendations*, UNCTAD: Geneva.
- ¹⁹⁸ WTO, *Labelling*. Available at https://www.wto.org/english/tratop_e/envir_e/labelling_e.htm
- ¹⁹⁹ World Wildlife Fund (2021), *Codex Planetary*, WWF International, <https://www.worldwildlife.org/publications/codex-planetary>; Clay, J., (2016), *Codex Planetary Maintaining the Environmental Sustainability of Food Production*, WWF-US. Available at https://c4o2277.ssl.cf1.rackcdn.com/publications/1426/files/original/Codex_Planetary_white_paper.pdf?1611682012%20um
- ²⁰⁰ Collinet, J., (2020), *Due diligence: has France really laid the foundations to end corporate impunity?*, *Equal Times*, 19 February. Available at <https://www.equaltimes.org/due-diligence-has-france-really#.X6rZCZNKhTY>
- ²⁰¹ Harrabin, R., (2021), *Climate: Government postpones Environment Bill again*, BBC News, January 26. Available at <https://www.bbc.co.uk/news/uk-politics-55799191>. Also see, Government of UK, (2020), *Government response to the recommendations of the Global Resource Initiative*, available at <https://www.gov.uk/government/publications/global-resource-initiative-taskforce-government-response/government-response-to-the-recommendations-of-the-global-resource-initiative>; and SEL, (2020), *Response to Consultation on Due diligence on forest risk commodities*, available at <https://www.sei.org/wp-content/uploads/2020/10/uk-due-diligence-deforestation-legislation-sei-response.pdf>
- ²⁰² European Commission, (2020), *Study on due diligence requirements through the supply chain*. Available at <https://op.europa.eu/en/publication-detail/-/publication/8ba0a8fd-4c83-11ea-b8b7-01aa75ed71a1/language-en/format-PDF/source-search>
- ²⁰³ Norton Rose Fulbright, (2020), *Proposal for an EU wide mandatory human rights due diligence law*. Available at <https://www.nortonrosefulbright.com/en/knowledge/publications/1a58997f/proposal-for-an-eu-wide-mandatory-human-rights-due-diligence-law>
- ²⁰⁴ European Commission, (2021), *EU Deforestation Free Value Chain initiative*. Available at https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12137-Deforestation-and-forest-degradation-reducing-the-impact-of-products-placed-on-the-EU-market_en
- ²⁰⁵ Deere Birkbeck, C. (2020), *Environment and Trade 2.0 and a Green Recovery: A Transformative Agenda for Greater Sustainability in Trade*.
- ²⁰⁶ Ibid.
- ²⁰⁷ European Commission and IEEP, (2018), *Trade Liberalisation and Biodiversity*. Available at [https://ieep.eu/uploads/articles/attachments/81fc8203-11a8-40db-8a63-e5751f030991/Trade%20and%20biodiversity%20-%20ofinal%20report%20\(published\)%20-%20Feb%202018.pdf?v=63691176035](https://ieep.eu/uploads/articles/attachments/81fc8203-11a8-40db-8a63-e5751f030991/Trade%20and%20biodiversity%20-%20ofinal%20report%20(published)%20-%20Feb%202018.pdf?v=63691176035)

