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The Global Value Chain Policy Series was launched in 2018 by the World Economic Forum's System Initiative on Shaping the Future of International Trade and Investment. It consists of brief policy papers on various aspects of global value chains (GVCs). The aim of the series is to stimulate cross-policy discussion and thinking about GVCs and collect ideas from researchers and practitioners on how to help GVCs contribute towards development, sustainability and inclusiveness. These ideas can then be examined in more depth in the context of particular value chains, regions or public-private initiatives. The World Economic Forum is working to bring the relevant actors together to facilitate this multistakeholder, cross-policy undertaking, aimed at catalysing partnerships for impact.

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Context: The 2030 Agenda

Since their adoption in 2015, the Sustainable Development Goals (SDGs) have gained momentum across jurisdictions, with businesses and the public, as an ambitious roadmap for development within planetary boundaries. As with the Paris Agreement on Climate Change and the Addis Ababa Action Agenda, governments foresaw SDG implementation accelerated by partnerships, notably between public and private actors. These new global commitments marked a concerted shift in recognizing the mutual dependence of public and private stakeholders in shaping sustainable development outcomes.

Progress towards sustainability is essentially an ongoing endeavour, but the research community has demonstrated that there are certain immutable deadlines. In 2009, for example, 28 scientists identified nine planetary boundaries within which humanity can pursue development for generations to come, without causing irreversible and abrupt environmental changes.¹ As the 2030 Agenda and Paris Agreement were thrashed out, researchers confirmed four of these (climate change; loss of biosphere integrity; land-system change; and altered biogeochemical cycles) had been crossed as a result of human activity.² The need for a systemic realignment of the way in which societies produce and consume is clear. Tinkering at the edges of current business-as-usual approaches will be insufficient.

In many respects, international trade patterns and investment sit at the heart of this realignment. Choices made by the private sector and consumers within global value chains have resource use and conservation impacts, while policy interventions perform an important market signalling function for all players on the field. For individual companies, questions arise regarding responsibility vis-à-vis suppliers, balancing competitiveness and change leadership, as well as responsiveness to consumer interests and demand. For trade policy-makers, there is an opportunity to reshape the enabling environment and incentive structures towards sustainable outcomes. The plethora of instruments that make up the international trade and investment system play a major role in defining the way in which the world produces and consumes. This system arguably needs to be refreshed and reformed to build a pathway to sustainability, while complementing private efforts.

This paper presents some preliminary thoughts and recommendations on the linkages between environmental protection and global value chains (GVCs). It examines:

1. The barriers and opportunities in environmental goods and services value chains
2. The role of global producers and retailers in improving sustainability impacts throughout the value chain, particularly through voluntary sustainability standards (VSS).

Finally, some suggestions are made for the way forward, considering the importance of convergence and coherence among various initiatives and actors.

Part 1: Trade in environmental goods and services

Identifying the target

Work has been under way for more than two decades to shape a distinct environmental goods and services (EGS) sector. The global EGS market is estimated by Environmental Business International to be approximately \$866 billion, with some analysts forecasting that it could reach up to \$1.9 trillion by 2020.³ Like any estimate, the definition of its parameters is key. Broadly, it is widely held that EGS comprise four categories: Goods and services used for pollution prevention and control, the production of renewable energy, the conservation and management of natural resources, and environmental monitoring.⁴

Moving from these broad categories, however, to an internationally-agreed list of goods and services remains complex. Should goods and services that can be used for environmental purposes be included if they *also* have non-environmental uses? This “dual use” problem arises, for instance, in relation to pumps that could be used for wastewater treatment but also in other industries.⁵ How should goods and services that provide relatively greener or cleaner outcomes compared to mainstream counterparts be treated, when in absolute terms they nonetheless cause some environmental harm? Hydroelectric power may be cleaner than burning fossil fuels, but large-scale dams can have adverse impacts on biodiversity. Other examples include more efficient appliances, jet aircraft engines and greener tourism destinations.

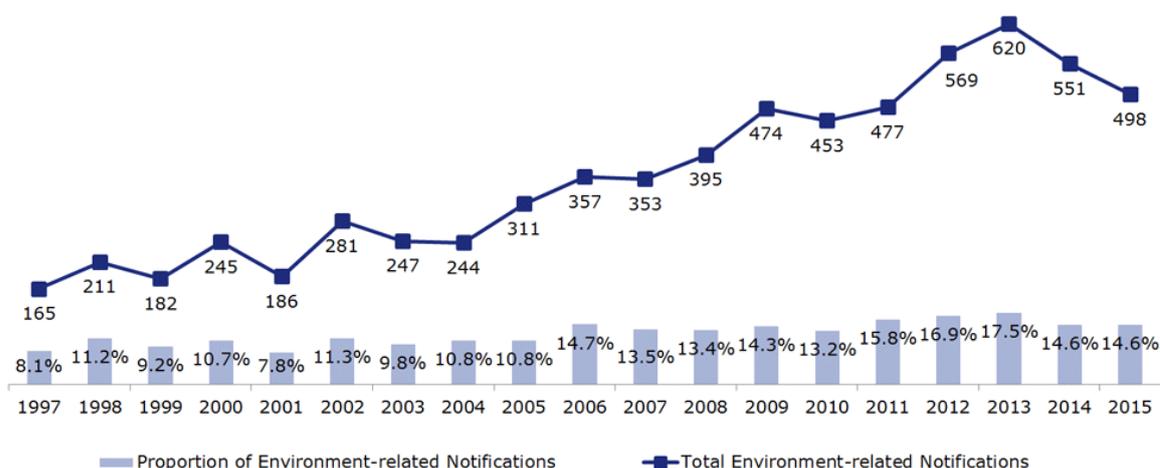
Identifying the scope of the sector matters from a GVC and trade perspective. Once environmental goods and services are outlined, then trade barriers impeding them can be pinpointed and subsequently eliminated, allowing for increased ease of international trade flows. Accordingly, time and energy have been spent on compiling different lists. The 21-economy Asia-Pacific Economic Cooperation (APEC) group define a relatively narrow list of 54 goods – primarily targeting pollution treatment and monitoring – that benefit from voluntary tariff ceilings of 5% or less. The Organisation

for Economic Co-operation and Development (OECD) Secretariat has a broader indicative list of 164 goods and services. In July 2014, a group of World Trade Organization (WTO) members began negotiations for binding tariff elimination on environmental goods.⁶ Talks moved forward on the basis of different environmental goods categories including goods related to: Renewable energy generation and energy and resource efficiency; reduction of air, water and soil pollution; the management of solid and hazardous waste; noise abatement; and environmental quality monitoring and evaluation.⁷ The effort stalled in December 2016 following mercantilist tensions on what products to include in the tariff cuts.⁸

Although tariffs on many of the goods identified across various lists are relatively low, the “nuisance” impact should not be underestimated in a value chain world where, aside from finished products, parts and components also cross borders and do so multiple times. Furthermore, trade in these types of environmentally-beneficial products can represent sizeable values. Exports of environmental goods alone, excluding services, rose from approximately \$231 billion in 2001 to \$656 billion in 2012.⁹ Exports in 2012 were valued at \$18,346.87 billion, with environmental goods accounting for approximately 3.6% of this amount.

Notifications by WTO members also point to the growth of potential challenges around EGS trade spanning beyond tariffs. Although imperfect, notifications by WTO members provide a snapshot of governments’ views of what constitutes traded environmental goods and services. Of the 3,400 different notifications submitted by WTO members under different agreements – such as safeguards, Trade-Related Intellectual Property Rights or agriculture in 2015 – more than 14% were environment-related. As shown in Figure 1 below, the proportion of environment-related notifications has also increased substantially in the 20-year period since the WTO Secretariat began tracking these.

Figure 1: WTO Members’ Environment-Related Notifications (1997-2015)¹⁰



Source: World Trade Organization, “Environmental Database for 2015”

Technical standards under the WTO Technical Barriers to Trade (TBT) Agreement represent by far the largest proportion out of total environment-related notifications. Irrespective of the preoccupation with tariffs as key impediments to trade in EGS, non-tariff barriers can significantly hamper the efficient functioning of environmental goods value chains, green investment and trade in environmental services. Analysis from 2017 by the Asia-Pacific Research and Training Network on Trade (ARTNeT) using a gravity model, revealed that the most significant impact on environmental goods trade came from technical non-tariff measures, when compared to non-technical, non-tariff measures. Furthermore, it was found that tariff measures represented a statistically insignificant impediment to environmental goods trade.¹¹ Trade in EGS is further tied to services trade restrictiveness and its impact on imports and exports between countries across all goods, but particularly in the trade in environmental goods and products.

Non-tariff barriers and services trade barriers are not, however, always well-articulated or clarified, despite their impact on EGS value chains. Furthermore, with a few exceptions, many negotiations to date have focused on tariffs. More work could be done to identify specific impediments across various EGS chains – perhaps using the categories identified above – in dialogue with companies. A value chain approach to scaling-up EGS trade and investment could then be pursued by a group of ambitious countries. A link between EGS trade impediments and company research and development in relevant sectors would also be the basis of a useful public-private research agenda.

Trade policy interventions

Although debates around different EGS lists and products to target remain a critical technical issue, the trade negotiating landscape has progressed, despite the current absence of consensus. Newer trade agreements have, to a greater and lesser extent, made efforts to address the enabling environment for EGS value chains and related sustainability standards, whether public or private.

For example, the Canada-European Union Comprehensive Economic and Trade Agreement (CETA) broke no new ground in EGS or standards related to the sustainability of these products, basically repeating higher-level references to trade-related international environmental agreements. However, CETA did include a chapter on trade and sustainable development, noting:

The Parties affirm that trade should promote sustainable development. Accordingly, each Party shall strive to promote trade and economic flows and practices that contribute to enhancing decent work and environmental protection, including by... encouraging the development and use of voluntary schemes relating to the sustainable production of goods and services, such as eco-labelling and fair trade schemes.¹²

The environment chapter of the Trans-Pacific Partnership (TPP) included provisions that encourage the use of flexible and voluntary mechanisms, including market-based incentives such as eco-labels, to increase environmental performance.¹³ Based on analysis published by the World Economic Forum, in contrast to APEC and the Environmental Goods Agreement (EGA), where the focus lies on goods in particular, the TPP had considered environmental goods and services of equal importance and requiring distinct consideration.¹⁴ As a continuation of the TPP, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) has carried over many of the environmental provisions, but should further aim to accentuate this important mutual prioritization.

European Union (EU) Trade Commissioner Cecilia Malmström has referenced several times the possibility of linking trade policy, related standards and the SDGs. In her “The Future of EU Trade Policy” speech in 2017, Commissioner Malmström noted:

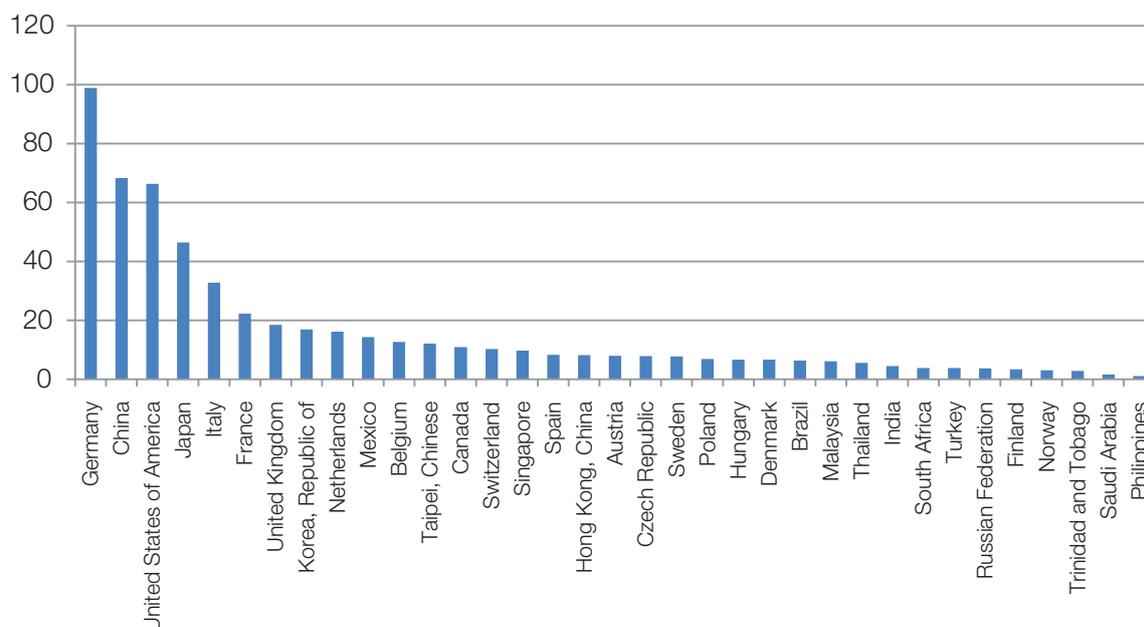
Trade isn't just about protecting our standards at home – but promoting them abroad. By using trade policy as a vehicle for our values, we can shape globalisation, rather than merely submitting to it, or letting others shape it for us. It's about ensuring other parts of the world embrace our high standards of protection in areas like consumer safety, health, or environmental protection.¹⁵

The EU has mobilized trade policies and bilateral agreements that strengthen the market for EGS globally and, in particular, with some Asia-Pacific markets and developing economies.

One example is the implementation of the Generalized System of Preferences (GSP), which was revamped in 2014 to the Special Incentive Arrangement for Sustainable Development and Good Governance (GSP+).¹⁶ The GSP+ acts as an enabler centred on tariff reductions to promote the implementation of sustainable development through trade. It is arranged to reduce the burden of responsibilities on developing economies in the ratification of core international conventions around human and labour rights, environmental protection and good governance. Currently, 10 economies are granted GSP+ status.¹⁷ One key participant is the Philippines, which gained GSP+ status in 2014 and saw a swift increase in its exports of photovoltaic cells to reach \$1 billion in 2013¹⁸, along with an increase in exports of other environmental technologies.

The EU has gone beyond trade policies focusing on tariff reductions and demonstrated specific support to the EGS sector and standards provisions in bilateral trade agreements, including with Singapore, South Korea and Viet Nam. The Asia-Pacific region represents a key player in the EGS market worldwide in both imports and exports, with a share of 42% of world exports in environmental goods in 2014.¹⁹ Moreover, this trend emerges across all categories of EGS discussed above, including a 56% regional share of world trade in renewable energy goods, 32% in environmental protection goods and 29% in environmental monitoring goods.²⁰ As can be seen in Figure 2 below, while much of this is dominated by China, leading economies also include Japan, Malaysia, Singapore, South Korea and Viet Nam (along with the emergence of the Philippines).

Figure 2: Leading Exporters of Environmental Goods: Average Yearly Export Value 2008-2013 (\$ billion)²¹



Source: ITC Trade Map, using OECD Classification of Environmental Goods

For example, Chapter 13 of the EU-Singapore Free Trade Agreement (FTA) outlines the provisions and objectives towards Trade and Sustainable Development. Particularly key for this paper is Article 13.11 in which specific objectives for the trade and investment in environmental goods and services is outlined.²² The Article further prioritizes the removal of obstacles to trade in goods and services, including renewable energy goods and energy-efficient products. It also outlines the promotion of standards aligning with the environmental and economic challenges or needs.

Similarly, Chapter 15, Article 9 of the EU-Viet Nam FTA affirms the parties' commitments to facilitating and promoting trade and investment in environmental goods and services.²³ Chapter 13 of the EU-South Korea FTA demonstrates strong commitments to labour and environmental standards.²⁴

With advancements in the promotion of EGS, the broader trade policy question that arises is the eventual need to differentiate green or greener goods from their mainstream counterparts. In this respect, a key question moving forward will be whether trade panels should be asked to decide possible market-access issues, including border carbon tax adjustment, for products that embody significantly different process and production methods from their mainstream counterparts.²⁵

Beyond trade policy: Seeing the big picture

It is also helpful to take a step back to survey the enabling environment globally for EGS value chains – which includes, but goes beyond, so-called pure trade policy and practice. Broadly, many EGS are conceived, designed, produced, marketed, distributed and consumed through value chains and exhibit the same kind of slicing and linkages as mainstream goods and services. Work by the OECD

underscores the important role of domestic policies in driving EGS expansion: More stringent domestic air and water pollution regulations typically trigger best-available technology options to meet permissible ambient air and water quality standards. Several government-led post-Paris carbon clubs, such as the 2017 Powering Past Coal Coalition, are likely to drive the demand for greater energy efficiency and installed renewable energy.

There has also been continuing interest in greening various services in the face of interlinked consumer demand and sustainability imperatives. This ranges from increased eco-tourism to a push for greener, low-carbon freight, marine and airline transport. For example, in 2010, countries agreed through the International Civil Aviation Organization (ICAO) on a roadmap to voluntarily submit national action plans to reduce carbon dioxide emissions from international air travel.²⁶ A major part of the initiative includes the sequestration of carbon emissions, thereby expanding research, mapping, accounting and other environmental services related to carbon sinks. In turn, many services sectors are, of their own accord, adopting commitments towards a low-carbon and zero-carbon footprint in their global operations.

Climate initiatives in the financial services sector in particular suggest more capital may be available along clean energy supply chains. There has been a marked acceleration in the greening of financial services following the conclusion of the Paris Agreement; various initiatives were announced at the December 2017 One Planet Summit in Paris²⁷ involving central banks, stopping upstream oil and gas financing and adopting an internal carbon price within the World Bank. Following the release in mid-2017 of the Recommendations of the Financial Stability Board Task Force on Climate-Related Financial Disclosures, 237 companies with a combined market capitalization of more than \$6.3 trillion,

have agreed to improve how they disclose organizational climate risk identification, assessment and management to investors and other stakeholders.²⁸ This comes as the largest carbon emitters are being tracked and approximately 400 funds, with a combined estimated value of \$50 trillion, have shed their exposure to fossil fuel investments. The November 2017 announcement by the Norwegian Sovereign Wealth Fund of its proposal to exit from all oil and gas investments marks the single-largest divestment from fossil fuels to date, while the listing of the top 100 global companies with the highest greenhouse gas emissions is focused primarily on pressuring investors towards cleaner portfolios.²⁹

Specific efforts to green various financial instruments have also been made, from power purchase agreements for renewable energy, newer efficiency purchase agreements for energy efficiency investments and the higher profile increase in green bonds. Since first issuance a decade ago, green bonds have roughly doubled every two years, and will likely exceed \$100 billion in 2017. As the value and profile of green bonds expand, there has been increased interest from both public and private actors in identifying clear, comparable standards to define and differentiate them from their vanilla counterparts. In other words, what makes a green bond green? This echoes the debate on defining environmental goods, but also demonstrates how criteria around establishing green bonds can drive the demand for EGS and those actors adopting international standards.

Generally speaking, the definition of green bonds has been market-led and based on voluntary guidelines. The Luxembourg Bourse – issuer of approximately one-half of all green bonds – works on green bond consolidation, including quality controls and labels. The City of London's Green Finance Initiative includes work to examine how green standards guide green lending and securitization. In 2014, a group of large investors (including Bank of America Merrill Lynch, JP Morgan Chase, Morgan Stanley, Goldman Sachs, HSBC and Deutsche Bank) signed up to the Green Bond Principles, a set of voluntary guidelines to help define and support transparency and credibility in tracking green bonds. Updated in mid-2017, the principles define broad eligibility categories, like sustainable agriculture and forestry, without either establishing their own green standards or endorsing others that exist through third-party certification systems.³⁰ The International Organization of Standardization (ISO) in 2017 announced the creation of a new technical working group to track how green bonds were including different green, low-carbon, conservation, sustainability and other standards in general, and ISO-related standards in particular.³¹ The world's two largest green bond issuers, (including all types, by country of origin) – China³² and Europe – are beginning informal discussions to define common criteria for green standards that underpin green bonds.

Company-led push

Examples of company-led initiatives underscore the role that global producers and multinational enterprises (MNE) operating international value chains, multicountry retail suppliers and finance powerhouses play in the scale-up of environmental goods and services. For many of these, decisions must be taken across borders and jurisdictions, either in the context of greening a value chain or supporting an EGS production network itself.

Global private-sector actors like Unilever, Campbell Soup Company³³, Coca-Cola and others have internal systems to set targets and measure performance across their global operations and supply chains. Walmart's current reliance on renewable energy for its global operation is 25%, moving to 50% by 2025.³⁴ Apple reports that currently 100% of all its electricity demand globally is sourced from renewable energy.³⁵ It lists the carbon footprint of its key suppliers within its supply chain, with nearly 80% of the annual 30 million tons of greenhouse gas (GHG) emissions attributed to largely China-based manufacturing of integrated circuits, aluminum and boards. The installed renewable energy sources in China for Apple-segmented manufacturing are reported at 485 megawatts.³⁶

Similar mapping of carbon footprints within the global supply chains of large multinationals has been done, or is under way, largely driven by the growing attention post-Paris to increase climate action. The CDP (formerly Carbon Disclosure Project) Supply Chains Program provides a platform for tracking and analysis of 89 organizations representing \$2.7 trillion in global procurement.³⁷ A practical challenge moving forward is how the Paris Agreement will advance coherent and comparable rules regarding measurement and accounting systems, given the acceleration of largely heterogeneous public and private actions.

However, companies are not acting strictly alone, as this paper will go on to show. Consumer demand has contributed to driving the adoption of sustainability standards, environmental labelling and corporate social responsibility (CSR) at least at the marketing and end-product purchase stage.

Part 2: The role of market-based sustainability standards

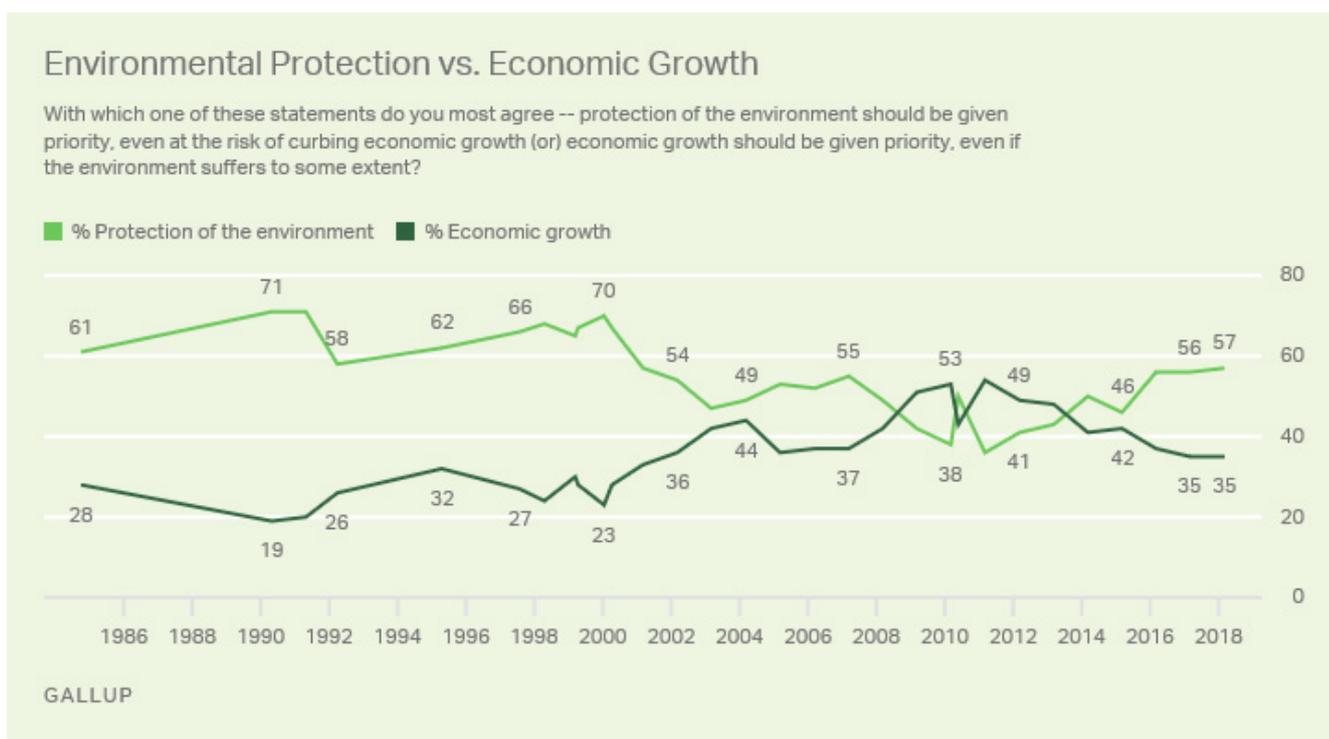
Origin and rise

The complexity in production processes associated with the internationalization of supply chains³⁸ and corporate branding and marketing strategies³⁹ have increased interest in third-party certification standards to provide assurance of the integrity of supply chains. The key challenge of identifying strictly sustainable products and services is at least partially mitigated by the use of sustainability standards across supply chains. Today, more than 400 different environment-related voluntary systems operate around the world. When these are combined with different social-related labels, some estimates put this total number at more than 550.

Although climate change has recently become the main catalyst for environmental action by companies, market-based or voluntary labelling and certification systems have been used for decades to promote a range of sustainability objectives in consumer goods and services, as well as the underlying production chains that support those goods and services. Private sustainability labels and third-party certification systems cover the sustainability landscape, including criteria to advance sustainable forestry, agriculture, fisheries, apparel, tourism, metals and mining, energy and other objectives. Some of these voluntary schemes have anticipated later government action. For example, companies marketed ozone-friendly consumer goods before the binding targets of the 1987 Montreal Protocol entered into force.

Consumer concern about environmental conditions has directly or indirectly played a role in driving these schemes. A recent sampling of changing public opinion polls about environmental concerns in the past two decades by the polling agency Gallup shows a steady increase in public concern for environmental protection. At the same time, many of these initiatives also aim to bridge a perceived shortfall between the stringency of regulatory action and scientific evidence of decline. For example, while scientific assessments point to the alarming collapse of key fish stocks or the accelerating loss of biodiversity ecosystems, gaps in domestic laws or their implementation coupled with weak international systems prompted the emergence of labels such as the Marine Stewardship Council, the Forestry Stewardship Council, Rainforest Alliance and others.⁴⁰

Figure 3: Poll on Opinion of Environmental Protection Vs Economic Growth, Gallup News (accessed December 2017)⁴¹



The criteria used to support sustainability standards or labels within markets run into thousands, including lower carbon intensity in energy systems to the banning of defined practices in fisheries, the prohibition of defined chemical additives in food categories and different social objectives, such as gender parity, child labour, income, human rights. Several social and consumer-related standards are contained in systems like Fair Trade International.

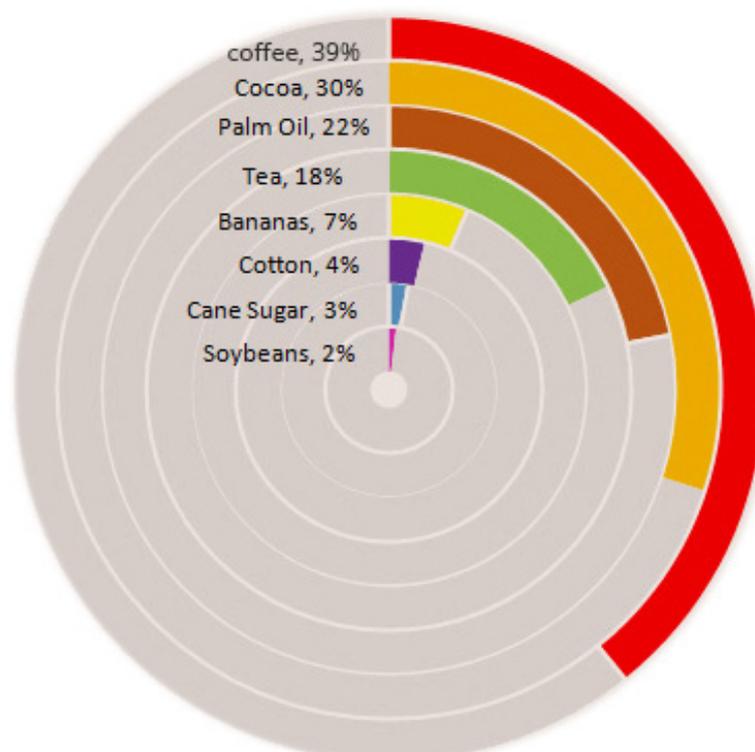
Trends show that the proportion of several key commodities covered, including commodities of particular importance to developing countries for livelihood and export earnings, is growing. The annual State of Sustainability Initiatives provides an overview of trends in market-based voluntary systems, focusing on the largest 16 eco-labelling schemes covering four areas: coffee, cocoa, palm and protected forestry. The estimated annual global trade value of these commodities is \$31.6 billion, representing 40% of the world's coffee production, 22% of total cocoa production, 15% of total palm oil production as well as 9% of the world's forested area (based on 2012 data).⁴² Palm oil trade expansion is also a main driver of deforestation among areas of most important forestry ecosystems. Major conservation organizations, global buyers and others set up in 2001 the Roundtable on Sustainable Palm Oil (RSPO), led by the World Wildlife Fund (WWF),⁴³ to shift towards sustainable palm oil production. This focuses on production without forest clearing, initially supported by guidelines and standards such as environmental impact assessments. The primary sustainability standards are the RSPO Standard for Sustainable Oil Palm Production, and the RSPO Supply Chain Certification Standard (SCCS).⁴⁴ Perhaps most important is the trajectory of these schemes, which show a compounded growth rate of about 50% over a five-year period.⁴⁵

One sub-category of this overall growth in sustainability standards is marine-related initiatives, intended to support sustainable fisheries and related objectives. Between 2003 and 2015, the proportion of certified sustainable seafood (both wild-catch and aquaculture) grew from 0.5% to 14% of estimated global production, representing a current global market value of \$11.5 billion (2015).⁴⁶

As impressive as these average growth rates are, they will likely accelerate in the field of low-carbon and net-zero carbon standards following the Paris Agreement. Since Paris, new labels have entered different markets to advance various lower carbon and zero carbon attributes. In a report released around the One Planet Summit, the Consumer Goods Forum – a global association of 400 retailers, manufacturers, service providers, and others – signalled the growing importance of low-carbon solutions across its membership, including the adoption of lower carbon emissions in global supply chains to energy efficiency and lower carbon labels provided in consumer labels.⁴⁷

The proliferation of standards has raised a number of concerns related to the diversity of different platforms, criteria, costs and possible non-discriminatory market access issues. Work by the International Trade Centre, including its Standards Map, provides helpful information for developing country suppliers of these systems.⁴⁸ Furthermore, the State of Sustainability Initiatives (SSI), facilitated by the United Nations Conference on Trade and Development and the International Institute for Sustainable Development, provides research and analysis of the proliferation of these systems, involving standard compliance worldwide in the production and trade of sustainable commodities.

Figure 4: Percentage of Standard Compliant Metric Tonnes in Selected Agricultural Commodities (2013/2014)⁴⁹



Since the inception of sustainability standards, there have been impediments in consumer willingness to pay a sustained price premium for products or services labelled as sustainable.⁵⁰ A related concern is that costs for companies, particularly small and medium-sized enterprises (SMEs), in joining and meeting operations expenses of schemes are often high.⁵¹

Traceability and impact measurement

Another key challenge in global supply chains is product differentiation and traceability. Some methods are making more use of data systems to improve assurance traceability and independent conformity assessment systems. A recent independent analysis found that traceability systems were universal hallmarks of seafood certification systems, with approximately one half of the systems requiring chain-of-custody standards to ensure tracking processes.⁵² Organizations are now turning to blockchain and other technologies for digital and accessible data records for tracking product information.⁵³ In January 2018, WWF announced its Blockchain Supply Chain Traceability Project to track sustainability in the tuna supply chain from “bait to plate”, using information technology to backstop traceability.⁵⁴

Ultimately, the value of any certification system is the degree to which it has a measurable impact on environmental quality, conservation outcomes and related social objectives. Chain of custody standards and blockchain technology provide traceability data to measure this impact. However, some aspects of environmental quality are more difficult to measure than others.

For example, avoided air pollution or greenhouse emissions due to increased levels of energy efficiency requires setting and contrasting baselines and business-as-usual values against those actions, above and beyond what domestic regulations require, to count system impacts. It is even more difficult to measure the extent to which a particular standard has avoided damages within an ecosystem or to biodiversity more generally. Since their inception, there have been concerns of greenwashing among different systems. The Committee on Sustainability Assessment (COSA), a global consortium of development institutions advancing science-based measurement of sustainable agriculture, notes that the absence of clear and comparable criteria makes it especially difficult to measure the impact within the sector.

Comparability and convergence

A key question is whether there is an opportunity to improve the effectiveness and impact of some of the 500+ voluntary standards, by identifying points of comparability and systems convergence.

One method is by finding ways in which to broaden the use of international standard management practices, so as to enhance comparability in supporting systems like traceability, data, auditing and verification systems. The ISO 14000 Environmental Management workstream series⁵⁵ has proliferated in recent years, developed by Technical Committee 207 (TC 207) to examine different thematic areas of environmental and sustainability standards, as well as the

underlying environmental management systems needed to improve environmental performance.

Although the ISO work continues to encourage greater adherence to some international methods and approaches, there is a divergence under way among systems from global to regional, national and sub-national-based systems. Illustrating this is the fact that almost 70% of sustainable fishery standards are based on nationally-distinct standards, and 56% contain highly-localized sustainability indicators, reflecting the highly-localized characteristics of ecosystem pressures and pathways to sustain them.⁵⁶ Both international and national-level systems are therefore instrumental in both providing opportunities for convergence while retaining national-level demands.

The SDGs and international trade policy could provide a platform on which greater standards comparability and convergence could proceed, while accounting for the differentiation of requirements to see SDG targets realized within a national context. These are explored briefly below.

The Sustainable Development Goals

The SDGs are an ambitious, universally-applicable and comprehensive agenda comprising 17 goals and 169 targets.⁵⁷ The SDGs recognize the need to advance a comprehensive, integrated agenda not so much as an abstract ideal, but due to hard-won lessons from decades of false starts in single-issue development policies. For example, the SDG commitment to advance sustainable agricultural systems will not be achieved unless related targets such as freshwater management, gender equity, land-tenure reform, indigenous rights, climate adaptation and sustainable consumption are advanced simultaneously.

SDG 12 (Responsible Production and Consumption) and its eight targets have the most immediate relevance to many voluntary sustainability standards and value chains, encouraging for example: “Companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.”⁵⁸

Although the holistic nature of the SDGs appears daunting, their universality could create an important opportunity to provide focus and convergence among different sustainability standards in relation to value chains along thematic clusters. A first practical step is to examine how the current suite of VSS relates to the SDGs. A joint report by the UN Global Compact and the Global Reporting Initiative, *Business Reporting on the SDGs: An Analysis of the Goals and Targets*, represents a first step in bridging the 169 targets that make up the SDGs with business standards, either within supply chains or CSR instruments. The report underscores the importance of deepening this bridging analysis. More important is the need to find practical areas of convergence among standards in alignment with specific SDG targets.⁵⁹ ISO issued a report on how the SDGs relate to the ISO 26000 series (Guidance on Social Responsibility) dealing with social issues, including human rights, employment, sustainable resource use and other standards criteria.⁶⁰

Next steps and conclusions: Opportunities for coherence and progress

There is significant potential for MNEs (as both producers and consumers along the value chain), to drive sustainable GVC-linked investment. Furthermore, there is an increased need and benefit for the public sector to drive sustainable consumption with sustainable public procurement (SPP).⁶¹ However, today neither the VSS community nor the trading system have examined in depth how the 2030 Agenda, and in particular the SDGs, could provide greater focus, coherence and convergence on supply chain sustainability efforts. In this regard, the contrast is striking to the financial sector, which is responding in a serious and systematic way to climate risk and emerging low-carbon opportunities. This has included identifying areas of consolidation and convergence in the standards for green bonds as direction and drivers for green investment opportunities.

Traditionally VSS have been viewed as a convoluted business pressure and potential barrier to trade, but these standards can be restructured as facilitating measures. For example, there is the opportunity to leverage the market expansion of EGS — and the increasing consumer demand for socially- and environmentally-responsible products and services — towards more sustainable GVCs overall. With improved cohesiveness and streamlined tracking, VSS may contribute to more sustainable value added trade across goods and services.

To achieve this cohesion, it will be crucial to consolidate actors and types of VSS, including private- and public-sector-led, investor-led, and NGO-led standards. The SDGs provide a useful application for clustering VSS around thematic targets. More work needs to be done to further position this process inclusively among all relevant actors and within the appropriate platform. It remains too early to determine what this might look like, but the appropriate design of this system will be crucial to leverage the benefits of VSS, while levelling the playing field across global market actors.

At the same time, there is an opportunity for further exploration of financing and investment tools as instruments for greening GVCs. In 2017, IISD examined the application of voluntary sustainability standards, as well as responsible investment frameworks (RIFs), as instruments to improve gender equality in agriculture.⁶² Where a consumption-led push is *limited* by the consumer's willingness or ability to pay higher-price premiums for more sustainable goods and services, RIFs act as a tool for investors to drive sustainable and responsible investment.

As voluntary guidelines and principles, RIFs may be key to the promotion of investment by government, private-sector actors, international organizations and civil society, further driving the competitiveness of sustainable goods and services along their value chains. Another push from the private sector to encourage commitments to investment in sustainable value chains is through the issuance of corporate green bonds to build capital towards greener products and services. An example of this is Starbucks, which issued the first US Corporate Sustainability Bond in 2016 with the aim of using net proceeds to “enhance its sustainability programs around coffee supply chain management”.⁶³

Taken together, voluntary measures have undergone progress towards supporting greener goods and services and addressing the growing concern in the sustainability of global markets. With increased clarity and convergence of these voluntary measures across supply chains, this progress can be strengthened to address the challenges of environmental and social impacts, while realizing market and development potential.

Endnotes

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