

Voluntary Sustainability Standards in International Trade



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Introduction

Trade and sustainable development

Introduction: Trade and sustainable development

International trade has expanded significantly over the past few decades, powered by the rise of global supply or value chains. In particular, it rose rapidly after 1990, reaching a record level of \$28.5 trillion in 2021 (UNCTAD, 2022). Moreover, trade has truly transnationalized economic activities (Hoekman, 2014). In addition, and more fundamentally – the nature of international trade has changed with the emergence of global value chains (GVCs), whereby parts and components are exchanged across countries before being incorporated into final products (Hoekman, 2014). Indeed, today around 70 per cent of international trade involves GVCs (OECD, 2020), which can enhance countries' ability to exploit their comparative advantages (UNCTAD, 2021a).

International trade continues to bring significant benefits to many countries and their people by generating economic growth and increasing incomes, reducing poverty, fostering innovation, creating jobs, broadening consumption choices and encouraging peaceful relations (Irwin, 2020). Both the 2030 Agenda for Sustainable Development (the 2030 Agenda) and its accompanying Sustainable Development Goals (SDGs), as well as the Addis Ababa Agenda, recognized that, overall, trade can be an engine for inclusive economic growth and poverty reduction, and that it contributes to the promotion of sustainable development (UNCTAD, 2021b; WTO, 2018; WTO, 2022). In addition, it has been argued that the increase in trade might lead to a “race to the top” for better social and environmental protection (Vogel, 2005). As highlighted by Bradford (2020), multinational corporations and GVCs can spread stricter social and environmental standards across the globe.

However, international trade has also generated significant environmental and socioeconomic concerns. It has contributed to environmental damage, including deforestation, climate change and biodiversity loss (Deere Birkbeck, 2021), and has also been linked to an increase in pollution through the creation of “pollution havens”. The socioeconomic concerns associated with increased trade relate, in particular, to labour rights violations, especially those aimed at reducing labour costs, including child labour, insufficient wages, slave and forced labour, excessive working hours, or unhealthy and unsafe working conditions. And while international trade has lifted many people out of poverty, it has also contributed to increased inequalities within countries (UNCTAD, 2019).

Thus, global trade offers huge potential to contribute to sustainable development, but it must be governed in a way that mitigates some of its negative impacts on sustainability. Accordingly, many initiatives have been developed that seek to govern global trade in a way that would make it more sustainable. One important initiative is the development and implementation of voluntary sustainability standards (VSS) relating to products and production processes. The United Nations Forum on Sustainability Standards (UNFSS, 2013: 3) defines VSS as “Standards specifying requirements that producers, traders, manufacturers, retailers or service providers may be asked to meet, relating to a wide range of sustainability metrics, including respect for basic human rights, worker health and safety, the environmental impacts of production, community relations, land use planning and others.”

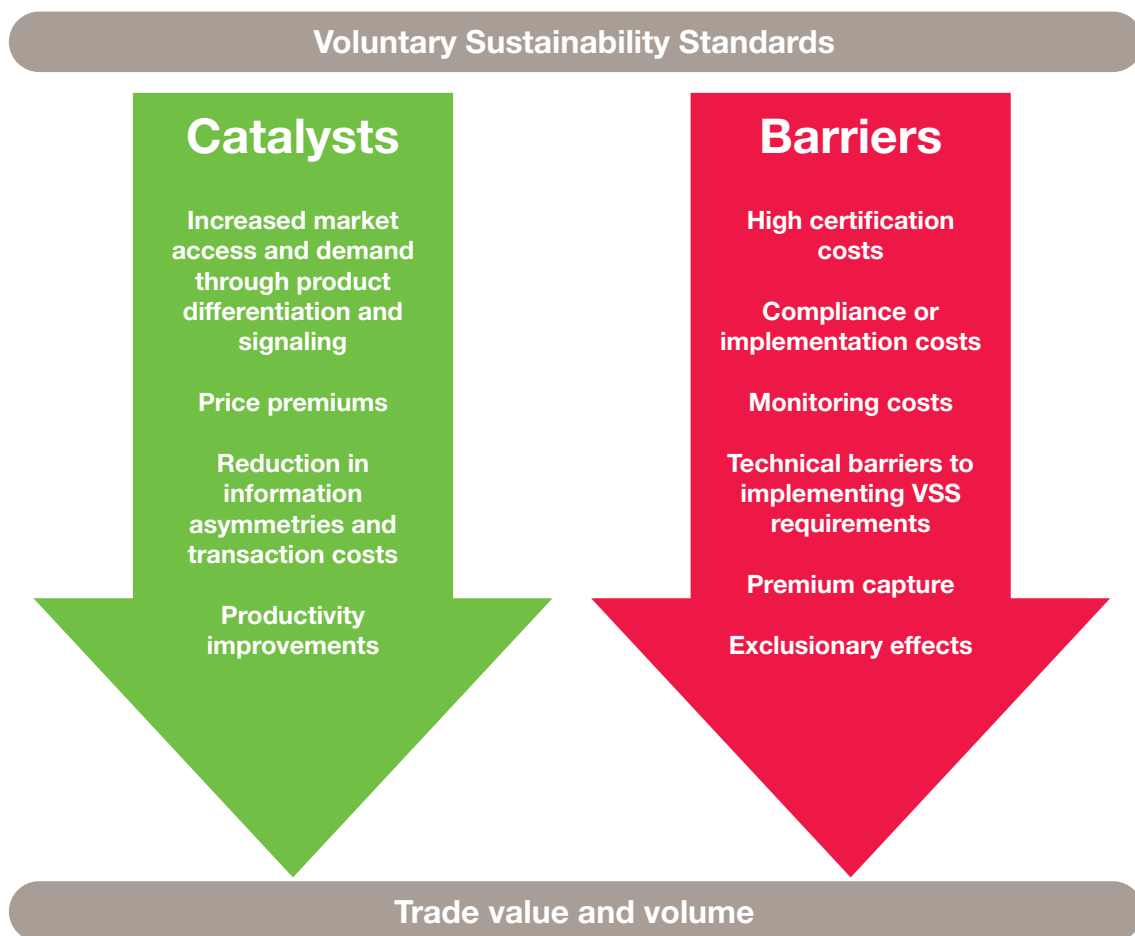
In other words, VSS prescribe a set of social, economic and/or environmental requirements that economic actors can voluntarily comply with in order to make their production and processing practices more sustainable. Upon verification of compliance with their rules, VSS issue certificates or labels that serve as proof of such compliance. They reward economic actors for producing more goods or services sustainably, in theory by facilitating market access and generating price premiums for those goods or services (Auld *et al.*, 2008a; Estrella *et al.*, 2022).

Researchers have sought to analyse the effects of VSS on trade (Grassnick and Brümmer, 2021; Guan and Ip Ping Sheong, 2019). This aspect is especially important for exports from low- and middle-income countries, as trade is viewed as a significant engine for inclusive economic growth and poverty reduction in those countries. In addition, VSS certification is the most widespread in tropical agricultural commodities

such as coffee, cocoa and palm oil, which are mainly produced in developing countries. VSS can have an impact on trade in several ways, as summarized in figure 1. They can have either a trade-enhancing effect as trade catalysts, or a trade-reducing effect as trade barriers.

One body of literature argues that VSS enhance trade through several mechanisms, such as securing market access and price premiums, reducing information asymmetries and transaction costs, as well as boosting productivity as a result of improved agricultural practices, training, input use and technology transfer. A second strand of literature suggests that VSS impede trade, especially for low-income countries. Costs related to certification, compliance and monitoring make it difficult for some producers, especially smallholders, to obtain certification. In addition to costs, producers – especially in developing countries – might not have the technical resources to comply with VSS requirements. Besides, as argued in the literature, price premiums are not guaranteed, and when they are obtained, they do not necessarily trickle down to the producers, but instead are often captured by powerful actors along GVCs. Thus the producers are not compensated for the certification costs they incur – what Ponte (2019) refers to as the “sustainability-driven supplier squeeze”. These barriers to VSS adoption can exclude producers especially from developing countries from value chains in which certification increasingly becomes de facto mandatory.

Figure 1
Channels of potential VSS impact on trade



Source: Authors.

Little empirical research has been conducted on the actual impact of VSS on trade. A literature review of the empirical evidence of their trade impacts by Elamin and Fernandez de Cordoba (2020) found only nine such studies in this field. While the literature points to a trade-enhancing effect of VSS, overall, some relevant nuances are important to bear in mind. In particular, the reviewed studies yield contradictory results and are highly case-specific, focusing on only a few VSS and products. For example, a study by Grassnick and Brümmer (2021) finds that UTZ certification promotes exports of cocoa beans and paste, but weakens the export performance for further processed cocoa products. Likewise, Guan *et al.* (2019) find that the trade impact of certification by the Forest Stewardship Council (FSC), a VSS for the sustainable management of forests, depends on the type of wood products exported. More research on the trade effects of VSS is therefore warranted.

This report provides an introduction to VSS as instruments for making international trade more sustainable. Chapter I describes VSS, how they emerged and how they have evolved. It shows that they have grown significantly as a tool for transnational governance in terms of the number of VSS, the number of sectors and commodities in which they are active, and the share of certified production of some key commodities in total global production of those commodities. Chapter II delves into how VSS work to achieve sustainability goals. It describes in detail how VSS operate and the different actors involved in the certification process. The chapter also highlights the significant diversity among VSS. Chapter III takes stock of the current literature and evidence on the effectiveness of VSS. Effectiveness is approached from two different dimensions. One dimension focuses on the use or uptake of VSS. The second focuses on the impacts of VSS on the ground on different sustainability indicators, with a specific focus on their social and environmental impacts. Chapter IV describes the use of VSS by other trade-related policy instruments. It details how VSS are integrated into public policy as complementary instruments to achieve public policy goals.

Chapter I

Voluntary sustainability standards

Chapter I. Voluntary sustainability standards

A. Introduction

VSS have emerged as important tools for governing global value chains (GVCs) and addressing related sustainability concerns (Marx and Depoorter, 2022). They are increasingly seen as key transnational governance instruments to pursue sustainable development, as they aim to ensure that products and production processes comply with a set of social, economic and/or environmental requirements in order to make global production more sustainable. VSS are actively engaged in a wide range of sectors, from agriculture and forestry to minerals and electronics. However, they are most widely used in tropical agricultural commodity sectors, including bananas, cocoa, coffee, cotton, palm oil, soy, sugarcane and tea, which are mostly produced in and exported from developing countries.

Some VSS have gained broad recognition. The FSC, for example, is a global, not-for-profit multistakeholder organization that sets standards to make forest management environmentally responsible, socially beneficial and economically viable in the long term. The Marine Stewardship Council (MSC) is another multistakeholder organization with representatives from the seafood industry, environmental non-governmental organizations (NGOs) and academia, which sets standards on fishery practices in order to protect the oceans and safeguard seafood supplies. The Fair Wear Foundation (FWF) is an independent organization that works with the garments industry, workers and industry influencers in order to improve labour conditions in that sector. The Better Cotton Initiative (BCI) aims to make cotton a sustainable mainstream commodity by reducing the environmental impacts of cotton production, and by improving the livelihoods and economic development of cotton-producing areas. The Rainforest Alliance, founded in 1987 as an NGO, promotes responsible business practices, and provides certifications for sustainable forestry and agriculture, in particular in the coffee, cocoa, tea, hazelnut and banana sectors, but also for sustainable tourism. Fairtrade International is a multistakeholder non-profit organization active in various agricultural sectors that sets standards on labour and cooperative organization to improve farmers' and workers' income.

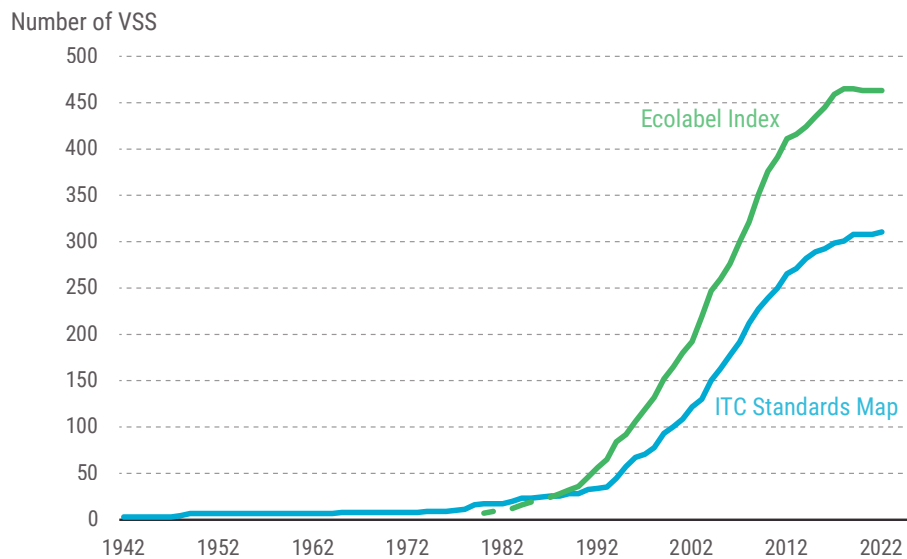
Although VSS are not a new phenomenon, their number has proliferated over the past few decades. Depending on the database consulted, their number now ranges from 300 (ITC Standards Map, 2022) to more than 450 (Ecolabel Index, 2022). This chapter traces the emergence of VSS and their evolution, and presents the factors driving them.

B. Emergence and evolution of VSS

The emergence of VSS can be traced back to 1928 with the creation of the Demeter symbol for the certification of biodynamic farms (Marx and Wouters, 2015a). In that sense, VSS are relatively old. However, it took many years before any other VSS were created, starting with Spiel Gut in 1954, which sought to promote sustainable toys. In the 1970s, some additional biological agricultural labels emerged, such as Bioland in 1971, California Certified Organic Farmers in 1973, and the Soil Association's organic standard in 1973. In 1978, the first government-led voluntary sustainability standard, Blue Angel, emerged in Germany. Thereafter, there was an acceleration in the number of other VSS created.

Figure 2 plots the number of VSS from 1942 to 2022 based on two databases – the ITC Standards Map, and the Ecolabel Index. It is based on the reported establishment dates of the various VSS schemes, and only includes those that were still operational in 2022. It shows that while in the early 1980s, only three to four new VSS were created on an annual basis, their number increased rapidly from the mid-1990s onwards.

Figure 2

Evolution in the number of VSS, 1942–2022

Source: Authors, based on ITC Standards Map (2022) and Ecolabel Index (2022).

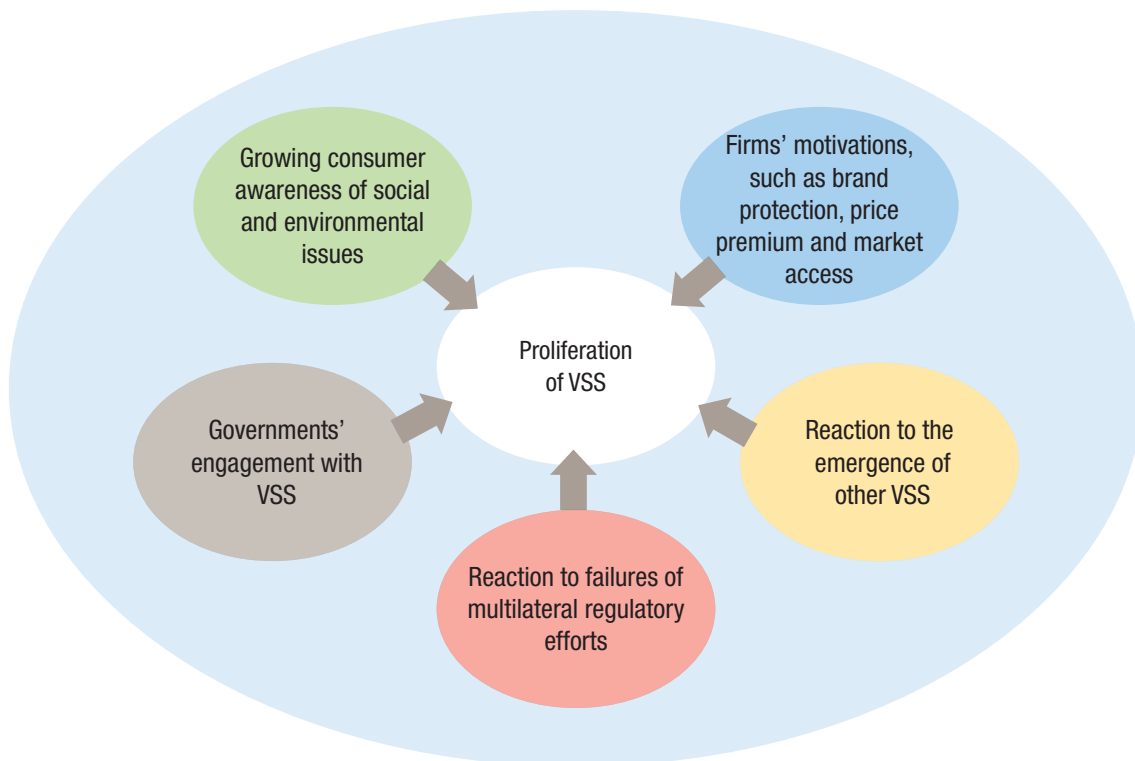
Despite the divergence in numbers between the ITC Standards Map and the Ecolabel Index, resulting from different methodologies and selection criteria, two interesting common trends can be identified. First, although the idea of VSS is relatively old, their proliferation is more recent: VSS truly emerged in the 1990s, and their number grew consistently until the early 2010s. Second, growth in the number of active VSS has been slowing down in recent years, and has stabilized since 2017. The next section explores the factors that drove the proliferation of VSS in the 1990s, before turning to the possible reasons why their growth has been stagnating in recent years.

C. Drivers behind the rise of VSS

Several factors contributed to the proliferation of VSS between the 1990s and the 2010s. They relate to consumer demand, firms' motivations, governments' engagement, a failure of multilateral regulatory efforts and competition from other VSS (figure 3), as discussed further below.

Figure 3

Factors contributing to the proliferation of VSS between the 1990s and the 2010s



1. Consumer awareness (demand)

One factor driving the proliferation of VSS from the 1990s until the 2010s has been consumer demand. In recent decades, consumers have grown more conscious of sustainability issues and, accordingly, they have adjusted their purchasing behaviour in relation to their perceptions of products' sustainability (O'Rourke, 2012). In this respect, VSS respond to consumer concerns by providing information on the sustainability attributes of products through the use of labels. There are several channels through which consumers have contributed to the emergence of VSS. First, in addition to price considerations, ethical considerations, either consciously or unconsciously, play a role in consumers' purchasing behaviour. For example, sustainability considerations have prompted some consumers to become vegetarian, while others choose to buy only locally in their own community, and some decide to boycott garment companies that are associated with forced labour or child labour. A number of consumers look for VSS labels on products. Thus, ethical considerations create demand for sustainable products which VSS aim to supply.

In addition to these ethical considerations, producers and retailers have increasingly realized that consumers have a certain influence on how products are produced and distributed. Consumers may decide to boycott certain products, or, on the contrary, purchase sustainable products – “boycott” (Bartley *et al.*, 2015). These consumption choices have an impact on producers and economic actors in value chains who, as a consequence, may increase their uptake of VSS in order to avoid boycotts or increase their sales.

Ethical consumerism has been widely documented in North America and Europe, although this does not mean that outside these regions consumers do not make ethically driven consumption choices. However, the reality of ethical consumerism and the existence of consumer markets for sustainable products remain contested. Nevertheless, increases in market shares of certified products in some sectors provide

evidence of the growing demand for sustainable products. Although systematic data on sales of certified products remain scarce, some examples can be cited. For instance, 45 per cent of the coffee sold on the market in the Netherlands in 2010 was certified, compared to only 2.9 per cent in 2001 (Ingenbleek and Reinders, 2013: 467); and global retail sales of Fairtrade certified products increased by 125 per cent, from €4.36 billion in 2010 to €9.8 billion in 2018 (Fairtrade, 2019; ITC, 2019). On the other hand, the actual size of the market for sustainable products is still unclear. Some studies emphasize that there is demand for VSS-certified goods, and that consumers (mainly in Europe and North America) will consciously choose such goods, but only if they do not cost more (Hainmueller *et al.*, 2015). Other studies show that consumers demand for sustainable products depends on multiple factors, including age, education, budget, nationality, knowledge about sustainability and sustainability labels, or force of habit (Taufique *et al.*, 2017; Thøgersen *et al.*, 2017). Thus, demand for sustainable – and certified – products depends mainly on specific socioeconomic and demographic attributes.

In addition, research points to an “attitude-behaviour gap”, meaning that the expression of people’s awareness of sustainability issues and their intentions to buy sustainable products do not necessarily translate into more sustainable purchasing behaviour (Grabs *et al.*, 2020; Hainmueller *et al.*, 2015). Besides, studies show that the proliferation of sustainability labels, such as VSS, on consumer markets has generated confusion among consumers about the missions of various VSS, the differences between them, and their effectiveness, which has undermined consumers’ trust in such labels (Marx and Wouters, 2015a; Schleifer *et al.*, 2019). Consumers often find it difficult to determine “the right thing to do”, although civil society is increasingly playing a guiding role by providing information or establishing ethical rankings. Finally, research shows that there is an oversupply of certified products in some markets, as consumer demand has not kept up with supply, and hence some certified products are sold as non-certified, as is the case in the coffee sector, for example (Tayleur *et al.*, 2017; Garrett and Pfaff, 2019), which is also indicative of limited consumer demand for certified coffee.

2. Motivations of firms to adopt VSS (supply)

A second factor driving the emergence of VSS lies in the different motives of firms to adopt certification. Here, five main motives are highlighted.

First, some firms have sought to adopt VSS in order to protect their brands and mitigate reputational risks (Auld *et al.*, 2008a; Gereffi *et al.*, 2001; Marx, 2008). Indeed, brand protection has become a major concern for many leading companies. Often, NGOs directly target firms through media campaigns and boycotts, pressuring those firms to take civil society concerns into account, and leading them to engage with NGOs to adopt VSS. For instance, Bartley (2003) observed that some business enterprises were directly targeted for not upholding labour standards throughout their value chain. Initially, those firms reacted by announcing their adoption of codes of conduct to address labour issues throughout their supply chain. However, instead of silencing protests, these actions generated more inquiry and allegations that those enterprises were not adhering to their own codes of conduct. Gereffi *et al.* (2001) noted at the turn of the millennium that protests and direct actions against brand-name retailers were only 10 years old, but as one Greenpeace activist said, “It was like discovering gunpowder for environmentalists.” As a result, protests became a powerful means of forcing retailers and companies to take environmental, social and safety issues into consideration and develop new tools such as VSS.

A second motivation for firms to engage with VSS lies in the price premium these can yield for producers or firms, as certified products can potentially be sold at higher prices (Auld *et al.*, 2008b; Marx and Cuypers, 2010). However, research has also revealed that price premiums are not guaranteed (Garrett and Pfaff, 2019). Moreover, producers and suppliers do not always reap the benefits of certification, as powerful actors in the value chain often capture the premiums (Grabs, 2020) – what Ponte (2019) refers to as the “sustainability-driven supplier squeeze”.

Third, producers or firms engage with VSS in order to gain or increase their access to GVCs and higher value markets. VSS can increase market access via two channels. First, as a differentiation mechanism, they can improve the access of certified products to environmentally and socially sensitive markets. Second, when market access is conditional on compliance with specific sustainability criteria, VSS can provide proof of compliance with such requirements. Indeed, the latter (providing proof of compliance) might become increasingly important with the emergence of new regulatory measures in the area of human rights due diligence (Bright *et al.*, 2020; UNFSS, 2022).

Fourth, adoption of VSS by producers or firms along GVCs can be driven by their commitment to sustainability and ethical values (Faggi *et al.*, 2014; Takahashi, 2001). Firms undertake these commitments in response to shareholder/stakeholder demands in order to be able to attract better workers, or improve or protect their reputation (Galati *et al.*, 2017).

A final motive for firms and producers to engage with VSS is that this enables them to innovate. VSS can facilitate knowledge transfer and learning relating to more sustainable practices, sometimes leading to efficiency gains (Auld *et al.*, 2015; Rickenbach and Overdevest, 2006). For example, Galati *et al.* (2017) studied the motivations of companies in the Italian forestry industry to adopt FSC certification. While signalling and differentiation motivations, moral aspects, market benefits and greater ability to comply with regulations play a greater role in companies' decision to become certified, the authors nonetheless found that companies also engage in certification for learning purposes so as to improve the quality of their products and enhance efficiency in their procedures.

3. Reaction to failures of multilateral regulatory efforts

In addition to demand (consumer awareness) and supply (firms' motivations) factors contributing to the rise of VSS in the 1990s, another factor was the repeated failures of multilateral regulatory efforts to address sustainability issues. For example, the Brundtland report, *Our Common Future*, as well as the United Nations Conference on Environment and Development in 1992, also known as the Earth Summit, identified deforestation as a key environmental issue. However, the summit failed to deliver a binding commitment to address deforestation. As a result, private forest certification emerged as a tool to address sustainability issues related to forestry. As Bartley (2011) notes, "Private efforts have also been perceived by many NGOs as a way to bypass political roadblocks".

4. Reaction to the emergence of other VSS

The proliferation of VSS can also be explained as a reaction to the emergence and rise of other VSS. NGO-driven VSS are sometimes countered by industry-driven VSS, or vice versa, leading to different VSS often competing in the same markets. For example, the Programme for the Endorsement of Forest Certification (PEFC), an industry-driven VSS, was established in reaction to the creation of the FSC, an NGO-driven VSS, in order to better suit forestry companies' realities. These dynamics have resulted in the emergence of several VSS focusing on the same commodities.

Some other VSS were established following successes in other sectors, such as the Marine Stewardship Council (MSC) or the Roundtable on Sustainable Palm Oil (RSPO), under the leadership of the same organizations, such as the World Wide Fund for Nature (WWF). These dynamics contribute to the diffusion of the certification model across sectors.

While there has been a degree of consolidation in the form of mergers between some VSS, some important competitive dynamics persist (Fransen, 2011), and new players continue to enter the VSS market. In addition to competition between NGO-driven and industry-driven VSS, an increasing number of public sector VSS are emerging in different parts of the world. And this is becoming a significant

trend in developing countries or regions (UNFSS, 2022). These VSS try to accommodate more local or regional sensitivities in their standards. For example, the Indonesian Sustainable Palm Oil and Malaysian Sustainable Palm Oil (public sector) national standards were created as a response to the Roundtable on Sustainable Palm Oil (RSPO), which is an international multistakeholder VSS for the governance of sustainable palm oil. Although VSS originate more in developed than in developing countries (Schleifer *et al.*, 2019), these dynamics contribute to the rise in the number of VSS, overall, and have gained importance, especially in recent years.

5. Governments' engagement with VSS

A last factor that has contributed to the proliferation of VSS is that governments are increasingly engaging with VSS. Government regulations have been, and remain, a major driver of VSS development and adoption. The chapter on VSS and public policy delves deeper into how different types of public policy instruments integrate VSS or refer to them in some form. This includes regulations that restrict market access if products do not comply with certain (sustainability) requirements in trade policy (including export promotion policy instruments) and public procurement policies, as well as with regulations based on due diligence requirements.

D. Stagnation in the growth of VSS

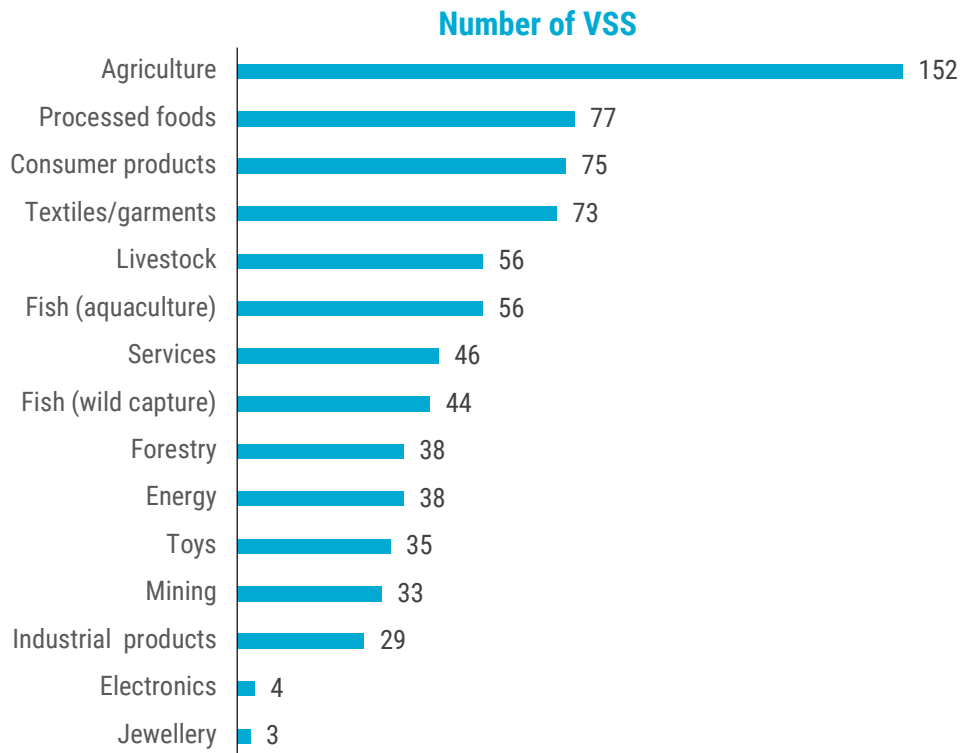
While the combination of these factors fostered the proliferation of VSS during the period 1990–2010, in recent years the number of VSS has remained more or less stable (figure 2) for a number of reasons.

First of all, growth in VSS was driven by the diffusion of the certification model across different economic sectors and commodities due to the various factors identified above. However, it appears that such diffusion might have reached its limits. Moreover, it may not be applicable to all or other commodities and sectors. The existing VSS are concentrated in a limited number of sectors, such as agricultural and food commodities, textiles and forestry products (figure 4). For some other sectors and commodities, it might take more time or be more difficult to introduce certification. An example is the sustainable management of rubber production, for which it appears to be difficult to develop VSS due to rubber price volatility, complex value chains and a lack of demand for sustainable rubber (Depoorter *et al.*, 2021).

Second, for those sectors in which VSS are active, growth has slowed down due to a certain degree of consolidation in the VSS market, which makes it difficult for new VSS to emerge. This consolidation is driven by two dynamics. In certain sectors such as forestry, some VSS have become dominant, such as the FSC and the PEFC, leaving little market opportunity for other VSS to emerge. Moreover, some leading VSS are merging or collaborating closely, although this remains rare. An example in this respect is the merger of UTZ and the Rainforest Alliance in 2020, which resulted in one of the largest VSS currently operational.

Third, the stagnation can be linked to how databases measure the evolution in the number of VSS. These databases might miss some dynamics, such as the creation of regional or national VSS, especially as the geographical scope and recognition of their standards are limited. Databases might also have become more stringent in deciding which VSS they should include. Hence, the observed stagnation might be an effect of data collection rather than a real stagnation.

Figure 4
Distribution of VSS across sectors



Source: Authors' calculations based on ITC Standards Map (2022).

Despite the current stagnation in their number, VSS have become a major governance instrument to make GVCs more sustainable in several sectors, especially the forestry and agricultural sectors. However, the large number of VSS and limited mutual recognition generate confusion on the market for consumers and other actors along GVCs, as it is difficult to distinguish credible from non-credible VSS. Some initiatives, such as the ISEAL Alliance, provide recognition to VSS based on guidelines for credible standards. And in 2020 the European Commission launched an initiative to establish minimum criteria for sustainability labels related to their institutional design (European Commission, 2022). The next chapter, examines how VSS work and how they differ from one another.

Chapter II

How do VSS work?

Chapter II. How do VSS work?

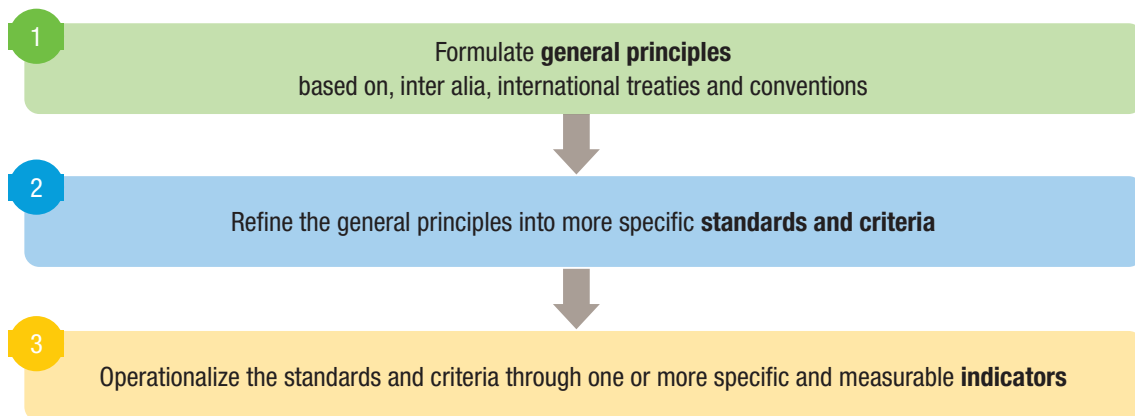
VSS schemes differ in the standards they develop, how they set and enforce those standards, and how they track the path of certified products along GVCs. But there are also some similarities in how they operate in these respects.

A. Setting sustainability standards

Both substantive and procedural aspects of standard-setting are important for developing relevant and inclusive standards for sustainability. VSS organizations are established based on clear commitments to sustainability, which they operationalize in three distinct steps (figure 5).

Figure 5

VSS standard-setting process



First of all, a VSS organization formulates general principles, which represent its mission or the broad sustainability goals it seeks to achieve. Many VSS aim to cover all dimensions of sustainability, but some are more oriented towards addressing environmental concerns, while others are more socially oriented. The general principles of VSS are largely based on existing international rules and agreements, often developed in a multilateral context, which relate to sustainability issues. In this respect, VSS entities integrate those public international rules and standards into their own procedures (Marx, 2017). The international agreements include, for example: the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, the Convention Concerning the Protection of World Cultural and Natural Heritage, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention on the Rights of the Child and the ILO Declaration on Fundamental Principles and Rights at Work adopted at the International Labour Conference in 1998.

Second, VSS refine their general principles into more specific standards, or criteria. Each principle generally comprises several standards, which make conformity assessment possible. For example, many VSS commit to protecting workers' rights and improving employment conditions. This commitment is refined into various standards which include, for example, freedom of association, the right to collective bargaining, the abolition of forced labour and child labour, combating discrimination, and promoting gender equality, health and safety practices, as well as minimum wages.

Third, each of these standards is then operationalized into one or more specific and measurable indicators. The indicators enable additional conformity assessment as well as standardization. For example, the commitment to promote gender equality is operationalized into different measurable indicators that can

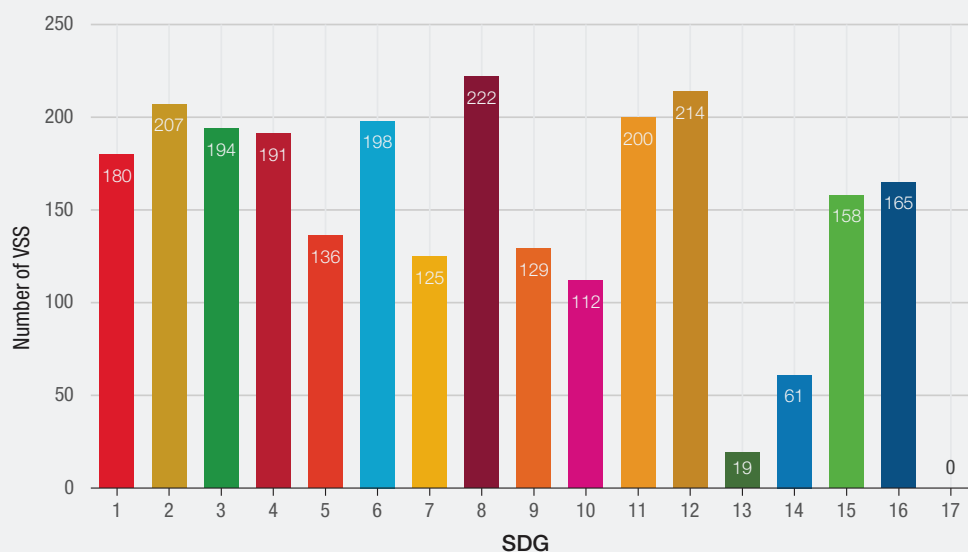
be monitored to ensure compliance, including, for example, equal wages for women and men when they do the same work, direct payment to working women to ensure that they receive and retain their wages, that maternity leave is no less than a six-week period after childbirth, or that paternity leave is available to men and that they do not incur a penalty for taking it.

These three layers – principles, standards and indicators – enable the operationalization of the general sustainability goals that VSS aim to achieve, many of which align with the SDGs (box 1 and figure 6).

Box 1. VSS and the United Nations Sustainable Development Goals

The SDGs provide a shared blueprint to bring peace and prosperity to all people in the world by 2030. VSS are discussed as a possible implementation mechanism for the 2030 Agenda (UNFSS, 2016). Beyond their direct relevance to SDG 12 (Responsible Consumption and Production), VSS align with a wide range of policy targets included in some of the other SDGs, such as food security, gender equality and climate action among others (Marx and Depoorter, 2021). However, empirical research in this area is still at a very early stage. On the one hand, there are those who see great potential for “credible” voluntary standard systems to play an important role in this area (WWF, 2017). Others are less optimistic, pointing to shortcomings and limitations of VSS as a mode of sustainability governance (Bartley, 2010; Bennett, 2018). Bissinger et al. (2020) find significant concordance between VSS and the SDGs. They observe that a large number of relevant VSS are available for policymakers aiming to create synergies in SDG-related areas. Using data from the ITC Sustainability Map, they conducted a systematic analysis of the interlinkages between 232 VSS and the 17 SDGs and their targets. The result (see figure 6) indicates that the three SDGs most widely covered by VSS are SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production) and SDG 2 (Zero Hunger). Moreover, they found that more than 200 VSS are linked with each of these goals. The standards are also relevant to other SDGs, including SDG 16 (Peace, Justice and Strong Institutions), SDG 15 (Life on Land), SDG 5 (Gender Equality), SDG 9 (Industry, Innovation and Infrastructure), SDG 7 (Affordable and Clean Energy) and SDG 10 (Reduced Inequalities). There is potential to further increase the relevance of VSS. In summary, VSS could contribute to the achievement of the SDGs by complementing the roles of governments and international organizations. This is of great value, especially for developing countries in their attempts to move towards a sustainable future, better understand the SDGs and how VSS can foster their efforts towards achieving these goals.

Figure 6
Links between VSS requirements and SDG targets



Source: Bissinger et al. (2020).

The way that VSS develop their principles, standards and indicators should follow a set of procedural guidelines. They should set standards through an open, transparent and consensus-based process which takes into account various stakeholders' concerns and interests. Key stakeholder groups should include directly affected stakeholders (those who will be impacted by the implementation of the standards), and may also include indirectly affected stakeholders (those who have an interest in the application of the standards), such as representatives from NGOs, businesses, producers, consumers and several other groups. An open consultation process should guarantee that all stakeholders have access to the standard-setting activities.

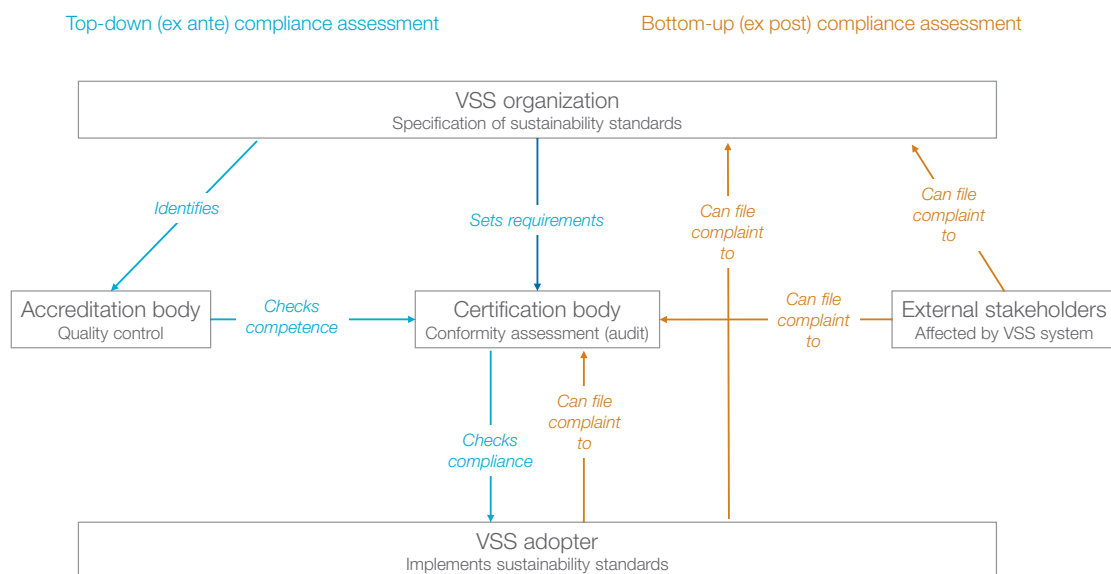
In order to overcome the difficulty of ensuring that all relevant stakeholders are included, standard-setting organizations should make efforts to identify them through a stakeholder identification (or mapping) process. The challenge of including all stakeholders was made clear by Bennett (2017), who sought to find out who was involved in the standard-setting process. Bennett observed that VSS organizations are often assumed to have multistakeholder governance structures, which include the producers of certified products (e.g. farmers, artisans and workers). However, her research of 33 VSS organizations showed that producers are not always included in standard-setting processes. Only in a quarter of the cases did producers have votes or seats, and only in 20 per cent of the cases did producers have veto power, which is key to influencing decision-making.

B. Ensuring compliance with standards

Once a VSS organization has developed standards, producers or other actors along GVCs can apply to the VSS organization, which involves a commitment to conform their production practices to its sustainability standards. In order to ensure that those standards are correctly applied by certified entities, the VSS develops systems to assess conformity and monitor continuous compliance. Those who are found to comply with the standards receive a certificate and are allowed to use a label on their products to signify that they were produced in conformity with the sustainability requirements. VSS certificates therefore provide proof of compliance with sustainability standards. This makes it possible to differentiate products on the market, transfer information to buyers and consumers, and increase transparency in complex GVCs.

Figure 7

Top-down and bottom-up compliance assessments



Source: Authors.

VSS organizations ensure compliance with their standards in two ways: by means of conformity assessments through audits (top-down or ex-ante conformity assessment), and through complaint or grievance mechanisms (bottom-up or ex-post conformity assessment). Figure 7 shows the different actors involved in the VSS system, and how they relate to each other in the context of conformity assessment. The blue arrows indicate the relationships between actors in a top-down conformity assessment system through audits, whereas the orange arrows represent their relationships in a bottom-up system based on complaint and grievance mechanisms.

The following sections describe these two assessment systems in more detail. It discusses what a conformity assessment or audit (top-down) entails, why it is sometimes criticized, and how VSS have carried out conformity assessments during the Covid pandemic. This is followed by a description of complaint and grievance mechanisms (bottom-up).

1. Conformity assessment: Top-down verification

VSS organizations issue certificates after determining whether the practices of potential adherents are in conformity with their standards. Conformity assessment can therefore be called an ex-ante verification system, since compliance with standards is verified prior to granting a certificate. Such assessments use a top-down verification mechanism and are carried out by independent third-party auditors. The auditors form part of a certification body. And it is this body that awards the certificate to the standards adopter if the latter is seen to comply with the standards.

Different types of audits can be carried out in the VSS system to ensure conformity: certification, verification, surprise and shadow audits. Audits involve an analysis of documents, as well as the collection of data on the practices of the VSS applicants during field visits, using surveys, checklists and sometimes interviews. Therefore several actors are involved in the assessment and auditing process.

Figure 7 summarizes how VSS certification works. The work done by certification bodies is checked in an accreditation process by an accreditation office which is appointed by the VSS. The accreditation office, such as Assurance Services International (ASI), verifies whether the certification bodies are competent to perform the conformity assessment.

Certification audits include audits that are conducted both in the certification and re-certification processes. They are carried out in three steps. First, the applicant to the VSS invites an auditor, who conducts a pre-audit or feasibility study on whether the entity under consideration has the potential to be certified. Second, a genuine certification audit is conducted through an on-site field visit to assess the current management practices of the applicant against the standards and criteria of the VSS organization. Following this audit, the auditor can issue corrective actions requests (CARs), which refer to identified non-conformities that need to be addressed by the applicant in order to gain certification. They usually specify a time frame within which the applicant needs to address the non-conformities. Third, when the applicant has implemented the required corrective actions and has assessed the audit, a new audit is carried out by the certification body to verify that non-conformities have been addressed, and it may issue additional CARs. Based on that, the certification body decides whether or not a certificate can be awarded. The validity period of certificates varies depending on the VSS (e.g. 1, 3 or 5 years), but they can be renewed based on re-certification audits.

Verification audits are usually carried out on an annual basis to monitor continued compliance. Depending on the VSS, surveillance audits can be desk-based rather than on-site, meaning that the auditor reviews updated documentation on the certified entity from their office, rather than through a field visit. Based on those audits, corrective actions may be requested, or the certificate may be suspended or even withdrawn in case of severe and repeated non-compliance.

In addition to certification and verification audits, other types of audits may be carried out by the independent auditor, by the VSS organization itself, or by the accreditation body to further ensure compliance. For example, auditors may conduct surprise audits, which are unannounced or announced only with short notice to the certified entity to ensure its continued compliance. Another example is shadow audits, which are conducted by the VSS itself or by the accreditation body, which witnesses an audit conducted by the certification body in order to verify the quality of the audit. Surprise and shadow audits therefore provide an additional layer of checks on compliance with standards. However, not all VSS organizations require or even allow shadow or surprise audits. Box 2 describes how auditing works in the field.

While VSS rely on audits to ensure compliance with their standards, such audits have been criticized for several reasons (LeBaron *et al.*, 2017; Power, 1997; Strathern, 2000). First, it is alleged that they are selective about the issues they assess, often focusing on outcome standards that are more easily measurable, such as working hours or wages, while paying less attention to process standards that are more difficult to measure, such as freedom of association or non-discrimination in the case of labour standards.

Second, audits have been criticized for the quality of information they gather. Audits are typically based on checklists and questionnaires, which enable quantification and standardization, and thus allow comparison between certified entities. Typically, audits lack a more qualitative assessment of standards implementation, and fail to include the voices of local stakeholders, marginalized groups, or workers themselves (although some VSS require auditors to interview workers and, sometimes, external stakeholders as well) (Marx and Wouters, 2018).

Third, audit-based conformity assessment systems have been criticized for not taking sufficient account of the complexity of value chains in some sectors. In some GVCs, there is considerable outsourcing or subcontracting, and it can therefore be difficult to monitor operations in a systematic and sufficiently frequent manner in different steps of the value chain.

Lastly, since the certification bodies that carry out the audits are chosen and paid by the standards adopter, conflicts of interest can arise and lead auditors to underreport bad practices in order to retain clients (Marx and Wouters, 2018). Under most certification schemes, it is the certificate holder's responsibility to select and sign a contract with a certification body from a list of accredited bodies. Both parties sign a contract in which the estimated audit costs are predefined and agreed upon. Those audit costs are paid by the certificate holder to the certification body. However, this can generate conflicts of interest, as certification bodies have an incentive to underreport non-compliance, lest certificate holders contract with another certification body.

The reliance of VSS on audits to ensure compliance with their standards has also faced challenges as a result of the Covid-19 pandemic, since lockdowns and travel restrictions prevented auditors from conducting field visits. In response, some VSS decided to suspend all auditing activities and extend the validity period of certificates for the time being. Other VSS opted for remote auditing to continue monitoring compliance, which involves collecting data, for example through telephone interviews or teleconferencing, or by reviewing documents. Remote audits therefore significantly rely on the use of information and communication technology. Even before the Covid-19 pandemic, some VSS were already increasingly using technological tools to enhance audits. For example, some VSS had started using satellite images to assess environmental parameters such as changes in forest cover. While, arguably, audits should not fully rely on technology, technology can nevertheless support and enhance audits to better ensure compliance with sustainability standards and inform evidence on the sustainability impacts of VSS.

Box 2. Getting certified and audited: Example from the field in Indonesia

In 2004, company A, a coffee plantation in Indonesia, wished to increase its exports to European markets by becoming UTZ-certified. It applied for UTZ certification and contracted a certification body, Control Union, to carry out the initial audit. After fulfilling all pre-certification requirements and drawing up a management plan, company A obtained UTZ certification. The company hired a new staff member dedicated to managing all administrative aspects of UTZ certification. Every year, the company would undergo a surveillance audit to make sure that it continued to comply with UTZ requirements.

In 2007, the company decided to seek certification also by the Rainforest Alliance, since its main buyer on the export market, a Japanese company, started to require Rainforest Alliance certification from its suppliers. The Mass Balance system allowed under the Rainforest Alliance enables the Japanese company to mix certified coffee beans supplied from company A with coffee beans supplied from other sources, and market them accordingly.

Company A contracted Nepcon, the only certification body accredited by the Rainforest Alliance in Indonesia at that time, to carry out the annual audits. With its double UTZ/Rainforest Alliance certification, company A had to accommodate and pay for two different audits per year. As the UTZ certificate did not help increase the company's access to European markets, company A decided not to renew its UTZ certification in 2019, but to continue with Rainforest Alliance certification. Later on, the two certification schemes merged.

Some years later, incidences of non-compliance were uncovered during the surveillance audit carried out on company A's plantation. For example, in 2019, the audit revealed that wages of workers on the plantation were not paid according to the time frame required by Rainforest Alliance standards. Company A explained this non-compliance by differences between the requirements of the Rainforest Alliance and the traditional way of working in the coffee sector in Indonesia. According to the latter, wages are paid upon achieving the result of the work for which workers are hired, whereas the Rainforest Alliance requires that wages be paid on a daily basis.

A time frame to resolve this non-compliance issue was agreed upon between the certification body and company A. Eventually, the company paid the wages as required by the Rainforest Alliance and an additional audit, for which the company had to pay half the price of the annual audit, was carried out, whereupon it was concluded that the non-compliance issue had been resolved. In 2020, other certification bodies became accredited by the Rainforest Alliance to conduct audits in the coffee sector in Indonesia. Company A decided to contract another certification body, SDS, as it was more competitive.

This example from the field illustrates how certification is adopted by a producer, how audits are carried out, and non-compliance resolved. It also shows that competition between certification bodies is important for VSS adopters. Moreover, it illustrates that sometimes local practices can differ from the requirements of transnational VSS organizations.

2. Fostering compliance from the bottom up: Complaint systems

In addition to top-down verification through audits, several VSS have also established mechanisms to ensure compliance with their standards using a bottom-up approach, namely through complaint or grievance mechanisms. While audits are a form of ex-ante verification, complaint systems involve ex-post verification, as compliance with standards is constantly monitored after the certificate has been granted. Complaint systems form a complementary mechanism for standards enforcement.

Although complaint mechanisms may differ in detail among various VSS entities, in general, they allow stakeholders, such as VSS member organizations, certificate holders, workers in certified operations, but also external actors from the wider community, such as NGOs, governments, consumers and local communities, to lodge complaints relating to the VSS entity's operations and to challenge its decisions. Typically, complaints can be raised on three types of issues:

- First, how a VSS organization operates internally, including issues relating to its principles, its procedures, how standards are set, and who is involved in standard-setting or other decisions;
- Second, how a certification body operates and conducts the audits; and
- Third, about a certification decision if there are clear indications of non-compliance with standards.

However, there are several shortcomings on the use of complaint systems in the VSS realm. First, not all VSS organizations have complaint systems in place. Marx and Wouters (2018) found that only a few of them had ex-post verification systems in place based on data from 2011. The authors pointed to the lack of incentives for them to establish such systems, which would require them to mobilize resources and establish procedures to deal with complaints. Moreover, the very existence of such systems could deter potential clients from seeking certification as those systems would likely subject their operations to increased scrutiny.

The design of complaint systems can vary in a number of ways, which determine their strength and credibility as a verification mechanism. First of all, they vary in what they accept as a complaint. Some VSS organizations allow complaints to be raised on a wide range of issues, while others restrict complaints to the interpretation of standards and to conformity assessments. Second, they vary in who they allow to file a complaint. Some VSS organizations restrict the possibility of complaint to members only, while others allow anyone to raise a complaint. There has been some criticism concerning the accessibility of these systems as well as their outcomes, with only a minority of VSS organizations making their complaint procedures and outcomes publicly available and accessible language-wise and procedure-wise (Fiorini *et al.*, 2019; Marx and Wouters, 2015b). One literature review and empirical analysis of 18 VSS concluded that complaint systems typically fail to meet internationally recognized criteria for effective access to remedy (MSI Integrity, 2020); their resolution of complaints can be slow and may not address issues in a satisfactory manner from the perspective of the complainants.

C. Supply chain tracking

A third important aspect of how VSS organizations operate lies in how they track the path of certified products along GVCs through traceability systems. Before a product reaches the end consumer, it is often handled by various intermediaries, who add value to the product and link producers to consumers. Hence, it is important to ensure the integrity of the trade in certified products along the entire value chain, ensuring that products sold as certified have indeed been produced in accordance with the sustainability standards of a certification scheme. For this reason, many VSS have developed what is called “chain of custody” (CoC) certification (or “supply chain certification”) in addition to product certification. CoC certification makes it possible to keep track of the traded volumes of certified products, and hence prevents false claims about the sustainability attributes of end products. It also helps trace the path of products emanating from certified operations (e.g. farms) throughout their value chain, which is done via so-called “traceability systems”.

A traceability system is often operated online, and consists of the collection of documents specifying the ownership and/or transfer of ownership of a product from one economic actor to another, together with its sustainability criteria in the form of VSS certificates. Such a system makes it possible to record the paths of products, parts and materials from their suppliers, their processing and ultimately their distribution as end products (ISEAL Alliance, 2016).

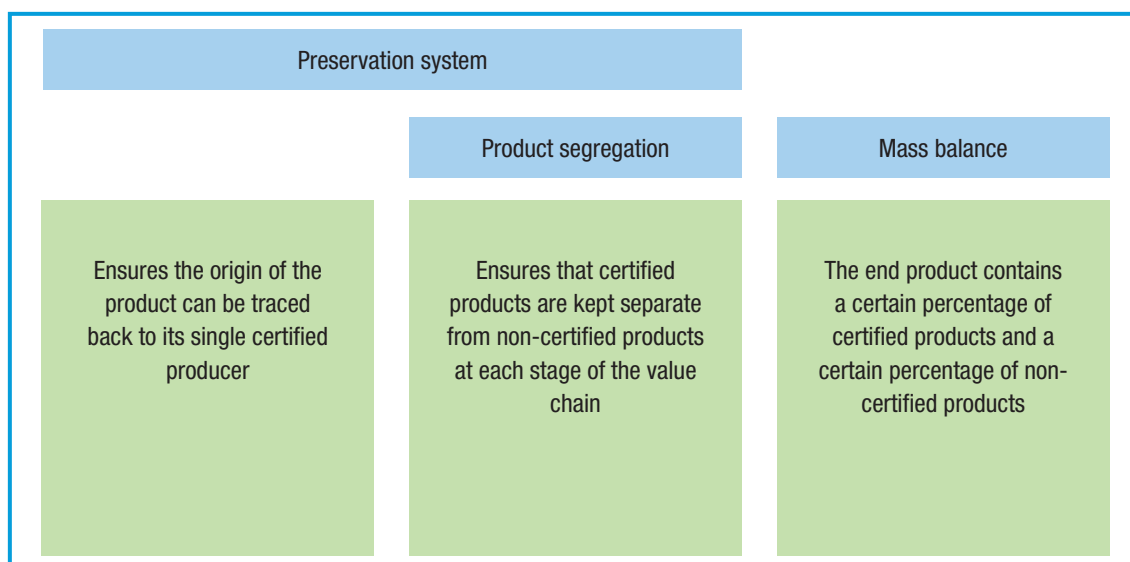
Different traceability systems exist, which vary according to the use and handling of the certified products they allow along the value chain (ISEAL Alliance, 2016). The three most important traceability systems are: identity preservation, product segregation and mass balance (see figure 8). An identity preservation system not only ensures that certified products are kept separated from non-certified products at each stage of the value chain, but also that the origin of the product can be traced back to its single certified producer. Under this system, the mixing of certified products from different origins is prohibited. The

identity preservation system is therefore only applicable to certain commodities that can be kept separate at each stage of the value chain, such as fish or wood.

A product segregation system is comparable to an identity preservation system in that it forbids the mixing of certified with non-certified products, but product segregation allows the mixing of certified products from different origins. As with the identity preservation system, this system can only be used for certain commodities, such as fish or wood.

A mass balance system does not necessarily aim to keep certified products separate from non-certified products; they can be mixed, and this results in the end product containing various percentages of certified and non-certified inputs. For the end product to be sold as certified, the seller must indicate the percentage of certified products it contains. The mass balance system is often applied to commodities such as tea, coffee or palm oil, which are typically difficult to keep separate from non-certified products along the whole value chain. In recent years, increasing attention has also been paid to the possibilities and limitations of applying new technologies, such as blockchain technology, for traceability purposes.

Figure 8
Traceability systems



D. Diversity of VSS institutional design

As the previous sections have highlighted, VSS organizations can differ greatly in their standard-setting procedures, in their conformity assessment mechanisms and in their traceability systems. Overall, this shows high diversity in how their standards are designed. This has important implications, since the institutional design of VSS organizations influences their credibility as well as their effectiveness, as analysed by several studies summarized below.

A first and early stream of research focused on the legitimacy of VSS as transnational governance instruments. To conceptualize and analyse legitimacy in relation to VSS, many researchers build on the work by Scharpf (1999), who introduced the notions of input and output legitimacy. Input legitimacy focuses on the rule-making or standard-setting process, and can be assessed by examining whether standards are developed according to a set of procedural requirements, such as representation of relevant stakeholders, inclusiveness, transparency and deliberativeness (Auld and Gulbrandsen, 2010). This line of research has focused particularly on which actors are involved in the standard-setting process.

Some authors argue that VSS organizations are remarkably democratic and inclusive in standard-setting (Dingwerth, 2007), while others are more sceptical and critical, and highlight that key actors, such as producers, are scarcely represented in the standard-setting process (Bennett, 2017).

Output legitimacy relates to the degree to which decision makers can be held to account after decisions are made. It echoes the notion of “accountability as responsiveness” (Gulbrandsen, 2004; 2008), which focuses on the relationship between the VSS organization and its various stakeholders (Gulbrandsen, 2008). To analyse output legitimacy, some researchers have focused on complaint systems as accountability mechanisms (Marx, 2014). Other researchers have criticized these approaches to legitimacy, as they tend to ignore questions related to the broader societal acceptance of an organization’s policies, structures and operations (Bernstein and Cashore, 2007). This has been addressed by scholars using a more sociological approach to legitimacy, and has led to assessing the attitudes and perceptions of the communities in which the institution in question operates (Bernstein and Cashore, 2007; Beisheim and Dingwerth, 2008; Cashore, 2002).

A second stream of research focuses on the substance of standards, and analyses which social, economic and environmental aspects are addressed by standards, as well as the stringency of those standards (Holvoet and Muys, 2005). This line of research also includes a focus on which international norms, conventions and agreements these standards are based. Some authors argue that VSS are firmly rooted in existing international law, and thus they do not create new rules or commitments; instead, they operationalize existing international commitments, as mentioned earlier (Marx, 2017). However, in so doing, the question arises as to whether this results in the dilution or weakening of standards or their strengthening, with a specific focus on corporate co-option leading to greenwashing (Auld, 2014; Bennett, 2018; Grabs, 2020).

A third stream of research focuses on how standards are enforced. A significant body of literature discusses the use of independent third-party auditing, and the many deficiencies in the audit approach (Locke, 2013; Marx and Wouters, 2015b; Sabel *et al.*, 2000). It also focuses on complaint and grievance mechanisms (Marx and Wouters, 2015b; Marx, 2014).

A fourth stream of research seeks to bring these elements together, and looks at how different components of institutional design combine in the context of specific VSS organizations, or provides a comparative analysis of several VSS organizations’ institutional design (Collins *et al.*, 2017; Fiorini *et al.*, 2019; Marx, 2013). This line of research shows that there is significant variation in how VSS institutions are designed in terms of how standards are set, how ex-ante conformity is assessed through audits, whether or not they use complaint systems and the extent of their transparency. This diversity in their design has important implications for their effectiveness. Accordingly, researchers have also tried to understand what influences the design of VSS. Van der Ven (2019) argues that large consumer-oriented retailers that use VSS influence the design and credibility of those standards, since VSS organizations targeting those firms specifically seek to insulate them from critical scrutiny. Therefore, they develop stringent systems to provide more reassurance to firms that they are complying with sustainability commitments throughout their value chains.

Although the mechanisms by means of which VSS institutional design affects VSS impacts are unclear, many impact studies recognize the relevance of design. The next chapter provides an overview of the effectiveness of VSS.

Chapter III

Effectiveness of VSS

Chapter III. Effectiveness of VSS

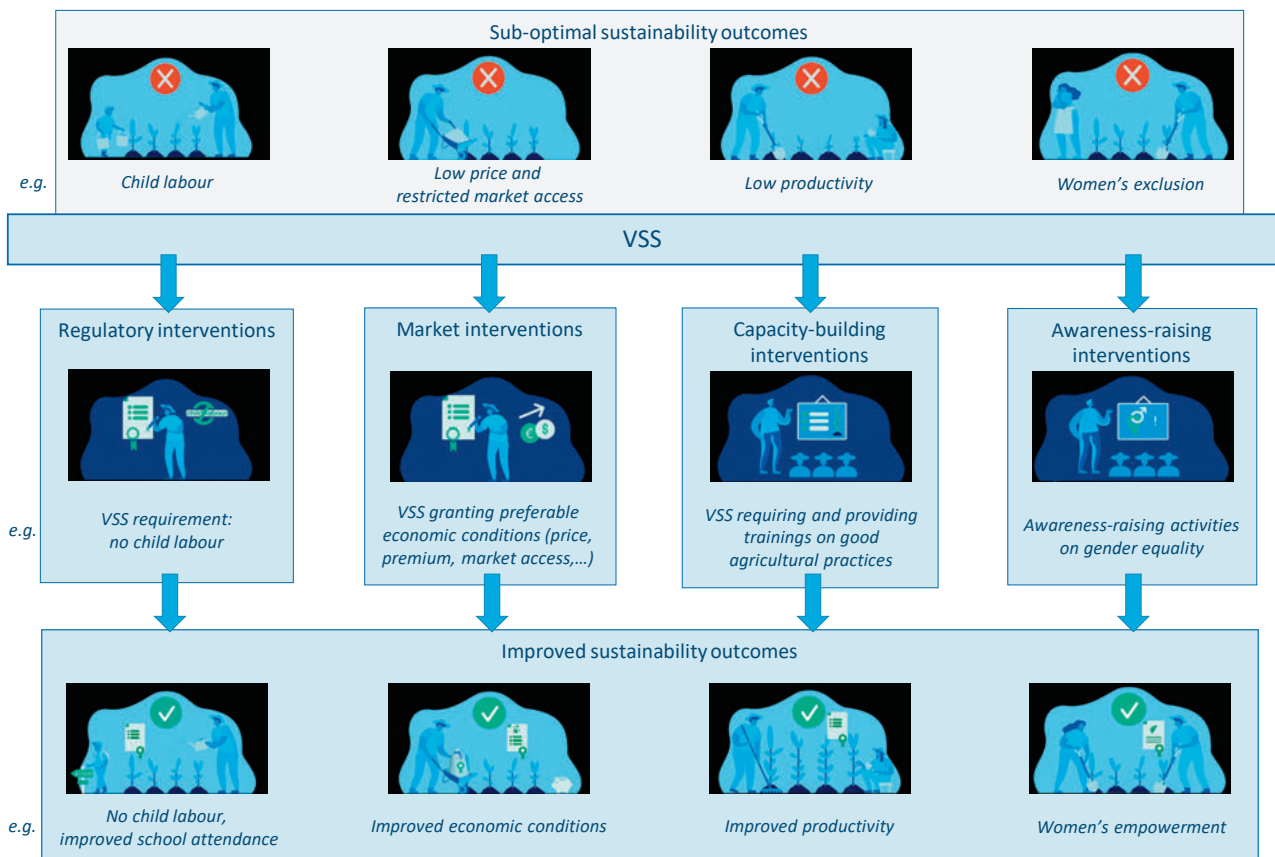
Given that VSS have become important governance instruments to foster sustainability along GVCs, it is important to understand whether these systems are effective in achieving positive sustainability impacts. Many factors determine the effectiveness of VSS, including their institutional design, the content of their standards, and the socioeconomic and political context in which the standards are implemented. In general, the effectiveness of VSS can be analysed along two dimensions: their impacts on the ground based on various sustainability parameters, and their adoption.

This chapter first examines the pathways through which VSS aim to exert positive impacts, and provides an overview of the current evidence of their impacts on various sustainability dimensions. The chapter then explores the second dimension of VSS effectiveness – adoption – by examining the different ways in which VSS adoption can be analysed and identifying the barriers to adoption.

A. Pathways for generating impact through VSS adoption

There are four main pathways, or interventions, by means of which VSS aim to achieve impacts on the ground: regulatory interventions, market interventions, capacity-building and awareness-raising (figure 9). These pathways are described in more detail below, along with concrete examples.

Figure 9
Pathways for VSS impacts



First, VSS rely on regulatory interventions to generate sustainability impacts. Upon applying for VSS adoption, participants may need to invest in modifying their production practices to comply with sustainability standards, such as implementing wastewater management systems or ensuring they do not employ child labour. VSS thereby embody regulatory intervention in the sense that, upon compliance with the standards, the environmental and social practices of producers are improved. For example, they ensure that wastewater is treated and avoid the use of toxic chemical inputs, or refrain from employing child labour. This in turn is expected to improve environmental and social sustainability outcomes, causing, for example, a reduction of effluent runoff in critical watersheds, or better educational outcomes for children and youth.

Second, VSS aim to improve sustainability through market interventions. Upon adoption of a standard, upstream value chain actors, such as buyers, may grant preferable economic conditions to VSS-compliant producers, for example through increased market access or price premiums. Market access is sometimes conditional on producers obtaining VSS certification for their products, as upstream buyers, such as retailers, often require them to provide such certification in order to purchase their goods. Consequently, economic conditions for the producers improve, as they often receive higher prices for their products or gain access to certain markets which they could not enter before. Better economic conditions for producers in turn are expected to increase household incomes and well-being. Moreover, market interventions are assumed to provide the incentives necessary for producers to adopt and comply with VSS.

Third, VSS rely on capacity-building interventions to improve sustainability. Upon VSS adoption, managing entities need to conduct capacity-building events, such as offering training to producers in good agricultural practices, or in professional management skills. Some VSS entities themselves often organize such training. As a result, productivity rises. For example, technical training in good agricultural practices can lead to increased productivity, which in turn can generate higher incomes. Thus, capacity-building can also ultimately be associated with improved economic and social sustainability.

Lastly, VSS organizations improve sustainability through awareness-raising interventions. Upon VSS adoption, organizations adopting VSS may be induced to conduct awareness-raising events, for example on gender-related issues. As a consequence, awareness about critical social issues (such as women's disempowerment) increases. This in turn is expected to lead to improved social behaviour and sustainability outcomes, as women's social and economic conditions can improve. In addition, the VSS organizations themselves may raise awareness about some sustainability issues which might not have been considered before.

An increasing body of literature has been dedicated to assessing the impacts of VSS on the ground. The following sections present the current evidence on the impacts of VSS in general, and more specifically on their impacts on the socioeconomic and environmental dimensions of sustainable development.

1. VSS sustainability impacts: Empirical evidence

Overall, the evidence on the impacts of VSS on different sustainability dimensions is mixed. Some studies point to positive impacts of certification, others find no impact, and still others – albeit only a few – find negative impacts. Generally speaking, the nature of the findings depends on the VSS, the local context in which VSS are implemented, as well as the indicators measured and the methodology used to assess VSS impacts.

Nonetheless, one way to gain an overview of the current evidence on the sustainability impacts of VSS is provided by the Evidensia database, a knowledge platform that summarizes credible evidence about VSS impacts. To provide comparable and credible results, the studies included in the Evidensia database are selected against strict quality criteria with regard to their research design. The studies need to be based upon a statistical analysis, which permits isolating the effects of VSS, and comparing a treatment group

(i.e. a certified group) with a control group (i.e. a non-certified group). The studies also need to be recent – no older than 10 years old (Evidensia, 2019). The database lists almost 450 impacts of VSS from more than 70 different studies. For each impact, the database reports whether VSS have a positive impact if the certified group performs better than the control group; a neutral impact if there is statistically no difference between the certified and the control group; and a negative impact if the control group performs better than the certified group.

Table 1 shows that, of the 447 impacts listed in the Visual Summaries, 205 are positive and 211 are neutral. Only 31 of the impacts appear to be negative. These negative impacts include, for example that VSS increase the costs of production. A similar distribution of positive, neutral and negative impacts can be observed in the types of impacts, that is, socioeconomic and environmental impacts. The table lists 94 positive impacts, 93 neutral impacts, and only 9 negative impacts on environmental issues. For the socioeconomic impact of the studied VSS, Evidensia shows 111 positive impacts, 118 neutral impacts and 22 negative impacts (Marx *et al.*, 2021).

Table 1
Number of positive, neutral and negative impacts by category

| Issue category | Positive | Neutral | Negative |
|----------------|------------|------------|-----------|
| Environment | 94 | 93 | 9 |
| Socioeconomic | 111 | 118 | 22 |
| Total | 205 | 211 | 31 |

Source: Authors based on Evidensia database.

Importantly, the literature highlights that VSS impacts are highly context specific. More research is warranted to understand the conditions under which the standards generate positive impacts, particularly in relation to the institutional design of VSS (Marx *et al.*, 2021). In addition, trade-offs between sustainability dimensions can occur when evaluating VSS impacts. The following sections provide some insights into the current evidence of VSS impacts on socioeconomic indicators, and on environmental indicators more specifically.

2. Socioeconomic impacts

Most VSS define a set of socioeconomic requirements for the production of and/or trade in certified products. The requirements are specified mainly for the production stage, which applies to primary producers and hired workers (ITC, 2021). In contrast, only a limited number of VSS focus on upstream actors in the value chain, such as traders and processing companies.

To assess the socioeconomic impacts of VSS at the production stage, most studies focus on indicators that can be grouped into six different thematic areas identified by Evidensia (2022). These areas include costs and benefits for participants (incl. costs of inputs, net income, price, yield, access to certified markets, knowledge and training), child rights and well-being (incl. child labour and education); health and well-being (incl. food security, access to health care, nutrition, water, sanitation and hygiene, and waste disposal); livelihoods (incl. access to credit, access to land, assets, poverty and gender equality); wages and workers' rights (incl. wage levels, working hours, occupational health and safety measures, health insurance, permanence of working contracts, local employment opportunities, forced labour, freedom of association, grievance redressal, job satisfaction and worker empowerment); and rights of indigenous and local communities (incl. their participation in decision-making, infrastructure development for the community such as the development of roads, social protection, such as conflict resolution practices, and recognition of land rights). In contrast, the main indicators used to assess VSS socioeconomic impacts along value chains are traceability, and revenue and costs (Evidensia, 2022).

A large number of studies have been carried out to assess the socioeconomic impacts of VSS, though they differ in scope. Most of them focus on the economic impact, and tend to neglect the social (and environmental) impacts, although all three pillars of sustainability are equally important to investigate, and eventually improve sustainability (Traldi, 2021). Moreover, most existing studies concentrate on the agricultural sector, with currently more than 100 studies published in high-quality peer-reviewed journals, followed (in descending order) by forestry, fisheries, energy and others (Evidensia, 2022; Traldi, 2021; Meemken, 2020; Oya *et al.*, 2018). Studies of the agricultural sector focus on coffee, while cotton, sugar, cocoa, soy and palm oil are underrepresented. There is also a geographical imbalance. Most studies conducted are for Africa, followed by Latin America and Asia. No studies have yet been conducted for North America or Australia, although certification does take place in these regions. Moreover, most studies focus on Fairtrade, Rainforest Alliance or UTZ certification, while studies focusing on organic certification are underrepresented.

In terms of findings, recent reviews focusing on studies that measured impacts quantitatively show that VSS have mixed impacts, meaning that the studies mainly find positive impacts, while others find no or even negative impacts (Oya *et al.*, 2018; Traldi, 2021; Meemken, 2020; DeFries *et al.*, 2017; UNFSS, 2022). The possible negative impacts are most often related to the economic dimensions of sustainability, and refer to increased costs for producers. Results also depend on the indicators investigated and the research context under review.

Overall, in terms of economic impacts, about half of the studies find positive impacts of VSS. A third of these find no significant economic impacts, and about a tenth find negative impacts. In terms of social impacts, most studies (about two thirds) find no significant impacts of VSS, while a third of these studies find positive impacts, and a few of them find negative impacts (Traldi, 2021). Moreover, impacts on economic indicators seem to be more positive than those on social indicators. And the impacts seem to be greater for large-scale agro-industrial farms than for smallholders (UNFSS, 2022; Meemken, 2020). However, as the current studies focus heavily on only a few crops, on some VSS or on some countries, these findings should be interpreted with caution, as they cannot be generalized, particularly as the impacts tend to be context-dependent.

3. Environmental impacts

VSS vary in terms of how they aim to mitigate the adverse environmental impacts of production and the stringency of their environmental standards. Many studies have been conducted to assess their environmental impacts. Most of them focus on indicators that can be grouped into five thematic areas (Evidensia, 2022): climate change (incl. adaptation of farming techniques to increase resilience of crops to droughts, reduction of greenhouse gas emissions, switching to renewable energy sources); forests and other ecosystems (incl. protection of primary forests and protected areas, a minimum required canopy cover for commodity products which are grown under shady trees, efforts to restore land area to its natural state); freshwater and oceans (incl. creation of buffer zones around rivers, monitoring water use, reducing water consumption and treating waste water); pesticides, fertilizers and soil (incl. use of organic fertilizers, reduced use of chemical pesticides and herbicides, prevention of soil erosion, improving health), plant and wildlife conservation (incl. protecting threatened and endangered species and protecting habitats for plants and wildlife).

Most of the studies assessing the environmental impacts of VSS are based on case studies (largely relating to coffee certification), and focus mainly on Latin America and Africa. For example, Takahashi and Todo (2013; 2014) analysed coffee certification in Ethiopia, and showed that certification reduces the probability of deforestation. In a study comparing organic and non-organic farms in Nicaragua, Costa Rica and Guatemala, Haggard *et al.* (2015) found greater tree diversity in certified farms. Carlson *et al.* (2018) found that RSPO-certified palm oil plantations in Indonesia had less deforestation than non-certified plantations.

Traldi (2021) summarized the findings of 45 studies on the environmental impacts of VSS certification: 47 per cent reported positive impacts, another 47 per cent reported no difference between certified and non-certified groups, and 6 per cent reported negative environmental impacts. In a review of the evidence from 24 studies on the impacts of certification of tropical agricultural commodities for achieving sustainability goals among small-scale producers, DeFries *et al.* (2017) reported 36 per cent positive outcomes and 64 per cent indifferent outcomes.

Hence, the evidence on VSS sustainability impacts, so far, remains mixed, although, overall, it is positive or neutral.

B. Uptake of VSS

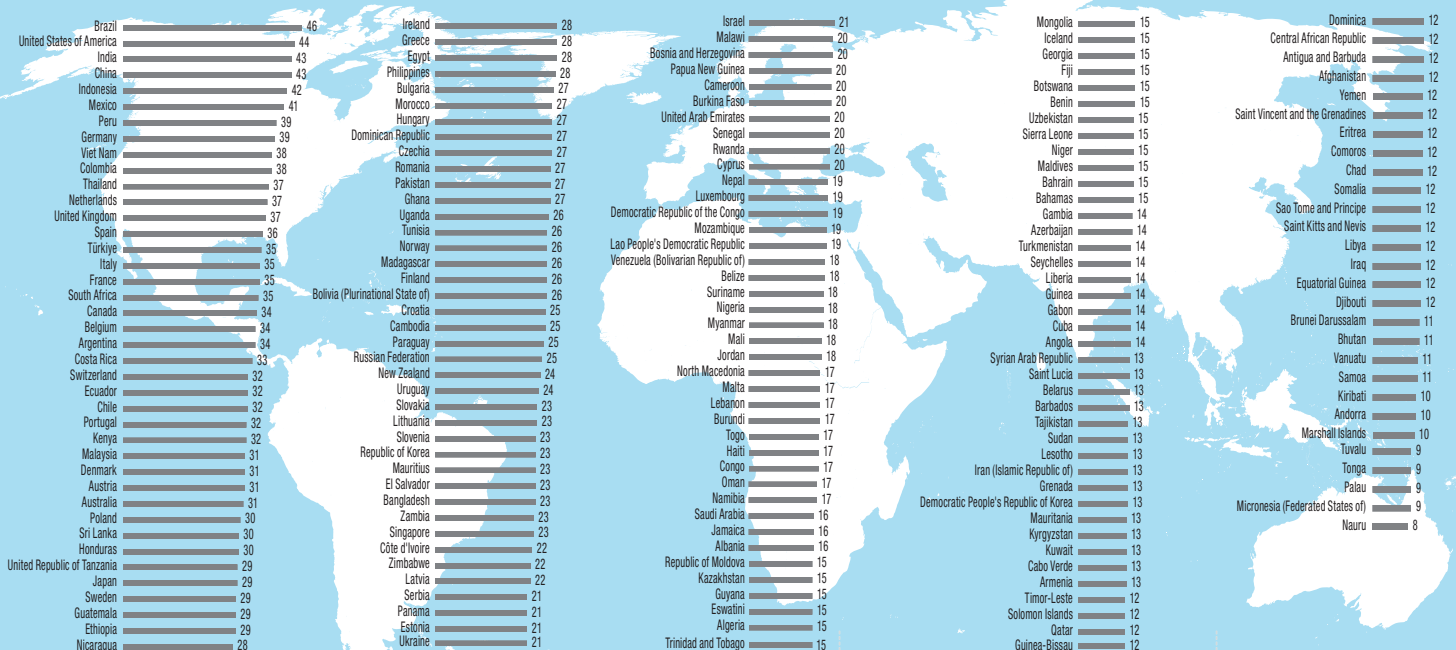
The second dimension for gauging the effectiveness of VSS is their adoption, or uptake. Adoption is a relevant dimension of effectiveness because the more widely VSS are adopted, the more likely they will be to improve sustainability. If they are only marginally adopted, their potential to transform production processes in GVCs towards more sustainable ones is limited. VSS adoption can be measured by different indicators, such as the number of VSS active in different countries, the distribution of VSS across sectors, the number of producers or firms that are certified, the proportion of certified production volume in total production volume, and the share of certified production land in total production land.

Chapter I showed that the number of VSS organizations active globally has greatly increased over time. However, they are not evenly distributed across countries, sectors and commodities.

First, at the country level, the adoption of VSS varies. Based on data from the ITC Standards Map, the UNFSS 4th Flagship report (2020) calculated VSS adoption scores, which are obtained by dividing the number of VSS organizations active in a country by the total number that exist worldwide. This gives an indication of where VSS organizations are the most active. Figure 10 presents a ranking of VSS adoption scores by country. Several observations can be made from this figure.

Figure 10

VSS adoption scores by country (proportion of VSS in a country on total number of VSS)



Source: Authors based on data in the 4th Flagship report of UNFSS (2020).

First, it appears that VSS organizations operate in all countries, but there is considerable variation among countries, which can be broadly expected due to variations in the size of their economies. Second, variation in adoption scores appears to be more or less in line with income levels. Low-income countries – and to some extent, lower middle-income countries – tend to count fewer VSS than high- or upper middle-income countries. However, there are exceptions. For example, some lower middle-income countries score high, such as India, Indonesia and Viet Nam. Income levels therefore do not necessarily predict VSS adoption rates. Rather, the well-scoring lower middle-income countries are typically those that pursue an export-oriented economic development policy and export a wide variety of products. Lastly, even some low-income countries score fairly high, such as Ethiopia and the United Republic of Tanzania. It is worth noting that these countries score relatively high because their export commodities, such as coffee, tend to be certified by multiple VSS schemes.

In addition to an uneven distribution of VSS across countries, there is also an uneven distribution of VSS across sectors. Figure 4 above showed that VSS are primarily active in the agricultural sector, and in consumer products, processed foods and the garments sector. In contrast, only a few VSS are active in sectors like electronics or jewellery.

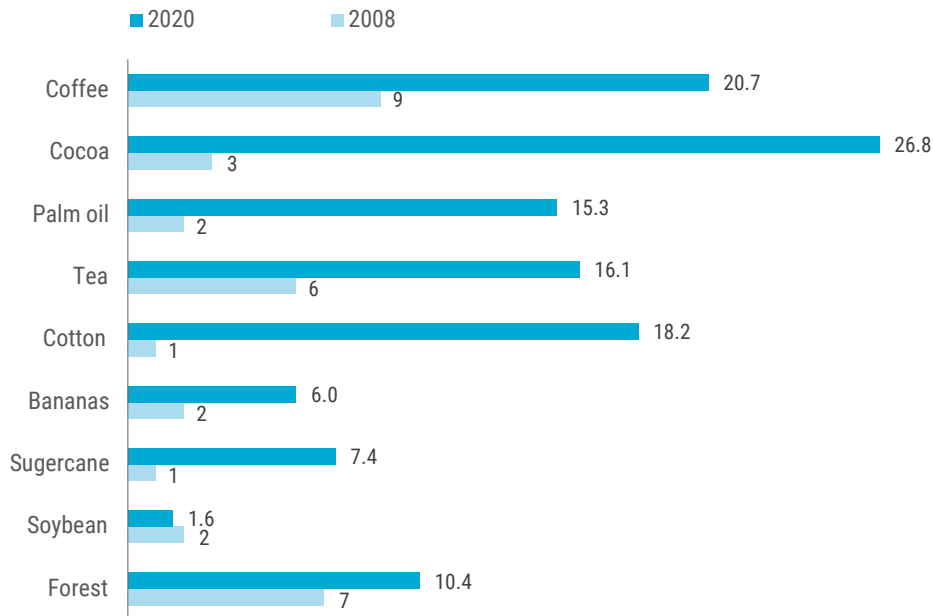
However, merely looking at the number of VSS active in a given sector does not give an indication of the level of their adoption by economic actors in that sector. Hence, other indicators need to be analysed to better understand the adoption rates of VSS. Investigating the number of certificate holders would help assess the extent of adoption. However, this number is difficult to assess because not all VSS disclose information about the number of certificates they issue. Besides, the number of certificate holders does not provide information about the size of their certified operations. Hence, other indicators are needed, such as the share of the certified commodity (by volume) in total commodity production (by volume), and the share of certified production area in total production area.

In this respect, the State of Sustainable Markets annual reports of the International Trade Centre (ITC), in collaboration with the Research Institute of Organic Agriculture (FiBL) and the International Institute for Sustainable Development (IISD), have been providing the most comprehensive mapping and evolution-tracking of certified commodities globally since 2008. Those reports compile data from the 14 major VSS organizations globally, covering eight agricultural commodities: bananas, cocoa, coffee, cotton, palm oil, soybeans, sugarcane and tea, plus forestry. The main findings of the 2020 report show that certification has intensified over the past decade, both in terms of the share of certified commodities in their respective markets, and the share of certified production area.

First, regarding the share of certified production (by volume) in total production (by volume), the report found that an increasing proportion of the eight commodities studied had been certified over time (except for soybeans), though the increase varied by commodity (figure 11). Depending on estimates, certified global coffee production increased from 9 per cent in 2008 to 20–40 per cent in 2020, that of cocoa from 3 per cent in 2008 to 26–44 in 2020, palm oil from 2 per cent in 2008 to about 15 per cent in 2020, tea from 6 per cent in 2008 to 16–22 in 2020, cotton from 1 per cent in 2008 to 18–20 per cent in 2020, bananas from 2 per cent in 2008 to 6–10 per cent in 2020, and sugarcane from 1 per cent in 2008 to 7–8 per cent in 2020. Only soybeans showed a possible decline, from 2 per cent in 2008 to 1–2 per cent in 2020 (Meier *et al.*, 2020). In addition, in 2020, about 10 per cent of global forests had been certified by the FSC and/or the PEFC compared to 7 per cent in 2008. However, this general trend hides significant differences on the country level where in some cases adoption increases strongly, while in other cases it declines (Depoorter and Marx, 2022). In sum, in several sectors, VSS have become mainstream.

Figure 11

Share of certified commodity production in total commodity production, 2008 and 2020



However, the report also shows that there is still considerable potential for VSS to expand further. In terms of the share of certified production area in total production area, the report estimates that the area of production land certified by 12 leading agricultural VSS accounts for only 1.94 per cent of total agricultural land area globally. However, this percentage is increasing, as confirmed by Tayleur *et al.* (2017), who mapped the coverage of 12 major agricultural VSS, and found that certified cropland is growing by approximately 11 per cent a year. They observed that the proportion of certified cropland is higher in countries that are large producers of agricultural commodities. More strikingly, they found that even when looking only at the areas or countries where agricultural commodities are mostly produced, certification is not uniformly distributed. For example, while bananas, cocoa, coffee, palm oil, soybeans and sugarcane are produced in many tropical countries, their certification is concentrated in specific countries, or regions of countries. For bananas, certification is the most intensive in some parts of Colombia, Costa Rica, the Dominican Republic, Ecuador and Honduras. Certified cocoa is mostly concentrated in Côte d'Ivoire, certified coffee in Brazil, Central America and Colombia, certified palm oil in Indonesia and Malaysia, certified soybeans in Argentina and Brazil, and certified sugarcane in Brazil.

These findings suggest that being a large producer of commodities for which many VSS exist potentially plays a role, but is not sufficient in and of itself to explain VSS adoption.

1. Barriers to VSS adoption

The previous section has shown that VSS adoption is uneven across countries, and suggests that there remain barriers to the uptake of VSS. Four major barriers to adoption can be identified in the relevant academic literature: the costs involved in obtaining certification, the lack of incentives to adopt VSS, governance gaps and sociopolitical resistance to VSS (figure 12). Typically, it is mainly the smallholder producers in developing countries who face these barriers.

Figure 12
Barriers to VSS adoption



Costs of certification

The costs involved in obtaining certification are of two kinds: certification costs and compliance costs (Schleifer *et al.*, 2019). Certification costs are the costs involved in the different steps of the certification process. These include the costs of audits, which must be paid for by the standards adopter, as well as the costs linked to the certification decision, as some VSS organizations charge a fee for their certificate. The VSS applicants also need to elaborate management plans in order to get certified, and audits are intensive in terms of the time invested and the data required to be provided. The applicant needs to collect and provide relevant data linked to all the requirements. However, these data are often not readily available, especially in developing countries. In addition to certification costs, producers incur compliance costs to make their production practices compliant with VSS requirements. This can require significant investment and acquisition of expertise, especially for producers (typically in developing countries) that lack prior capacity to comply.

Lack of incentives to engage in certification

Economic benefits provide an important incentive for producers to become certified, but when it is uncertain whether such benefits will accrue, there is little incentive for VSS adoption. To some extent, the costs incurred to obtain certification need to be compensated by additional revenue. The economic benefits linked to certification can take two forms: price premiums and increased market access. However, these incentives are not guaranteed, which can discourage the adoption of VSS.

With regard to price premiums, some VSS organizations, such as Fairtrade, guarantee a price (or income) premium for producers of their certified commodities. This form of direct additional income for producers can incentivize them to adopt VSS. However, generally, price premiums are not guaranteed, and their existence depends on market dynamics. Consumers may or may not be willing to pay a premium for certified products. Besides, even when they are willing to pay a premium, producers and suppliers do not necessarily receive it, as they need to negotiate the premium with their buyers. Typically, small-scale producers, especially in developing countries, have less negotiating ability, which results in powerful actors in the value chain often capturing the premium (Grabs, 2020; Ponte, 2019).

VSS can act as trade facilitators since they can augment demand by providing information on how goods are produced and distributed. However, this incentive can only be effective if countries have sufficient potentially VSS certifiable products for export (in terms of value and volume), and if the markets exist for VSS-certified products. If exports remain limited, or if there is no market for the certified products, the incentives to certify will remain low.

Governance gap

Several studies highlight the importance of the political and institutional context in which VSS are being used, and point to a governance gap as a possibly significant additional barrier to VSS adoption. A literature review of more than 100 studies argued that a necessary, although insufficient, condition for the use of VSS is the presence of national institutions which provide a supporting environment for compliance with standards (Loconto and Dankers, 2014). This implies that countries with effective and well-functioning governance structures offer a better institutional context for the adoption of VSS. This is probably because producers in these countries are more accustomed to complying with rules than those in countries with weaker governance structures, and therefore find it less difficult to comply with VSS requirements.

In contrast, in countries with weaker governance structures, as in many developing countries, the political and institutional context can constitute a barrier to the adoption of VSS because of a governance gap (Auld *et al.*, 2015). In such a context, there can be a discrepancy between public regulations and VSS requirements in terms of the stringency of the rules they prescribe, but also in terms of their enforcement. In a country with less stringent or poorly enforced public regulations, economic actors are less accustomed to complying with rules. As a consequence, complying with VSS requires more efforts for them. This governance gap can therefore be a barrier to the adoption of VSS.

Sociopolitical resistance

Some authors report that VSS are sometimes viewed as mechanisms that enforce existing power relations, especially by lead firms in GVCs, many of which are located in developed countries. These firms define sustainability according to their perspectives and interests, and require this approach from all their suppliers. This can generate resistance to the adoption of VSS by some producers in developing countries if they believe that developed countries' standards are being imposed on them (Auld and Renckens, 2021; Levy *et al.*, 2016). Such resistance to VSS can come from individual producers, but also from governments in developing countries. This developed-developing country tension or divide might represent a disincentive to the adoption of VSS. Moreover, it could also foster the adoption of alternative, more localized institutional arrangements.

The persistence of these kinds of barriers to VSS adoption can create significant exclusionary effects, particularly for small-scale producers in developing countries.

Chapter IV

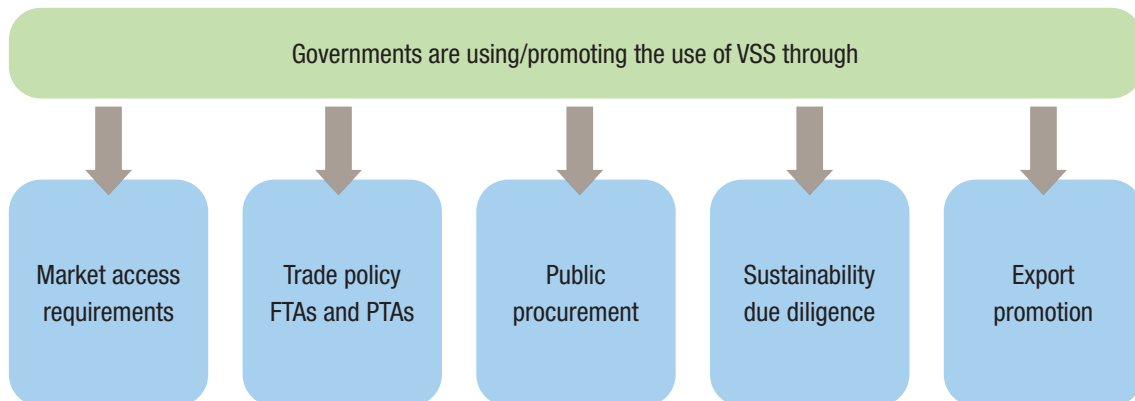
VSS and public policy

Chapter IV. VSS and public policy

As explored in chapter II, one factor that has led to the proliferation of VSS is their increased recognition by governments, and their integration into public policy. This chapter explores the different types of public policies into which VSS have been (or could be) integrated. These include market access regulations, trade policy, public procurement policy, due diligence and export promotion measures.

Figure 13

Integration of VSS into different public policies



A. Market access regulations

VSS are increasingly used in market access regulations or are incorporated by reference to them in the regulations that determine which products can access a market or not. The VSS then become a mandatory market access requirement. No data are available on how many regulations are based on – or refer to – VSS, but some recent examples are presented below to illustrate how VSS have been integrated into market access regulations.

The Republic of Korea's Act on the Sustainable Use of Timbers (2017) explicitly recognizes VSS as proof of compliance with legality requirements (Korea Forest Service, 2017). This regulation aims to tackle illegal deforestation and prevent illegally harvested timber from being sold on that country's market. Complying with the Act is mandatory for all timber operators or traders aiming to conduct their activities in the Republic of Korea. Timber importers are expected to prepare all legality assurance documents prior to importing timber into the country. The Korea Forest Service supervises the legality of the timber imports through pre-import controls with the assistance of the Korea Forestry Promotion Institute, an inspection agency. This institute checks the legality assurance documents and decides whether the timber in question can enter the country. Implementation of the Act is supported by the Detailed Standards for Determining Legality of Imported Timber and Timber Products, which specify the requirements that imported and domestically produced timber and timber products need to meet. It contains an exhaustive list of documents and certifications that are recognized by the Republic of Korea as assuring the legality of the timber harvest. In particular, these documents include explicit references to VSS, and certificates from the FSC and the PEFC as proof of legality (Korea Forest Service, 2018; UNFSS, 2020).

Another interesting example where VSS play a role in market access regulations is the European Union's Renewable Energy Directive (RED). The directive aims to achieve a number of mandatory targets to promote the use of renewable energy sources, including the use of biofuels as a renewable energy source. In order to ensure that the European Union imports sustainable biofuels, RED has established a set of sustainability criteria for biofuels, and VSS certification can provide proof of compliance with those criteria. While VSS organizations certify most of the sustainable biofuels available in the European Union

market, not all of them provide the proof of compliance necessary to enter that market, since not all VSS organizations are equal in how they set standards and which standards they set. In this respect, a key component of RED is a recognition system based on substantive and procedural requirements that VSS entities need to fulfil in order for their certificates to qualify as proof of compliance with sustainability criteria. Currently, the European Union recognizes around a dozen VSS entities, including for example the Round Table on Responsible Soy (RTRS) and the Roundtable on Sustainable Biomaterials (RSB).

However, an evaluation of the certification of sustainable biofuels by the European Court of Auditors identified a number of shortcomings in the RED system (see UNFSS, 2020), which reveals the challenges that emerge when integrating VSS into market access regulations. The European Court of Auditors (2016) found that the European Union's assessment procedures for the recognition of VSS did not adequately take into account a number of critical aspects regarding the sustainability of biofuels. It found that some recognized VSS did not sufficiently address socioeconomic issues such as forced labour, child labour and land tenure conflicts. In addition, it found that some VSS organizations were insufficiently transparent. Finally, it noted that once a VSS organization is officially recognized, the European Union does not adequately check whether it actually applies the certification standards it committed to in its request for recognition.

B. Trade policy: Free trade agreements and the Generalized System of Preferences

VSS can also play a role in trade policy, more specifically through two trade instruments: free trade agreements (FTAs) (UNFSS, 2020) and preferential trade agreements (PTAs) (Marx, 2019).

An FTA establishes the conditions for trade, in terms of tariffs, trade-related regulations and other issues, between two or more parties. Currently, there are hundreds of FTAs in force. Over the past two decades, the content of FTAs has evolved, increasingly incorporating non-trade provisions, such as sustainable development provisions or social and environmental protection provisions. The new TRade and ENvironment Database – or TREND – shows that the number of references to environmental protection (embodied in provisions, clauses or rules) in FTAs started to grow in the 1970s, with a sharp increase in the 1990s (Morin *et al.*, 2018). FTAs also increasingly include references to VSS. The UNFSS 4th Flagship report notes that at least 19 FTAs refer to VSS in a promotional way to encourage information exchange and cooperation on implementation and follow-up of VSS (UNFSS, 2020). In exceptional cases, VSS might feature more prominently in an FTA. For example, in the new FTA between the European Free Trade Area (EFTA) and Indonesia, VSS-certified palm oil products are assigned lower tariffs – or taxes – than non-certified palm oil products in order to promote sustainable palm oil production.

VSS can also be integrated into generalized systems of preferences (GSPs). A GSP scheme is a preferential trade arrangement whereby a country grants unilateral and non-reciprocal preferential market access to goods originating in developing countries. The preferences take the form of a partial or entire suspension of import tariffs for beneficiaries. A beneficiary country is determined on the basis of its level of economic development. In some cases, additional preferences are awarded if a country complies with an additional set of requirements concerning sustainable development, such as ratifying and implementing a number of international conventions relating to sustainable development. As part of their objectives, both VSS and GSP schemes aim to foster sustainable development and good governance. For example, in the European Union's special incentive arrangement for sustainable development and good governance (GSP+), a country which commits to ratifying and implementing 27 international conventions concerning human and labour rights, environmental protection and good governance can benefit from additional tariff preferences. As a result, some authors have explored the possibility of integrating VSS into the European Union's GSP, since VSS might contribute to better implementation of international commitments relating to sustainable development (Marx, 2019). One of the main arguments in favour of such integration is that it would allow a more differentiated approach to fostering compliance with sustainable development

requirements, since it would provide direct incentives (or punishment) to individual economic operators rather than to countries.

C. Sustainable public procurement

Governments can also engage with VSS through their purchasing or public procurement policies. The World Trade Organization (WTO) estimates that government procurement accounts for up to 15 per cent of an economy's gross domestic product (GDP), which makes governments mega-consumers. Given the size of public procurement, government purchasing power has significant potential to nudge markets towards higher standards of sustainability. In this respect, a growing body of evidence (Martin-Ortega and O'Brien, 2019; UNFSS, 2020) suggests that public authorities throughout the world are increasingly adopting sustainable public procurement policies. This refers to socially and environmentally friendly public procurement policies such as public authorities demanding, for example, that their purchases of wood products are manufactured from legally harvested or sustainable timber, that public buildings meet ecological standards, that clothing for public sector employees is made in a healthy labour environment devoid of child labour, or that coffee served by public bodies is produced under fair conditions. Sustainable public procurement is therefore a means to ensuring that public contracts contribute to governments' broader environmental and social policy goals. VSS play a specific – and increasingly significant – role since they are often involved in the operationalization of sustainable public procurement practices (UNFSS, 2020). However, the development of sustainable public procurement policies does not imply a straightforward or automatic recognition of VSS by governments (Marx, 2019). In the majority of legal frameworks for public procurement, the principle of equal treatment and non-discrimination prevents contracting authorities from referring to any specific VSS organization or label in public procurement tenders. However, VSS may be referred to indirectly in sustainable public procurement through the inclusion in public tenders of sustainability criteria that are similar to standards set by a particular VSS organization, or by making reference, for instance in buying guides, to a number of specific VSS as a form of proof of compliance with the criteria stipulated in tenders. As a result, in daily procurement practice, VSS can serve as indicators of social and environmental performance, and may be used as a convenient means of assessing a bidder's credentials.

D. Due diligence regulations

A fourth area of public policy in which VSS can play a role is so-called due diligence regulations, and, more specifically, human rights due diligence legislation. The concept of human rights due diligence was originally developed in the United Nations Guiding Principles on Business and Human Rights as a means to ensure that companies fulfil their responsibility to respect human rights. It refers to the positive steps that companies need to take, through their policies and processes, to identify, prevent, mitigate and account for the adverse human rights impacts they may cause or contribute to through their own activities, or that may be linked to their operations, products or services by their business relationships. The idea of human rights due diligence, but also environmental due diligence, has been incorporated in several other international instruments such as the Guidelines for Multinational Enterprises established by the Organisation for Economic Co-operation and Development (OECD). Additionally, over the past decade, an increasing number of countries have started to adopt legislative measures requiring companies to report on the steps they are taking to tackle certain human rights issues, in order to induce companies to adopt due diligence processes. Examples include the United Kingdom Modern Slavery Act, the Dutch Child Labour Due Diligence Act and the French Duty of Vigilance Law. At the European level, various instruments have been adopted which introduce certain human rights due diligence obligations, and the European Union recently proposed a draft directive on corporate sustainability due diligence (Bright *et al.*, 2020).

In order to comply with different steps of due diligence, several companies are incorporating VSS into their due diligence plans and management systems, which allow them to identify and address possible adverse sustainability effects through monitoring and complaint systems. In many of these management systems, VSS are used to govern value chains, and the role of VSS is recognized in several different reference documents on due diligence, which note that some VSS entities can deliver credible assurance that a supply chain does not contribute to serious human rights abuses. Thus, VSS can provide a complementary enforcement mechanism for public regulation, and the new trend of due diligence regulations might result in the further development and uptake of VSS.

1. Export promotion policies

Governments also engage with VSS to spur economic development through export promotion measures, especially if they can help increase access to export markets. No data are available on the number and nature of measures which integrate VSS into export promotion, but there are several examples of countries that seek to promote their main export products through adoption of VSS. An interesting example of the use of VSS for export promotion can be found in Gabon, which aims to increase its wood exports through certification (UNFSS, 2020). Forests cover about 90 per cent of the Gabonese territory, and about 60 per cent of this area consists of 40 forestry concessions. Although the contribution of the forestry industry to Gabon's GDP has decreased over the past few decades, wood products still account for about 10 per cent of the country's exports. Increasingly, regulations to ensure that forests are sustainably managed have been implemented in recent years with the explicit aim of promoting wood exports. Most significantly, in September 2018, the President of Gabon announced that forestry permits would be withdrawn from all forestry operators not certified by the FSC. Following that announcement, an agreement was signed between the FSC and the Government of Gabon, which aims to "promote the sustainable management of Gabonese forests and improve access for FSC certified wood products from Gabon to international markets" (UNFCCC, 2021).

Conclusions

The SDGs highlight the many dimensions of sustainability, and stress the importance of international trade and trade policy to achieve their goals. International trade brings several benefits to people and countries, but it can also pose significant challenges. This report has discussed the importance of VSS as an instrument to make trade more sustainable. Besides explaining VSS, and discussing their achievements and challenges, it has identified how they relate to other policy instruments. Each of the chapters provides some key takeaway messages.

The introduction discussed the importance and changing nature of international trade in which GVCs have gained increasing prominence. It showed how VSS can strive to make international trade more sustainable, and examined their implications for developing countries. It discussed how VSS offer opportunities but also present challenges for developing countries. Addressing these challenges will, to a degree, influence the ability of developing countries to be integrated into GVCs and the global economy.

Chapter I set out to describe VSS, and how they have emerged and evolved. It showed that VSS have grown significantly as a transnational governance tool, in terms of the number of VSS, the number of sectors and commodities in which they are active, and the share of some certified key commodities in global production of those commodities. During the past decade, some VSS have become mainstream and are a regularly used governance tool for GVCs, especially in the agricultural and forestry sectors.

Chapter II delved deeper into how VSS work to achieve sustainability goals. It described in detail how VSS operate and the different actors involved in the certification process. The chapter explained how conformity to sustainability standards is assessed through different procedures and processes, and that VSS organizations can vary in the way they work. Nonetheless, the chapter suggests that early concerns on VSS as being greenwashing instruments are misguided for some well-established VSS organizations. However, given their number and diversity, doubts about their credibility persist. These concerns could be dispelled if there were international recognition of credible VSS.

Chapter III took stock of the current literature and evidence on the effectiveness of VSS. Their effectiveness was considered from two dimensions. One dimension focused on the use or uptake of VSS. The second focused on the impacts of VSS on the ground, with a specific focus on their social and environmental sustainability impacts. VSS are increasingly used, but least developed countries are struggling with involvement in sustainability markets. The chapter also presented evidence that VSS generate positive sustainability impacts, but noted that these are highly context-specific. Besides, there is room for improvement, and possible trade-offs exist between environmental and social impacts. The need to better understand the mechanisms that lead to different impacts was also highlighted.

Chapter IV, discussed the use of VSS by various trade-related policy instruments. It explained how VSS have been, or could be, integrated into public policy as complementary instruments in the governance of global trade. This integration takes different forms and is expected to increase in the future, since several new initiatives are being launched around the world for sustainable governance of GVCs .

VSS offer potential for the transnational governance of GVCs and trade to foster sustainable development. But there are also challenges, especially for producers in developing countries. This report has highlighted some of the challenges relating to financial and technical capacity to comply with standards and to advancing an understanding of the role of VSS in governing GVCs. Addressing these challenges is a collective responsibility. Several actors, including international organizations, can play a proactive role in addressing the challenges by providing technical and financial support for VSS adoption and building capacity for compliance with sustainability standards.

References

- Auld G (2014). *Constructing Private Governance: The Rise and Evolution of Forest, Coffee, and Fisheries Certification*. Yale University Press. New Haven, CT.
- Auld G, Bernstein S and Cashore B (2008a). The new corporate social responsibility. *Annual Review of Environment and Resources*. 33: 413–435.
- Auld G, Gulbrandsen LH and McDermott CL (2008b). Certification schemes and the impacts on forests and forestry. *Annual Review of Environment and Resources*. 33: 187–211.
- Auld G and Gulbrandsen LH (2010). Transparency in nonstate certification: Consequences for accountability and legitimacy. *Global Environmental Politics*. 10: 97–119.
- Auld G, Renckens S and Cashore B (2015). Transnational private governance between the logics of empowerment and control. *Regulation & Governance*. 9: 108–124.
- Auld G and Renckens S (2021). Private sustainability governance, the Global South and COVID-19: Are changes to audit policies in light of the pandemic exacerbating existing inequalities?. *World Development*. 139, 105314.
- Bartley T (2003). Certifying forests and factories: States, social movements, and the rise of private regulation in the apparel and forest products fields. *Politics & Society*. 31(3): 433–464.
- Bartley T (2010). Transnational private regulation in practice: The limits of forest and labor standards certification in Indonesia. *Business and Politics*. 12(3): 1–34.
- Bartley T (2011). Certification as a mode of social regulation. In: Levi-Faur D, ed. *Handbook on the Politics of Regulation*. The Hebrew University of Jerusalem. 441–4562.
- Bartley T, Koos S, Samel H, Setrini G and Summers N (2015). *Looking Behind the Label: Global Industries and the Conscientious Consumer*. Indiana University Press. Bloomington, IN.
- Beisheim M and Dingwerth K (2008). Procedural legitimacy and private transnational governance: Are the good ones doing better? SFB-Governance Working Paper Series No. 14. DFG Research Centre. Berlin.
- Bennett EA (2017). Who governs socially-oriented voluntary sustainability standards? Not the producers of certified products. *World Development*. 91: 53–69.
- Bennett EA (2018). Voluntary sustainability standards: A squandered opportunity to improve workers' wages. *Sustainable Development*. 26(1): 65–82.
- Bernstein S and Cashore B (2007). Can non-state global governance be legitimate? An analytical framework. *Regulation & Governance*. 1(4): 347–371.
- Bissinger K, Brandi C, Cabrera de Leicht S, Fiorini M, Schleifer P, Fernandez de Cordoba S and Elamin N (2020). *Linking Voluntary Standards to Sustainable Development Goals*. International Trade Centre. Geneva.
- Bradford A (2020). *The Brussels Effect. How the European Union Rules the World*. Oxford University Press. Oxford.
- Bright C, Marx A, Pineau N and Wouters J (2020). Toward a corporate duty for lead companies to respect human rights in their global value chains? *Business and Politics*. 22(4): 667–697.
- Carlson KM, Heilmayr R, Gibbs HK, Noojipady P, Burns DN, Morton DC, Walker NF, Paoli G and Kremen C (2018). Effect of oil palm sustainability certification on deforestation and fire in Indonesia. *Proceedings of the National Academy of Sciences*. 115(1): 121–126.

- Cashore B (2002). Legitimacy and the privatization of environmental governance: How non-state market-driven (nsmd) governance systems gain rule-making authority. *Governance*. 15: 503–529.
- Collins B, Evans A, Hung M and Katzenstein S (2017). *The New Regulators? Assessing the Landscape of Multi-Stakeholder Initiatives*. MSI Integrity and Kenan Institute for Ethics, Duke University. Durham, NC.
- Deere Birkbeck C (2021). Greening international trade: Pathways forward. Global Governance Centre and the Forum on Trade, Environment & the SDGs (TESS). Geneva.
- DeFries RS, Fanzo J, Mondal P, Remans R and Wood SA (2017). Is voluntary certification of tropical agricultural commodities achieving sustainability goals for small-scale producers? A review of the evidence. *Environmental Research Letters*. 12(3), 033001.
- Depoorter C and Marx A (2022). Seeing the Trees for the Forest: Adoption Dynamics of the Forest Stewardship Council. *Applied Economic Perspectives and Policy*. 44, 4: 1788–1806.
- Depoorter C, Marx A, Otteburn K (2021). *Multistakeholder Governance*. GLOBE Report. GLOBE EU Horizon 2020 Framework Programme. Barcelona.
- Dingwerth K (2007). *The New Transnationalism: Transnational Governance and Democratic Legitimacy*. Palgrave MacMillan: Basingstoke.
- Ecolabel Index (2022) Ecolabel Index. Available at: <https://www.ecolabelindex.com/>.
- Elamin NEA and Fernandez de Cordoba S (2020). The trade impact of voluntary sustainability standards: A review of empirical evidence: UNCTAD Research Paper No. 50. Geneva.
- Estrella A, Navichoc D, Kilian B and Dietz T (2022). Impact pathways of voluntary sustainability standards on smallholder coffee producers in Honduras: Price premiums, farm productivity, production costs, access to credit. *World Development Perspectives*, 27, 100435.
- Evidensia. Approach and Methodology (2019). Available at <https://www.evidensia.eco/about-evidensia/approach-methodology/>. <https://doi.org/10.1787/9789264055698-4-en>.
- Evidensia. 2022. Available at: <https://www.evidensia.eco/>.
- European Commission (2020). Public Procurement. Available at https://ec.europa.eu/growth/single-market/public-procurement_en.
- European Commission (2022). Consumer Policy – Strengthening the Role of Consumers in the Green Transition. Available at https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12467-Consumer-policy-strengthening-the-role-of-consumers-in-the-green-transition_en.
- European Court of Auditors (2016). Special Report: The EU system for the certification of sustainable biofuels. Available at https://www.eca.europa.eu/Lists/ECADocuments/SR16_18/SR_BIOFUELS_EN.pdf.
- Faggi AM, Zuleta GA, Homberg M (2014). Motivations for implementing voluntary environmental actions in Argentine forest companies. *Land Use Policy*. 41: 541–549.
- Fairtrade (2019). Fairtrade Annual Report 2018–2019. Available at https://files.fairtrade.net/publications/2018-19_FI_AnnualReport.pdf.
- Fiorini M, Hoekman B, Jansen M, Schleifer P, Solleder O, Taimasova R and Wozniak J (2019). Institutional design of voluntary sustainability standards systems: Evidence from a new database. *Development Policy Review*. 37: 193–212.
- Fransen L (2011) Why do private governance organizations not converge? A political-institutional analysis of transnational labor standards regulation. *Governance*. 24: 359–387.

- Galati A, Gianguzzi G, Tinervia S, Crescimanno M and La Mela Veca DS (2017). Motivations, adoption and impact of voluntary environmental certification in the Italian forest based industry: The case of the FSC Standard. *Forest Policy and Economics*. 83: 169–176.
- Garrett R and Pfaff A (2019). When and why supply-chain sustainability initiatives “work”: Linking initiatives’ effectiveness to their characteristics and contexts. Meridian Institute. Washington, DC.
- Gereffi G, Garcia-Johnson R and Sasser E (2001). The NGO-industrial complex. *Foreign Policy*, 125: 56–65.
- Grabs J (2020). *Selling Sustainability Short? The Private Governance of Labor and the Environment in the Coffee Sector*. Cambridge University Press. Cambridge.
- Grabs J, Auld G and Cashore B (2020). Private regulation, public policy, and the perils of adverse ontological selection. *Regulation & Governance*. 15: 1183–1208. See <https://onlinelibrary.wiley.com/doi/full/10.1111/rego.12354>.
- Grassnick N and Brümmer B (2021). Do voluntary sustainability standards ‘increase countries’ access to cocoa export markets? GlobalFood Discussion Papers No. 150. Leibniz Information Centre for Economics, ZBW, Kiel.
- Guan Z and Ip Ping Sheong JKF (2019). The restricting effects of forest certification on the international trade of wood products. *Journal of Sustainable Forestry*. 38(8): 809–826.
- Gulbrandsen LH (2004). Overlapping public and private governance: Can forest certification fill the gaps in the global forest regime? *Global Environmental Politics*. 4(2): 75–99.
- Gulbrandsen LH (2008). Accountability arrangements in non-state standards organizations: Instrumental design and imitation. *Organization*. 15: 563–583.
- Haggard J, Asigbaase M, Bonilla G, Pico J and Quilo A (2015). Tree diversity on sustainably certified and conventional coffee farms in Central America. *Biodiversity and Conservation*. 24(5): 1175–1194.
- Hainmueller J, Hiscox M J and Sequeira S (2015). Consumer demand for fair trade: Evidence from a multistore field experiment. *Review of Economics and Statistics*. 97(2): 242–256.
- Hoekman B (2014). Supply chains, mega-regionals and multilateralism: A road map for the WTO. Robert Schuman Centre for Advanced Studies. Research Paper No. RSCAS, 27. Fiesole FI, Italy.
- Holvoet B and Muys B (2004). Sustainable forest management worldwide: A comparative assessment of standards. *International Forestry Review*. 6: 99–122.
- Ingenbleek P and Reinders MJ (2013). The development of a market for sustainable coffee in the Netherlands: Rethinking the contribution of fair trade. *Journal of Business Ethics*. 113(3): 461–474.
- Irwin DA (2020). *Free Trade Under Fire*. Princeton University Press. Princeton, NJ.
- ISEAL Alliance (2016). Chain of custody models and definitions. ISEAL Alliance. London.
- ITC (2019). *The European Union market for sustainable products: The retail perspective on sourcing policies and consumer demand*. Geneva.
- ITC (2021). *The State of Sustainable Markets 2021: Statistics and Emerging Trends*. Geneva
- ITC (2022). ITC Standards Map App. Available at <https://standardsmap.org/en/identify>.
- Korea Forest Service (2017). Act on the Sustainable Use of Timbers. Available at: <https://www.documents.clientearth.org/wp-content/uploads/library/2017-09-22-korean-act-on-the-sustainability-of-woodext-en.pdf>.

- Korea Forest Service (2018). Detailed standards for determining the legality of imported timber and timber products. Available at: <https://www.forest.go.kr/images/data/down/Detailed%20Standards%20for%20Determining%20the%20Legality%20of%20Imported%20Timber%20and%20Timber%20Products.pdf>.
- LeBaron G, Lister J and Dauvergne P (2017). Governing global supply chain sustainability through the ethical audit regime. *Globalizations*. 14(6): 958–975.
- Levy D, Reinecke J and Manning S (2016). The political dynamics of sustainable coffee: Contested value regimes and the transformation of sustainability. *Journal of Management Studies*. 53(3): 364–401.
- Locke R M (2013). *The Promise and Limits of Private Power: Promoting Labor Standards in a Global Economy*. Cambridge Studies in Comparative Politics, Cambridge University Press. Cambridge and New York, NY.
- Loconto A and Dankers C (2014). Impact of international voluntary standards on smallholder market participation in developing countries: A review of the literature. Food and Agriculture Organization of the United Nations. Rome.
- Martin-Ortega O and O'Brien CM, eds. (2019). *Public Procurement and Human Rights*. Edward Elgar Publishing. Cheltenham.
- Marx A (2008). Limits to non-state market regulation: A qualitative comparative analysis of the international sport footwear industry and the Fair Labor Association. *Regulation & Governance*. 2(2): 253–273.
- Marx A (2013). Varieties of legitimacy: A configurational institutional design analysis of eco-labels. *Innovation: European Journal of Social Science Research*. 26: 268–287. See <https://www.tandfonline.com/doi/abs/10.1080/13511610.2013.771892>.
- Marx A (2014). Legitimacy, institutional design, and dispute settlement: The case of eco-certification systems. *Globalizations*. 11: 401–416.
- Marx A (2017). The public-private distinction in global governance: How relevant is it in the case of voluntary sustainability standards? *Chinese Journal of Global Governance*. 3: 1–26. See https://brill.com/view/journals/cjgg/3/1/article-p1_1.xml?language=en.
- Marx A (2019.) Public procurement and human rights: Current role and potential of voluntary sustainability standards. pp. 132-149 In: Martin-Ortega O and O'Brien CM, eds. *Public Procurement and Human Rights*. Edward Elgar Publishing. Cheltenham:
- Marx A and Cuypers D (2010). Forest certification as a global environmental governance tool: What is the macro-effectiveness of the Forest Stewardship Council? *Regulation & Governance*. 4(4): 408–434.
- Marx A and Wouters J (2015a). Competition and cooperation in the market of voluntary sustainability standards. In: Delimatsis P, ed. *The Law, Economics and Politics of International Standardisation*. Cambridge University Press. Cambridge: 215–241.
- Marx A and Wouters J (2015b). Redesigning enforcement in private labour regulation: Will it work? *International Labour Review*. 155: 435–459.
- Marx A and Wouters J (2018). Explaining new models of global voluntary regulatory organizational studies contribute? *Global Policy*. 9(1): 121–128.
- Marx A and Depoorter C (2021). Achieving the Global 2030 Agenda: What role for voluntary sustainability standards? In: von Schnurbein G, ed. *Transitioning to Strong Partnerships for the Sustainable Development Goals*. Multidisciplinary Digital Publishing Institute (MDPI). Basel: 95–110.
- Marx A, Depoorter C and Vanhaecht R (2021). Voluntary sustainability standards: State of the art and future research. *Standards*. 2(1): 14–31.

- Marx A and Depoorter C (2022). Voluntary Sustainability Standards. In: Delimatsis P and Reins L, eds. *Encyclopedia of Trade and Environmental Law*. Cheltenham: Edward Elgar Publishing, 704-714.
- Meemken E M (2020). Do smallholder farmers benefit from sustainability standards? A systematic review and meta-analysis. *Global Food Security*. 26, 100373.
- Meier C, Sampson G, Larrea C, Schlatter B, Voora V, Dang D, Bermudez S, Wozniak J and Willer H (2020). *The State of Sustainable Markets 2020: Statistics and Emerging Trends*. International Trade Centre. Geneva.
- Morin JF, Dür A and Lechner L (2018). Mapping the trade and environment nexus: Insights from a new data set. *Global Environmental Politics*. 18(1): 122–139.
- MSI Integrity (2020). *Not Fit-for-Purpose: The Grand Experiment of Multi-Stakeholder Initiatives in Corporate Accountability, Human Rights and Global Governance*. See https://www.msi-integrity.org/wp-content/uploads/2020/07/MSI_Not_Fit_For_Purpose_FORWEBSITE.FINAL_.pdf.
- OECD (2020). Trade policy implications of global value chains. Paris. Available at <https://www.oecd.org/trade/topics/global-value-chains-and-trade/>.
- O'Rourke D (2012). *Shopping for Good*. MIT Press. Cambridge, MA.
- Oya C, Schaefer F and Skalidou D (2018). The effectiveness of agricultural certification in developing countries: A systematic review. *World Development*. 112: 282–312.
- Ponte S (2019). *Business, Power and Sustainability in a World of Global Value Chains*. Bloomsbury Publishing. London.
- Power M (1997). *The Audit Society: Rituals of Verification*. Oxford University Press. Oxford.
- Rickenbach M and Overdevest C (2006) More than markets: Assessing Forest Stewardship Council (FSC) certification as a policy tool. *Journal of Forestry*. 104: 143–147.
- Sabel C, O'Rourke D and Fung A (2000). Ratcheting labor standards: Regulation for continuous improvement in the global workplace. Columbia Law and Economic Working Paper No. 185. Columbia Law School, New York, NY.
- Scharpf FW (1999). *Governing in Europe: Effective and Democratic?* Oxford University Press. Oxford.
- Schleifer P, Fiorini M and Fransen L (2019). Missing the bigger picture: A population-level analysis of transnational private governance organizations active in the Global South. *Ecological Economics*. 164 106362
- Strathern M (2000). *Audit Cultures*. Routledge. London.
- Takahashi T (2001). *Why firms participate in environmental voluntary initiatives: Case studies in Japan and Canada* (PhD. thesis). University of British Columbia, Vancouver, BC.
- Takahashi R and Todo Y (2013). The impact of a shade coffee certification program on forest conservation: A case study from a wild coffee forest in Ethiopia. *Journal of Environmental Management*, 130: 48–54.
- Takahashi R and Todo Y (2014). The impact of a shade coffee certification program on forest conservation using remote sensing and household data. *Environmental Impact Assessment Review*. 44: 76–81.
- Taufique KM, Vocino A and Polonsky MJ (2017). The influence of eco-label knowledge and trust on pro-environmental consumer behaviour in an emerging market. *Journal of Strategic Marketing*. 7: 511–529.
- Taylor C, Balmford A, Buchanan GM, Butchart SHM, Ducharme H, Green RE, Milder JC, Sanderson FJ, Thomas DHL, Vickery J and Phalan B (2017). Global coverage of agricultural sustainability standards, and their role in conserving biodiversity. *Conservation Letters*. 10: 610–618.

- Thøgersen J, Haugaard P and Olesen A (2017). Consumer responses to ecolabels. *European Journal of Marketing*. 44(11/12): 1787–1810.
- Traldi R (2021). Progress and pitfalls: A systematic review of the evidence for agricultural sustainability standards. *Ecological Indicators*. 125, 107490.
- UNFCCC (2021). Gabon's Proposed Modified National REDD+ Forest Reference Level – Conseil National Climat, Gabonese Republic. Available at https://redd.unfccc.int/files/gabon_frl_modified_oct2021_clean_final.pdf.
- UNCTAD (2013). Non-tariff measures to trade: Economic and policy issues for developing countries. Available at https://unctad.org/system/files/official-document/ditctab20121_en.pdf.
- UNCTAD (2019). *Trade Policies and Their Impact on Inequalities* (United Nations publication. Sales No. E.19.II.D.21. Geneva). Available at https://unctad.org/system/files/official-document/tdb66_d4_en.pdf.
- UNCTAD (2021a). *Better Trade for Sustainable Development: The Role of Voluntary Sustainability Standards*. Available at <https://unctad.org/meeting/better-trade-sustainable-development-role-voluntary-sustainabilitystandards-vss>.
- UNCTAD (2021b). *The Bridgetown Covenant: From Inequality and Vulnerability to Prosperity for All*. Available at https://unctad.org/system/files/official-document/td541add2_en.pdf.
- UNCTAD (2022). *NTMs from A to Z*. (United Nations publication eISBN: 978-92-1-001189-1).
- UNCTAD (2022). *Global Trade Update*. Available at <https://unctad.org/webflyer/global-trade-update-february-2022>. Geneva.
- UNFSS (2013). *Voluntary Sustainability Standards. Today's Landscape of Issues and Initiatives to Achieve Public Policy Objectives*. United Nations Forum on Sustainability Standards. Part 1: Issues, and Part 2: Initiatives. Available at https://unfss.org/wp-content/uploads/2012/05/unfss-report-issues-1_draft_lores.pdf; https://unfss.org/wp-content/uploads/2012/05/unfss-report-initiatives-2_draft_lores.pdf.
- UNFSS (2016). *Meeting Sustainability Goals: Voluntary Sustainability Standards and the Role of the Government*. 2nd Flagship Report. Geneva.
- UNFSS (2020). *Scaling up Voluntary Sustainability Standards Through Sustainable Public Procurement and Trade Policy*. Geneva.
- UNFSS (2022). *Voluntary Sustainability Standards, Sustainability Agenda and Developing Countries: Opportunities and Challenges*. Geneva.
- Van der Ven H (2019). *Beyond Greenwash: Explaining Credibility in Transnational Eco-Labeling*. Oxford University Press. Oxford
- Vogel A (2005). *The Market for Virtue: The Potential and Limits of Corporate Social Responsibility*. Brookings Institution Press. Washington, DC.
- WTO (2018). *Mainstreaming Trade to Attain the Sustainable Development Goals*. Geneva. Available at https://www.wto.org/english/res_e/booksp_e/sdg_e.pdf.
- WTO (2022). MC12 outcome document. Available at <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/MIN22/24.pdf&Open=True>.
- WWF (2017). *SDGs Mean Business: How Credible Standards Can Help Companies Deliver the 2030 Agenda*. WWF-ISEAL joint report. Gland, Switzerland. Available at <https://sustainablefdi.org/index.php/resourcecenter/pin/564>.



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