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POLICY ANALYSIS

Global governance through voluntary sustainability standards: Developments, trends and challenges

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Abstract

Voluntary Sustainability Standards (VSS) are transnational governance instruments that can be leveraged to pursue sustainable development in global value chains. They have proliferated since the 1990s in terms of their number and the share of global production they govern. This paper shares some key insights arising from the considerable body of literature that has analysed the role of these instruments for sustainable production and trade. First, it introduces VSS, traces the evolution of their adoption and takes stock of the research on their sustainability impacts. Next, some major developments in the VSS realm are discussed, related to public policy and the emergence of national sustainability standards. The paper then zooms in on the challenges and limitations of VSS in transforming value chains towards sustainability, focusing on the shortcomings related to inclusiveness and the problems arising from their proliferation. The paper concludes by distilling recommendations on overcoming these challenges, especially in light of recent policy developments, and outlines what different stakeholders can do to make VSS more effective and inclusive instruments for sustainable value chains.

1 | VOLUNTARY SUSTAINABILITY STANDARDS AS A GLOBAL GOVERNANCE INSTRUMENT

International trade has expanded significantly over the past few decades, supporting economic development in many parts of the world (UNCTAD, 2022). While international trade can bring significant benefits, it has also generated environmental and social concerns (UNCTAD, 2023). The important link – including synergies and trade-offs – between trade and sustainable development has been widely recognised and also stressed in the 2015 Sustainable Development Goals (WTO, 2018).

Public and private policy-making processes have both sought to make trade more sustainable. Public

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efforts are apparent in the emergence of sustainability provisions in trade agreements (Brandi & Morin, 2023; ILO, 2023), the strengthening of sustainability commitments in Generalized Schemes of Preferences (UNFSS, 2020) and discussions on sustainability in the WTO (Hoekman et al., 2023). Private efforts have centred on initiatives that aim to make the economic activities occurring along global value chains (GVC) more sustainable (Auld, 2014; Bartley, 2007; Gulbrandsen, 2010). Captured under different terms over the years, such as private standards, multi-stakeholder initiatives, certification schemes and eco-labels, they are now most commonly known as voluntary sustainability standards (VSS).

Voluntary Sustainability Standards prescribe a set of social, economic and/or environmental requirements that private actors can voluntarily adopt or comply with to make their sourcing strategies or their production and processing practices more sustainable (UNCTAD, 2022). Upon verification of compliance with their rules, usually through a third-party certification body, certificates are issued that serve as proof of compliance. VSS reward economic actors for producing goods or services sustainably, in theory, by facilitating market access, generating price premiums and/or guaranteeing minimum prices for those goods or services (Auld, Bernstein, & Cashore, 2008; Estrella et al., 2022). These new governance initiatives were welcomed by some as '*one of the most innovative and startling institutional designs of the past 50 years*' (Cashore et al., 2004, p. 4) and have gained prominence and legitimacy over the past three decades as a major transnational governance tool and a new type of cooperation (Auld, 2014; Cashore, 2002; Chaturvedi et al., 2021; Negi et al., 2020). Prominent examples of VSS active globally include Fairtrade International, the Forest Stewardship Council (FSC), the Marine Stewardship Council (MSC), the Roundtable on Sustainable Palm Oil (RSPO), the Better Cotton Initiative (BCI), the Fair Wear Foundation (FWF) and the Rainforest Alliance (RA) – among many others.

The rise to prominence of VSS has led to increased public recognition of their role in broader policy approaches and instruments and to their further institutionalisation. The literature on public-private interactions (Lambin et al., 2014; Marques & Eberlein, 2021; Schleifer & Fransen, 2022; UNFSS, 2020) highlights the main forms through which VSS are integrated in public policy instruments. Concrete examples include the integration of references to VSS in free trade agreements, the use of VSS in sustainable public procurement, the recognition of VSS as proof of compliance in different types of regulatory measures and legislative acts, the incentivisation of VSS uptake in export promotion policies and the support by international donors for VSS in private sector development policies. We further describe this process of institutionalisation in the section on new major developments.

However, recently some concerns have been raised with regard to the specific role of VSS in global governance. VSS, for example, can potentially impede trade, especially for producers in low- and middle-income countries who are excluded from value chains in which certification is becoming de facto mandatory (Negi et al., 2020; UNCTAD, 2022). Capabilities as well as costs related to certification, compliance and monitoring make it difficult for some producers and smallholders to obtain certification, especially when these costs are not offset by sufficient revenue and/or price premiums (Boonaert & Maertens, 2023; Brandi et al., 2015). Moreover, concerns are voiced over their effectiveness in terms of sustainability impacts and their limited ability to operate in an inclusive manner and to address issues of inequality. Finally, due to the large number and diversity of VSS, problems have been highlighted in relation to greenwashing and the credibility of some VSS. These issues are further discussed in Section 4 where we focus on some of the major challenges that arise with the spread of VSS and how they can be addressed.

In an effort to take stock of these developments, the United Nations Forum on Sustainability Standards (UNFSS) established an Academic Advisory Council (AAC).[1] The aim of the AAC is to create a dialogue between academia and the policy community and feed scientific knowledge into the policy debate. Over the last 4 years, several annual meetings, workshops and activities were organised to discuss current trends and developments and identify challenges related to VSS. This Global Policy Insight paper aims to share the main lessons gained from these discussions complemented with key insights from the literature on VSS.

Lessons learned from this assessment address different actors in the VSS 'ecosystem'. We reflect upon several implications that relate to their current approach towards sustainability governance and its future place in the regulatory landscape of transnational business regulation. We also draw implications for businesses, national governments and international organisations.

In the rest of this article, we first introduce VSS and discuss their adoption dynamics and impacts on the three main dimensions of sustainability (social, economic and environmental). Next, we highlight some major developments in the VSS realm relating to public policy and the emergence of national standards. We then examine challenges and limitations of VSS in transforming value chains towards sustainability, focusing on shortcomings in inclusiveness and challenges related to their diversity. We conclude by distilling recommendations to overcome these challenges and by suggesting priority actions for different stakeholders with a view to shaping more sustainable value chains.

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2 | HOW VSS WORK, THEIR ADOPTION AND IMPACTS

Voluntary Sustainability Standards organisations develop standards for sustainable production usually in three distinct steps. First, they propose a set of foundational principles and, sometimes, a theory of change on sustainability which will determine their approach to sustainability standard-setting. Second, they translate these principles into measurable indicators of actions that adopters can implement to demonstrate compliance. Third, they develop an institutional framework to monitor adopters' compliance with these standards. These different steps, idealised here for clarity, are in reality the result of complex social processes and power relations evolving over time.

Voluntary Sustainability Standards organisations typically ensure compliance with their standards in two ways (see Figure 1): by means of conformity assessment procedures through initial and surveillance audits (top-down or ex-ante conformity assessment; plain black arrows), and through complaint or grievance mechanisms (bottom-up or ex-post conformity assessment; dashed arrows and italic; UNCTAD, 2022). Figure 1 shows the different actors and processes involved in this general VSS approach and how they relate to each other in the context of fostering compliance with standards (for other models, such as participatory assurance systems, see Loconto, 2017).

2.1 | VSS emergence and adoption trends

Voluntary Sustainability Standards have gained importance as value chain sustainability governance tools, and a large body of research has followed their development (see a systematic review of the literature on the input into creating and governing VSS, their institutionalisation and impacts in de Bakker et al., 2019). First, the number of VSS operating globally has increased over recent decades. Figure 2 shows the evolution of the number of VSS over the last eight decades. This evolution captures the variety of VSS currently active, including VSS covering different sectors, multiple VSS within one sector and different types of VSS (stringent versus less stringent ones, public and private ones, etc.) (*infra*). Factors driving the notable VSS proliferation between 1990 and 2020 include increased consumer demand for ethical and sustainable products (O'Rourke, 2012), government and donor support and use of instruments to govern transnationally on sustainability concerns (Gulbrandsen, 2010; Krauss & Krishnan, 2022; Schleifer, 2017; UNFSS, 2022), company commitments on sustainability driven by shareholder/stakeholder demands (Auld, Bernstein, & Cashore, 2008; Gereffi et al., 2001; van der Ven, 2019), ideational and norm entrepreneurs (e.g. Rainforest Alliance, WWF or ISEAL) that carried the certification model to a growing number of sectors (Auld et al., 2007; Loconto & Fouilleux, 2014), and a search by the policy community for public-private innovations to develop more sustainable production systems (Auld et al., 2015; Rickenbach & Overdevest, 2006). More recently, the number of VSS has been stagnating, probably as a result of saturation and consolidation in the VSS market (UNCTAD, 2022).

Second, VSS have gained importance in terms of the extent to which they are adopted. This can be measured, for example, by the share of certified production area or volume in specific sectors. Although VSS exist in very diverse sectors such as jewellery, electronics or mining, they are mostly prevalent in land-use and natural resource sectors, including agriculture, aquaculture,

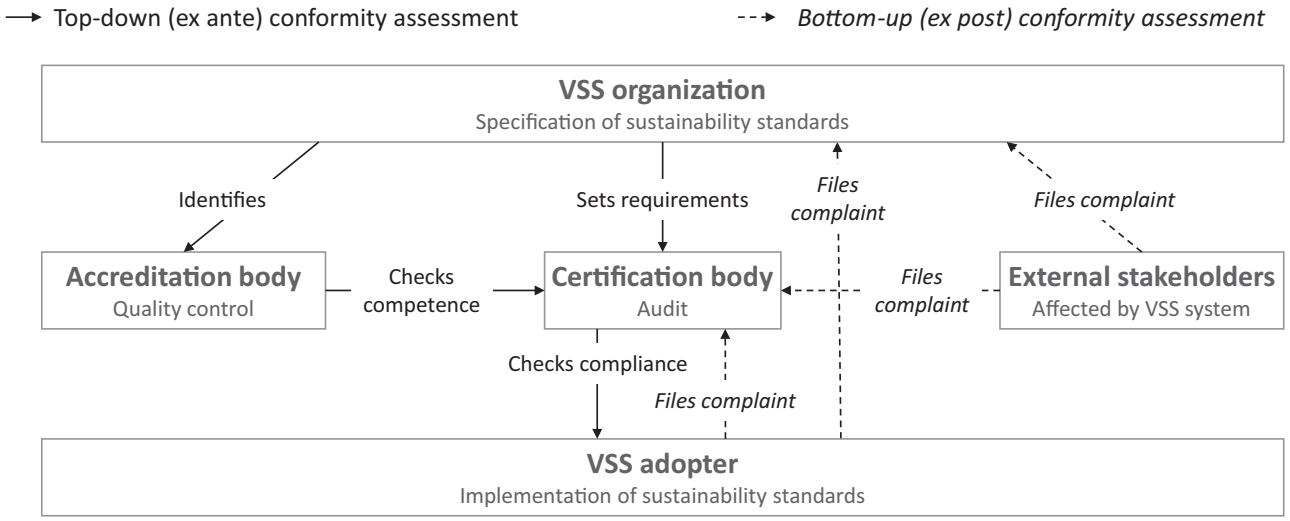

FIGURE 1 Top-down and bottom-up compliance assessments. *Source*: Authors based on UNCTAD (2022).

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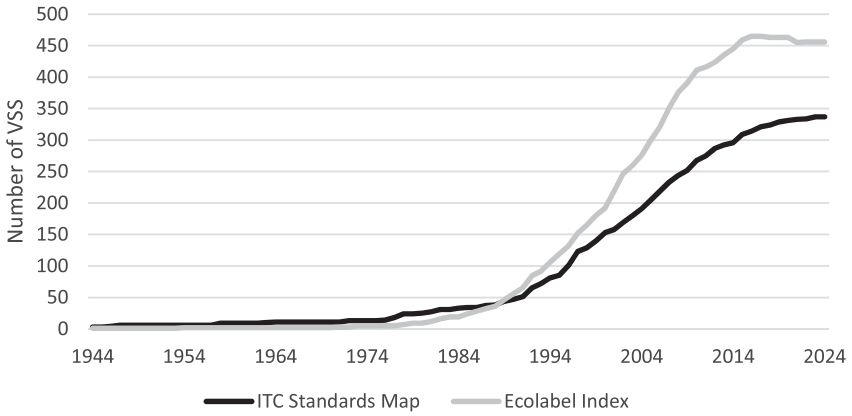

FIGURE 2 Evolution in the number of VSS, 1944–2024. *Source*: Authors, data from ITC Standards Map (https://standardsmap.org/en/identify) and Ecolabel Index (https://www.ecolabelindex.com/).

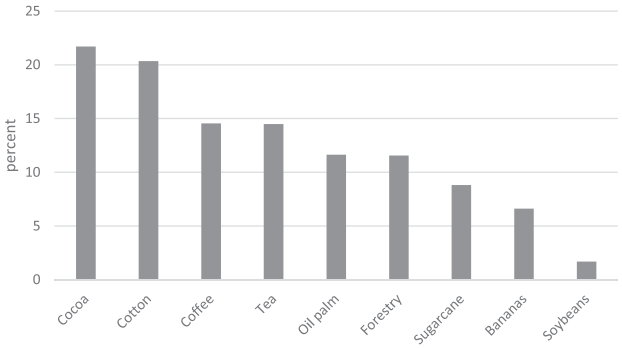

FIGURE 3 Share of certified production area in total production area, by selected commodity, 2021. *Source*: Authors based on Kemper et al. (2023).

fisheries, forestry and textiles/garments, where they certify significant shares of global production. Figure 3 shows that for some commodities such as cocoa and cotton, more than 20% of global production area is certified; similarly, close to 15% of coffee and tea production area is certified. However, this does not mean that all production coming from these areas is sold as certified – in many markets, actual demand for certified products is lower than the supply available.

Overall certified production is increasing steadily in most sectors; yet, there are also sector- and VSS-specific dynamics depicting more nuanced evolutions. For example, the coffee sector has experienced a 33% drop in certified area between 2017 and 2021, mostly due to a decrease in 4C-certified coffee (possibly explained by the major standard revision that the scheme operated, increasing its stringency; Kemper et al., 2023). In addition, there is evidence that the full institutionalisation and recognition of VSS by (inter-) governmental and private actors, which is critical for their up-scaling, is not fully materialising even in sectors with a high proportion of certified products, such as coffee. Grabs (2020a) analyses whether institutionalisation has occurred in the coffee sector and finds that norm generation around sustainability has advanced considerably. However, this does not fully translate into internalising social and environmental externalities in production processes. Depoorter and Marx (2022) study the adoption of FSC (hectares of certified forest area) over a 20-year period and highlight distinct adoption trends across countries, including growth, stagnation as well as a decline in certified forest area in specific countries, which are determined by economic, social, environmental and institutional factors, such as competition from other VSS or support from governments.

2.2 | VSS sustainability impacts

Although adoption is necessary for VSS to have the potential to steer global production towards sustainability, it is not sufficient. VSS also need to be effective in actually generating sustainability impacts. Several impact and review studies[2] conclude that the evidence on the impacts of VSS is mixed and context-specific, with varying results, depending on the sustainability indicators measured, the VSS under analysis (including their variation in approach and stringency), the specificities of the sector and country in which they operate, among other factors (Auld, Gulbrandsen, & McDermott, 2008; DeFries et al., 2017; Garrett et al., 2021; Meemken, 2020; Oya et al., 2018; Schleifer & Sun, 2020; UNFSS, 2022). It should be noted that there is no sector, region, or specific VSS that has been overwhelmingly successful in consistently meeting its stated objectives. At the same time, there are many instances of VSS improving sustainability outcomes. In this section, we highlight the results of some impact studies on the three dimensions of sustainability – environmental, social and economic – to provide an overview of the potential contribution of VSS in addressing sustainability challenges.

On the environmental dimension, studies have examined environmental outcomes and impact parameters,

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such as deforestation, as well as whether prescribed environmental practices from VSS requirements are indeed implemented, such as biodiversity protection measures or reduced chemical application in agricultural production. Concerning outcomes, Lambin et al. (2018) describe a mixed picture of the effects of certification on reducing deforestation. Rueda et al. (2015) find that tree cover in certified coffee plantations in the eastern Andes, Colombia, increased significantly more than in non-certified plantations. Blackman et al. (2018) find no significant effect of FSC certification on preventing deforestation in Mexico, while Heilmayr and Lambin (2016) find that FSC certification in Chile did slow the conversion of native forests to plantations. In a recently published paper, Zwerts et al. (2024) show that there are more mammals, especially large species and species of high conservation priority, in FSC-certified forests compared to non-FSC-certified forests.

Milder et al. (2016) studied the effects of Rainforest Alliance certification on biodiversity protection practices in the tourism sector across six Latin American countries and found that certification enhanced compliance with biodiversity criteria, especially for enterprises that were previously less sustainable. In relation to climate change and climate resilience, Thompson et al. (2022) find that cocoa certification in Ghana has a strong effect on basic management practices, but far less on more complex resilience strategies such as agroforest diversification. Blackman and Naranjo (2012) study coffee farms in Central Costa Rica and find that organic certification reduces the use of pesticides, chemical fertilisers and herbicides, and increases the adoption of environmentally friendly management. Grabs (2020b) finds that among certified coffee smallholders, environmental practices with economic co-benefits such as improving input efficiency are more often taken up than practices that create long-term costs or might incur yield losses such as diverse agroforestry.

Although many of these studies explore how VSS affect environmental performance within certified value chains, VSS also have the potential to transform broader market conditions and production practices, driving either leakage or positive spillovers to other value chains. For example, Heilmayr et al. (2020) show that oil palm sustainability certification in Indonesia led to changes in deforestation patterns in non-certified value chains. These spillovers included both a decline in illegal deforestation and an acceleration in legal deforestation within non-certified value chains. Collectively, these findings suggest that certification has some potential to enhance environmental conservation, but other interventions that complement and accompany VSS are necessary to improve their effectiveness and aggregate impact.

The social impacts of VSS are also heterogeneous (Meemken, 2020; Terstappen et al., 2013). Studies focusing on health and educational outcome indicators document positive effects of VSS adoption. Asfaw et al. (2010), for instance, find that EurepGAP uptake among smallholder horticulture farmers in Kenya improved farmers' health through better and less hazardous pesticide use. Sellare et al. (2020) show that Fairtrade certification of cocoa farmers in Côte d'Ivoire, despite increasing agrochemical input use, reduced pesticide-related health problems for farmers and farm workers. Another study by Akoyi et al. (2020) on child well-being related to coffee certification in Uganda and Ethiopia finds positive effects of Fairtrade certification on child schooling, although not associated with a reduction of child labour on farms. They also study the effect of Rainforest Alliance certification on the same indicators and find no effect on schooling for boys and slightly reduced schooling of girls, yet reduced child labour. They conclude that child labour prohibition alone by VSS is not sufficient to enhance schooling, and that awareness-raising and enhancing social capital are necessary to improve children's wellbeing. Chiputwa and Qaim (2016) find that women in Fairtrade-certified farm households in Uganda have greater control over cash income from coffee production, resulting in better nutritional outcomes in these households (similar to findings of Schleifer & Sun, 2020). Concerning impact on workers and labour conditions, current literature seems to suggest that VSS are more effective in inducing higher wages and better employment conditions on large-scale (cooperative) farms than on smallholder farms (Krumbiegel et al., 2018; Meemken et al., 2019).

Finally, on the economic dimension, studies have investigated both the micro-economic and macro-economic effects of VSS. On the micro-economic dimension, a review study by Oya et al. (2018) finds that VSS uptake among smallholders has significant positive effects on producer prices and (small) effects on farm income from certified crops, but no significant effects on crop yields or the total income or poverty status of the farming household. Garrett et al. (2021) and Vanderhaegen et al. (2018) find that income effects are usually associated with productivity gains rather than price effects. In addition, price effects are stronger for higher-value products, especially fresh produce, than for tropical commodities. Price effects are also more evident for VSS that apply a system of quality-based price differentiation than for VSS that apply a price premium or a floor price (Boonaert & Maertens, 2023). The economic benefits of certification for producers also depend on the share of their production that they can sell under certified conditions. In many crops such as coffee, certified supply typically exceeds demand, which has both driven down market-based price premiums and increased the likelihood that producers sell a significant share of their crop into the mainstream market (Boonaert & Maertens, 2023; de Janvry et al., 2015; Grabs, 2020a, 2020b; see also Section 4.1). Lastly, it should be noted that, although a small portion of VSS

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refers to living, fair, or decent wages for workers, this is seldom implemented. Thus, VSS do not generally raise wages above the legal minimum (Bennett, 2018).

On the macro-economic dimension, studies typically analyse the impact of VSS as catalysts or barriers to trade. On the one hand, it is suggested that VSS can help increase export volumes by fulfilling the demand for sustainable products and increasing yields, as well as export value through price premiums and quality gains (Elamin & Fernandez de Córdoba, 2020). On the other hand, VSS can embody trade barriers when they become de facto mandatory to access specific markets, hence tendentially excluding smallholder producers and other vulnerable actors from export value chains due to high compliance, monitoring and certification costs (UNCTAD, 2008). Exploring this conundrum, Fiankor et al. (2019) find a trade-enhancing effect of certification, which varies across products and destination markets. Their results also show that the trade-enhancing effect is more driven by growth in certified production areas rather than by new certified producers. Bemelmans et al. (2023), studying the effect of seven VSS in five tropical commodity sectors globally, find that a one percentage point increase in the share of certified production area increases export value by 1.8%–3.3%. This effect is particularly pronounced when the income and governance gap between trading partners is larger, suggesting that VSS can be used to partly overcome the trade-inhibiting effect of governance distance between countries, i.e. the effect that trade between two countries tends to decline when the governance distance between these countries widens.

VSS have become prominent instruments for sustainability governance in international trade and in some cases generate important environmental benefits and/or improve the wellbeing of farmers, workers and their communities (Rueda & Lambin, 2013). However, they do not systematically generate positive sustainability impacts on all three dimensions of sustainability simultaneously and often involve trade-offs between different dimensions of sustainability (Lee et al., 2020; Vanderhaegen et al., 2018). As a result, VSS are confronted with, and struggle to resolve, the same challenges faced in other policy instruments that aim to pursue sustainability (Hickmann et al., 2024).

These findings have at least three implications. First, we need to better understand under what conditions VSS generate significant positive impacts. In this context, attention is turning to the important role of intermediary actors, such as traders, in the implementation process. A future research agenda to address this research gap is outlined in a recent publication by Grabs et al. (2024) focusing on understanding the diversity of intermediaries and the different functions they perform. Second, questions exist about the best theory of change VSS ought to adopt to strengthen their impact effectiveness. Extant research identifies several pathways which VSS can follow to foster sustainability. Auld et al. (2015) distinguish between a logic of compliance and a logic of empowerment and capacity building (for a further refinement, see Estrella et al., 2022; Depoorter & Marx, 2023). The latter logic might be better for implementing sustainability standards, but for several VSS, it can go to the detriment of uptake due to more intensive interactions with certified entities. Understanding this potential trade-off between adoption effectiveness and impact effectiveness and ways to overcome it can be addressed in future research. Third, ongoing questions exist about the value of broad or narrow approaches that either tackle all conceivable dimensions of sustainability or focus on specific dimensions or even sub-dimensions (or targets in an SDG context). While VSS might be more successful in reaching certain targets, this could happen to the detriment of a more holistic approach towards sustainability and might imply that certified entities need to apply for a wider range of certificates (Auld, 2014a). In this context, future research needs to focus on which sustainability challenges can be best addressed by VSS and which need to be tackled by other sustainability governance instruments, and on how to foster synergies among different instruments.

In the next section, we turn to discussing some major developments that have occurred in recent years relating to public policies and the emergence of national and regional standards, which have important implications for VSS adoption and operation.

3 | MAJOR DEVELOPMENTS

3.1 | Public-private interactions

Although VSS are most often defined and operated by private actors, governments play an important role in their adoption by economic actors, both indirectly and directly (Cashore et al., 2007; Grabs et al., 2021; Gulbrandsen, 2014; UNFSS, 2022). Indirectly, governments are key actors in creating an enabling environment in which VSS can be adopted and operated effectively. They do this by establishing political and legal frameworks and other institutions favouring regulatory compliance, and through private sector development that facilitates VSS adoption –for example, through financial and technical support, clear land property rights or infrastructure development (Hernandez et al., 2021; Lambin & Thorlakson, 2018; Loconto & Dankers, 2014; von Essen & Lambin, 2021). Directly, governments influence the adoption of VSS through their public policies (Gulbrandsen, 2014), public procurement and development cooperation policies including South–South and triangular cooperation projects (Pérez-Pineda, 2023). Two main developments in public policies have unfolded in recent years that have

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important implications for VSS: the increasing integration and recognition of VSS in public policy initiatives and the emergence of due diligence regulations.

3.1.1 | VSS integration in public policies

Governments are increasingly recognising and integrating VSS in different types of public policies, hence exploiting public-private complementarities in 'smart mix' policies (Cashore et al., 2021; Gulbrandsen, 2014; Lambin et al., 2014; Schleifer & Fransen, 2022). This integration takes various forms. First, VSS are increasingly used in market access regulations. For example, the Republic of Korea's Act on the Sustainable Use of Timbers (2017) aims to tackle illegal deforestation and prevent illegally harvested timber from being sold in the country's market. The regulation explicitly recognises VSS certificates as proof of compliance with its legality requirements (UNFSS, 2020). Another example is the European Union's (EU) Renewable Energy Directive (RED) (2009), which 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. RED has established a set of sustainability criteria for biofuels, and VSS certificates are recognised as proof of compliance with those criteria – provided the VSS fulfil the substantive and procedural requirements set out in the RED recognition system (Renckens, 2020; Schleifer, 2013). In the same vein, governments can also use VSS as criteria for distributing public support preferentially to certified actors.

Secondly, VSS are increasingly (although indirectly) integrated into public procurement policies. In some countries, public procurement accounts for a significant percentage of gross domestic product, which makes governments key actors in nudging markets towards higher sustainability standards. A growing body of evidence (Gulbrandsen, 2014; Martin-Ortega & O'Brien, 2019; UNFSS, 2020) suggests that public authorities throughout the world are increasingly adopting sustainable procurement as a means to ensure that public contracts contribute to governments' broader environmental and social policy goals. VSS play an increasingly significant role in its operationalisation (UNFSS, 2020). Due to equal treatment and non-discrimination principles, VSS are usually referred to indirectly in sustainable public procurement through the inclusion of sustainability criteria that are similar to standards set by VSS organisations. This inclusion in public procurement has, besides effects on the uptake of VSS, also effects on the development of VSS since the inclusion in public procurement has resulted in an upward convergence of VSS in for example the forestry sector (Gulbrandsen, 2014).

Lastly, governments also integrate references to VSS in trade policy such as free trade agreements (FTAs) and preferential trade agreements (UNFSS, 2020) which establish the conditions for trade between two or more parties in terms of tariffs, trade-related regulations and other issues. Over the past two decades, the content of FTAs has evolved, increasingly incorporating non-trade aspects, such as sustainable development or social and environmental protection provisions (Brandi & Morin, 2023; Morin et al., 2018). At least 19 FTAs currently refer to VSS in a promotional way to encourage information exchange and cooperation on the implementation and follow-up of VSS (UNFSS, 2020). In exceptional cases, VSS feature more prominently in an FTA. For example, in the recent FTA between the European Free Trade Area (EFTA) and Indonesia, VSS-certified palm oil products are subject to lower tariffs than non-certified palm oil products. While the impact of this particular scheme has been questioned, it is a model that could be utilised with respect to other VSS in the future (Harrison, 2023). However, there are ongoing discussions about the compatibility of this type of measure with WTO rules.

In sum, research on smart mixes, transnational hybrid governance and related concepts suggests that productive public-private interactions are possible. Public policymakers can improve the design, uptake and compliance with VSS through the provision of information, capacity building, economic incentives and legal recognition. Conversely, VSS may complement public policies by serving as indicators for compliance, providing information for companies, establishing frameworks for engaging and protecting vulnerable groups, and surpassing the minimum criteria specified in public policies (Schleifer & Fransen, 2022). However, the scholarship on private authority and public policy interactions also shows that private governance can displace or compete with public governance, that it can have unintended consequences and/or that the dynamic of public-private interactions can vary over time (Cashore et al., 2021; Lambin et al., 2014).

3.1.2 | The rise of autonomous sustainability regulations

The recent emergence of autonomous, due diligence-based, regulations, where governments aim to foster sustainable development through value chain governance, has important implications for VSS. Due diligence puts obligations on companies to govern their value chains more sustainably. More specifically, sustainability due diligence is an ongoing, proactive, and reactive process that can be defined by six distinct steps (Figure 4). Companies are asked to identify and address actual or potential risks in view of preventing or mitigating the risks of adverse sustainability impacts associated with their activities, including their sourcing and marketing decisions. Due diligence also requires

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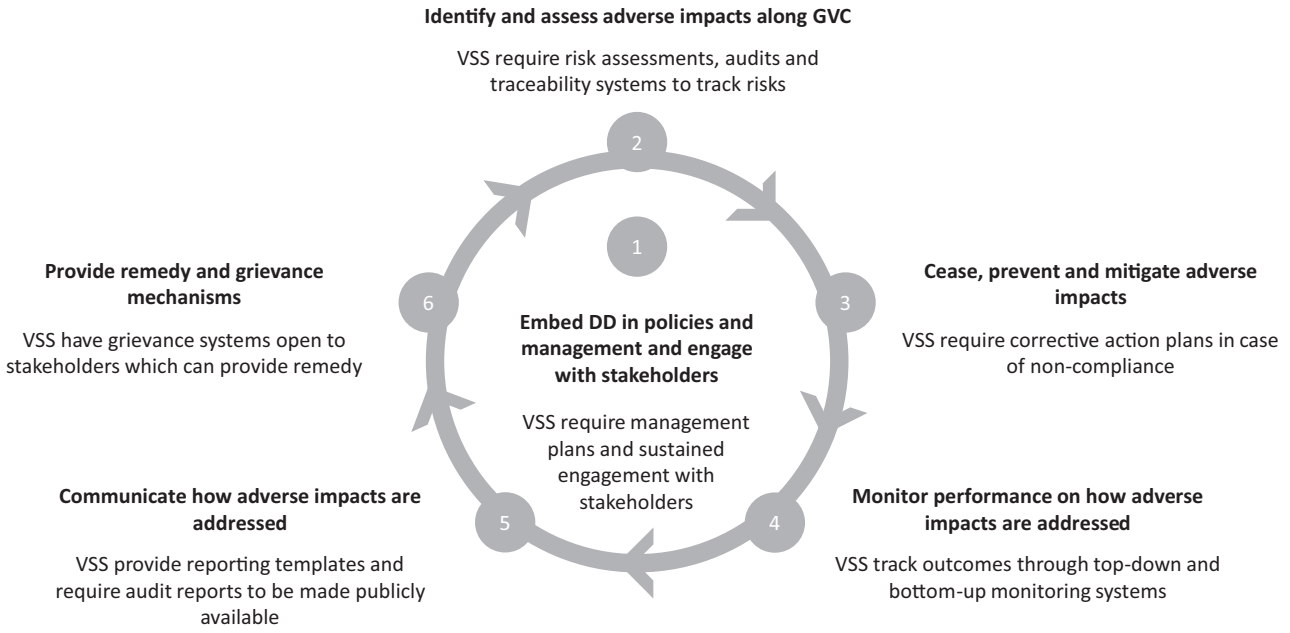

FIGURE 4 Complementarity between due diligence approaches and VSS. *Source*: Authors based on OECD (2018).

companies to track and communicate the effectiveness of their actions (OECD, 2018).

Several countries have adopted or are adopting due diligence regulations to tackle the adverse sustainability impacts of business operations along value chains. Some of the measures focus on specific products while others focus on companies. A notable example is the European Union Deforestation-free Products Regulation (EUDR) (2023), which came into force on 29 June 2023. The regulation targets seven key deforestation-prone commodities, namely cattle, cocoa, coffee, oil palm, rubber, soya, wood and their derived products. The EUDR implies that companies which produce, market or import these commodities in the EU market must be able to prove that these products do not originate from deforested land and have not contributed to forest degradation after 31 December 2020. The EUDR sets out risk assessment requirements and mitigation obligations – including audits, information collection, reporting, supplier engagement and capacity-building. Other examples of due diligence regulations include the new EU Batteries Regulation (2023), the United Kingdom's Environment Act (2021), the German Supply Chain Due Diligence Act (2021), the French Duty of Vigilance Law (2017) and the EU Directive on Corporate Sustainable Development Due Diligence (Bastos Lima & Schilling, 2024; Bright et al., 2020; Gustafsson et al., 2023).

In this context, questions have emerged about the role of VSS in due diligence regulations, since they share common ground as instruments that are trade-related and reflect sustainability principles as embodied in the UN Sustainable Development Goals (Schleifer et al., 2022). Questions are emerging about potential trade-offs and synergies between them, for example, whether due diligence regulations will make VSS redundant or whether VSS will undermine the effectiveness of due diligence regulations (Partiti, 2022).

Importantly, the existing infrastructures and expertise of VSS present possible synergies with due diligence obligations. Figure 4 links the typical six steps of the due diligence process (in bold) to requirements and procedures put forward by VSS to producers and firms. Figure 4 shows that VSS have the potential to be a cost-effective way for companies to meet certain due diligence obligations. Additionally, in practice, many VSS have actively started to align their systems with due diligence principles and with specific due diligence regulations' requirements (see for example Rainforest Alliance (2024), Fairtrade International (2023) and FSC (2024) aligning with EUDR requirements). However, as we discuss in Section 4, there are also several challenges related to the contribution VSS can make, as their current practices on stakeholder involvement, audits and grievance mechanisms have been criticised.

The rapid emergence and proliferation of due diligence measures for the transnational regulation of business conduct in relation to sustainability may be a game-changer for several sustainability instruments, including VSS. On the one hand, one can observe a movement by which some VSS are aligning with due diligence requirements. This can boost the uptake of VSS. It could also trigger inquiries into whether due diligence measures strengthen or weaken VSS in terms of effectiveness. On the other hand, due diligence requirements may make VSS redundant since due diligence measures might bring in a new set of intermediaries

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which might replace the role VSS play in governing global value chains. The interactions between VSS and due diligence regulations constitute an important area for future research.

3.2 | National and regional standards

Another important development in the VSS landscape is the emergence of national and regional sustainability standards in low- and middle-income countries, in addition to the transnational VSS that often have roots in high-income countries (Marques & Eberlein, 2021; Thorstensen et al., 2024; van der Ven et al., 2021). In this regard, questions arise on whether these national/regional standards are competitors or complements to transnational VSS in markets for sustainable products (Cashore et al., 2021; van der Ven & Barmes, 2023).

In some cases, national and regional sustainability initiatives do act as VSS complements and are intentionally designed as a stepping stone to compliance with transnational VSS. For example, the Certified Minas Coffee (CMC) in Brazil has gained a mutual recognition agreement with UTZ. Through this collaboration, Minas Gerais producers gained international access to buyers as well as to the UTZ traceability system (D'Hollander & Tregurtha, 2016). This mutual recognition increased efficiencies between the assurance models of the two standards by promoting joint audits and joint training programs for producers. However, one can also observe competitive dynamics between national and transnational standards. For example, the national Indonesian Sustainable Palm Oil (ISPO) standard was established to compete directly with the transnational Roundtable on Sustainable Palm Oil (RSPO) (Brandi, 2021; Hospes, 2014; Humphrey & Michida, 2021; UNFSS, 2022). While ISPO aims to be more inclusive than the RSPO, it has gained limited international recognition so far, as it is considered less stringent and credible than RSPO (Choiruzzad et al., 2021). These trends are consistent with the longer history of competition in the forest sector between national and international programs such as FSC (Cashore et al., 2004). In short, national standards can constitute a stepping stone towards transnational VSS, which might significantly influence the adoption of the latter. However, national initiatives also need to address credibility concerns (see also Section 4.2). It remains to be seen whether the trend of establishing national standards as a potential stepping-stone towards VSS and more stringent standards will further expand and diffuse to other countries and regions. Furthermore, it remains unclear how the nature of interactions between national standards and VSS will develop. Will they coevolve and complement one another or will they contradict and antagonise one another? Future research should look more in-depth into these dynamics.

4 | CHALLENGES

Several challenges prevent VSS from being effective tools for sustainable development (UNCTAD, 2022; UNFSS, 2020, 2022). Two main challenges are particularly salient in light of recent developments: their shortcomings related to inclusion of low- and middle-income countries and smallholders, and the diversity of their systems in terms of fostering compliance, which is important in the context of possible complementarity with public and development policies.

4.1 | Integrating low-income countries and producers in certified global value chains

The potential for VSS to contribute to solving sustainability issues partly depends on their level of adoption by producers and consumers. Evidence shows that VSS adoption among producers correlates with their income levels and that of the countries they operate in: high- and middle-income countries tend to adopt more VSS than low-income countries, and VSS are less active in regions where poverty reduction is most needed (Marx & Cuypers, 2010; Oya et al., 2018; Tayleur et al., 2018; UNFSS, 2020). This is because the capabilities – financial, technical, institutional, and regulatory – of economic actors in low-income countries tend to be weaker in relation to compliance (Auld, Bernstein, & Cashore, 2008; Marx & Wouters, 2015).

Economic actors in low-income countries, and smallholder producers more specifically, face significant barriers to obtaining certification although they are the ones most in need of sustainability benefits (Brandi, 2017; Dietz et al., 2020; Glasbergen, 2018; Negi et al., 2020). These barriers include practical barriers for VSS uptake such as the inability to read or manage invoices. Other barriers, more explored in the literature, include the costs involved in obtaining certification, the lack of incentives to adopt VSS, socio-political resistance to VSS and a lack of representation of (marginalised) actors from low-income countries in VSS governance structures (UNCTAD, 2022).

Costs are one of the most significant challenges in the uptake and effective implementation of VSS. These include certification and compliance costs (Brandi et al., 2015; Dietz & Grabs, 2022; Renckens & Auld, 2022; Schleifer et al., 2019). Certification costs occur through the different steps required to receive and maintain certification, including audit costs and certification fees (UNCTAD, 2022). In addition, producers incur compliance costs, i.e. costs of adjusting their production practices to align them with VSS requirements (UNFSS, 2022).

Lack of incentives constitutes an additional barrier to certification. Incentives to adopt VSS include additional

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revenue through price premiums, minimum prices and/or enhanced access to markets. However, under most VSS, price premiums are not guaranteed, and even when they exist, they do not necessarily trickle down to the producers and are often captured by other actors along the value chain (Minten et al., 2018). Hence, producers are not compensated for the certification costs they incur – what Ponte (2019) refers to as the 'sustainability-driven supplier squeeze'. In terms of market access, there is evidence that VSS enhance trade, especially when the governance gap between countries is large (Bemelmans et al., 2023; Fiankor et al., 2019). Yet, since VSS adoption remains lowest in weak institutional/governance settings, because of a selection bias towards producers with prior capacities to comply, VSS might uphold established trade relations while deepening market access barriers for smallholder producers in the poorest countries (Bemelmans et al., 2023; UNFSS, 2020).

Furthermore, while some studies suggest a positive evolution in (mainly Western) consumer demand for certified products (Majer et al., 2022; Potter et al., 2021), others indicate that this demand remains limited and is stagnating – thus putting downward pressure on sustainability premiums. In several sectors such as coffee or palm oil, certified producers do not always manage to sell their products as certified as demand from buyers or end consumers is limited (de Janvry et al., 2015). For example, only half of RSPO-certified palm oil (Kemper et al., 2023) and only a small fraction (11%) of Fair Trade production are actually sold as such (Dragusanu et al., 2022). Hence, certified products often end up being sold as conventional, and potential price premiums thus elude producers. Enhancing consumer demand for certified products (Grymshi et al., 2021) may be one way to provide additional incentives for VSS adoption. Prieto-Sandoval et al. (2020) argue that this can be done through a variety of measures including targeted communication strategies and sustainable public procurement criteria. However, even higher demand without other interventions would not fully address the existing power imbalances along value chains, where a few retailers and agri-food processors hold sway vis-à-vis many small-scale producers (Ponte, 2019). In addition, strengthening domestic demand for certified products might also contribute to increased uptake.

In addition, socio-political resistance remains a barrier to the adoption of certain VSS schemes (van der Ven et al., 2021). VSS are sometimes perceived as neocolonial approaches of high-income countries imposing behavioural expectations upon actors in low- and middle-income countries. These perceptions prevent VSS from being adopted in countries where the need for sustainability improvements is highest. At the same time, they can be a possible driving force for the emergence of national sustainability standards (Schouten & Bitzer, 2015; Sun & van der Ven, 2019), which however suffer from a lack of recognition in international markets and result in low uptake of certified products in domestic markets depriving local people of sustainable products. Competition can also influence adoption, such as in the forest sector, where the uptake of PEFC-endorsed national programs caught up and then surpassed the adoption of the FSC (Auld, 2014).

Lastly, barriers related to the lack of representation of smallholder producers and stakeholders from low-income countries in VSS governance structures further exclude them from sustainable value chains (Renckens & Auld, 2019). Bennett (2017) finds that, while diversity exists in governance practices, there is on average a widespread lack of inclusion of producers in decision-making and standard-setting bodies of socially oriented VSS schemes (see also Cheyns & Riisgaard, 2014; Elder, 2023). van der Ven (2022, 2023), studying stakeholders' inputs in VSS consultation and revision systems, also shows that there is an over-representation of input from industry stakeholders, who have superior resources (see also Ponte, 2014). When such a lack of inclusion exists, it may prevent VSS from developing standards that are more fit to the reality of target producers, hence contributing further to the selection bias of certification. This not only has implications for the legitimacy and accountability of VSS systems, but also contributes to broader challenges in global economic governance by preventing empowerment and capacity-building of marginalised actors (Bennett, 2024a; Ponte, 2008).

Overall, existing research suggests that high costs of participation, lack of incentives to adopt more sustainable practices, and insufficient mechanisms for including workers and smallholders in key decisions impede VSS adoption, especially in low-income countries. The implications of these findings are twofold. First, they suggest that more value needs to be distributed to potential adopters. Many strategies have emerged to address inequitable value distribution, including value chain profit sharing (Bennett & Grabs, 2024), solidarity trade (Gendron et al., 2009), relationship and direct trade (Cole & Brown, 2014), creating shared value (Porter & Kramer, 2011) and fair trade certification (Dragusanu et al., 2022). Although fair trade certification, which offers a price premium and maintains a minimum price floor, is the strategy that most easily translates to VSS, research on sectors that are not closely associated with fair trade suggests that VSS in other sectors may be unlikely to adopt the fair trade practices associated with value distribution, including transparency, accountability, collaborative price-setting, pre-payment, honouring contracts, inclusive governance, and worker organisation (Bennett, 2018, 2024b, 2024c). Understanding different strategies for more equal value distribution and their wider applicability to VSS constitutes an important area for future research.

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The second implication of the challenges involved in engaging low- and middle-income countries is that workers and smallholders in these countries are often not well-integrated into VSS governance, including in standard-setting, policy-making and strategic planning. There are some notable exceptions. The governance structure from the FSC included parity between stakeholders from the north and the south from the outset (Auld, 2014; Marx et al., 2012). In 2012, Fairtrade International, the organisation that sets standards for the global Fairtrade certification, adopted a governance model that gives fair trade producers in the global South half of the votes in the General Assembly and the same share of Board seats as the labelling organisations, which are generally based in the global North (Bennett, 2016, 2017). More recently, RSPO is increasingly including smallholder and smallholder advocacy organisation representation in Indonesia's RSPO membership base (surpassing industrial grower representation). However, this is not yet reflected in the governance and decision bodies where smallholder representatives are underrepresented (Eggen et al., 2024). Further research needs to be conducted on how to make VSS governance processes more inclusive and representative of workers and smallholders from low- and middle-income countries.

4.2 | Diversity of VSS and credibility deficit

Over the past two decades, the overall number of VSS has surged from a handful to over 300 today (see Figure 2). This proliferation has brought up questions related to the credibility of VSS, given the range of claims and the confusion that they can create for producers, buyers, and consumers (UNFSS, 2018). Several studies have focused on how VSS are designed and how they differ on some important substantive and design characteristics (Collins et al., 2017; Depoorter & Marx, 2023; Dietz et al., 2018; Fiorini et al., 2019; Grabs, 2020b; Marx, 2013; Marx et al., 2022; Schleifer, 2019). These studies show that there is significant variation in how VSS are designed in relation to how standards are set, how ex-ante conformity is assessed through audits, whether they use complaint systems and how effective complaints systems are and how transparent VSS processes and structures are. This diversity shows that not all VSS are equal in terms of credibility and effectiveness, even when operating in the same sector. Some studies have explored what influences the design of VSS. van der Ven (2019), for example, argues that the use of VSS by large consumer-oriented retailers influences their design and credibility, since VSS targeting these firms specifically want to insulate them from critical scrutiny. Hence, some VSS develop procedurally stringent systems to provide more reassurance to firms that they are complying with sustainability commitments and pledges they make throughout their value chains.

Significant attention in relation to assessing the credibility of VSS has focused on the use of audits as the main tool for conformity assessment. In this context, some deficiencies of independent third-party auditing were identified (LeBaron et al., 2017; Locke, 2013; Marx & Wouters, 2016; Renckens & Auld, 2022). Some relate to the quality of information collected, conflicts of interest, differential outcomes across auditing firms and the ad hoc nature of auditing. Some VSS have nonetheless fine-tuned their auditing systems by taking these criticisms into account (Gulbrandsen & Auld, 2016). For example, some VSS now require certification bodies and their auditors to be accredited by independent organisations such as Assurance Services International (ASI) to ensure their competence and provide shadow audits and additional checks on audits. Complaint and grievance mechanisms have also been developed, which can be used on a continuous basis by any stakeholder to flag non-compliances that sporadic audits might have missed (Gulbrandsen & Auld, 2016). Yet, only a few VSS have developed these more advanced systems (Marx & Wouters, 2015), and even when they have, their effectiveness often remains limited (Harrison & Wielga, 2023). Challenges to effective complaint mechanisms include ensuring complainants know about their existence and can access them, effective and timely processes for handling complaints and dealing with retaliations against complainants, and providing effective remedy to successful complainants (Harrison et al., 2023; Harrison & Wielga, 2023). Finally, besides auditing and grievance mechanisms, in organic farming, participatory guarantee systems are promoted by both social movements and some governments, as a more affordable type of assurance system for small producers (Fouilleux & Loconto, 2017). As a multistakeholder peer-reviewing system, they do overcome the conflict of interest inherent in third-party certification, where the controller is paid by the controlled.

As a result of VSS proliferation and diversity, it becomes increasingly important to develop systems that distinguish credible from non-credible VSS. Some external recognition systems are in place, for example public policies recognising VSS as proof of compliance with some of their requirements based on specific procedural and substantive criteria (Renckens, 2020). Other examples are specific regulatory measures, such as the proposed EU Green Claims Directive, that include requirements on environmental labels, and private membership organisations, such as the ISEAL Alliance, which requires compliance with codes of good practice in standards setting, assurance and impact evaluation. A final example has recently emerged in the context of the shift towards due diligence measures. The OECD (2020) has developed an alignment

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assessment tool to evaluate the alignment of industry, multistakeholder programs or VSS with the recommendations of OECD due diligence guidance in the garment and footwear sector. The result of the alignment evaluation is that some VSS receive a recognition that they are aligned with a due diligence-based approach. This dynamic of increasingly recognising VSS on a number of criteria by an external independent party (i.e. certifying the certifiers) will contribute to the credibility and legitimacy of some VSS. However, the emergence of a variety of unrelated recognition systems in a fragmented manner may increase the transaction costs involved in VSS, as they would seek to be recognised in multiple systems. A more global approach towards recognising VSS is more advisable.

5 | RECOMMENDATIONS AND CONCLUSION

Looking back over 30 years of VSS research, a consensus is growing that VSS have not lived up to their promise of fundamentally addressing sustainability challenges (Dietz et al., 2022; Grabs, 2020b). Despite a proliferation of sustainability initiatives, major sustainability challenges remain in value chains – related inter alia to climate change, biodiversity protection, and labour rights protection (Schleifer, 2023). One explanation might be that the expectations placed on VSS were too high – in thinking that market dynamics could be fundamentally changed to take into account a large number of sustainability challenges and address them over a short period. VSS success also creates incentives for entry by other assurance providers, which can exacerbate proliferation (Auld, 2014).

However, we are not arguing that VSS should become obsolete. Several discussions in the AAC meetings suggest that VSS might constitute the second-best option in the absence of other strong private or public regulatory alternatives. From that perspective, VSS can continue to play an important role in making trade more sustainable and contributing to achieving the SDGs (Schleifer et al., 2022). They often play the role of catalysts by accelerating the adoption of credible sustainability policies by public and private actors (Kosolapova et al., 2023; Lambin & Thorlakson, 2018). Strengthening their potential in terms of impact, as well as offering support for their adoption, are important priorities – especially in a context in which VSS are integrated in public policies (Schiller et al., 2021). In what follows we distil specific advice for actors that have agency to influence the future effectiveness of VSS.

To be most effective, VSS would need to better address the power imbalances along value chains that place smaller producers in developing countries at the mercy of large transnational buyers (Grabs & Ponte, 2019). This could be done by requiring or encouraging the adoption of worker-owned businesses such as cooperatives, sustainable business models such as value chain profit sharing (Bennett & Grabs, 2024), and setting and enforcing strict rules around minimum prices and price premiums as well as long-term contracting and pre-financing (Bennett, 2024c). How to stimulate these innovative practices is an area for future research since firms will need incentives to adopt these practices. In addition, given that midstream actors such as commodity traders play an important role in implementing VSS and oftentimes act as certificate holders, they could be recognised and included more intentionally as sustainability governance actors with set responsibilities, e.g. in terms of passing financial benefits onward to farmers and informing downstream buyers about on-the-ground conditions and implementation challenges (Grabs et al., 2024).

VSS organisations should also focus on being more inclusive in the standard-setting process and provide capacity-building and training to potential certified entities (Auld et al., 2015; Depoorter & Marx, 2023; Elder, 2023). They can prioritise addressing costs related to certification via mutual recognition systems or by introducing cost-sharing mechanisms along the value chain. They should also reflect on their theories of change and key objectives in a changing institutional context that involves an increasing number of mandatory regulatory measures (Hernandez, 2021; Thorstensen et al., 2024). As indicated above, VSS can complement public policies in several ways including as proof of compliance with regulatory requirements. The latter will become increasingly important in the context of the current wave of due diligence measures. Aligning their approach with due diligence approaches will be a major challenge in the near future and might result in VSS reconsidering their theories of change. An alternative scenario is that they will not align themselves (fully) with regulatory requirements, but remain a separate and independent sustainability governance tool with the specific aim of surpassing the minimum criteria specified in public policies (i.e. raise the sustainability bar for businesses which are certified).

Buyers can reinforce these reforms by supporting the VSS schemes that adopt best governance practices and demonstrate greater environmental and social benefits. In the forestry sector, for example, public procurement policies have contributed to a ratcheting up of certification standards (Gulbrandsen, 2014). Buyers should also more consistently pay premiums for more sustainable products, as the main incentive for producers to adopt more sustainable practices is to be paid for their efforts. Without clearer benefits for adopting higher performing VSS, producers will have few incentives to take on the additional costs of seeking certification. Moreover, producers will not be able to pay their labour forces a living or decent wage without adequate pricing from buyers. To achieve the latter,

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pressure should be directed towards buyers either through consumer pressure or through protest organisations which continue to pressure buyers to meet their commitments.

International organisations and donors can provide technical support to comply with VSS, both directly through support to producers and producer groups, as well as indirectly through further support of an enabling environment in developing countries (Negi et al., 2020). They can offer support to firms that have a more inclusive approach towards producers/suppliers which can also increase uptake in developing countries (Lima & Lee, 2023). They can also engage with VSS to push both substantive sustainability agendas, such as a living wage, and enhanced compliance mechanisms, such as effective complaints mechanisms. Finally, international organisations should reflect on their role of coordinating or setting up recognition systems to distinguish credible from non-credible VSS. The current fragmented proliferation of recognition and benchmarking systems creates confusion and a more coordinated approach is required.

National governments, in supporting more sustainable land use, environmental and social policies, can engage more intensively with private instruments to create more effective policies to achieve sustainable development. Lambin et al. (2018) argue that public-private mixes are indeed needed to increase the effectiveness of value chain initiatives that aim to reduce deforestation. However, VSS should not be promoted in an export-oriented strategy only, as they are also a way to make domestic markets more sustainable and increase consumer consciousness about sustainability. Further, exploring innovative ways of combining public policies with private governance initiatives will be an important challenge for the future of VSS, if they are to help achieve the Sustainable Development Goals.

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CONFLICT OF INTEREST STATEMENT

No conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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ENDNOTES

[1] The United Nations Forum on Sustainability Standards (UNFSS) is a platform of six UN agencies: FAO, ITC, UNCTAD, UNECE, UNEP and UNIDO. UNFSS assesses the contribution of VSS to sustainable development by pooling resources, aligning efforts and assuring policy coherence, coordination and collaboration among UN agencies (more information: www.unfss.org). The objective of the UNFSS Academic Advisory Council, a joint effort with the Leuven Centre for Global Governance Studies (KU Leuven), is to bring different academic perspectives into one overarching network on the effectiveness of VSS, thus contributing to a comprehensive understanding of VSS effectiveness (more information on AAC and its activities: https://unfss.org/academic-advisory-council/).

[2] For an overview of the most significant impact studies, one can consult the Evidensia platform (www.evidensia.eco).

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