



HAL
open science

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

Axel Marx, Charline Depoorter, Santiago Fernandez de Cordoba, Rupal Verma, Mercedes Araoz, Graeme Auld, Janne Bemelmans, Elizabeth A. Bennett, Eva Boonaert, Clara Brandi, et al.

► To cite this version:

Axel Marx, Charline Depoorter, Santiago Fernandez de Cordoba, Rupal Verma, Mercedes Araoz, et al.. Global governance through voluntary sustainability standards: developments, trends and challenges. Global Policy, 2024, online first, 21 p. 10.1111/1758-5899.13401 . hal-04630495

HAL Id: hal-04630495

<https://hal.inrae.fr/hal-04630495>

Submitted on 1 Jul 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - NonCommercial - NoDerivatives 4.0 International License

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

Axel Marx¹  | Charline Depoorter¹  | Santiago Fernandez de Cordoba² | Rupal Verma² | Mercedes Araoz³ | Graeme Auld⁴  | Janne Bemelmans¹  | Elizabeth A. Bennett⁵  | Eva Boonaert¹  | Clara Brandi⁶  | Thomas Dietz⁷ | Eve Fouilleux^{8,9} | Janina Grabs¹⁰  | Lars H. Gulbrandsen¹¹  | James Harrison¹²  | Robert Heilmayr¹³  | Ariel Hernandez¹⁴ | Bernard Hoekman¹⁵  | Siti Rubiah Lambert² | Eric Lambin^{16,17}  | Li Li¹⁸ | Miet Maertens¹  | Paulo Mortara Batistic⁷ | Etsuyo Michida¹⁹ | Junji Nakagawa²⁰ | Archana Negi²¹ | Jorge A. Pérez-Pineda^{22,23}  | Stefano Ponte²⁴  | Ximena Rueda²⁵  | Philip Schleifer²⁶ | Vera Thorstensen²⁷ | Hamish van der Ven²⁸ 

Correspondence

Axel Marx, Leuven Centre for Global Governance Studies, KU Leuven, House De Dorlodot – Deberiotstraat 34, Leuven 3000, Belgium.
Email: axel.marx@kuleuven.be

Funding information

Flemish Fund for Scientific Research (FWO), Grant/Award Number: G0F4420N

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

For affiliations refer to page 13.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2024 The Author(s). *Global Policy* published by Durham University and John Wiley & Sons Ltd.

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.

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,

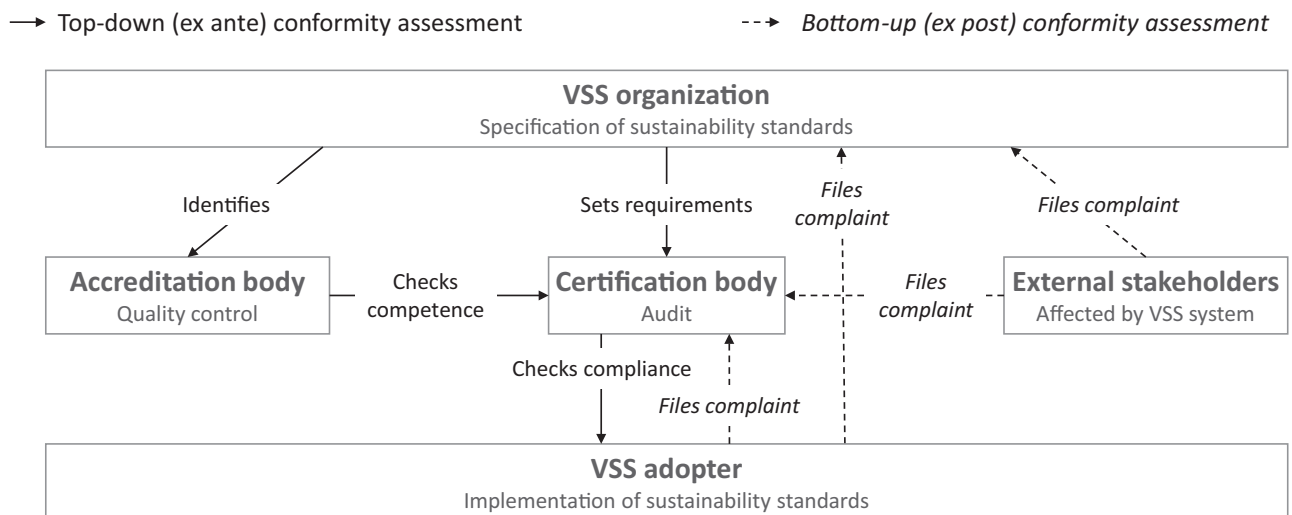


FIGURE 1 Top-down and bottom-up compliance assessments. Source: Authors based on UNCTAD (2022).

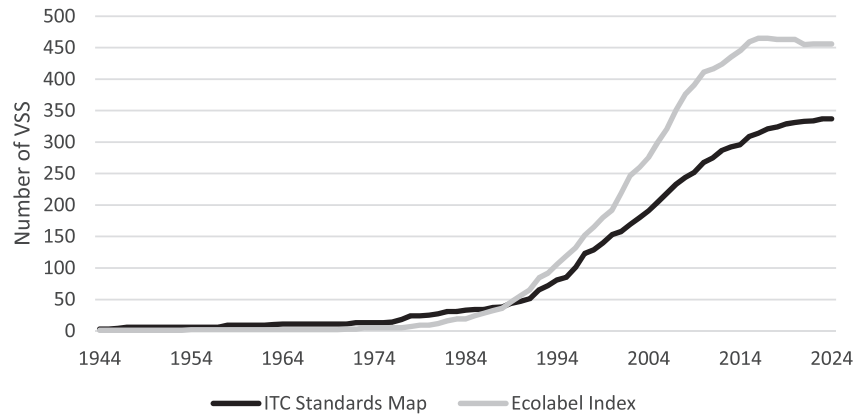


FIGURE 2 Evolution in the number of VSS, 1944–2024. *Source:* Authors, data from ITC Standards Map (<https://standardsmap.org/en/identify>) and Ecolabel Index (<https://www.ecolabelindex.com/>).

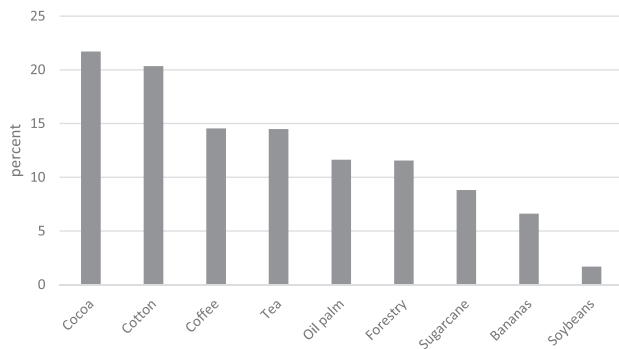


FIGURE 3 Share of certified production area in total production area, by selected commodity, 2021. *Source:* Authors based on Kemper et al. (2023).

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 studies² 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,

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

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

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

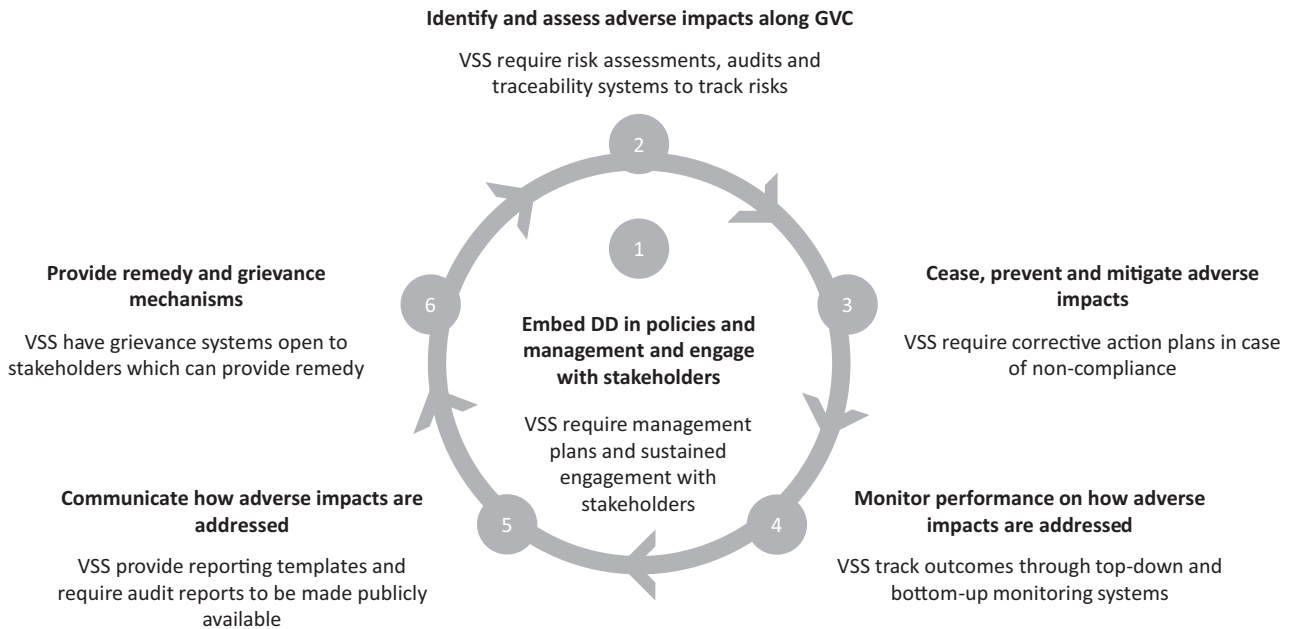


FIGURE 4 Complementarity between due diligence approaches and VSS. *Source:* Authors based on OECD (2018).

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

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 co-evolve 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

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 Cheyngs & 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.

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

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,

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.

ACKNOWLEDGEMENT

The authors thank Dr. Nag for editorial guidance, an anonymous reviewer for excellent feedback and Elene Dzneladze for support with the references. The authors would also like to express their gratitude for the opportunity to interact at the annual Academic Advisory Council meetings, held since 2020, organized by the United Nations Forum for Sustainability Standards.

AFFILIATIONS

¹KU Leuven, Leuven, Belgium

²UNCTAD, Geneva, Switzerland

³Universidad del Pacífico, Lima, Peru

⁴Carleton University, Ottawa, Ontario, Canada

⁵Lewis & Clark College, Portland, Oregon, USA

⁶German Institute of Development and Sustainability, Bonn, Germany

⁷University of Münster, Münster, Germany

⁸French National Center for Scientific Research (CNRS), Laboratoire Interdisciplinaire Sciences Innovations Sociétés, University of Paris-Est Marne-la-Vallée, Noisy-le-Grand, France

⁹Montpellier Interdisciplinary Research Center on Sustainable Agrifood Systems, Montpellier, France

¹⁰University of Basel, Basel, Switzerland

¹¹Fridtjof Nansen Institute, Lysaker, Norway

¹²University of Warwick, Coventry, UK

¹³University of California, Santa Barbara, California, USA

¹⁴University of Duisburg-Essen, Essen, Germany

¹⁵European University Institute, Fiesole, Italy

¹⁶Stanford University, Stanford, California, USA

¹⁷University of Louvain, Ottignies-Louvain-la-Neuve, Belgium

¹⁸University of International Business and Economics, Beijing, China

¹⁹Institute of Developing Economies (JETRO), Chiba, Japan

²⁰Chuo Gakuin University, Chiba, Japan

²¹Jawaharlal Nehru University, New Delhi, India

²²Anáhuac University Mexico, Mexico, Mexico

²³Comillas Pontifical University, Madrid, Spain

²⁴Copenhagen Business School, Frederiksberg, Denmark

²⁵School of Management – Universidad de los Andes, Bogotá, Colombia

²⁶University of Amsterdam, Amsterdam, The Netherlands

²⁷Fundação Getúlio Vargas, São Paulo, Brazil

²⁸University of British Columbia, Vancouver, British Columbia, Canada

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.

ORCID

Axel Marx  <https://orcid.org/0000-0003-1474-0539>

Charline Depoorter  <https://orcid.org/0000-0001-6463-8132>

Graeme Auld  <https://orcid.org/0000-0002-4054-7284>

Janne Bemelmans  <https://orcid.org/0000-0003-1024-1169>

Elizabeth A. Bennett  <https://orcid.org/0000-0002-3319-1160>

Eva Boonaert  <https://orcid.org/0000-0002-6526-5304>

Clara Brandi  <https://orcid.org/0000-0002-1469-1143>

Janina Grabs  <https://orcid.org/0000-0002-1630-5672>

Lars H. Gulbrandsen  <https://orcid.org/0000-0002-7006-3336>

James Harrison  <https://orcid.org/0000-0002-5253-6689>

Robert Heilmayr  <https://orcid.org/0000-0001-8980-9639>

Bernard Hoekman  <https://orcid.org/0000-0002-6839-7142>

Eric Lambin  <https://orcid.org/0000-0002-0673-5257>

Miet Maertens  <https://orcid.org/0000-0001-7245-0375>

Jorge A. Pérez-Pineda  <https://orcid.org/0000-0001-5209-9151>

Stefano Ponte  <https://orcid.org/0000-0001-6788-8700>

Ximena Rueda  <https://orcid.org/0000-0002-5991-4048>

Hamish van der Ven  <https://orcid.org/0000-0002-9223-9080>

ENDNOTES

¹The 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/>).

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

REFERENCES

- Akoyi, K.T., Mitiku, F. & Maertens, M. (2020) Private sustainability standards and child schooling in the African coffee sector. *Journal of Cleaner Production*, 264, 121713. Available from: <https://doi.org/10.1016/j.jclepro.2020.121713>
- Asfaw, S., Mithöfer, D. & Waibel, H. (2010) Agrifood supply chain, private-sector standards, and farmers' health: evidence from Kenya. *Agricultural Economics*, 41(3/4), 251–263. Available from: <https://doi.org/10.1111/j.1574-0862.2010.00443.x>
- Auld, G. (2014) *Constructing private governance: the rise and evolution of forest, coffee, and fisheries certification*. New Haven: Yale University Press.
- Auld, G. (2014a) Private market-based regulations: what they are, and what they mean for land-use governance. In: Seto, K.C. & Reenberg, A. (Eds.) *Rethinking global land use in an urban era*. Cambridge, MA: The MIT Press, p. 14. Available from: <https://doi.org/10.7551/mitpress/10011.003.0018>
- Auld, G., Balboa, C., Bartley, T., Cashore, B. & Levin, K. (2007) The spread of the certification model: understanding the evolution of non-state market driven governance. *Proceedings of 48th annual ISA convention held in Chicago, IL., 28 February – 3 March 2007*.
- Auld, G., Bernstein, S. & Cashore, B. (2008) The new corporate social responsibility. *Annual Review of Environment and Resources*, 33, 413–435. Available from: <https://doi.org/10.1146/annurev.enviro.32.053006.141106>
- Auld, G., Gulbrandsen, L. & McDermott, C. (2008) Certification schemes and the impacts on forests and forestry. *Annual Review of Environment and Resources*, 33, 187–211. Available from: <https://doi.org/10.1146/annurev.enviro.33.013007.103754>
- Auld, G., Renckens, S. & Cashore, B. (2015) Transnational private governance between the logics of empowerment and control. *Regulation & Governance*, 9(2), 108–124. Available from: <https://doi.org/10.1111/rego.12075>
- Bartley, T. (2007) Institutional emergence in an era of globalization: the rise of transnational private regulation of labor and environmental conditions. *The American Journal of Sociology*, 113(2), 297–351. Available from: <https://doi.org/10.1086/518871>
- Bastos Lima, M. & Schilling, A. (2024) Supply chain divergence challenges a 'Brussels effect' from Europe's human rights and environmental due diligence laws. *Global Policy*, 15, 260–275. Available from: <https://doi.org/10.1111/1758-5899.13326>
- Bemelmans, J., Curzi, D., Olper, A. & Maertens, M. (2023) Trade effects of voluntary sustainability standards in tropical commodity sectors. *Food Policy*, 118(1), 102440. Available from: <https://doi.org/10.1016/j.foodpol.2023.102440>
- Bennett, E.A. (2016) Governance, legitimacy, and stakeholder balance: lessons from Fairtrade international. *Social Enterprise Journal*, 12(3), 322–346. Available from: <https://doi.org/10.1108/SEJ-08-2016-0038>
- Bennett, E.A. (2017) Who governs socially-oriented voluntary sustainability standards? Not the producers of certified products. *World Development*, 91, 53–69. Available from: <https://doi.org/10.1016/j.worlddev.2016.10.010>
- Bennett, E.A. (2018) Voluntary sustainability standards: a squandered opportunity to improve workers' Wages. *Sustainable Development*, 26(1), 65–82. Available from: <https://doi.org/10.1002/sd.1691>
- Bennett, E.A. (2024a) Labor justice and global economic governance: how is labor included in and impacted by the International Labour Organization and corporate social responsibility? In: Brandi, C., Kollar, E. & Berger, A. (Eds.) *Justice in global economic governance: reforming the world economy to promote fair globalization*. Edinburgh: Edinburgh University Press.
- Bennett, E.A. (2024b) Which fair trade principles travel to distant sectors? An analysis of social and sustainability entrepreneurs and enterprises in the legal cannabis (marijuana) sector. *Journal of Fair Trade*, 5(1).
- Bennett, E.A. (2024c) Are voluntary sustainability standards designed to address or entrench global inequality? Pessimistic results from a study of 31 standards' support for alternative business models and value distribution mechanisms. *Paper Presented at the International Studies Association Annual Conference, San Francisco, CA, 03–06 April*.
- Bennett, E.A. & Grabs, J. (2024) How can sustainable business models distribute value more equitably in global value chains? Introducing “value chain profit sharing” as an emerging alternative to fair trade, direct trade, or solidarity trade. *Business Ethics, the Environment & Responsibility*, 1–21. Available from: <https://doi.org/10.1111/beer.12666>
- Blackman, A., Goff, L. & Rivera Planter, M. (2018) Does eco-certification stem tropical deforestation? Forest stewardship council certification in Mexico. *Journal of Environmental Economics and Management*, 89(4), 306–333. Available from: <https://doi.org/10.1016/j.jeem.2018.04.005>
- Blackman, A. & Naranjo, M.A. (2012) Does eco-certification have environmental benefits? Organic coffee in Costa Rica. *Ecological Economics*, 83(C), 58–66. Available from: <https://doi.org/10.1016/j.ecolecon.2012.08.001>
- Boonaert, E. & Maertens, M. (2023) Voluntary sustainability standards and farmer welfare: the pathways to success? *Food Policy*, 121(3), 102543. Available from: <https://doi.org/10.1016/j.foodpol.2023.102543>
- Brandi, C. (2017) Sustainability standards and sustainable development—synergies and trade-offs of transnational governance. *Sustainable Development*, 25(1), 25–34. Available from: <https://doi.org/10.1002/sd.1639>
- Brandi, C. (2021) The interaction of private and public governance: the case of sustainability standards for palm oil. *The European Journal of Development Research*, 33(6), 1574–1595. Available from: <https://doi.org/10.1057/s41287-020-00306-8>
- Brandi, C., Cabani, T., Hosang, C., Schirmbeck, S., Westermann, L. & Wiese, H. (2015) Sustainability standards for palm oil: challenges for smallholder certification under the RSPO. *The Journal of Environment & Development*, 24(3), 292–314. Available from: <https://doi.org/10.1177/1070496515593775>
- Brandi, C. & Morin, J.F. (2023) *Trade and the environment: drivers and effects of environmental provisions in trade agreements*. Cambridge: Cambridge University Press.
- Bright, C., Marx, A., Pineau, N. & Wouters, J. (2020) Towards a corporate duty for lead companies to respect human rights in their global value chains? *Business & Politics*, 22(4), 667–697. Available from: <https://doi.org/10.1017/bap.2020.15>
- Cashore, B. (2002) Legitimacy and the privatization of environmental governance: How non-state market-driven (NSMD) governance systems gain rule-making authority. *Governance*, 15(4),

- 503–529. Available from: <https://doi.org/10.1111/1468-0491.00199>
- Cashore, B., Auld, G., Bernstein, S. & McDermott, C. (2007) Can non-state governance 'ratchet up' global environmental standards? Lessons from the Forest sector. *Review of European Community & International Environmental Law*, 16(2), 158–172. Available from: <https://doi.org/10.1111/j.1467-9388.2007.00560.x>
- Cashore, B., Knudsen, J.S., Moon, J. & van der Ven, H. (2021) Private authority and public policy interactions in global context: governance spheres for problem solving. *Regulation & Governance*, 15(4), 1166–1182. Available from: <https://doi.org/10.1111/rego.12395>
- Cashore, B.W., Auld, G. & Newsom, D. (2004) *Governing through markets: forest certification and the emergence of non-state authority*. New Haven: Yale University Press.
- Chaturvedi, S., Janus, H., Klingebiel, S., Li, X., Mello e Souza, A.D., Sidiropoulos, E. et al. (2021) Development cooperation in the context of contested global governance. In: Chaturvedi, S. et al. (Eds.) *The Palgrave handbook of development cooperation for achieving the 2030 agenda: contested collaboration*. London: Palgrave Macmillan, pp. 1–21.
- Cheyns, E. & Riisgaard, L. (2014) Introduction to the symposium: the exercise of power through multi-stakeholder initiatives for sustainable agriculture and its inclusion and exclusion outcomes. *Agriculture and Human Values*, 31(3), 409–423. Available from: <https://doi.org/10.1007/s10460-014-9508-4>
- Chiputwa, B. & Qaim, M. (2016) Sustainability standards, gender, and nutrition among smallholder farmers in Uganda. *The Journal of Development Studies*, 52(9), 1241–1257. Available from: <https://doi.org/10.1080/00220388.2016.1156090>
- Choiruzzad, S., Tyson, A. & Varkkey, H. (2021) The ambiguities of Indonesian sustainable palm oil certification: internal incoherence, governance rescaling and state transformation. *Asia Europe Journal*, 19(2), 189–208. Available from: [10.1007/s10308-020-00593-0](https://doi.org/10.1007/s10308-020-00593-0)
- Cole, N.L. & Brown, K. (2014) The problem with fair trade coffee. *Contexts*, 13(1), 50–55. Available from: <https://doi.org/10.1177/1536504214522009>
- Collins, B., Evans, A., Hung, M. & Katzenstein, S. (2017) *The new regulators? Assessing the landscape of multi-stakeholder initiatives. Assessing the landscape of multi-stakeholder initiatives*. Berkeley, CA: MSI Integrity and Kenan Institute for Ethics, Duke University.
- de Bakker, F., Rasche, A. & Ponte, S. (2019) Multi-stakeholder initiatives for sustainability: a cross-disciplinary review and research agenda for business ethics. *Business Ethics Quarterly*, 29(3), 343–383. Available from: <https://doi.org/10.1017/beq.2019.10>
- de Janvry, A., McIntosh, C. & Sadoulet, E. (2015) Fair trade and free entry: can a disequilibrium market serve as a development tool? *Review of Economics and Statistics*, 97(3), 567–573. Available from: https://doi.org/10.1162/REST_a_00512
- DeFries, R.S., Fanzo, J., Mondal, P., Remans, R. & Wood, S.A. (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. Available from: <https://doi.org/10.1088/1748-9326/aa625e>
- Depoorter, C. & 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. Available from: <https://doi.org/10.1002/aep.13263>
- Depoorter, C. & Marx, A. (2023) Fostering compliance with voluntary sustainability standards through institutional design: an analytic framework and empirical application. *Regulation & Governance*. Available from: <https://doi.org/10.1111/rego.12573>
- D'Hollander, D. & Tregurtha, N. (2016) Exploring the potential of government and voluntary standards collaborations to scale up sustainable production and supply. *Policy Matters*, 21, 60–72.
- Dietz, T., Auffenberg, J., Chong, A.E., Grabs, J. & Kilian, B. (2018) The voluntary coffee standard index (VOCSI). Developing a composite index to assess and compare the strength of mainstream voluntary sustainability standards in the global coffee industry. *Ecological Economics*, 150, 72–87. Available from: <https://doi.org/10.1016/j.ecolecon.2018.03.026>
- Dietz, T., Biber-Freudenberger, L., Deal, L. & Börner, J. (2022) Is private sustainability governance a myth? Evaluating major sustainability certifications in primary production: a mixed methods meta-study. *Ecological Economics*, 201(4), 107546. Available from: <https://doi.org/10.1016/j.ecolecon.2022.107546>
- Dietz, T., Estrella Chong, A., Grabs, J. & Kilian, B. (2020) How effective is multiple certification in improving the economic conditions of smallholder farmers? Evidence from an impact evaluation in Colombia's Coffee Belt. *The Journal of Development Studies*, 56(6), 1141–1160. Available from: <https://doi.org/10.1080/00220388.2019.1632433>
- Dietz, T. & Grabs, J. (2022) Additionality and implementation gaps in voluntary sustainability standards. *New Political Economy*, 27(2), 203–224. Available from: <https://doi.org/10.1080/13563467.2021.1881473>
- Dragusanu, R., Montero, E. & Nunn, N. (2022) The effects of fair trade certification: evidence from coffee producers in Costa Rica. *Journal of the European Economic Association*, 20(4), 1743–1790. Available from: <https://doi.org/10.1093/jeea/jvac026>
- Eggen, M., Heilmayr, R., Anderson, P., Armson, R., Austin, K., Azmi, R. et al. (2024) Smallholder participation in zero-deforestation supply chain initiatives in the Indonesian oil palm sector: challenges, opportunities, and limitations. *Elementa: Science of the Anthropocene*, 12(1), 1–23.
- Elamin, N.E. & Fernandez de Córdoba, S. (2020) *The trade impact of voluntary sustainability standards: a review of empirical evidence*. UNCTAD Research Paper No. 50. Available from: <https://www.sipotra.it/wp-content/uploads/2020/07/The-Trade-Impact-of-Voluntary-Sustainability-Standards-A-review-of-empirical-evidence.pdf> [Accessed 29th April 2024].
- Elder, S. (2023) IISD's SSI thematic review: producer inclusion in voluntary sustainability standard governance. *International Institute for Sustainable Development* Available from: <https://www.iisd.org/publications/report/ssi-review-producer-inclusion-voluntary-sustainability-standard-governance>
- Estrella, A., Navichoc, D., Kilian, B. & 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(6), 100435. Available from: <https://doi.org/10.1016/j.wdp.2022.100435>
- Fairtrade International. (2023) *Fairtrade producers set to expand deforestation monitoring through new partnership with Satelligence*. Available from: <https://www.fairtrade.net/news/fairtrade-producers-set-to-expand-deforestation-monitoring-through-new-partnership-with-satelligence> [Accessed 29th April 2024].
- Fiankor, D.-D., Martínez-Zarzoso, I. & Brümmer, B. (2019) Exports and governance: the role of private voluntary agrifood standards. *Agricultural Economics*, 50(3), 341–352. Available from: <https://doi.org/10.1111/agec.12488>
- Fiorini, M., Hoekman, B., Jansen, M., Schleifer, P., Solleder, O., Taimasova, R. et al. (2019) Institutional design of voluntary sustainability standards systems: evidence from a new database. *Development and Policy Review*, 37(S2), O193–O212. Available from: <https://doi.org/10.1111/dpr.12379>
- Forest Stewardship Council (FSC). (2024) *EUDR & FSC*. Available from: <https://fsc.org/en/eudr-regulation-on-deforestation-free-products> [Accessed 29 April 2024].

- Fouilleux, E. & Loconto, A. (2017) Voluntary standards, certification, and accreditation in the global organic agriculture field: a tripartite model of techno-politics. *Agriculture and Human Values*, 34(1), 1–14. Available from: <https://doi.org/10.1007/s10460-016-9686-3>
- Garrett, R.D., Levy, S.A., Gollnow, F., Hodel, L. & Rueda, X. (2021) Have food supply chain policies improved forest conservation and rural livelihoods? A systematic review. *Environmental Research Letters*, 16(3), 033002. Available from: <https://doi.org/10.1088/1748-9326/abe0ed>
- Gendron, C., Bisailon, V. & Rance, A.I.O. (2009) The institutionalization of fair trade: more than just a degraded form of social action. *Journal of Business Ethics*, 86(1), 63–79. Available from: <https://doi.org/10.1007/s10551-008-9758-4>
- Gereffi, G., Garcia-Johnson, R. & Sasser, E. (2001) The NGO-industrial complex. *Foreign Policy*, 125, 56–65. Available from: <https://doi.org/10.2307/3183327>
- Glasbergen, P. (2018) Smallholders do not eat certificates. *Ecological Economics*, 147(10), 243–252. Available from: <https://doi.org/10.1016/j.ecolecon.2018.01.023>
- Grabs, J. (2020a) Assessing the institutionalization of private sustainability governance in a changing coffee sector. *Regulation & Governance*, 14(2), 362–387. Available from: <https://doi.org/10.1111/rego.12212>
- Grabs, J. (2020b) *Selling sustainability short?: the private governance of labor and the environment in the coffee sector*. Cambridge: Cambridge University Press.
- Grabs, J., Auld, G. & Cashore, B. (2021) Private regulation, public policy, and the perils of adverse ontological selection. *Regulation & Governance*, 15(4), 1183–1208. Available from: <https://doi.org/10.1111/rego.12354>
- Grabs, J., Carodenuto, S., Jespersen, K., Adams, M.A., Camacho, M.A., Celi, G. et al. (2024) The role of midstream actors in advancing the sustainability of agri-food supply chains. *Nature Sustainability*, 7, 527–535.
- Grabs, J. & Ponte, S. (2019) The evolution of power in the global coffee value chain and production network. *Journal of Economic Geography*, 19(4), 803–828. Available from: <https://doi.org/10.1093/jeg/lbz008>
- Grymshi, D., Crespo-Cebada, E., Elghannam, A., Mesías, F. & Díaz-Caro, C. (2021) Understanding consumer attitudes towards ecolabeled food products: a latent class analysis regarding their purchasing motivations. *Agribusiness*, 38(1), 93–107. Available from: <https://doi.org/10.1002/agr.21714>
- Gulbrandsen, L.H. (2010) *Transnational environmental governance: the emergence and effects of the certification of forest and fisheries*. Cheltenham: Edward Elgar Publishing.
- Gulbrandsen, L.H. (2014) Dynamic governance interactions: evolutionary effects of state responses to non-state certification programs. *Regulation & Governance*, 8(1), 74–92. Available from: <https://doi.org/10.1111/rego.12005>
- Gulbrandsen, L.H. & Auld, G. (2016) Contested accountability logics in evolving nonstate certification for fisheries sustainability. *Global Environmental Politics*, 16(2), 42–60. Available from: https://doi.org/10.1162/GLEP_a_00353
- Gustafsson, M.-T., Schilling-Vacaflor, A. & Lenschow, A. (2023) Special issue: the politics of supply chain regulations: towards foreign corporate accountability in the area of human rights and the environment'. *Regulation and Governance*, 17(4), 851–1151. Available from: <https://doi.org/10.1111/rego.12526>
- Harrison, J. (2023) Trade agreements and sustainability: exploring the potential of global value chain (GVC) obligations. *Journal of International Economic Law*, 26(2), 199–215. Available from: <https://doi.org/10.1093/jiel/jgac057>
- Harrison, J., Parejo, M. & Wielga, M. (2023) The value of complaints mechanisms in private labour regulation of GVCs: a case study of the fair labor association. *International Labour Review*, 163(1), 73–94. Available from: <https://doi.org/10.1111/ilr.12405>
- Harrison, J. & Wielga, M. (2023) Grievance mechanisms in multi-stakeholder initiatives: providing effective remedy for human rights violations? *Business and Human Rights Journal*, 8(1), 43–65. Available from: <https://doi.org/10.1017/bhj.2022.37>
- Heilmayr, R., Carlson, K.M. & Benedict, J.J. (2020) Deforestation spillovers from oil palm sustainability certification. *Environmental Research Letters*, 15(7), 1–15. <https://doi.org/10.1088/1748-9326/ab7f0c>
- Heilmayr, R. & Lambin, E.F. (2016) Impacts of nonstate, market-driven governance on Chilean forests. *Proceedings of the National Academy of Sciences*, 113(11), 2910–2915. Available from: <https://doi.org/10.1073/pnas.1600394113>
- Hernandez, A.M. (2021) SDG-aligned futures and the governance of transformation to sustainability reconsidering governance perspectives on the futures we aspire to. *DIE Discussion Paper Series* (Discussion Paper 30/2021). <https://doi.org/10.23661/dp30.2021>
- Hernandez, A.M., Reiners, W. & Grimm, S. (2021) *Voluntary sustainability standards (VSS) – Mobilising public and private rule-makers in managing global governance*. Bonn: German Institute of Development and Sustainability.
- Hickmann, T., Biermann, F., Sénit, C.A., Sun, Y., Bexell, M., Bolton, M. et al. (2024) Scoping article: research frontiers on the governance of the sustainable development goals. *Global Sustainability*, 7(1), 1–12. Available from: <https://doi.org/10.1017/sus.2024.4>
- Hoekman, B., Mavroidis, P. & Nelson, D. (2023) *Non-economic objectives, globalisation and multilateral trade cooperation*. Paris & London: CEPR Press. Available from: <https://cepr.org/publications/books-and-reports/non-economic-objectives-globalisation-and-multilateral-trade> [Accessed 29th April 2024].
- Hospes, O. (2014) Marking the success or end of global multi-stakeholder governance? The rise of national sustainability standards in Indonesia and Brazil for palm oil and soy. *Agriculture and Human Values*, 31(3), 425–437. Available from: <https://doi.org/10.1007/s10460-014-9511-9>
- Humphrey, J. & Michida, E. (2021) National Palm oil Standards in Asia: motivations and impacts on trade and rural development. In: Michida, E., Humphrey, J. & Vogel, D. (Eds.) *The diffusion of public and private sustainability regulations*. Cheltenham, UK: Edward Elgar Publishing, pp. 17–46.
- ILO. (2023) *Promoting and enforcing compliance with labour provisions in trade agreements: Comparative analysis of Canada, European Union and United States approaches and practices*. Available from: <https://www.ilo.org/publications/promoting-and-enforcing-compliance-labour-provisions-trade-agreements> [Accessed 29 April 2024].
- Kemper, L., Sampson, G., Larrea, C., Schlatter, B., Luna, E., Duc Dang, T. et al. (2023) *State of sustainable markets 2023: statistics and emerging trends*. Geneva: ITC.
- Kosolapova, E., Verma, R., Turley, L. & Wilkings, A. (2023) State of sustainability initiatives review: standards and the sustainable development goals. *International Institute for Sustainable Development* Available from: <https://www.iisd.org/publications/report/ssi-review-standards-sustainable-development-goals-sdgs> [Accessed 29th April 2024].
- Krauss, J.E. & Krishnan, A. (2022) Global decisions versus local realities: sustainability standards, priorities and upgrading dynamics in agricultural global production networks. *Global Networks*, 22(1), 65–88. Available from: <https://doi.org/10.1111/glob.12325>
- Krumbiegel, K., Maertens, M. & Wollni, M. (2018) The role of fair-trade certification for wages and job satisfaction of plantation workers. *World Development*, 102, 195–212. Available from: <https://doi.org/10.1016/j.worlddev.2017.09.020>

- Lambin, E.F., Gibbs, H.K., Heilmayr, R., Carlson, K.M., Fleck, L.C., Garrett, R.D. et al. (2018) The role of supply-chain initiatives in reducing deforestation. *Nature Climate Change*, 8(2), 109–116. Available from: <https://doi.org/10.1038/s41558-017-0061-1>
- Lambin, E.F., Meyfroidt, P., Rueda, X., Blackman, A., Börner, J., Cerutti, P.O. et al. (2014) Effectiveness and synergies of policy instruments for land use governance in tropical regions. *Global Environmental Change*, 28(1), 129–140. Available from: <https://doi.org/10.1016/j.gloenvcha.2014.06.007>
- Lambin, E.F. & Thorlakson, T. (2018) Sustainability standards: interactions between private actors, civil society, and governments. *Annual Review of Environment and Resources*, 43, 369–393. Available from: <https://doi.org/10.1146/annurev-environ-102017-025931>
- LeBaron, G., Lister, J. & Dauvergne, P. (2017) Governing global supply chain sustainability through the ethical audit regime. *Globalizations*, 14(6), 958–975. Available from: <https://doi.org/10.1080/14747731.2017.1304008>
- Lee, J.S.H., Miteva, D.A., Carlson, K.M., Heilmayr, R. & Saif, O. (2020) Does oil palm certification create trade-offs between environment and development in Indonesia? *Environmental Research Letters*, 15(12), 124064. Available from: <https://doi.org/10.1088/1748-9326/abc279>
- Lima, U.M. & Lee, K. (2023) Governance and asymmetry in global value chains of the coffee industry: possibility for catch-up by emerging economies. *Seoul Journal of Economics*, 36(1), 79–112. Available from: <https://doi.org/10.22904/sje.2023.36.1.003>
- Locke, R.M. (2013) *The promise and limits of private power: promoting labor standards in a global economy*. Cambridge: Cambridge University Press.
- Loconto, A. & Dankers, C. (2014) *Impact of international voluntary standards on smallholder market participation in developing countries: a review of the literature*. Rome: FAO.
- Loconto, A. & Fouilleux, E. (2014) Politics of private regulation: Iseal and the shaping of transnational sustainability governance. *Regulation & Governance*, 8(2), 166–185. Available from: <https://doi.org/10.1111/regg.12028>
- Loconto, A.M. (2017) Models of assurance: diversity and standardization of modes of intermediation. *The Annals of the American Academy of Political and Social Science*, 670(1), 112–132. Available from: <https://doi.org/10.1177/0002716217692517>
- Majer, J., Henschler, H., Reuber, P., Fischer-Kreer, D. & Fischer, D. (2022) The effects of visual sustainability labels on consumer perception and behavior: a systematic review of the empirical literature. *Sustainable Production and Consumption*, 33(1), 1–14. Available from: <https://doi.org/10.1016/j.spc.2022.06.012>
- Marques, J.C. & Eberlein, B. (2021) Grounding transnational business governance: a political-strategic perspective on government responses in the global south. *Regulation & Governance*, 15(4), 1209–1229. Available from: <https://doi.org/10.1111/regg.12356>
- Martin-Ortega, O. & O'Brien, C.M. (2019) *Public procurement and human rights*. Cheltenham: Edward Elgar Publishing.
- Marx, A. (2013) Varieties of legitimacy: a configurational institutional design analysis of eco-labels. *Innovation: The European Journal of Social Science Research*, 26(3), 268–287. Available from: <https://doi.org/10.1080/13511610.2013.771892>
- Marx, A., Bécault, E. & Wouters, J. (2012) Private standards in forestry: assessing the legitimacy and effectiveness of the Forest Stewardship Council. In: Marx, A. et al. (Eds.) *Global governance and private standards. Economic, legal and political perspectives*. Cheltenham: Edward Elgar, pp. 60–97.
- Marx, A. & Cuyper, 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. Available from: <https://doi.org/10.1111/j.1748-5991.2010.01088.x>
- Marx, A., Depoorter, C. & Vanhaecht, R. (2022) Voluntary sustainability standards: state of the art and future research. *Standards*, 2(1), 14–31. Available from: <https://doi.org/10.3390/standards2010002>
- Marx, A. & Wouters, J. (2015) Competition and cooperation in the market of voluntary sustainability standards. In: Delimatsis, P. (Ed.) *The law, economics and politics of international standardisation*. Cambridge: Cambridge University Press, pp. 215–241.
- Marx, A. & Wouters, J. (2016) Redesigning enforcement in private labour regulation: will it work? *International Labour Review*, 155(3), 435–459. Available from: <https://doi.org/10.1111/j.1564-913X.2015.00040.x>
- Meemken, E.-M. (2020) Do smallholder farmers benefit from sustainability standards? A systematic review and meta-analysis. *Global Food Security*, 26, 100373. Available from: <https://doi.org/10.1016/j.gfs.2020.100373>
- Meemken, E.M., Sellare, J., Kouame, C.N. & Qaim, M. (2019) Effects of Fairtrade on the livelihoods of poor rural workers. *Nature Sustainability*, 2(7), 635–642. Available from: <https://doi.org/10.1038/s41893-019-0311-5>
- Milder, J.C., Newsom, D., Sierra, C. & Bahn, V. (2016) Reducing tourism's threats to biodiversity: effects of a voluntary sustainability standard and training program on 106 Latin American hotels, lodges and guesthouses. *Journal of Sustainable Tourism*, 24(12), 1727–1740. Available from: <https://doi.org/10.1080/09669582.2016.1158824>
- Minten, B., Dereje, M., Engida, E. & Tamru, S. (2018) Tracking the quality premium of certified coffee: evidence from Ethiopia. *World Development*, 101, 119–132. Available from: <https://doi.org/10.1016/J.WORLDDEV.2017.08.010>
- Morin, J.-F., Duer, A. & Lechner, L. (2018) Mapping the trade and environment nexus: insights from a new data set. *Global Environmental Politics*, 18(1), 122–139. Available from: https://doi.org/10.1162/GLEP_a_00447
- Negi, A., Pérez-Pineda, J.A. & Blankenbach, J. (2020) *Sustainability standards and global governance: experiences of emerging economies*. Singapore: Springer Nature Singapore.
- OECD. (2018) *OECD due diligence guidance for responsible business conduct*. Available from: <https://mneguidelines.oecd.org/due-diligence-guidance-for-responsible-business-conduct.htm> [Accessed 29th April 2024].
- OECD. (2020) *The alignment of industry and multi-stakeholder programmes with the OECD garment and footwear guidance: Assessment of the German partnership for sustainable textiles*. Available from: <https://mneguidelines.oecd.org/Align-ment-Assessment-Partnership-Sustainable-Textiles-PST.pdf> [Accessed 29th April 2024].
- O'Rourke, D. (2012) *Shopping for good*. Cambridge, MA: MIT Press.
- Oya, C., Schaefer, F. & Skalidou, D. (2018) The effectiveness of agricultural certification in developing countries: a systematic review. *World Development*, 112(C), 282–312. Available from: <https://doi.org/10.1016/j.worlddev.2018.08.001>
- Partiti, E. (2022) The place of voluntary standards in managing social and environmental risks in global value chains. *European Journal of Risk Regulation*, 13(1), 137. Available from: <https://doi.org/10.2139/ssrn.3839485>
- Pérez-Pineda, J.A. (2023) Sector privado Y agenda 2030, RETOS TRAS PABA+40 - private sector and agenda 2030, challenges following BAPA+40. *Foro Internacional*, 63(2 252), 325–368. Available from: <https://doi.org/10.24201/fi.v63i2.2930>
- Ponte, S. (2008) Greener than thou: the political economy of fish ecolabeling and its local manifestations in South Africa. *World Development*, 36(1), 159–175. Available from: <https://doi.org/10.1016/j.worlddev.2007.02.014>
- Ponte, S. (2014) Roundtabling' sustainability: lessons from the bio-fuel industry. *Geoforum*, 54, 261–271. Available from: <https://doi.org/10.1016/j.geoforum.2013.07.008>

- Ponte, S. (2019) *Business, power and sustainability in a world of global value chains*, 1st edition. London: Zed Books.
- Porter, M.E. & Kramer, M.R. (2011) Creating shared value. *Harvard Business Review*, January–February 2011 [online]. Available from: <https://hbr.org/2011/01/the-big-idea-creating-shared-value> [Accessed 29th April 2024].
- Potter, C., Bastounis, A., Hartmann-Boyce, J., Stewart, C., Frie, K., Tudor, K. et al. (2021) The effects of environmental sustainability labels on selection, purchase, and consumption of food and drink products: a systematic review. *Environment and Behavior*, 53(8), 891–925. Available from: <https://doi.org/10.1177/0013916521995473>
- Prieto-Sandoval, V., Mejía-Villa, A., Ormazabal, M. & Jaca, C. (2020) Challenges for ecolabeling growth: lessons from the EU ecolabel in Spain. *The International Journal of Life Cycle Assessment*, 25(5), 856–867.
- Rainforest Alliance. (2024) *How the rainforest alliance supports EUDR compliance from farm to retailer*. Available from: <https://www.rainforest-alliance.org/business/certification/how-the-rainforest-alliance-supports-eudr-compliance-from-farm-to-retailer/> [Accessed 29th April 2024].
- Renckens, S. (2020) *Private governance and public authority: regulating sustainability in a global economy*. Cambridge: Cambridge University Press.
- Renckens, S. & Auld, G. (2019) Structure, path dependence, and adaptation: north-south imbalances in transnational private fisheries governance. *Ecological Economics*, 166(C), 1. Available from: <https://doi.org/10.1016/j.ecolecon.2019.106422>
- Renckens, S. & Auld, G. (2022) Time to certify: explaining varying efficiency of private regulatory audits. *Regulation & Governance*, 16(2), 500–518. Available from: <https://doi.org/10.1111/rego.12362>
- Rickenbach, M. & Overdevest, C. (2006) More than markets: assessing Forest Stewardship Council (FSC) certification as a policy tool. *Journal of Forestry*, 104(3), 143–147. Available from: <https://doi.org/10.1093/jof/104.3.143>
- Rueda, X. & Lambin, E.F. (2013) Responding to globalization: impacts of certification on Colombian small-scale coffee growers. *Ecology and Society*, 18(3), 1–14. <https://doi.org/10.5751/ES-05595-180321>
- Rueda, X., Thomas, N.E. & Lambin, E.F. (2015) Eco-certification and coffee cultivation enhance tree cover and forest connectivity in the Colombian coffee landscapes. *Regional Environmental Change*, 15(1), 25–33. Available from: <https://doi.org/10.1007/s10113-014-0607-y>
- Schiller, L., Auld, G., Sinan, H. & Bailey, M. (2021) Decadal changes in international advocacy toward the conservation of highly migratory fishes. *Conservation Letters*, 14(6), e12827. Available from: <https://doi.org/10.1111/conl.12827>
- Schleifer, P. (2013) Orchestrating sustainability: the case of European Union biofuel governance. *Regulation & Governance*, 7(4), 533–546. Available from: <https://doi.org/10.1111/rego.12037>
- Schleifer, P. (2017) Private regulation and global economic change: the drivers of sustainable agriculture in Brazil. *Governance*, 30(4), 687–703. Available from: <https://doi.org/10.1111/gove.12267>
- Schleifer, P. (2019) Varieties of multi-stakeholder governance: selecting legitimization strategies in transnational sustainability politics. *Globalizations*, 16(1), 50–66. Available from: <https://doi.org/10.1080/14747731.2018.1518863>
- Schleifer, P. (2023) *Global shifts: business, politics, and deforestation in a changing world economy*. Cambridge, MA: MIT Press.
- Schleifer, P., Brandi, C., Verma, R., Bissinger, K. & Fiorini, M. (2022) Voluntary standards and the SDGs: mapping public-private complementarities for sustainable development. *Earth System Governance*, 14, 100153. Available from: <https://doi.org/10.1016/j.esg.2022.100153>
- Schleifer, P., Fiorini, M. & Fransen, L. (2019) Missing the bigger picture: a population-level analysis of transnational private governance organizations active in the global south. *Ecological Economics*, 164(C), 106362. Available from: <https://doi.org/10.1016/j.ecolecon.2019.106362>
- Schleifer, P. & Fransen, L. (2022) Towards a smart mix 2.0: harnessing heterogeneity for sustainable global supply chains. *SWP Working Paper* [Online], WP NR. 04 AUGUST 2022. Available from: https://www.swp-berlin.org/publications/products/arbeitspapiere/WP04_SmartMix2.0_Schleifer_Fransen.pdf [Accessed 29th April 2024].
- Schleifer, P. & Sun, Y. (2020) Reviewing the impact of sustainability certification on food security in developing countries. *Global Food Security*, 24(6), 100337. Available from: <https://doi.org/10.1016/j.gfs.2019.100337>
- Schouten, G. & Bitzer, V. (2015) The emergence of southern standards in agricultural value chains: a new trend in sustainability governance? *Ecological Economics*, 120(C), 175–184. Available from: <https://doi.org/10.1016/j.ecolecon.2015.10.017>
- Sellare, J., Meemken, E.-M. & Qaim, M. (2020) Fairtrade, agrochemical input use, and effects on human health and the environment. *Ecological Economics*, 176, 106718. Available from: <https://doi.org/10.1016/j.ecolecon.2020.106718>
- Sun, Y. & van der Ven, H. (2019) Swimming in their own direction: explaining domestic variation in homegrown sustainability governance for aquaculture in Asia. *Ecological Economics*, 167, 106445. Available from: <https://doi.org/10.1016/j.ecolecon.2019.106445>
- Taylor, C., Balmford, A., Buchanan, G.M., Butchart, S.H., Corlet Walker, C., Ducharme, H. et al. (2018) Where are commodity crops certified, and what does it mean for conservation and poverty alleviation? *Biological Conservation*, 217, 36–46. Available from: <https://doi.org/10.1016/j.biocon.2017.09.024>
- Terstappen, V., Hanson, L. & McLaughlin, D. (2013) Gender, health, labor, and inequities: a review of the fair and alternative trade literature. *Agriculture and Human Values*, 30(1), 21–39. Available from: <https://doi.org/10.1007/s10460-012-9377-7>
- Thompson, W., Blaser-Hart, W., Joerin, J., Krütli, P., Dawoe, E., Kopainsky, B. et al. (2022) Can sustainability certification enhance the climate resilience of smallholder farmers? The case of Ghanaian cocoa. *Journal of Land Use Science*, 17(1), 407–428. Available from: <https://doi.org/10.1080/1747423X.2022.2097455>
- Thorstensen, V., Hernandez, A.M., Corrêa, R.O., Brito, D.T., Arima Junior, M.K., Rebouças Mota, C. et al. (2024) *Voluntary sustainability standards (VSS) and the “greening” of high-emitting industry sectors in Brazil: mapping the sustainability efforts of the private sector (IDOS discussion paper 1.2024)*. Bonn: German Institute of Development and Sustainability (IDOS). Available from: <https://doi.org/10.23661/idp1.2024>
- UNCTAD. (2008) *Private-Sector Standards and National Schemes for Good Agricultural Practices: Implications for Exports of Fresh Fruit and Vegetables from sub-Saharan Africa – Experiences of Ghana, Kenya, and Uganda*. Available from: https://unctad.org/system/files/official-document/ditcted200713_en.pdf [Accessed 29th April 2024].
- UNCTAD. (2022) *Voluntary sustainability standards in international trade*. Available from: https://unctad.org/system/files/official-document/ditctab2022d8_en.pdf [Accessed 29th April 2024].
- UNCTAD. (2023) *Trade and development report 2023*. Available from: https://unctad.org/system/files/official-document/tdr2023_en.pdf [Accessed 29th April 2024].
- UNFSS. (2018) *Voluntary sustainability standards (VSS), trade and sustainable development*. UNFSS 3rd flagship report. Available from: <https://unfss.org/wp-content/uploads/2018/09/UNFSS-3rd-Flagship-Report-FINAL-for-upload-1.pdf> [Accessed 30th April 2024]

- UNFSS. (2020) *Scaling up voluntary sustainability standards through sustainable public procurement and trade policy*. UNFSS 4th flagship report. Available from: https://unfss.org/wp-content/uploads/2020/10/UNFSS-4th-Report_revised_12Oct2020.pdf [Accessed 29th April 2024].
- UNFSS. (2022) *Voluntary sustainability standards—sustainability agenda and developing countries: opportunities and challenges*. UNFSS 5th flagship report. Available from: https://unfss.org/wp-content/uploads/2022/10/UNFSS-5th-Report_14Oct2022_rev.pdf [Accessed 29th April 2024].
- van der Ven, H. (2019) *Beyond greenwash: explaining credibility in transnational eco-labeling*. Oxford: Oxford University Press.
- van der Ven, H. (2022) Effects of stakeholder input on voluntary sustainability standards. *Global Environmental Change*, 75, 102554. Available from: <https://doi.org/10.1016/j.gloenvcha.2022.102554>
- van der Ven, H. (2023) A comparison of stakeholder engagement practices in voluntary sustainability standards. *Regulation & Governance*. Available from: <https://doi.org/10.1111/rego.12552>
- van der Ven, H. & Barmes, D. (2023) The uneasy marriage of private standards and public policies for sustainable commodity governance. *Business Strategy and the Environment*, 32(8), 5161–5173. Available from: <https://doi.org/10.1002/bse.3424>
- van der Ven, H., Sun, Y. & Cashore, B. (2021) Sustainable commodity governance and the global south. *Ecological Economics*, 186, 107062. Available from: <https://doi.org/10.1016/j.ecolecon.2021.107062>
- Vanderhaegen, K., Akoyi, K.T., Dekoninck, W., Jocqué, R., Muys, B., Verbist, B. et al. (2018) Do private coffee standards 'walk the talk' in improving socio-economic and environmental sustainability? *Global Environmental Change*, 51, 1–9. Available from: <https://doi.org/10.1016/j.gloenvcha.2018.04.014>
- von Essen, M. & Lambin, E.F. (2021) Jurisdictional approaches to sustainable resource use. *Frontiers in Ecology and the Environment*, 19(3), 159–167. Available from: <https://doi.org/10.1002/fee.2299>
- WTO. (2018) *Mainstreaming trade to attain the sustainable development goals*. Geneva: World Trade Organization.
- Zwerts, J., Sterck, E.H.M., Verweij, P.A., Maisels, F., van der Waarde, J., Geelen, E.A.M. et al. (2024) FSC-certified forest management benefits large mammals compared to non-FSC. *Nature*, 628(8008), 563–568. Available from: <https://doi.org/10.1038/s41586-024-07257-8>

AUTHOR BIOGRAPHIES

Axel Marx is Deputy Director at the Leuven Centre for Global Governance Studies (Univ Leuven) and co-Chair of the Academic Advisory Council of the UN Forum on Sustainability Standards. His research interests include voluntary sustainability standards, EU trade policy and business and human rights. He recently developed a Massive Open Online Course on Sustainable Trade on EdX.

Charline Depoorter is a Doctoral Researcher at the Leuven Centre for Global Governance Studies and at the Division of Bioeconomics, KU Leuven. She conducts research on global value chains sustainability governance, with a focus on institutional design effectiveness of voluntary sustainability standards as private governance instruments for sustainable agri-food and wood sectors.

Santiago Fernandez de Cordoba is Coordinator of the UN Forum on Sustainability Standards (UNFSS) and UNCTAD's Chief of the VSS Program. He is the Editor of UNFSS Flagship series and co-Chair of the UNFSS Academic Advisory Council. He has been a trade policy expert for over 25 years, particularly on market access issues, standards and structural adjustment.

Rupal Verma served as a Consultant at the United Nations Conference on Trade and Development (UNCTAD) and secretariat advisor for the UN Forum on Sustainability Standards (UNFSS). She has conducted research in the fields of sustainability standards, international trade and value chains, with a focus on their implications for developing nations.

Mercedes Araoz is a Professor of International Economics and Public Policy at Universidad del Pacifico, Lima, Peru. She has been Vice-President and Member of the Parliament and Prime Minister of Peru. She holds a PhD from the University of Miami and has a long career in academia as Professor and Researcher in international trade policy. She has received two “Doctor Honoris Causa” degrees.

Graeme Auld is a Professor in Carleton University's School of Public Policy and Administration. He researches environmental politics and global governance, focusing particularly on transnational private governance. He is author of *Constructing Private Governance: The Rise and Evolution of Forest, Coffee, and Fisheries Certification* (Yale University Press, 2014).

Janne Bemelmans is a Doctoral Researcher at the Division of Bioeconomics at KU Leuven. Her research spans socio-economic impact assessments of VSS both in terms of global trade effects, focusing on tropical food commodity sectors, and small-holder welfare effects, specifically for Indonesian cocoa producers.

Elizabeth A. Bennett is the Joseph M. Ha Associate Professor of International Affairs and Director of Political Economy at Lewis & Clark College (US), and a recent fellow at the Harvard Kennedy School Carr Center for Human Rights and the Rutgers University Institute for Employee Ownership and Profit Sharing. She researches how VSS include labour in governance and implement living wages.

Eva Boonaert is a Doctoral Researcher at the Division of Bioeconomics at KU Leuven. Her research focuses on the design and sustainability impact of voluntary sustainability standards, with a particular focus on tropical commodities in Peru.

Clara Brandi is the Head of the Department at the German Institute of Development and Sustainability (IDOS) and Professor of International Economics / Development Economics at the University of Bonn. She studied in Freiburg and Oxford and received her PhD from the European University Institute, Florence. She has published widely on issues related to the global economy and sustainability, including on voluntary sustainability standards.

Thomas Dietz is a Professor of International Politics and Law at the University of Münster, Germany. His research revolves around global sustainability governance, with a particular emphasis on transnational private regulations, including Voluntary Sustainability Standards (VSS).

Eve Fouilleux is a Senior Research Director at the French National Centre for Scientific Research, interested in understanding how globalisation reshapes the conditions and dynamics of public debates and policy-making. She works mainly on multilevel policies and politics in food and agriculture, with a focus on sustainability and ecological transition.

Janina Grabs is an Associate Professor of Sustainability Research at the University of Basel. She received her PhD in Political Science from the University of Münster, Germany. Her work focuses on the governance of sustainability in global value chains, with a special focus on tropical agricultural commodities such as coffee and palm oil.

Lars H. Gulbrandsen is Deputy Director and Research Director at the Fridtjof Nansen Institute in Norway. His research interests are within the fields of transnational environmental governance and climate, energy, and environmental politics. He is the author of *Transnational Environmental Governance: The Emergence and Effects of the Certification of Forests and Fisheries* (Edward Elgar, 2010).

James Harrison is Professor of Law at the University of Warwick. He teaches and researches on issues of international economic law and the transnational regulation of corporate activity. Of particular relevance to this project, he has undertaken extensive empirical research on VSS grievance mechanisms and human rights due diligence.

Robert Heilmayr is an Assistant Professor of Environmental Economics in the Environmental Studies Program and the Bren School of Environmental Science and Management at the University of California, Santa Barbara. Robert's research draws upon methods of causal inference to understand the environmental and socioeconomic impacts of market-based policies to protect and restore forests.

Ariel Hernandez is currently a fellow at the NEW INSTITUTE in Hamburg, a Senior Researcher at the German Institute of Development and Sustainability (IDOS) and a Lecturer at the University of Duisburg-Essen. His research interests include negotiations, mediation, knowledge diplomacy, transformation to sustainability, climate and environmental justice, sustainability standards and due diligence, development policies of Asian powers, sustainable energy and mobility.

Bernard Hoekman is Professor and Director of Global Economics at the EUI's Robert Schuman Centre. A CEPR Research Fellow and associate of the UK Centre for Inclusive Trade Policy, he previously was Director of International Trade at the World Bank. He holds a PhD in Economics from the University of Michigan.

Siti Rubiah Lambert is an Associate Economic Affairs Officer at UNCTAD within the Office-of-the-Secretary-General. She works with the Advisor to the Secretary-General as a dedicated speechwriter for the Secretary-General. She was formerly from the Trade Analysis Branch, focused on VSS and its impact on trade and development, and secretariat advisor for the UN Forum on Sustainability Standards (UNFSS).

Eric Lambin, a geographer, divides his time between the University of Louvain and Stanford University. His research tries to better understand the causes and impacts of land use changes. He was awarded the 2014 Volvo Environment Prize and 2019 Blue Planet Prize.

Li Li is Professor at the Institute of International Economy, University of International Business and Economics (UIBE) and the Director of China Research Center for Technical Barriers to Trade (CCTBT), UIBE. She has participated in the drafting of ISO260000 and several VSS in mineral, textile, natural rubber, information and technology, and communication industries.

Miet Maertens is Professor of Agricultural and Development Economics at the Division of Bio-economics, KU Leuven. She holds a PhD in Agricultural Economics from the Georg-August University in Goettingen. Her research focuses on food trade, global value chains, sustainability standards, climate change, decent work, and sustainable agricultural intensification.

Paulo Mortara Batistic is a PhD candidate at the University of Münster. His research interests include development, sustainable food systems, private regulation and rule compliance, as well as small producers within global value chains.

Etsuyo Michida is a Senior Research Fellow at the Institute of Developing Economies, Japan External Trade Organization (IDE-JETRO). Her interest lies in sustainability regulations and private standards, focusing on the impact on the global value chains.

Junji Nakagawa is Professor at the Faculty of Liberal Arts, Chuo Gakuin University. Before assuming this position in 2019, he was a Professor of International Economic Law at the Institute of Social Science, University of Tokyo. He is also an Advisor at Anderson, Mori & Tomotsune, LL.P.

Archna Negi teaches at the Jawaharlal Nehru University (JNU), New Delhi, India. She has a PhD in International Law and her research focus is on the issues of international trade and environment. She has published a co-edited volume titled *Sustainability Standards and Global Governance: Experiences of Emerging Economies* (Springer, 2020).

Jorge A. Pérez-Pineda is Research Professor at Anahuac University Mexico and an Associate professor of International Political Economy at Comillas Pontifical University. He focuses his work on Private Sector Engagement in International Cooperation, Corporate Social Responsibility, institutional aspects of South–South and Triangular cooperation, and Voluntary Sustainability Standards, where he has published papers, books and book chapters.

Stefano Ponte is Professor of International Political Economy at Copenhagen Business School and a Distinguished Visiting Professor at the University of Johannesburg. He is primarily interested in the overlaps and tensions between private authority and public regulation, how sustainability certifications shape power relations in value chains, and how different partnerships affect sustainability outcomes.

Ximena Rueda is the Dean of the School of Management at Universidad de los Andes in Bogotá, Colombia, and Professor of Sustainability. She holds a PhD in Geography from Clark University and a Master's degree in Urban Planning from the Massachusetts Institute of Technology. She has over 20 years of experience in agricultural supply chains, land tenure and environmental conservation in Latin America. Rueda is currently co-Chair of the IPBES assessment on Business and Biodiversity.

Philip Schleifer is Associate Professor of Transnational Governance at the Political Science Department of the University of Amsterdam. He holds a PhD from the London School of Economics and Political Science. His research focuses on the politics and governance of sustainability in global supply chains.

Vera Thorstensen is a Professor at the School of Economics at the Getulio Vargas Foundation, São Paulo, and Head of the Center on Global Trade and Investments. She is the WTO Chair Holder in Brazil. She was an invited Professor at Sciences-Po, IELPO-Barcelona and IEE-Lisbon and has a track record of research on international trade policy.

Hamish van der Ven is Assistant Professor of Sustainable Business Management of Natural Resources in the Faculty of Forestry at the University of British Columbia. He holds a PhD in Political Science from the University of Toronto. His research focuses on sustainable supply chain governance and the impacts of emerging technologies on sustainability.

How to cite this article: Marx, A., Depoorter, C., Fernandez de Cordoba, S., Verma, R., Araoz, M., Auld, G. et al. (2024) Global governance through voluntary sustainability standards: Developments, trends and challenges. *Global Policy*, 00, 1–21. Available from: <https://doi.org/10.1111/1758-5899.13401>