The Standards-Regulation Nexus: Mapping the Ecosystem of Standardisation

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Executive Summary

1. The authors were commissioned to produce a report for the British Standards Institution (BSI), examining how best to deliver policy outcomes through the relationship between standards and regulation. The report is guided by the following research questions:

    i. What regulatory/non-regulatory levers are available and effective to deliver policy outcomes?
    ii. Under what conditions/in what roles do standards bodies interact successfully with actors in the standards and regulatory governance space to: ensure successful development and application of high integrity standards; accelerate alignment of best practice and innovation in standards; and help implement robust governance of regulatory requirements?
    iii. What factors drive the integration of a standard into the national regulatory infrastructure? What barriers, drivers and criteria are relevant to policymakers' decisions regarding how their policy should be governed?

2. We have focused these questions on the governance of climate policy, and particularly the successful pursuit of net zero policies.[1] We have targeted the analysis to produce a set of practical actions that flow from this research.

3. In examining the guiding questions, we map relevant ecosystems of standardisation, placing the process of standardisation within a wider governance picture that includes recognised national standards bodies (NSBs), commercial actors, other private bodies, civil society, governmental structures (sub-national, national, and international), and *sui generis* bodies and actors that bridge these traditional categories (such as public-private partnerships and multistakeholder initiatives). This serves to place standards and actors engaged in standardisation at the heart of an international and transnational space of governance.

4. The report is structured in three sections:

    1. **Section I: Definitions, Literature Review and Framing. Mapping the Ecosystem of Standardisation**

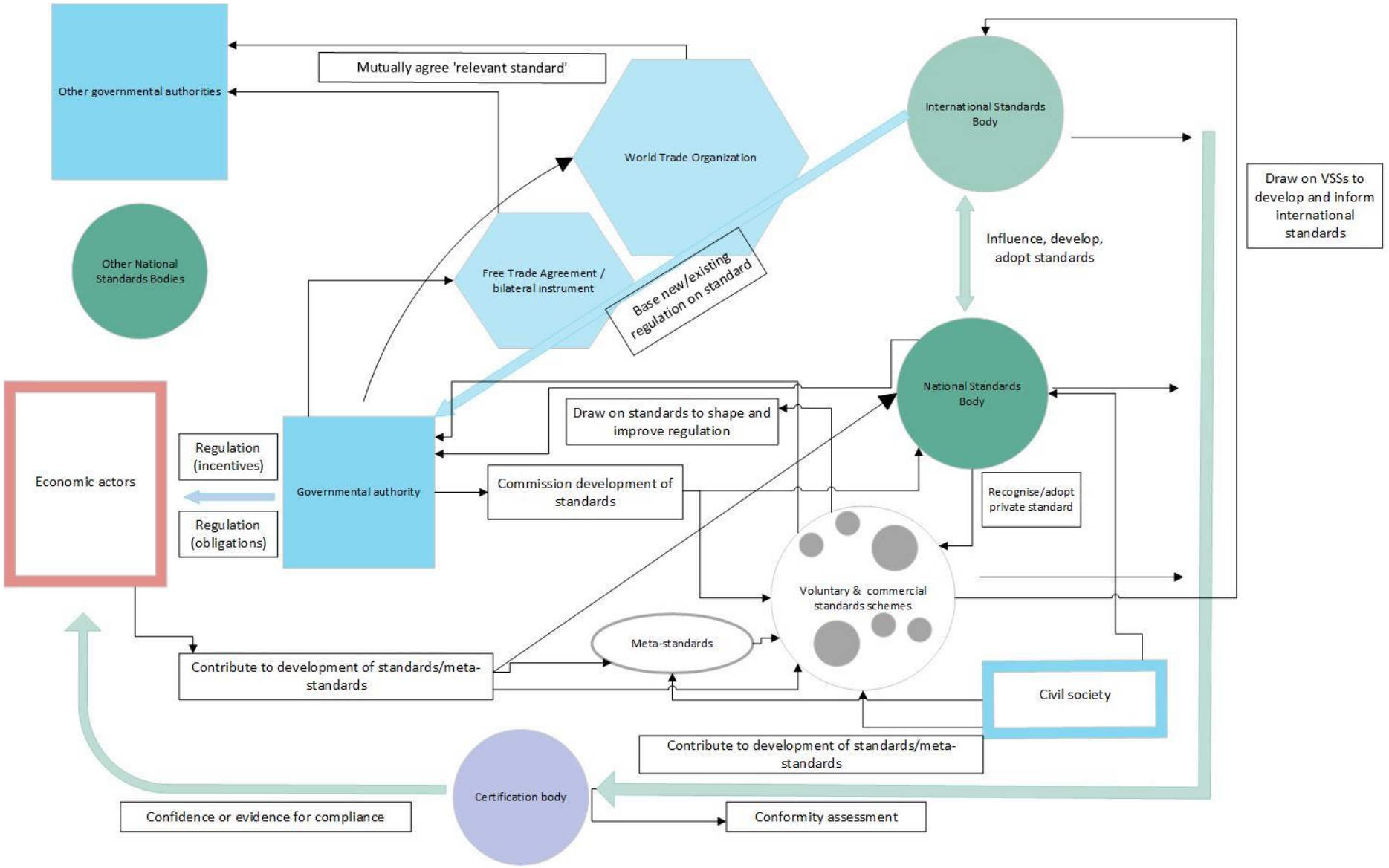
[1] The term 'net zero' is understood in line with ISO Net Zero Guidelines IWA 42:2022(en), 3.1.1: 'condition in which human-caused *residual GHG emissions* (3.2.9) are balanced by human-led *removals* (3.3.3) over a specified period and within specified boundaries.'

5. In **Section I** we confirm the definitions to be used for the purposes of the Report. As this project draws on literature from multiple different disciplines, confusion may arise as to how different terms are used across the various fields.

6. Next, we examine literature on the relationship between standards and regulatory frameworks (that is, the rules, principles, institutions, and practices of public governance). By building on existing models of how standards can play an important role in supporting climate policy goals (notably the 'conveyor belt model'[2]), we expand and deepen the role of standards bodies in this process. This involves an awareness of the necessity to improve the quality of standards within the ecosystem and a focused examination of potential actions NSBs could undertake.

7. Consequently, we map an ecosystem of standardisation to identify: how standards bodies interact with other standards bodies (recognised 'public' national standards bodies, private standards bodies such as consortia or Voluntary Sustainability Standards (VSSs), and hybrid bodies that include a mix of public and private actors); how standards bodies and their standards interact with regulatory frameworks at the national and international levels; and how standards shape or otherwise influence regulatory practices at the national and international levels. We identify a range of dynamics, their potential use, and associated risks. In particular, we note the desirability of 'symbiotic' relationships among actors in standardisation. Through mapping this ecosystem of standardisation, we also identify a set of entry-points and levers for standards bodies to engage (directly or indirectly) with regulatory frameworks to support policy aims. Our map of the ecosystem is as follows:

[2] T Hale, 'The Net-Zero Governance Conveyor Belt', Kleinman Centre for Energy Policy (2022).


Other governmental authorities
Mutually agree 'relevant standard'
World Trade Organization
International Standards Body
Draw on VSSs to develop and inform international standards
Other National Standards Bodies
Free Trade Agreement / bilateral instrument
Base new/existing regulation on standard
Influence, develop, adopt standards
National Standards Body
Economic actors
Regulation (incentives)
Regulation (obligations)
Governmental authority
Draw on standards to shape and improve regulation
Commission development of standards
Recognise/adopt private standard
Voluntary & commercial standards schemes
Meta-standards
Contribute to development of standards/meta-standards
Civil society
Contribute to development of standards/meta-standards
Certification body
Confidence or evidence for compliance
Conformity assessment

8. We test and contextualise the ecosystem map through case-studies (**Section II**), to further develop understanding and to identify specific policy instruments that could be leveraged by NSBs to support climate policy objectives (presented in **Section III**).

2. Section II: Case-studies: sustainable forestry management and carbon offsetting

9. In Section II, we undertake two case-studies to provide examples of the standardisation ecosystem. These case-studies draw on national and international legal instruments (legislation, regulations, treaties) other instruments of cooperation and governance (including standards), a wide body of secondary literature, and interviews with key stakeholders. The first case study concerns the role of standards in sustainable forestry management (SFM). The second deals with carbon offsetting.

10. While both case-studies are directly relevant to climate policy, they were chosen only in part for their proximity to the subject matter. These case-studies were chosen also as they (i) are cross-jurisdictional and involve actors from both the Global North and South, (ii) are sectors of particular interest and importance for their overlap with climate policy and net zero in particular and (iii) present governance challenges that have been responded to by multiple actors across public/private-national/international lines, thus offering important insights when viewed from an ecosystem perspective.

11. In the case of sustainable forestry management, we find:

- A regime that is dominated at the international level by two Voluntary Sustainability Standards (VSS): the Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC). The relationship between these standards bodies is nominally one of competition. Though in practice, the standards are often used in parallel, whether by economic actors (forestry managers or traders) or forestry management organisations. This concurrent usage challenges expectations around the influence of competition on the development of standards in the literature (whether positive or negative).
- Recognised public international standards do play a role in SFM, though it is a secondary, supporting role at best (for example, through ISO 14001:2015 on environmental management systems).

- Binding legal international commitments in relation to SFM have developed slowly since the early 1990s, and despite their increase in numbers, deforestation and forest degradation persist (FAO 2022:5). Where we see an increasing number of commitments in relation to SFM at the international level has been through trade agreements, specifically free trade agreements (FTAs). At times, under FTAs, such commitments relate to specific forestry management obligations, for example, stressing the need to cooperate on SFM, or the call to conclude Voluntary Partnership Agreements (VPAs) which support the export of sustainable forest products.
- Commitments under FTAs and the World Trade Organization (WTO) play a key role in relation to increasingly onerous or ambitious regulatory frameworks at a *national* level as they impose obligations on both regulating governments and economic actors within the supply chains of forest(related) commodities.. These national obligations (such as under the European Union Deforestation Regulation (EUDR)) are increasing commitments both in ambition (the obligations they impose on forest managers and traders) and reach (increasing their application beyond the territory of the regulating authority to across global supply chains of traders that deal in their market).
- Thus far, national regulations have not included a formal relationship with dominant standards such as an explicit reference to a standard as requirement or indicator of compliance. Instead, the VSS shadow the EUDR (for example) providing *de facto* indicators of *likely* compliance. This suggests the potential for 'upward' pressure on standards, where they are driven to improve their scope or ambition, pushed up by the regulation. Here VSS respond to market leaders' new regulation (such as the EUDR), highlighting the benefits their systems offer – but only where the regulation is 'ahead' of industry behaviour. At the same time, a lack of formal recognition of these standards ensures a focus on effective implementation and monitoring by business (customarily through inspection, testing, verification, and certification services). At the national level, we see examples of recognised standards *reflecting* dominant VSS, either directly (by incorporating or mirroring them, e.g., Gabon where forestry permits are conditioned on FSC certification) or indirectly (by meeting their requirements via conditions for certification, e.g., the UK Woodland Assurance Standard (UKWAS)).
- VSS are increasingly embedded in regulatory frameworks, not only in relation to commitments (that is, 'sticks') but also as incentives ('carrots'), for example as a condition of tax incentives, access to procurement contracts, or (indirectly, and currently rarely) through preferential access to markets through FTAs.

- One challenge that arises in SFM is how to ensure that different standards, including recognised national standards and VSS, and national regulatory requirements or incentives can be consolidated into a coherent package that encourages economic actors to 'race-to-the-top' rather than identify a lowest common denominator (a constructive 'symbiotic' relationship). The case-study identified a useful example of such a dynamic in the UK Forestry Standard, which bridges different jurisdictions' regulatory requirements, good practice, and the two dominant VSS and drives improvement in the standard's requirements (for example, in relation to resilience).
- An additional challenge is the limited capacity of traders in some countries to meet these national regulations and (indirectly) the key VSS standards. This stresses the need for mechanisms that improve accessibility and implementation of VSS, and improved participation in their development. In this respect, the most effective lever to support effective uptake and monitoring of quality standards in SFM is to identify mechanisms of technical assistance and capacity building. This could be directly from specific governments, or through international organisations.

12. In the case of carbon offsetting, we find:

- While the governance arrangements for compliance markets and voluntary markets are structurally very different from one another, both have suffered from significant credibility issues, and neither is seen at present as an exemplar of successful standards governance.
  Historically, the most significant compliance market has been that created under Clean Development Mechanism (CDM), which was based on internationally agreed standards established by its Executive Board (EB). Relatively speaking, these standards have enjoyed a high degree of international credibility as compared to others. CDM offsets (CERs) have been recognised in several national jurisdictions, and many offset providers in the voluntary market build their standards using the CDM as a baseline.
- The weaknesses of the CDM are by now well-documented in the literature. Decisions taken by the Executive Board lacked sufficient transparency and accountability, particularly in the early stages. The climate benefit of many CDM projects was ambiguous, and there is evidence that carbon emissions reductions have been systematically overstated. Projects can have significant unintended negative social and environmental impacts, including on local communities. While the finance provided through the CDM has been

significant, it has disproportionately been enjoyed by a small handful of States. Notably, other compliance markets – even those such as the Californian market with some of the most developed standards – have been subject to similar criticisms.

- Notwithstanding the centrality of the CDM, VSS have also played a role in the international compliance market established by the CDM. The CDM EB has drawn on the expertise and experience of VSS in its technical working groups and consultations. In addition, one VSS – Gold Standard – has sought to address some of the above criticisms by providing a set of additional sustainability screens for CDM projects.[3] This has been held up in the literature as an example of a 'symbiotic' relationship between VSS and more traditional standards bodies.
- The CDM is in the process of being replaced by a new mechanism under Art. 6 of the Paris Agreement. In this new mechanism, national public authorities will play a more significant gate-keeping role in the assessment and authorisation of carbon crediting projects.
- The voluntary market, by contrast, is largely unregulated, at least in traditional terms. It is characterised by a large number of VSS in competition with one another. Although these VSS tend to base their standards and methodologies on CDM methodologies as a starting point, where possible, there is still a high degree of variability in both their content and application.
- The functioning of the voluntary market has not, in general, been a successful model of standards governance. While the voluntary market remains large, and is projected to increase significantly, it suffers from very significant credibility issues, reflected in presently low, and highly volatile, market prices.
- National and regional governments have sought to encourage higher ambition and integrity in voluntary carbon markets by providing certain benefits and incentives to what they see as the most credible and highest quality schemes. These benefits can take many forms: the recognition of offset schemes in domestic emission trade schemes and carbon tax systems, the use of government procurement to favour specific schemes, government-backed kitemarks and certification for favoured schemes, preferential tax treatment, and compliance with recognised standards as a condition for access to markets, to climate and development finance, and to other regulatory benefits. The success of these measures in promoting favoured schemes is closely linked to the nature and size of the commercial benefits they provide, as well as to the level of the benchmark they establish.

[3] See, <https://www.goldstandard.org/about>

- Recent initiatives to promote greater integrity and quality in voluntary offset markets have taken the form of meta-standards. "Meta-standards' can be thought of as a second layer of governance sitting above schemes. They are used to assess the quality (credibility) of schemes, and are a tool designed to promote high quality schemes and encourage upward competition in the sector (see paras 79-83 below). Some examples, either existing and planned, include the Core Carbon Principles of the Integrity Council for the Voluntary Carbon Market, the EU's proposed Carbon Removal Certification Framework, as well as the Eligibly Criteria set out for carbon credits in ICAO's Carbon Offsetting and Reduction Scheme for International Aviation. While it is not yet clear what impact such initiatives will have, high quality and ambitious meta-standards, coupled with appropriate recognition mechanisms for compliant schemes, could play an important and increasing role in the governance of carbon credits in the coming years.

3. Section III: Conclusions and Recommendations

13. Reflecting on **Sections I** and **II**, we return to the research questions, responding to (1) the available regulatory and non-regulatory levers available to deliver policy outcomes; (2) the conditions under which standards bodies interact successfully with actors in the standards and regulatory governance space to ensure successful development and application of high integrity standards and (3) the factors that drive the integration of standards into the national regulatory infrastructure. We further provide a set of observations and proposals for further discussion and consideration.

14. In particular, we note the risk of competition driving down quality and trust in standards, but also examples where different standards regimes are able to support each other; and where regulation acts not as a floor but at its most effective drives continued improvement in the standards space. We focus on the potential role of NSBs.

15. We note the potential role for NSBs to drive the uptake of high-quality standards through active engagement with a range of public and private actors. In some cases, NSBs are able to act independently, in others they would need to work with private actors, including other voluntary or commercial standards schemes. In respect of some of the most ambitious initiatives, they will need to work closely with government partners.

16. We identify a suite of levers that can be pursued by NSBs both independently and in concert with government(s), drawing on lessons from both the literature review and case studies. These include: the adoption of meta-standards; potential certification, recognition, or validation of high quality non-NSB standards; support for the development of localised standards in developing countries; improved recognition of preferred standards or guidelines through the international trade architecture (particularly, the WTO and FTAs); and a range of economic incentives to drive ambition and uptake by economic actors.

17. In pursuing the development and implementation of these levers, we consider the conditions for successful involvement of standards bodies in this space. We note that certain conditions are necessary or conducive to ensure successful development and application of high integrity standards; accelerate alignment of best practice and innovation in standards; and help implement robust governance of regulatory requirements. Specifically, we note the importance of the underlying relationship between standards and regulation – the extent to which standards are necessary to reflect new regulatory demands, rather than commercial desire to improve efficiencies through sharing and agreeing common best practice. In the climate space, the need for longer-term framing of economic interest is necessary (something we see in forestry management also), and as such regulation or regulatory levers can play an important role shifting incentives and driving the uptake of high integrity standards. The level of incentive will play a role, though it is important to consider secondary effects. For example, in relation to carbon offsetting, we note the need for effective commercial incentives, while in forestry management the use of strong disincentives (e.g., the EUDR) can be influential but will have an impact on less-resourced traders.

18. Importantly, we find that the conditions for successful interaction will vary from sector to sector. In relation to carbon crediting, for example, perceived market failures in the voluntary market, with depressed demand and relatively low prices for most carbon credits, may create an opportunity for cooperative working between the public sector, standards bodies, and private actors. There is a recognition that the market as a whole would benefit from an improved governance structure to the extent that this could drive increased demand, and improve credibility and reliability (and thus prices) of credits. Here, NSBs can play an important role supporting regulatory developments drawing on their technical expertise and reputation. This is especially important where governance structures are in flux: for example, the work currently underway to design and implement credit mechanisms under

Art. 6 of the Paris Agreement provides an opportunity for cooperation and upward alignment. There will be strong incentives for schemes to ensure some degree of alignment and compatibility with the rules and standards developed under Art. 6. At the same time, methodologies developed in the Art. 6 context will necessarily draw on, and build on, current best practice in the voluntary sector.

19. Successful interactions can build on the relative strengths of different organisations. Government and intergovernmental institutions can enjoy a relatively high degree of legitimacy, and can be well-placed to establish mandates which drive demand and set minimum levels of quality. National and international standards bodies bring credibility, technical expertise, and established mechanisms of stakeholder engagement. Private actors tend to be more rapidly responsive to new information and new technologies: they can help to fill gaps, drive innovation, and encourage continuous improvement. They can also help compensate for limitations in public resources.

20. Linked, we note that a core factor driving the integration of a standard into the national regulatory infrastructure (and beyond) is its quality and the level of trust that it engenders. A recent decline in levels of trust in carbon offsetting mechanisms has increased calls for an additional degree of regulatory oversight, including through the development of international standards and their integration into regulatory frameworks. In the case of the dominant forestry standards bodies (FSC and PEFC) their non-governmental status is considered of lesser importance as they are considered to be of high quality, reducing demand for international standards bodies to develop competing standards. Another driver of integration is the benefits that can be gained through interoperability with government-based schemes that generate demand for carbon credits. There are strong commercial incentives, for example, for private schemes to align with methodologies developed under the new Art. 6 mechanism, and to achieve recognition within domestic emissions trading schemes. A third driver is the desire on the part of certain countries to cooperate in building new markets for sustainable products and technologies. Such cooperation requires some degree of regulatory alignment, to define common standards of sustainability, and to ensure their integrity.

21. Ultimately, this report proposes a range of options for actors in the standards world to help drive net zero policy goals. Many of these rely on working closely with other stakeholders or institutions but where we find a common underlying approach is in drawing on the strengths of standards bodies, and

especially NSBs, to support greater precision and engagement in the development of meaningful policy levers to support net zero.

Section I: Definitions, Literature Review and Framing. Mapping the Ecosystem of Standardisation

22. This section proceeds as follows: First, it sets out the definitions that will be used for the remainder of the project. Second, it examines the literature on the standards-regulation nexus along two axes: at a 'horizontal' national level, and at a 'diagonal' international level. Next, the review examines the role of transnational private standards in the standards-regulation nexus. Finally, the section sets out key elements of interest for particular attention in relation to the case-studies. This includes a working map of the ecosystem of standardisation.

23. We review selected literature relevant to the three research questions:

    i. What regulatory/non-regulatory levers are available and effective to deliver policy outcomes?
    ii. Under what conditions/in what roles do standards bodies interact successfully with actors in the standards and regulatory governance space to: ensure successful development and application of high integrity standards; accelerate alignment of best practice and innovation in standards; and help implement robust governance of regulatory requirements?
    iii. What factors drive the integration of a standard into the national regulatory infrastructure? What barriers, drivers and criteria are relevant to policymakers' decisions regarding how their policy should be governed?

Definitions

24. The three research questions focus on the interaction between 'standards' and 'regulation'. The literature also draws distinctions between different kinds of standards. They may be 'national', 'international', or 'transnational'. They may be promulgated by 'standards bodies' or be the result of the action of 'private' bodies (e.g., commercial or civil society initiatives). Each of these terms is used in different ways in the literature, so for clarity we set out the *specific* meanings we ascribe to those terms in what follows.

25. **Standard:** Our definition of 'standard' is taken from the ISO/IEC Guide: it is 'a document, [established by consensus and] approved by a recognized body, that provides, for common and repeated use, rules, guidelines or

characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context, and with which compliance is voluntary'. Most, if not all, of the standards we describe below are universally understood as such, and are unlikely to cause confusion.

26. **Regulation:** Our definition of 'regulation' is also usual: it is 'a document or series of documents that together provide requirements, either directly or by referring to or incorporating the content of a standard, technical specification or code of practice, and with which compliance is mandatory'. Where the questions above refer to a '**regulatory infrastructure**', we understand this to mean a framework of *binding* rules and the institutions that underpin them, adopted and enforced by governmental authority (including the authority of an independent regulator).

27. **Public standards:** In what follows, we will distinguish 'public' standards from 'private' standards. By 'public' standards, we mean standards adopted by *recognised* national standards bodies (NSBs) or by bodies composed of representatives from NSBs and/or their nominees. We also describe this as the 'traditional' standards development system. The term includes both BSI and ISO standards. We appreciate that the term 'public' may obscure the diverse relationships that such bodies may have with governments, and private participants in the standardisation process, but we acknowledge those relationships in the following sections.

28. **Private standards:** By 'private' standards we mean standards developed by non-governmental bodies of economic and/or social actors that are neither recognised as national standards bodies (NSBs) nor composed of representatives from NSBs or their nominees. We include in this category standards set by industry (commercial standards) and civil society actors or multistakeholder initiatives (e.g., voluntary sustainability standards).

29. **International** Where we refer to 'international' standards or standardisation, we are referring to activities on the international plane of governance; that is, between States or international organizations. Unless explicitly distinguished, international standards are 'public' standards for the purposes of this report.

30. **Transnational**: We use the term 'transnational' for those standards and standardisation initiatives which are private, and which govern activity or actors' activities *across* national borders, such as global supply chains. They are not 'international' in that they are not between international actors (States, international organisations) but nonetheless cross borders.

31. **Innovation:** The questions above refer also to 'innovation'. This is another term used in different senses in the literature. We find it useful to distinguish between 'innovation' as applied to standards and standardisation on one hand, and 'innovation' as applied to production processes of economic actors themselves on the other. The former refers to iterative experimentation (improvement) in the content of standards, or the processes of their development and implementation. The latter refers to iterative experimentation (improvement) in technology, management, or production process at the level of the firm (or supply chain), which may itself be driven by the need for compliance with standards.

Literature Review

32. A core dynamic underlying the three research questions is the standards-regulation nexus: the entry points where standards are (or can be) embedded in regulation directly or indirectly, through their reference, inclusion, or incorporation into mandatory regulatory requirements; the means through which standards are embedded most successfully; and the extent to which there are entry points or levers that are underexplored or yet to be identified.

33. There is a wide range of literature which is potentially relevant to these three questions, and, given the time available, our review is inevitably selective. Our selection of relevant literature has been guided by the following factors: (a) its degree of direct relevance to the three questions listed above; (b) our understanding of the larger context of this review, especially as regards ongoing activities around net zero standardisation; and (c) its quality, as indicated by academic peer review and by its degree of influence within the literature more broadly.

34. This section focusses on three distinct but overlapping literatures: comparative analyses of the governance role of standards in different regulatory jurisdictions; literature regarding the role of international standards in shaping and supporting domestic regulatory regimes; and scholarship on transnational private standards and their interactions with public regulatory governance. We mine these three literatures for insights directly relevant to the research questions.

35. First, we assess literature examining the standards-regulation nexus comparatively across different jurisdictions. While we draw on examples from a wide range of jurisdictions for the report, in this section we have selected the US, the EU and China as the primary points of comparison based on: (a) the global significance of these jurisdictions both economically and as

standards-setters; and (b) the significant and illustrative differences between them. Second, we review the literature on the influence of *international* standards on national regulatory infrastructures. We focus here on the legal and political factors that shape the influence of international standards bodies on national regulation through a range of institutions including the WTO and FTAs. Finally, we examine the extensive literature on transnational 'private' governance. This literature is particularly relevant in the context of climate governance, where transnational private initiatives are prevalent, and the question of the relation between such initiatives and NSBs is therefore central. We focus primarily on work relating to voluntary sustainability standards, which have much in common with emerging net zero governance frameworks.

The traditional standards development system

36. There are two strands to the literature on the development of standards and their relationship to regulation of relevance. The first relates to the role of *national* standards bodies (NSBs) within national regulatory frameworks. The second concerns the influence of *international* standards bodies on one or more domestic regulatory frameworks.

National standards bodies and domestic regulatory frameworks

37. Given the wide variety of different national arrangements between governments and NSBs, it is not possible to provide a comprehensive global analysis. Many studies, therefore, focus on specific jurisdictions. Though the jurisdictional approach has its benefits, as we will see, it risks presenting single jurisdictions as coherent or consistent spaces of standards production and governance and oversimplifying the differences across sectors within those markets. Additionally, the jurisdictional approach has taken place in the shadow of wider international economic relations: that is to say that many studies are pre-structured along lines of US and European competition, reflecting the (largely) transatlantic history of trade relations from the post-War period until around 2003, and now through China-Western relations since 2016 (note the preponderance of case-studies on China's engagement in tech and AI). Nonetheless, we can mine these analyses for specific insights that while context dependent, are useful for our purposes. Table 1 below presents a brief overview of this high-level assessment.

38. **The 'European' approach**: there has been great interest in the 'European' model of standardisation – and, in particular, its relationship to regulation. It

is telling, however, that NSBs themselves are not often the focus of the literature. Rather, the focus is on the institutions of the EU itself as an innovative regulatory actor. There are exceptions, however (Egan, 2001; Tate, 2001; Egan, 2002; Schepel, 2005; Büthe & Mattli, 2011), drawn in part by the idiosyncrasies of the EU model. In short, the 'New Approach' introduced in 1985 uses a framework of legislation (Directives) which sets out product requirements and delegates the development (or identification) of standards to meet these requirements to independent regional European standards bodies. While not mandatory, these standards carry a presumption of compliance with the relevant Directive. NSBs in the region are members of European standards bodies, and work together to develop and define standards which then replace pre-existing NSB standards. Consequently, standards are used to support economic integration as regional standards are adopted by NSBs as national standards, and conflicting national standards are withdrawn. This effectively empowers NSBs within the region as the 'voice' for each State's standards community (Schepel, 2005). It also influences the relationships *between* standards bodies within the European space providing a forum for accommodation on different approaches (e.g. on services standards between BSI and AFNOR: Graz, 2019: 99).

39. The leveraging of regional standards bodies is a hallmark of the 'European' approach. We see much interest in the literature on the creation and subsequent utilisation of the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC), tracking their developing importance, particularly since the standards bodies were given a central role in the 1980s as tools for European integration (Büthe & Mattli, 2011). Studies that examine the role of the European Telecommunications Standards Institute (ETSI) also present useful insights, not least regarding the body's distinctiveness as a consequence of its key sectoral partners and their economic structures – in this case, the domination of telecoms monopolies within Europe at the time (Egan, 2001).

40. Additionally, the development of ISO-CEN and IEC-CENELEC agreements (Vienna and Dresden respectively) has also been seen to give European standardisation an additional advantage. By fostering the simultaneous development and adoption of standards, these agreements encourage parallel recognition of standards at international and European – and consequently national – levels (reportedly with CEN often leading the work) (Graz 2019). In the case of CENELEC standards, over 80% are based on IEC standards but modified to adapt to the European regional context (for example, in relation to voltage). In this way, regional standards become

international standards, and international standards become regional standards, linking the two levels of governance closely. For our purposes, given the importance afforded to 'international' standards under the WTO, this effectively proliferates certain regional standards well outside of the European space.[4] This form of cross-NSB coordination would appear to open productive avenues for further exploration, both as a model of cross-jurisdictional alignment of standards and as a form of standards proliferation.

41. Nonetheless, the story of European regional standardisation as a tool for shaping behaviour is not a uniform success, and its limitations offer lessons to consider. We have evidence that businesses with limited resources chose to prioritise work in NSBs within their own jurisdiction, rather than coordinating regionally to drive the work of regional standards bodies, something which may have exacerbated the earlier difficult relationship between some NSBs and regional standards bodies (e.g. over plug sockets, Egan, 2001). Similarly, Pelkmans (2001) has provided a detailed examination of the development of Global System for Mobile Communications (GSM) standards, noting that expertise alone is insufficient: it was not until business had a sense of the economic benefits in supporting the development of *regional* standards that it was willing to engage, and where underpinned by additional commitments, in this case in the form of a memorandum of understanding between telecoms operators and equipment manufacturers.

42. For all the attention that the New Approach (and its successor, the New Legislative Framework) receives, it is important to note that this does not cover all products. Nor is this the only standards-regulation nexus within EU law, merely the more novel. Standards play an increasingly important role in other areas of regulation within the EU, most notably in relation to due diligence requirements (Marín Durán & Scott, 2022; ILA, 2022; Harrison, 2023) where private actors are held legally accountable for certain types of activities across their global supply chains. Here standards become important indicators of compliance. With the EU at the vanguard of leveraging its transnational supply chains to shape behaviour extraterritorially, analysis of the processes for making private standards meet the same levels of (procedural and substantive) quality expected from public standards, and their subsequent hardening through national legislative frameworks is essential to understand the current standards-regulation nexus.

[4] See para 65 below.

43. The European approach to commissioning the production of standards offers an interesting approach, not only because of the ways in which such standards fit into a regulatory system that uses them to presume compliance, but also because they can identify areas which are not only of economic interest to industry seeking a standards-based solution but also implicitly or explicitly identify a public interest also (something, curiously, also reflected in elements of China's hybrid model below). The inter-NSB and inter-ISB relationship is important to consider further here also: competition and/or conflict between European NSBs has not been eliminated by the creation of regional standards bodies, yet the relationships between them, and CEN/CENELEC/ETSI, and further ISO/IEC can be seen as productive in developing parallel standards as a means of 'norm export' (Koh 2006).

44. **The 'US' approach**: customarily depicted as highly decentralised, industry-led, sector-specific, and market-driven, the US approach to standardisation appears to differ fundamentally from the European approach (Egan 2001, Büthe and Mattli 2011, Schepel 2005). The American National Standards Institute (ANSI) coordinates standardisation (ANSI By-Laws, Article I, s1.02(1)), but actual standards development is performed by a variety of organizations, including industry groups, professional societies, and consumer groups. Indeed, the system is specifically designed to encourage the use of standards developed by private organisations (Schepel 2015). Its role is often supportive at best: e.g., holding workshops as an initial starting point to support the development of standards in relation to supply chain security for microelectronics products and services procured by the U.S. Department of Defense (DoD). In this case, it is the DoD not ANSI that is mandated by Section 224 of the FY20 National Defense Authorization Act to develop standards in this area. Thus, ANSI's role is principally a convening one. There is no significant funding made available for standardisation (Büthe and Mattli 2011), unlike in Europe or China.

45. The embedding of standards within US law is nonetheless commonplace, albeit in a highly fragmented, sector-specific manner. It can be fragmented vertically (that is, in different legal instruments across municipal, state, and federal levels) but is also sectoral with different codes at play within single industries (the so-called 'battle of the codes' where different regions/cities follow different mandated requirements). US law often relies on standards, incorporating them by reference to set out requirements or means to demonstrate compliance (Graz 2019 notes over 8,600 standards are referred to in US law, and over 10,500 in public procurement procedures). Additionally, standards are used informally by private actors to help them meet

requirements under US law that would otherwise not provide sufficient certainty (for example, in the case of the Lacey Act on the provenance of timber). As with the EU, these standards which serve to help commercial actors meet legal requirements (without creating a *presumption* of compliance) are more often private than public (that is, ANSI adopted).

46. While ANSI is the recognised NSB for the US by ISO, it is principally coordinating and accrediting standards of private bodies and does not develop standards itself (Tate 2001). The National Institute of Standards and Technology (NIST) acts, in part, as the standards body for the purposes of governmental agencies (which undertake a large amount of public governance and decision-making). NIST has become the focus for US regulatory diplomacy, as a body that should be sensitive to US representation in international standards bodies: as we will see, this is in part a response to European success in achieving outcomes from its own standards-regulation nexus, but increasingly to counter perceived threats from China's own increasing influence on standardisation.

47. The lack of central direction in relation to standards development has its disadvantages. Both Graz (2019) and Pelkmans (2001), examining different sectors, note the US's limited capacity to mobilise and respond to proposals that will potentially shape trade in services and interoperability in tech (services and GSM respectively). If we then consider our particular focus on the potential use of standards in developing, shaping, or bolstering regulation to support policy outcomes, we can expect the lack of coherence, consistence, and strategic planning to be a considerable limitation– in part within a specific jurisdiction but even more importantly, across external markets also.

48. **The 'China' approach**: if the US is depicted as decentralised and market-driven, China's standards system was, until 2014, almost exclusively State-driven. Noting the limits of not involving business actors effectively in standardisation (not least, due to a lack of technical capacity in government), from 2014-2018 China initiated a series of reforms to allow organizations outside the government to create 'association standards', similar to European or US industry-driven standards (Sheehan et al., 2021). The system is described in the literature as a 'hybrid-mode standard-setting system' (Zhang et al., 2023) as it seeks to combine the 'committee-mode' of standardisation seen within much of the public standards development system, with the less common 'government-mode' which plays a more directive, top-down role (Wiegmann et al., 2017).

49. Given China's interest in both encouraging innovation internally and also shaping the cross-border supply chains in which it is now deeply enmeshed, it has taken a particular interest in standardisation to support its technological advancement, economic growth, and global trade. For the government, standards are explicitly a strategic priority. This is most clearly set out in its 'China Standards 2035' plan which aims to (*inter alia*): set and promote standards in advanced high-end manufacturing and next-generation IT, promote China's standards globally through international standards organisations, and adopt more international standards in China (Chan 2022).

50. The ability of the Chinese government to shape private economic action is unparalleled in the US or Europe. Between the prevalence of state-owned enterprises and state-owned commercial banks, and the importance of CCP support for businesses, the government has far more levers available to it to encourage internal coherence in relation to the development of new standards (Wu, 2016). Additionally, under the Standardization Law, certain standards become mandatory, in effect giving them the force of regulation. This is determined on a sector and/or product specific basis (that is, products of particular concern from a governance/risk perspective such as toys or pharmaceuticals).

51. Increased strategic focus on standardisation is taking place not only domestically but internationally also: while China falls behind Germany, Japan, the US, France, and the UK in terms of leadership in the ISO and IEC Technical Committees, Sub-committees, and Working Groups, its leadership role appears to be increasing, as is its active participation in these bodies (Rühlig, 2023). Yet, China's track record in shaping international standards thus far is limited: successes such as the adoption of the TD-SCDMA standard (Whalley et al., 2010), has been more than outweighed by limited uptake in other (predominantly IT-related) standards (Chan, 2022). Additionally, the linkage of Belt-and-Road Initiative (BRI) projects with standards has been largely a 'paper tiger' given the lack of clarity over commitments (Rühlig, 2023), with some possible exceptions in rail. That said, the possibility of including specific references to standards in government contracts is an avenue that could be considered further by policy makers, even if it has been of limited impact in the case of BRI.

52. Of greatest importance for our purposes in unpacking the standards-regulation nexus, considering potential lessons from China, is (1) the variations between sectors, and the active prioritisation of China's activity thus

far on tech; (2) the influence of 'soft' governmental structures on wider economic behaviour (that is, social and cultural relationships and expectations that exist outside of formal legal requirements); and (3) the importance of the underlying economic dynamics, noting that business in China is often receptive to engagement from external interests (Chan, 2022). This is because, as an exporter first and foremost, it is not (currently) in a position to shape trading partners' (and their companies') behaviour in the way that governments and agencies of the world's largest importers of these products are to do (Bradford, 2019).

Table 1

Jurisdiction	US	EU	China
Characterisation	• Highly decentralised, private sector driven. • ANSI plays a coordinating/convening role rather than directive. • NIST's role across government agencies prioritises private standards over government-specific requirements.	• Relatively coordinated through regional bodies and direction from EC on New Approach products. • Diverse range of NSBs working 'upward' through regional bodies which in turn align to international bodies. • Explicitly framed as integrationist and liberalising.	• Traditionally State-led process, now including enhanced market-actor involvement. • Greater attention given to prioritised economic sectors (tech, comms, rail). • Standards explicitly framed as a strategic interest.
Relationship with regulation	• Incorporation by explicit recognition (e.g., EPA approval of ASTM standards) or *de facto* recognition through overlapping requirements (e.g., Lacey Act). • Large scale inclusion by reference of standards in public	• For New Approach Directives: standardization request given to regional bodies to develop European Standards or identify existing ones which offer technical solutions to meet Essential requirements. • In other areas, increasing recognition of private standards (e.g., REDII)	• Drive under *China Standards 2035* for alignment to international standards • Inclusion through contractual instruments in large-scale projects (e.g., BRI)

	procurement procedures.		
Insights into the standards-regulation nexus	• Multi-level governance challenges: federal/state/municipal. • To consider whether multi-level governance creates opportunities through 'building blocks' approaches? • ANSI's model of accrediting standards could offer potential to bridge the gap between commercial/ voluntary standards and public standards	• Useful lessons learnt from interaction between NSB/ESB (e.g., plug sockets). • Effective coordination across standards bodies as a means of increasing weight for purpose of legislative compliance. • Directive model which provides goals but defers to technical skills of NSBs.	• Examine the limits of 'top-down' approaches. • Consider pre-coordination mechanisms (e.g., IMT 5G Promotion Group) to improve influence. • Consider non-legal tools to support regulatory pull. • Consider limitations of contractual links to standards absent greater clarity.

International standards bodies and national regulatory systems

53. There is ample literature on the international standards system, whether its context and background, institutional set up and membership, or processes (Egan, 2001; Büthe & Mattli, 2011). Studies have identified principles that shape the perceived mission of an international standards body and the various ways in which the work of developing international standards is organized and managed (Brunsson & Jacobsson, 2002).

54. Here, relevant to this section are the ways in which international standards, once adopted, influence, or are integrated into, national regulatory frameworks. International standards, particularly those of preeminent standards bodies such as ISO and IEC play a particularly distinctive role in relation to their influence on national regulation as they are not binding but 'pull' policy actors (Lindahl, 2015). In other words, international standards are not binding as a matter of international law (therefore not binding on States) but hold a powerful economic or ideational pull. This can be 'bottom up' – that is, because standards are usually developed to respond to business needs and requests, and thus of economic interest. Just as States are not bound by

standards, nor are economic actors. They use standards, in part, because they see the value in them. Standards bodies often support economic actors to see the benefits of standards: mechanisms for making the case for standards and promoting them are identified by Henning (2002), drawing on the example of ISO 9000 in Sweden, including identifying (and in some cases, creating) adopters of standards, identifying benefits of their use and communicating them, and referencing the technical quality and prestige of the standard creation process as well as that of other users.

55. Beyond standards, the influence of non-binding instruments and their importance for international governance is well documented: studies in international law have long attempted to understand the influence and role of 'soft law' instruments (such as UN General Assembly Resolutions, intergovernmental declarations, and so on) which are not *formally* binding (Chinkin, 1989). In legal terms, soft law can have a range of influences 'on the road' to a hard legal obligation, including by contributing to the interpretation of existing obligations or helping to codify practice which can subsequently be adopted by States (Boyle, 2018). There is also much work on the influence of soft law more broadly on governance and rulemaking (e.g., Meyer, 2009). Of the most influential studies on the soft law and its relationship to the practice of States is Abbott & Snidal (2000). Their study rejects the lawyer's traditional binary of hard/soft law and instead places them along a spectrum from hard to soft, shaped by the levels of *obligation*, *precision*, and *delegation* in the commitment. This perspective is useful for our purposes as it rejects the traditional legal view of 'soft law' as necessarily worse than 'hard law', either in individual instances (lacking legal weight) or systemically (challenging a system of international governance built on hard legal obligations: Weil, 1983). Instead, Abbott & Snidal (2020) note the advantages of soft law on its own terms: it is easier to agree and consequently also allows actors to learn the impact of instruments over time. These insights are useful to help open the door to the influence of standards on obligations that may fall outside of a traditional approach to international governance, in effect giving more options to consider the standards-regulation nexus in a wider ecosystem where standards exist.

56. The two key levers at play in relation to the diagonal influence of international standards on national regulation are unilateral (where governments themselves choose to embed standards within their own legal systems) and bilateral or multilateral (where governments agree to embed standards indirectly through international commitments).

Unilateral incorporation by governments: standards as subjects of transplant

57. The first mechanism is where governments themselves choose to incorporate, reference, or otherwise embed standards by bringing them into their own regulatory frameworks. We have already seen how regulation can incorporate standards, whether through the commissioning of specific standards by law-makers (as in the EU) or by reference in legislative instruments (as in the US). The exact methods of incorporating standards will vary and have different benefits or drawbacks. The ISO and IEC note four key questions to consider: should the use of the international standards be mandatory (providing the only solution) or voluntary (providing one possible solution)? What level of checks should be put in place to ensure the standard is suitable for use and addresses the needs? Will the reference be to the whole standard or selected parts of it (i.e., only to certain clauses and subclauses)? How will the regulation be kept up-to-date if the international standards are revised? (ISO/IEC 2015).

58. The ISO/IEC have identified a range of mechanisms whereby governments use similar but different approaches to using international standards in their national laws:

Table 2

Jurisdiction	Technique	Role of international standard
China	Make standards in certain sectors (e.g., pharma) mandatory	International standards to be used as the basis for national standards (over 74% as at 2015)
EU	Commission the development of standards to support identification of compliance with mandatory requirements	When regional standard setters are commissioned to develop a standard(s), if appropriate international standard exists, it should be used (70% of CENELEC and 32% of CEN as at 2015)
Mexico	Procurement must comply with certain 'mandatory standards' and other national standards where appropriate	Where national standards do not exist, international standards are to be used
US	Standards are incorporated by reference in national law as conditions for compliance	ANSI and international standards included as alternatives

Source: (ISO/IEC 2015)

59. While the incorporation of standards into domestic legal orders may appear straightforward, there is considerable literature within comparative law on the consequences of 'legal transplant' (that is, incorporating seemingly identical

texts between legal orders). This process can often be unpredictable as different cultural practices, institutions, and economic conditions shape the interpretation and application of the same provisions in different jurisdictions (Watson, 1993; Siems, 2022). Similarly, work has been conducted on the outcomes of copying text between systems in trade law with unexpected outcomes where US legislative provisions incorporated into the text of WTO agreements were subsequently applied and interpreted differently across different jurisdictions and in the WTO itself (Messenger, 2016a, 2016b). Here we need to be sensitive to multiple overlapping instrumental, systemic, and ideational factors in how rules are applied and developed within different communities: a challenge to any assumption that the inclusion of a single standard across jurisdictions will necessarily produce desired – and consistent – policy outcomes.

60. The harder end of the soft law/hard law spectrum is also important to consider. We have examples where the diagonal relationship between standards and national regulation is shaped through *international* commitments such as WTO law. As such, an important part of the larger ecosystem of standards and regulation is the creation of additional 'entry points' for standards into national regulatory frameworks through international commitments, particularly under the WTO and FTAs.

Bilateral and multilateral incorporation: indirect embedding of standards

61. WTO members are bound, as a formal legal obligation, to comply with the 'covered agreements' – a set of annexed agreements to the WTO Agreement which, most relevantly for our purposes, include the Technical Barriers to Trade (TBT) and Sanitary & Phytosanitary (SPS) Agreements. These agreements seek to balance the right of governments to regulate for legitimate objectives with a desire to avoid discriminatory or burdensome regulation that undermines free(er) trade. As part of this balance, underpinning both the TBT and SPS Agreements is a core bargain: that when governments introduce regulation, they are to base their measures on international standards where such standards exist (Art. 2.4 TBT, Art. 3.1 SPS) and are appropriate. While 'based on' does not mean that the regulation must replicate a standard entirely, it cannot contradict elements of the standard, and governments should use the standard as a basis for the regulation.[5] This creates a specific legal obligation to use relevant standards where they exist, subject to limited reasons not to do so (e.g., no standard existing, it not being

[5] Appellate Body Report, *EC—Hormones*, para. 163; Panel Report, *India—Agricultural Products*, para. 7.202

appropriate due to reasons of geography or technical capacity, or the standard not providing a high enough level of protection). We have examples from the literature on the influence that the creation of such an avenue of 'diagonal' influence of standards has had on practice by WTO members and standardising bodies such as the Codex Alimentarius Commission (Fisher, 2010; Winickoff & Bushey, 2010; Burkhard, 2012; Messenger, 2016).

62. WTO law also incentivises the use of international standards by giving regulating governments a 'shield' of the presumption of legal compliance for some legal obligations under these agreements. Where a WTO member not only uses the standard as a basis for their measure but goes further and 'complies' with the standard (considered to be a higher level of alignment), they are rebuttably presumed to have complied with certain commitments under the TBT or SPS Agreements (Art. 2.5 TBT, Art. 3.2 SPS). One of the perceived strengths of the WTO legal system is its unusually (for international law) effective inter-governmental dispute settlement system (Crawford, 2010; Hughes, 2015). However, in truth, when it comes to defending new regulatory measures, the greatest challenges for regulating governments are not formal litigation but the long road running up to, and in the shadow of, litigation. For this, informal bilateral discussions and then discussions at WTO committees (and indeed, running up to them, and around them) are particularly important (Lang & Scott, 2009; Wolfe, 2020). This is an area where some work has been undertaken on a subject-specific basis (e.g., in public health: Barlow et al., 2022).

63. Being able to rely on an international standard as the basis of a measure has an important consequence beyond its legal benefits (or indeed, the well-documented economic benefits of using standards) – as a strategic tool. That is, relying on an international standard strengthens the ability of governments to regulate for public policy purposes where they may be challenged formally and informally by entrenched economic interests.

64. An additional element of the WTO obligations that play an important role on the standards-regulation nexus is (from a WTO perspective) what constitutes a 'relevant international standard' or 'recognised standardisation bodies'. In the *Australia—Plain Packaging* dispute, the panel accepted that a 'relevant international standard' could sit within a wider document.[6] In this case, Australia had argued that specific articles of the Framework Convention on

[6] Panel Report, *Australia—Tobacco Plain Packaging*, paras 7.278ff

Tobacco Control Guidelines constituted standards. Though unsuccessful in making this claim, the principle was accepted.

65. As regards the recognition of what constitutes a 'recognised standardisation body', The SPS Agreement is clear in this regard, as it explicitly identifies three standardisation bodies (Codex, IPPC, OIE – now WOAH) from which the standard must be produced. However, the TBT Agreement is less clear. The WTO Appellate Body, in its *US—Tuna II* report on dolphin-safe labelling 'clarified' elements of this (*inter alia*, a body must be open to the relevant bodies of all WTO members). However, there is a still a lack of clarity over the outer contours of this definition. For example, what of bodies which do not traditionally produce standards but could do so if NSBs were included (e.g., WHO guidelines on nutrient profiles)? And what of bodies which may produce standards but are not the recognised national body? They would appear to be excluded although their influence may well be similarly far reaching. Though there is voluminous literature on the legal interpretation of these definitions (Crowley & Howse, 2014; Delimatsis, 2015; Du, 2020; Tamiotti & Ramos, 2023), there is very little on the practical significance of this from the perspective of a specific public policy goal (although, foreseeing many of these issues in a public health context: McGrady, 2011). This opens the question of whether a body that does not customarily develop standards might also be a possible vector to adopt standards that would be subsequently embedded through WTO obligations.

66. Just as WTO commitments can draw standards into national regulatory systems, so increasingly do FTAs, albeit on a sectoral basis. For example, the EU has concluded FTAs which include annexes on motor vehicles and parts (e.g., EU-Korea, EU-Japan, EU-UK) which include specific references to UNECE WP29 standards as relevant international standards as between the parties, thus potentially 'pulling' them into the consubstantial rules under the TBT Agreement. We can contrast this with the US which has concluded commitments in relation to auto standards also, albeit bilateral through 'national-to-national' recognition (e.g., US-Mexico USMCA side letter on auto safety standards affirming that its domestic motor vehicle safety standards, NOM194-SCFI-2015, incorporate U.S. Federal Motor Vehicle Safety Standards (FMVSS)).

67. In the SPS space, many governments have concluded FTAs which add to their commitments under the SPS Agreement (Wagner, 2017), sometimes including references to topics which fall outside of the WTO definition of SPS measures strictly understood (e.g., on anti-microbial resistance or animal welfare). Though the options afforded by these provisions are not examined in a

significant manner in the literature, they open considerable additional avenues to explore potential interactions between international standards and national regulation at a bilateral level (potentially then acting as 'building blocks' for wider uptake: a dynamic that has taken place elsewhere in trade policy, including on the regulation of fisheries subsidies and environmental liberalisation: ILA, 2022).

68. Just as WTO committees play a critical role in discussing, defining, and potentially developing rules in relation to the standards-regulation nexus, so can FTA committees. This too is underexplored in the literature with only some analysis of their impact so far (Melillo, 2019). It is important to note that while each FTA text differs, many include provisions for regulatory cooperation dialogues or sub-committees or working groups to take 'decisions' which can range from confirming the desirability of a course of action to mutual recognition of specific measures (e.g., the SPS chapter of the EU-Mexico agreement has been used actively to tackle non-tariff barriers in agri-food). Finally, FTAs also provide the opportunity to harden 'soft' statements or instruments from the WTO, with one study identifying how the TBT Committee's Six Principles (formally soft law obligations in international law terms) have been given binding legal status under 25% of the FTAs examined (McDaniels et al., 2018). These Principles, which set out best practice in the process of standardisation (transparency, openness, impartiality and consensus, effectiveness and relevance, coherence, and the development dimension), were developed by drawing on the practice of standardisation bodies and build on the TBT Agreement's Code of Good Practice. Subsequently the Six Principles have been adopted formally and informally by a wide range of international standardisation bodies (ISO/IEC) and NSBs. This shows the multidirectional nature of influence across actors in the standards-regulation nexus, and the importance of looking beyond influence determined by formal legal obligations (that is, the Six Principles have been widely accepted, even by bodies not formally required to do so as a matter of public international law, such as NSBs).

69. The WTO and FTAs both offer a range of levers to embed standards and to shape the standards-regulation nexus. It should be noted, however, that this is principally in relation to what we define here as 'public standards' – that is, those adopted by recognised standards bodies (whether international or national). In the case of 'private standards' (whether developed by industry, civil society, or both), WTO mechanisms are weak. WTO law (and commitments under FTAs) are applied by and to governmental actors. As such, there is a regulatory gap in that the 'bargain' identified above does not apply to the much larger number of private standards, and nor do the obligations on

governments to encourage or ensure (depending on the body) that standardisation takes place according to best practice. The question of private standards at the WTO has been on the radar since the mid-2000s as agricultural exporters (in particular) noted the vastly higher requirements that private standards imposed over national regulation (Messenger, 2016a: 152ff). Though there has been some academic attention on the potential overlap in terms of formal legal requirements, especially in relation to food standards (Wouters & Geraets, 2012; Mavroidis & Wolfe, 2017; Van der Zee, 2018), the wider WTO literature does not. This raises the risk that by focussing solely on 'recognised' standardisation activities, we may miss an important part of the picture. This is corrected in the following section as we look to the influence of transnational private standards on traditional standardisation.

70. In relation to the relationship between international standards and national regulatory systems, we note the following preliminary observations:

- Variations across NSBs and their relationships with their host governments make it hard to predict specific outcomes in relation to their reception of standards, and how best they can embed standards within their national systems.
- Variations across legal cultures and governance practices will mean that there could well be a range of different outcomes even where standards are embedded. It will be necessary to focus not only on incorporation (however it may take place) but also ongoing implementation.
- Alliance building is important: not only across industry and civil society but also between NSBs. These alliances need not imply single positions, but 'compressed' divergent views (as in the European regional model) could help drive change to counter the core weakness of higher procedural quality of standards – their speed.
- Binary approaches to the standards-regulation nexus are not likely to yield the best results: soft law instruments can play an important role, as can institutions that may not have been leveraged effectively thus far (e.g., FTA committees) but could be in the future, even if as part of a wider campaign to ratchet commitments to improve their embedded status in national regulatory frameworks.

The relevance of transnational private standards

71. So far, we have considered: (a) the different ways in which NSB developed standards are integrated into national regulatory frameworks in different jurisdictions; (b) the entry points of international standards into national

regulatory frameworks. From this review, we have identified a number of key levers and mechanisms by which NSB developed standards can influence national regulation, which may also be available in the context of net zero. We have also identified a number of limitations of the existing regulatory machinery which will have to be taken into account in considering an appropriate role for NSBs in the global transition to net zero.

72. We now turn to consider the literature on transnational private standards. This literature is directly relevant to all three questions set out in paragraph 1, and in our view, essential to understand the potential role(s) for NSBs in the global standardisation ecosystem. Specifically:

    i. Transnational private standards have been integrated into domestic regulatory frameworks in several new and innovative ways, not all of which have traditionally been used for 'public' standards. The literature on transnational private standards therefore expands our toolbox of potential 'levers' for standards in regulatory frameworks and provides case studies assessing their strengths and weaknesses.

    ii. Transnational private standards interact in complex ways with national regulatory frameworks and traditional standards-setting bodies, and considerable attention has been paid in the literature to the question of how these relationships can engender the promotion of high integrity standards, innovation, and alignment of best practice.

    iii. The literature on transnational private regulation also offers insights on the question of why regulators sometimes choose to rely on, and form partnerships with, private initiatives for certain aspects of the regulatory process.

73. Much of the relevant literature focusses on case studies of 'voluntary sustainability standards' (VSS). Forestry, marine fisheries, and fair-trade standards are particularly well-studied examples, but there are by now many others, including for example, initiatives relating to organic agriculture, food safety, labour relations in supply chains, biofuel standards, among many others. There are many structural similarities between these regulatory domains and the domain of climate governance, which makes this literature particularly relevant for our review.

74. Many of the sectors in which private initiatives have emerged are characterised by the presence of multiple competing schemes, and dynamics of proliferation over time. In other sectors, however, a more coherent

structure has emerged, e.g. through the emergence of a single dominant industry-wide standard. Authors have sought to identify the conditions for coherence or proliferation (Kolk et al., 1999; Cashore et al., 2005; Bertels & Peloza, 2008; Fransen 2011; Fransen & Conzelmann, 2015). Fransen & Conzelmann (2015), for example, highlight several factors, including: the degree of industry concentration; the quality of first-mover standards; differential reputational interests of firms; the distribution of costs of standards compliance amongst firms; the presence or absence of global business associations or other cross-border collaborations; and disagreements about relevant stakeholders. While it is difficult to draw firm conclusions from this literature, many of the key structural factors driving competitive proliferation of private standards, and many of the structural impediments to significant harmonisation or alignment of private standards, are present in the context of net zero governance. This is an important background finding, as it has implications for the degree of voluntary harmonisation/alignment which is realistically achievable in the short or medium term in the context of climate governance.

75. The effects of competitive proliferation on the content of private standards can also vary considerably from sector to sector. Some authors observe beneficial dynamics in which competition between different private standards-based initiatives induces a ratcheting up of standards over time (Bertels & Peloza, 2008; Overdevest, 2010), and helps to generate innovative governance solutions (Sabel et al., 2000; Owen 2004; Prakash & Potoski 2006). Sometimes, these upward competitive dynamics occur in response to public pressure. Indeed, it has been argued that excessively cohesive or harmonised standards can actually impede learning and innovation at the level of governance and lead to lower ambition ('lowest common denominator') standards in some circumstances (Kolk et al., 1999). These studies all suggest that at least some degree of competition can be beneficial. That said, other authors observe precisely the opposite dynamics in other sectors. In such cases, competition from private standards undermines and impedes the development of public regulation, and competition between private standards puts a ceiling on levels of ambition or even leads to downward pressure where the quality of the standard is reduced (Gulbransen, 2005; Cashore et al., 2005; Bartley, 2005; Fransen, 2011; Cohen & Lang, 2023). This is especially the case where the transnationalisation of production can effectively mean that firms can choose the governance regime to which they are subject.

76. The effects of competition between private standards schemes are therefore variable, depending on the sector and the context. Competition can induce both positive and negative dynamics, and the relative strength of is difficult to predict in advance. This also has important potential implications for the present study: processes of standards-setting need not always be oriented towards a goal of maximal convergence, but rather towards some optimal combination of sufficient alignment with some degree of structured competition to drive innovation and upward ambition.

77. An important concept which has been developed in the literature on transnational private standards is that of 'metagovernance' (Sorenson, 2006; Derkx & Glasbergen, 2014; Fransen, 2015; Murphy-Gregory & Gale, 2019). In sectors characterised by multiple and competing private standards schemes, some actors began to take on the task of 'governing the governors' – that is to say, establishing standards and frameworks which aim to govern the conduct of private standards schemes themselves, coordinate their activity and structure the relations between them. Meta-governance, in the sense used here, is best understood as a response to the problem of downward competition between private standards schemes. As such, it typically involves the establishment of standards of scheme quality ('meta-standards') as a way of distinguishing between more and less credible schemes, as a way of securing the competitive edge of the former. Such meta-standards can be accompanied by formal or informal processes of endorsement of favoured schemes, either through certification, membership in an organisation, or the use of quality marks.

78. The literature contains several studies of such meta-standards initiatives, which illustrate the many different forms, they can take. One example, taken from the domain of sustainability standards, is the International Social and Environmental Accreditation and Labelling (ISEAL) Alliance, which is a consortium of market-leading private sustainability schemes formed in 2002. ISEAL does not itself establish substantive sustainability standards. Instead, through its various Codes of Good Practice, ISEAL establishes largely procedural and organisational principles of best practice in the design and implementation of sustainability standards schemes. It also performs a number of additional functions for its members and for the sustainability sector as a whole including: defining good and credible practice for sustainability standards; providing technical expertise for member schemes; catalysing improvements to standards schemes; providing a platform for learning; building support for sustainability schemes as a whole; and measuring and sharing the impacts of sustainability standards. Membership

in ISEAL is a marker of credibility in the market for sustainability certification (Cohen & Lang, 2023).

79. Another example, in the field of climate governance, is the Integrity Council for the Voluntary Carbon Market, a private sector-led initiative designed to strengthen governance in the market for carbon credits. Again, the ICVCM does not set its own substantive standards for evaluating and verifying carbon reductions, but rather establishes general principles to which such standards must adhere if they are to be endorsed. Some of these principles are procedural and organisational (dealing, for example, with transparency, robust quantification, third party validation, and effective governance), but others go further (for example, requiring attention to specific sustainability impacts, addressing double-counting, and additionality). Indeed, these 'meta-standards' developed by the ICVCM overlap in many ways with ISO's Net Zero Guidelines, which can also be understood as a meta-standards initiative.

80. While both ISEAL and ICVCM are examples of private bodies engaged in meta-governance, there are also various examples where international organisations take on this role. ICAO's Carbon Offsetting and Reduction Scheme for International Aviation, for example, establishes meta-standards for credible carbon offsetting schemes, and maintains a list of schemes which conform to its criteria of eligibility. The Food and Agriculture Organization has developed guidelines on fisheries ecolabelling, which set out its views as to the features that credible private labelling schemes should have. These include procedural and institutional aspect of scheme design and implementation, but also certain minimum substantive standards, as well as general principles to be followed and considerations to be taken into account. Indeed, as noted earlier, even the TBT Committee has engaged, to some degree, in establishing meta-standards for standards organisation through its Six Principles for international standard-setting.

81. As even these examples make clear, the precise boundary between 'first order standards' and 'meta-standards' is not always obvious. Specifically, the more meta-standards include minimum substantive standards to which schemes must comply, the more they resemble first-order standards. Furthermore, the more specific and elaborate the criteria used to assess compliance with meta-standards, the harder it is to distinguish them from first order standards. Nevertheless, the distinction is useful in the context of this report, because it draws attention to an important spectrum of choices facing public standards bodies when faced with a proliferation of private standards. On the one hand, standards bodies can write their own substantive standards covering the same domain – which may replicate, compete with, complement or replace

private standards. On the other hand, they may seek to 'govern the governors', by establishing meta-standards of quality and credibility against which private standards can be measured and evaluated, but leaving the precise normative content of such standards open-ended and open to contestation.

82. It has been noted that the domain of meta-standards can itself be subject to the same dynamics of proliferation and competition as individual standards themselves (Derkx & Glasbergen, 2014; Fransen, 2015; Murphy-Gregory & Gale, 2019). Nevertheless, the literature is clear that, in the right circumstances, meta-standards can be an important mechanism for shaping conditions of competition between private standards initiatives, and driving upward alignment and beneficial competition.

83. In its early stages, the literature on transnational private standards focussed on questions regarding the nature and foundations of private authority itself: e.g., what circumstances have given rise to private governance initiatives, from where do these initiatives derive their authority and legitimacy, how effective are they? These are important questions, but of less relevance to the present study. Increasingly, however, attention has turned to the *interactions* between private standards schemes and traditional state-led regulatory and policy frameworks. For example, Eberlein et al. (2014) propose an analytical framework for understanding the vast range of such interactions, inaugurating a now-flourishing literature on 'transnational business governance interactions' (see also Wood et al., 2015; Wood et al., 2019). Lambin and Thorlakson (2018), too, usefully and systematically, catalogue the different forms of interaction between public and private actors in the governance of forestry and agriculture. Although this strand of the literature, examining public-private interactions, is not yet at an advanced stage of development, a number of observations are clear: (a) there is a very wide range of possible models for public-private interactions; (b) the nature of these interactions can have a very significant impact on the evolution of standards; and (c) the direction of this impact can change, even diametrically, over time. We elaborate further in the following paragraphs.

84. Cashore et al. (2021) propose a typology of public-private interactions which is useful in the present context. They distinguish between *complementary*, *competitive*, and *coexistent* forms of interaction, each of which is sub-divided into different types, as set out in the following table:

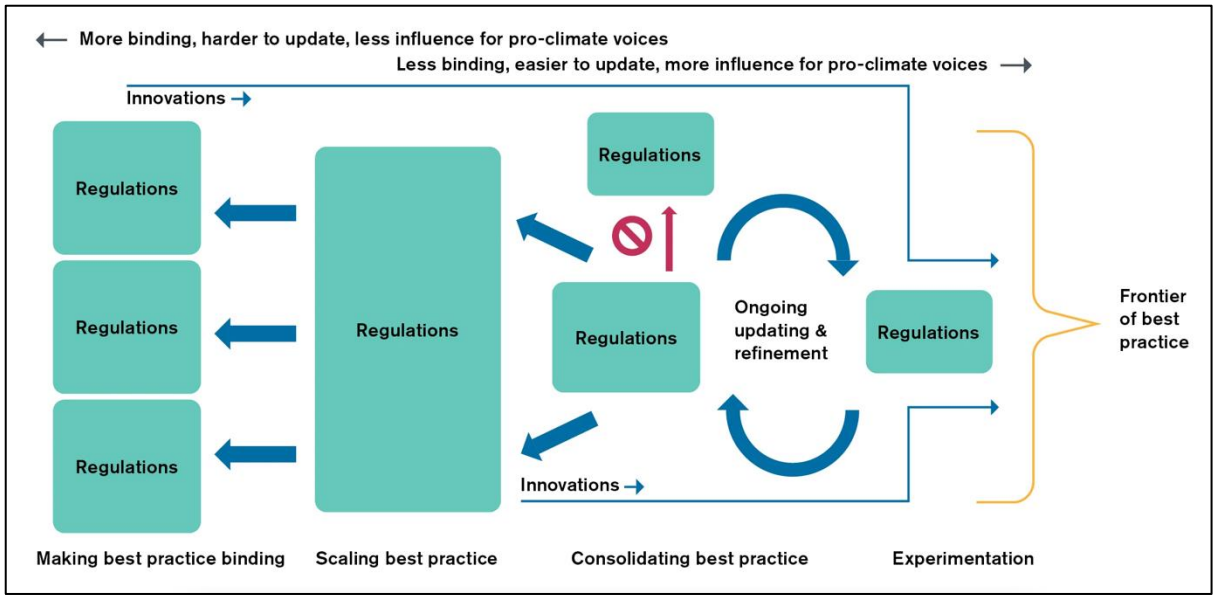
Table 1 Typology of interactions of private authority with public policy

Interaction type	Sub-type	Characteristics	Example
Complementary	Collaboration	• Active, voluntary, and conscious partnership toward a shared goal • Direct communication • Mutual recognition of political authority	• Public support (i.e. financial or administrative) for producers complying with private sustainability standards
	Coordination	• Overlapping goals or outcomes • Absence of direct communication or partnership • Independent interventions toward a shared goal	• Alignment of public environmental policy objectives with private governance priorities
	Isomorphism	• Goals or objectives need not be aligned • Similar use of governance mechanisms or instruments • Unconscious or independent emulation between governance efforts	• Reliance on best practice sharing as an instrument to achieve multiple governance objectives
Competitive	Substitution	• Private efforts to subvert, displace or pre-empt public regulation • Deliberate efforts by private actors to monopolize political authority	• Industry self-regulation intended to displace or pre-empt public regulation
	Cooptation	• Public efforts to subvert, displace or pre-empt private governance • Deliberate efforts by public actors to monopolize political authority	• Government standards intended to replace or compete directly with private standards
Coexistence	Institutional layering	• Divergent governance goals and strategies • Proliferation of regulatory institutions across different phases of the policy cycle • Division of labor on certain issues	• Private environmental standards and public labor standards within the same sector
	Chaos	• Divergent governance goals and strategies • Overlapping and incoherent regulatory institutions • Duplication and unpredictability	• Regime complexes with contradictory objectives (i.e. trade and environmental protection)

(Cashore et al. 2021)

85. In the context of the objectives of the present study, not all these types are equally relevant. We focus here on 'cooptation', 'collaboration' and 'institutional layering'.

86. Cashore et al. (2021) define 'cooptation' as including 'deliberate efforts by public actors to monopolise political authority'. While this uses antagonistic language, for our purposes, the core of this model is that the content of selected/preferred private standards are written into public regulation in the form of legally binding minimum standards. Understood in this way, this process is one important aspect of Hale's 'conveyor belt' model, in which industry best practice is discerned from a range of competing private initiatives and encoded into national regulatory frameworks (Hale, 2021; Hale, 2023).



(Hale, 2021)

87. Interestingly, there appear to be very few examples of the real-world application of this model (unless one sees the ANSI model generally as an instance of its application, in broad terms). The best example of the incorporation of a truly private standard appears to be the regulation of organic agriculture, studied in Arcuri (2015). Organics regulation is said to be 'unique among self-regulatory regimes' in the sense that 'it is the only one that evolved into a regime where the establishment of minimum standards has become the monopoly of public powers'. Arcuri describes this process as 'publicization'. She comparatively examines the process of 'publicizing' organics standards in the EU and the US, and seeks to discern its impact on: (a) the *content* of organics standards; (b) the range of *stakeholders* involved in the development of such standards, and (c) the *contestability* of organics regulation. Interestingly, her results differ significantly across the two jurisdictions. In the US, she finds that the process of publicization ended up setting a *de facto* ceiling on organics standards, making it practically impossible for private initiatives to set higher standards, and limiting the ability of such standards to drive genuinely transformative change to agricultural systems. In the EU, on the other hand, private standards continued to proliferate and exerted some degree of indirect upward pressure on public regulations themselves. These public regulations have subsequently been embedded in (and arguably projected through) new trade agreements: we note, for example, that in a link to the discussions on the role of FTAs, Annex 14 of the UK-EU Trade & Cooperation Agreement includes provisions for mutual recognition of organic regulations. Nonetheless, Arcuri also finds that in both the case of the EU and US the process of 'publicization' was associated with some degree of normative watering down of standards as a

direct result of the need to satisfy constituencies with highly divergent preferences.

88. A more recent set of approaches that is closest to 'cooptation' is the regulation by governments of claims that in turn rely on private standards: for example, recent EU moves to regulate claims on the circular economy (the Empower Consumers Directive[7]) or ecolabels (the proposed Green Claims Directive[8]) – the former has been adopted, the latter is still going through the legislative process. Both of these initiatives seek to guard against 'greenwashing' by setting out mandatory minimum standards to which claims much conform. These include, for example, that claims are based on transparent and reliable evidence, backed by third party verification, and reasonably comprehensive in their coverage of environmental impacts. . In the case of the Green Claims Directive, they would also need to demonstrate that they add value over and above 'public' EU schemes.

89. Cashore et al. (2021) define 'collaboration' as including 'active, voluntary and conscious partnership towards a shared goal'. In fact, there are many different forms of collaboration, and this should be understood as an umbrella term in need of disaggregation. In the present context, we focus on a particular kind of collaboration, namely 'steering' mechanisms (Eberling et al., 2014), in which public regulatory frameworks are deployed to steer private initiatives in certain directions.

90. 'Steering' mechanisms are central to a number of conceptual models of public-private interactions which have emerged over the last decade or so, even if the terminology of 'steering' is not always explicitly used. These include the notion of 'orchestration' introduced by Abbott and Snidal (2010, 2015), as well as 'experimentalist' models such as that described in Overdevest and Zeitlin (2014). The core idea in the context of transnational private standards is that public regulatory frameworks are used to guide the development of private standards in particular directions by (a) actively encouraging and supporting iterative standards innovation and improvement, and (b) rewarding/favouring those private standards which align most closely with public policy goals, by providing certain economic advantages to those who comply with such private standards. The literature suggests a number of benefits of this approach, including: endorsing and supporting the best private standards, reducing transaction costs and bargaining problems, overcoming mistrust,

[7] Directive (EU) 2024/825 of the European Parliament and of the Council of 28 February 2024 amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and through better information.

[8] Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on substantiation and communication of explicit environmental claims (Green Claims Directive), COM/2023/166 final.

offsetting differential power, promoting increasingly convergent standards, shaping inter-scheme competition and collaboration, increasing the range of stakeholders engaged in standards-setting, and promoting the more efficient use of both public and private resources (Abbot & Snidal, 2010, 2015).

91. There are many different ways in which a 'steering' role can be carried out. Here we list six illustrations, though it should be noted that many of them overlap, and they can be combined in multiple ways. The case studies in later sections of this report also provide further examples.

    i. *Frameworks* can provide direct economic or financial benefits to firms/products which comply with a selected subset of high-quality private standards. The literature is full of specific illustrations. For example, access to governmental subsidies, export credit or international financing can be on condition of compliance with specific standards (Hunter, 2008). Access to public procurement markets can be similarly conditioned (case studies include Marin-Duran & Cremona 2013; Gulbrandsen, 2014; Arcuri, 2015;). Imports can be denied access to domestic markets unless they meet defined sustainability standards (Lambin & Thorlakson, 2018). Privately certified goods can benefit from tax breaks, or exemptions from certain government audits (Lambin & Thorlakson, 2018). Private certification may be treated as sufficient evidence of a firm's compliance with its duties of due diligence as regards the sustainability of its supply chain (as in a number of EU regimes).

    ii. *Meta-standards.* Public regulatory frameworks can be used to establish 'meta-standards' in the sense described above, that is to say, standards and principles for distinguishing between more or less credible/ambitious private standards, coupled optionally with formal processes for public endorsement or approval of compliance private standards. Such meta-standards can indeed be one element of the *frameworks* mentioned immediately above: in that case, certification by a private scheme which complies with public meta-standards of quality and credibility would be the key condition for access to economic incentives.

    iii. *Benchmarking.* Practices of benchmarking are similar to meta-standards, and can be understood as an alternative form of 'meta-governance' of standards. Benchmarking involves the comparative substantive assessment of different private standards initiatives – either for the purpose of ranking, or for assessing their equivalence

with market leading best practice – with a view to prompting continuous improvement and/or establishing recognition arrangements. Illustrations in the literature include practices of benchmarking carried out by the UN Environment Programme (UNEP) and by the World Bank in respect of environmental governance, as well as so-called 'benchmarking for equivalence' in the case of forestry standards (Overdevest & Zeitlin, 2014).

iv. *Catalysing and capacity building*. Public institutions and processes can be used to sponsor dialogues, convene stakeholders, and help provide organisational support for private standards-setting initiatives. In their paper introducing the concept of 'orchestration', for example, Abbott and Snidal used the example of UNEP, which used these techniques successfully to catalyse and coordinate schemes such as the Global Reporting Initiative, as well as promoting company codes and environmental reporting (Abbot & Snidal, 2010). Van der Lugt and Dingwerth (2015) further describe the role of UNEP in convening, assisting, and coordinating the processes which led to the adoption of the Principles for Responsible Investment. Both of these studies offer important insights regarding the conditions in which catalysing and capacity building strategies are likely to be successfully adopted by (international) organisations, and the capabilities such organisations may need to make them work best.

v. *Experimentalism*. Although experimentalist approaches typically combine a number of the techniques already mentioned, they are worth special mention. Developed most prominently in the context of federal and other multilevel governance structures, experimentalist ideas have more recently been adapted to the context of transnational private standards (Overdevest & Zeitlin, 2014; Overdevest, 2018). Somewhat simplified, the model here is that public regulatory frameworks play three key roles in relation to private standards initiatives: (a) establishing a framework of principles and goals, alongside metrics for measuring conformity with them and progress over time towards them; (b) facilitating public oversight of, and peer review across, different standards initiatives, with a view to identifying best practice and driving continuous improvement; (c) providing resources and capacity building to private schemes where necessary and possible, to enable such schemes to work effectively and innovate successfully. Central to the experimentalist vision is also that the principles and goals contained in the public regulatory frameworks

themselves are open to iterative revision based on the experience and knowledge gained through the operation of the private initiatives.

vi. *Regulatory 'clubs'.* Regulatory clubs are still a nascent development, and are therefore not comprehensively addressed within the existing literature on transnational private standards. However, they are worth briefly noting given their contemporary salience, and special relevance in the context of net zero governance. The prime example is the Global Arrangement on Sustainable Steel and Aluminium (GASSA), a transatlantic arrangement, still under (currently stalled) negotiation, which proposes to liberalise transatlantic trade in 'green' steel and aluminium (and associated products), based on specified standards of sustainable or low carbon steel. It remains an open question precisely what the standards for 'green' steel will be, how they will be defined, and by whom, but based on existing discussions it seems likely that they will rely, perhaps heavily, on a range of existing standards currently promulgated by private industry and multistakeholder bodies. This, then, is another model by which public regulatory frameworks (in this case, trade regulation) is harnessed both to catalyse and endorse particular private standards, and to provide powerful economic incentives for those standards to be more broadly adopted, as other countries seek to join the regulatory club, and its associated (relatively) open markets.

92. Finally, we turn to 'institutional layering', which Cashore et al. (2021) define broadly, but which we use here specifically to refer to situations in which a mutually beneficial 'division of labour' exists between public and private standards-setting bodies, such that each takes on different tasks in a governance framework. Verbruggen and Havinga (2019) provide an interesting case study of this sort of interaction, focussing on the Global Food Safety Initiative (GFSI), a private initiative of 13 major retailers created in 2000 designed to coordinate across multiple rival corporate food safety schemes. They describe the way that, over time, GFSI increasingly worked together with public regulatory frameworks, as, for example, governments recognised GFSI-certification as sufficient for compliance with domestic regulation. For public agencies, the benefits of this arrangement include: that they can draw on private resources for audit and enforcement, and up to date compliance information; that it helps domestic regulators to position themselves strategically in global supply chains; and (for some, e.g., China) that is facilitates both oversight and indeed limitation of the domestic impact of transnational schemes. For the private schemes, these arrangements are useful because they add to their credibility and legitimacy, and therefore their

market position. While noting these mutual benefits, Verbruggen and Havinga (2019) also note risks and challenges of such arrangements, including: divergent public and private interests leading to conflict; underperformance of private actors; and challenges to the independence of public authorities.

93. We offer the following preliminary reflections on the basis of this review of selected relevant literature on transnational private standards:

    i. The question of the role(s) that NSBs can play in facilitating a just transition to net zero cannot be separated from the question of the systemic relationship between the traditional standards system and transnational private standards initiatives. The answer to the first question will depend in part on the position taken in relation to the second.

    ii. The literature above offers some qualifications to the assumption that the appropriate response to the proliferation of multiple standards in climate convergence is maximal convergence. Competition between schemes can, in the right circumstances, have beneficial systemic impacts, while excessive convergence can impede innovation and lead to lowest common denominator approaches. While alignment is crucial, a key lesson seems to be that it should be accompanied by specific mechanisms to actively promote innovation and increased ambition.

    iii. The regulatory 'levers' which have been developed for (some) transnational private standards are broader and more diverse than those which are available to NSB-developed standards in national regulatory frameworks. This literature therefore offers the prospect of expanding the toolbox of regulatory levers for all forms of standards. These levers include: conditionality in relation to sources of finance including state aid, export credit, development aid and finance organised through international organisations; public procurement conditions; tax advantages; regulatory relief and exemption from certain forms of government oversight; and market access conditionality through trade regulation, including both limitations on imports and trade preferences (subject always to WTO/FTA legality).

    iv. The literature above offers qualified support for the strategy of 'publicization' which is central to the Conveyor Belt model (i.e. the use of standards bodies to encode best practice from private initiatives into

binding regulation). It can be a central pillar in strategies to strengthen the effectiveness of standards and broaden their impact. However, the literature makes clear that this strategy comes with risks, and that care must be taken to mitigate any potential negative effects on the normative content of standards, the contestability of standards, the range of stakeholders involved in their development, and their ability to drive truly transformative change.

v. The literature above also invites further exploration of the notion of 'orchestration' in the Conveyor Belt model and suggests instead the somewhat broader term of 'steering'. It helpfully offers detailed accounts of the different ways in which 'steering' can occur, and raises the possibility that NSBs may play a role not just in 'publicization' of best practice standards, but also in 'steering' mechanisms. More specifically, it raises the following questions for further and more focussed analysis:

    i. In what ways might NSBs be involved in developing *meta-standards* for climate (net zero) governance, or *benchmarking* climate governance, either on its own or (more likely) in alliance with others?

    ii. Do existing examples of 'catalysing and capacity-building' offer models for the way in which NSBs or NSB-linked bodies could operate in the climate (net zero) governance space?

    iii. What opportunities exist for linkage between standards bodies and emerging standards-based trade arrangements, such as GASSA, or indeed the G7-proposed Climate Club? What challenges and risks might accompany such linkage?

vi. There are multiple reasons why public regulators choose to form partnerships with private standards schemes. Chief amongst these are that they can rely on the resources of private bodies, for example as regards monitoring and compliance. Such partnership can also have benefits for the regulating jurisdiction in terms of its influence over standardisation and implementation, and also facilitate its integration into global supply chains and production networks. Partnerships of this kind can also lend credibility to both parties.

vii. One limitation of this literature is that NSBs rarely feature as key players in case studies. While the activities of ISO are sometimes noted, very often it is described primarily as a competitor to private standards. As

a result, this literature provides few concrete models for NSB/ISO engagement with transnational private standards initiatives. Instead, they provide models for engagement between *regulatory* authorities and private initiatives which would have to be assessed and potentially modified to suit the particular roles and governance capabilities of NSBs. At the same time, this presents something of an opportunity, as it suggests the potential for entrepreneurial NSBs to take on potentially influential new roles.

Initial Findings & Reflections

94. In examining the literature related to the three dynamics within the ecosystem of standardisation, and in particular the standards-regulation nexus (national standards and regulatory frameworks, international standards and national regulatory frameworks, and between public and private sources of standards and governance), we have identified initial findings to inform the case studies which follow.

95. In relation to the relationship between standards and regulation at a national level, our overview of the literature on the role of standards-setting bodies in three contrasting jurisdictions (the EU, the US, and China) found that:

- Cross-national differences in the use of standards are determined in significant part by the histories of institutional and political development specific to jurisdictions. There are therefore limits to the extent to which the structures of standards governance in each jurisdiction are amenable to change.
- As a consequence, the levers available to support the adoption of standards in a national system are highly diverse and evolve significantly over time. This creates uncertainty but also offers multiple diverse options across jurisdictions.
- The experiences within jurisdictions of multiple actors (public and private) engaged in standardising processes can offer insights into the balancing or prioritisation of public policy goals within an economic context. This is of particular interest where the economic imperative for action may not be clear in the first instance and a governmental lead is needed.
- Though underexplored in the literature, there is scope to consider the relationships between national standard-setters within alliances or groups (including at a regional level) to drive forward a process of collective standardisation. Where these efforts work ‘upward’ to the international plane,

standards can be proliferated more widely through the vector of trade agreements (linking to the next dynamic).

96. In relation to the influence of international standards on national regulatory systems, we found:

- Where international standards are incorporated, there can be considerable variation at the level of implementation due to differences in conditions or where 'interactive' processes are part of the standard (that is, they depend on engagement with an international partner).[9] Accordingly, it will be necessary to focus not only on incorporation but also ongoing implementation.
- Alliance building is crucial, both in terms of effectively influencing international standards, and ensuring their effective incorporation and adoption. Alliances are needed across industry and civil society but also between NSBs. These alliances need not imply single positions, but 'compressed' divergent views (as in the European regional model) could help drive change to counter the core weakness of higher procedural quality of standards – their slow development and adoption.
- Soft law instruments can play an important role, as can institutions that may not have been leveraged effectively thus far. In particular, we draw attention to the committees and equivalent groups within trade agreements, whether the WTO or FTAs. These can act as valuable spaces for the forming of alliances, development of common positions, promulgation of international standards, and potentially, even the embedding of soft law instruments (including standards).

97. In relation to the influence of transnational private standards on public regulatory systems, we found:

- Transnational private standards have been integrated into public regulation in a wide variety of ways, some of which may provide useful insights for public standardisation.
- The literature offers some qualifications to the common assumption that international standardisation should strive for maximal convergence. While alignment is crucial, a key lesson is that it should be accompanied by specific mechanisms to actively promote innovation and increased ambition.
- The regulatory 'levers' which have been developed for (some) transnational private standards are broader and more diverse than those which are available to NSB-developed standards in national regulatory frameworks and could serve as useful models. These levers include: conditionality in relation to sources of finance state aid, export credit, development aid and finance

[9] Noted by the Panel in Panel Report, *Russia—Pigs (EU)*, para. 7.256.

organised through international organisations; public procurement conditions; tax advantages; regulatory relief and exemption from certain forms of government oversight; and market access conditionality through trade regulation, including both limitations on imports and trade preferences.

- The literature provides qualified support for the Conveyor Belt model, in which standards bodies help to encode best practice from private initiatives into binding regulation. However, the literature makes clear that this strategy comes with risks, and that care must be taken to mitigate any potential negative effects on the normative content of standards, the contestability of standards, the range of stakeholders involved in their development, and their ability to drive truly transformative change.
- The literature also identifies a range of potential roles for standards bodies, beyond that set out in the Conveyor Belt model. Of particular interest is the potential role of standards bodies in the dynamics noted above (para 62): (a) *benchmarking*, and developing *meta-standards* for climate governance, possibly in alliance with other bodies; and (b) *catalysing* private standards and providing certain kinds of *capacity building*; and (c) standards-based trade alliances.
- There are many drivers for linking private standards to public regulation, but chief amongst these are the efficient use of limited regulatory resources, facilitating integration into global supply chains, and influence over the processes of standardisation and implementation.

98. This section has confirmed the importance of imaginative, inter- and trans-disciplinary research in this field to produce findings which are outcome-oriented, specifically with the promotion of the ISO Net Zero Guidelines and other similar instruments in mind.

99. The following section explores the practice of standards development (public and private, national and international) in two separate areas to identify where the literature review has not identified dynamics of relevance for this study and to test expectations in relation to the initial findings.

Section II: Case Studies

Case Study 1: Sustainable Forestry Management case study

Introduction

100. Trade in forestry products can act as a motor to support the development of a sustainable forestry industry and provide an important source of income for some of the world's poorest (FAO, 2022). However, trade in forestry products can contribute to deforestation and forest degradation. While the attention on forestry management has long been on deforestation, degradation has increasingly drawn attention of policy makers, with recent studies suggesting that degradation constitutes a greater concern for carbon emissions than deforestation (Qin et al., 2021). Growth in agricultural production also impacts deforestation as land is taken for crops (EC 2013). The wider impact of trade in forestry products is now more clearly understood through the concept of 'forest risk commodities' (FRC) that includes products which contribute to deforestation (such as beef or palm oil production).

101. At the blunter end of the spectrum, forestry management as a focus of trade policy is intended to support (and in many instances encourage) trade in forestry products while minimising the negative impact of either illegal or unsustainable logging. This tension is recognised in the Sustainable Development Goals (SDGs) and, in particular, SDG 15 to '[p]rotect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.'[10]

102. The environmental dimensions of sustainable development are particularly clear in the context of forestry management: successful forestry management is important not only for its impact on specific species of endangered flora, or the fauna that rely upon them, but also for the wider environment. Forestry management is directly related to the maintenance and support of biodiversity, sustainable land management, respect for indigenous rights, and climate mitigation tools. In the case of the latter, deforestation and forest degradation are estimated to have accounted for approximately 10% of total anthropogenic CO2 emissions between 2011 and 2020 while the terrestrial sink (mostly forests) has been larger – as much as

[10] UN General Assembly, 'Transforming Our World: The 2030 Agenda for Sustainable Development', UN Doc. A/RES/70/1, (21 October 2015).

29% of annual anthropogenic CO2 emissions over the same period (FAO, 2022: 9). Indeed, in this way, forestry management cuts across the SDGs.

Approaches to Sustainable Forestry Management

103. Sustainable forestry management (SFM) is a broad term that includes a range of objects and criteria, shaped over the years as studies into the integrated nature of forests in environmental and social terms has expanded. For example, some SFM systems focus on land management, others on the economic operators engaged with forestry products. The scope of such schemes also varies within: for example, some may only cover timber (its sustainable and/or legal harvest) while others may include forest-risk commodities such as beef, soy, and palm oil which are considered to create a risk of deforestation by virtue of their production.

104. Some SFM schemes focus on legality (often under the jurisdiction of the land itself but occasionally including international legal obligations) while others may use 'sustainability' as the metric for compliance. These include requirements around logging practices and land management but also respect for a wider range of human rights commitments, including particular attention in relation to the rights of indigenous groups that are often negatively affected by deforestation. Some SFM schemes focus on *processes* (that is, that businesses have appropriate monitoring mechanisms, risk assessment, auditing, and verification, etc.) while others (performance-based standards) prioritise *outcomes*, not the extent to which the economic actor has appropriate systems in place necessarily but whether illegal or unsustainable forest commodities have entered their supply chains. Finally, different SFM schemes have different methods to assure compliance with their objectives. A few rely on a third-party non-State regulator (e.g., FSC) but most use a form of self-regulation.

105. While SFM schemes have existed since the early 1990s, it is over the past 15 years that governments have become to use public policy tools which either overlap with the scope of SFM schemes or encourage their use. The most notable of these tools are of particular interest for our study: due diligence obligations on economic actors (most common in import markets), mandatory compliance based on a specific VSS (most common in export markets), conditionality in relation to accessing government procurement or financial support, conditionality in relation to market access for exporters, or inter-governmental obligations under trade agreements that require or encourage the recognition or uptake of SFM programmes.

106. We might expect these legal mechanisms which entail an element of mandatory compliance, to 'strengthen' the VSS (Berning & Sotirov, 2023). There is evidence, however, that standards instead increase ambition of economic actors, encouraging them to follow higher standards than the legal requirements, but only where there exists a legal baseline – that is, the higher standards require legal obligations on which to build (Cerutti et al., 2011). The dynamics between regulation and standards are complicated by the standard-to-standard relationship within SFM, with potential competition between some standards (FSC and PEFC) which can include some positive aspects (gap-filling where the coverage of one standard is lacking) but also potential 'downward' pressure where industry and government cooperate to encourage the uptake of lower ambition standards (a concern in the palm oil sector), thereby discouraging improvement of standards and/or a reduction in ambition. Finally, to further challenge expectations, there is evidence that the integration of VSSs in public policy tools ('institutionalisation') has reduced or stagnated uptake of the standard in question, in part where there is an absence of support from governments or 'negative' competition with other certification schemes which discourages (implicitly or explicitly) multiple certifications (Depoorter & Marx, 2022).

107. This opens interesting opportunities to consider how NSBs could further drive a climate agenda, building on, rather than relying on, governmental measures. Cooperation with government is key, as is interoperability of standards to discourage negative competition.

Development of standards for sustainable forestry practices

<u>The development of the SFM standards landscape</u>

108. Forestry management programmes have existed for a long time: the 1919 Forestry Act which established the Forestry Commission in the UK was concerned with reforestation following aggressive timber harvesting during World War I; the American Tree Farm System (ATFS) was established in 1941, focussing on the sustainable management of forests owned by private landowners in the United States. It was not until widespread public concern in the 1980s in relation to deforestation, especially of rainforests, that private standard schemes began to be developed. The most significant early actor was the Forest Stewardship Council (FSC), created in 1993, shortly after the 1992 Rio Summit. The SFM VSS were developed, in part, as a response to a failure in global governance to tackle the crisis of deforestation. Unlike 'traditional' processes of standardisation (e.g., under NSBs or International Standards Bodies) which are driven by the economic needs of industry, here

VSS were driven first by environmental campaign groups and then subsequently by businesses that had suffered because of these groups' activities such as boycotts (Bartley, 2005).

109. The FSC creates a certification system that certifies forests and forest products. It is one of the most used VSS. The FSC Principles and Criteria for Forest Stewardship (FSC-STD-01-001) are particularly influential, shaping national rules, and other VSS too (for example, in Malaysia). FSC also provides chain of custody (CoC) certification to verify that FSC-certified material has been identified and separated from non-certified and uncontrolled material in supply chains. This includes ensuring that the processing and transformation of FSC-certified products is certified to apply an FSC label to their products and/or sell them with an FSC claim.

110. Other SFM VSS exist: Sustainable Forestry Initiative (SFI) (1994), Roundtable on Sustainable Palm Oil (RSPO) (2004), Rainforest Alliance (1987). The structures of these bodies vary: some are NGO-led (Rainforest Alliance), some business-led (SFI) but the most influential are multi-stakeholder bodies which include producers, traders, banks, civil society, and other interested parties (FSC, RSPO).

111. The Programme for the Endorsement of Forest Certification (PEFC) which was founded in 1999 takes a different approach: while certification programmes like FSC offer 'top down' certification (with the FSC creating standards for specific territories which are then met by applicants), PEFC operates a 'bottom up' certification scheme, which builds off local accreditation processes, determining whether they meet PEFC standards. This is, in part, a consequence of PEFC's purpose: to fill the perceived gap left by FSC in relation to (1) smaller operators and (2) non-tropical forests (Espach, 2006). The contrast between PEFC and FSC reflects the wider debates around inter-standard competition: in some ways PEFC filled a gap, empowering small-scale producers to be certified without the costs associated with FSC certification which may yet be unsuccessful; at the same time, PEFC, being based on local systems which are in turn more likely to be subject to downward pressure in terms of coverage, quality, and rigour by industry. Curiously, in spite of what appears to be a competitive relationship, for economic operators that are sufficiently incentivised to seek certification (or sufficiently resourced), identifying methods to meet *both* requirements can be beneficial (see further below in relation to the UK Forestry Standard).

112. Among these 'big' players, a wealth of other SFM VSS exist, at times feeding into others (PEFC in particular). Multiple factors shape the effectiveness of

private schemes within the environmental space (as indeed elsewhere). These have been unpacked by Espach (2006) as follows:

Table 1
Factors that Influence the Effectiveness of Private Environmental Regulatory Regimes

			Institutional requirement
Demand-side factors	Market	Consumer preference	Competitive markets with environmentally conscious consumers (domestic or foreign)
		Client preference or pressure (supply chain pressure)	Asset specificity and/or coordination among clients (easiest under conditions of high industry concentration)
		Enhanced company image	Company or brand differentiation
	Nonmarket	Threat of further state regulation	Competent state regulation
		Threat of negative public campaigns	Presence of activist groups and media for public dissemination
		Threat of litigation	Judiciary open to public claims against firms alleging environmental malpractice
			Institutional requirement
Supply-side factors	Market	Availability of verification instruments across the entire commodity chain	Organization and oversight of program across commodity chain through network or central administration
	Nonmarket	Organization and administration	Industry concentration, leadership by major firms, and capable administrative agency
		Availability of external support	Capable NGOs or other independent organizations willing to collaborate
		Government position relative to program	State legitimacy as a voice for public interest, credibility of government initiatives

(Espach, 2006: 61)

113. It is noteworthy that in the SFM space, the most notable weaknesses relate to effective enforcement, rather than, for example, a lack of potential further state regulation. Indeed, there is an argument that standards are driving improved behaviour in SFM, over and above mandatory legal requirements, in part because their value is because they embody best practice rather than formal compliance demands, or better reflect consumer interests (Messenger 2024). This is helpful to inform prioritisation in relation to identifying higher impact entry points for standards to improve the governance of SFM.

114. The global reach and identifiability of these standards is considered a key positive. One official working in forestry management told us:

> FSC and PEFC, over time, have become so well-established and recognised and their global coverage now gives added gravitas. I think they help consumers, they help forest managers, they help customers because they have this global presence… [T]heir logos are recognised. They have assurances. People have a degree of understanding about what they stand for. And because they have a global presence, they're easier to get to grips with than say equivalent individual

country versions. Obviously, it's difficult to have knowledge of individual equivalents in every country in the world. But because they operate globally, it's like an umbrella, it works. It makes it easier, I think.[11]

115. Other 'traditional' public international standards are also relevant for forestry management, most notably from ISO, though these are less tailored to the specificities of the forestry sector. These include: ISO 14001 (on environment management systems, and the most widely used in concert with FSC Principles), ISO 38200 (on chain of custody of wood and wood-based products), ISO 14004 (providing guidance on the establishment, implementation, maintenance and improvement of an environmental management system and its coordination with other management systems), ISO 14006 (used to integrate ISO 14001 EMS into other management systems), and ISO 14064-1 (specifying principles and requirements at the organizational level for the quantification and reporting of GHG emissions and removal). As SFM is intimately connected to the role of forests as carbon sinks, we can expect engagement with the ISO Net Zero Guidelines also, though there is trepidation among some that a focus on carbon can come at a cost for forestry management which is multifaceted and may exacerbate tensions (e.g., in relation to resilience and concerns over monocultures that may nonetheless capture carbon).

116. Importantly, while ISO standards play an important ancillary or supportive role, they do not compete with the dominant (PEFC, FSC) VSS. As one official working in forest management policy stated in relation to a dedicated ISO forest standard: 'I think the ship might have sailed possibly, 20 years ago, maybe. But I think given that we have the UK Forestry Standard, we have these big global players, I can't quite see where an ISO standard would now fit in.'[12] The importance of being able to respond to demand quickly is a key factor that has traditionally favoured VSS uptake. It is telling the ISO Net Zero Guidelines which have been widely shared, were developed through a much faster IWA process. It is not that ISO or other public standards are considered less desirable, merely that they are too late in this context. The same official noted: 'in terms of adding value, I mean. I understand the value of ISO standards, for example the current work to develop one for nature markets.

[11] Interviewee C (staff member at a forestry agency). Interview conducted by Gregory Messenger and Andrew Lang. 17 November 2023.

[12] Interviewee C (staff member at a forestry agency). Interview conducted by Gregory Messenger and Andrew Lang. 17 November 2023. Similar views shared by Interviewee D (staff member at a forestry agency). Interview conducted by Gregory Messenger. 21 November 2023.

There's definitely a role for them. But my personal view is that forestry standards are already beyond that there's no need for it now.'[13]

An example of bridging national regulation and voluntary frameworks: the UK Forestry Standard

117. At a national level we also see the use of standards to bridge both domestic legal requirements (examples of which we examine below) and voluntary standards. The UK Forestry Standard (UKFS) is a good example of this practice. The UKFS is the product of inter-agency collaboration in that it is the outcome of a cross-governmental process in the UK by the nationally recognised bodies which are responsible for forestry management in England, Scotland, Wales, and Northern Ireland. Importantly, the structure and responsibilities of these bodies is different, and the legal requirements in relation to forestry management in each jurisdiction also varies. It acts, therefore, as an important microcosm for what could be, in other fields, NSB collaboration in spaces heavily dominated by VSSs.

118. The UKFS sets out, in a single document, general forestry practice requirements and best practice in the UK (across all jurisdictions) in relation to forests and biodiversity, climate change, historic environment, landscape, people, soil, and water. It includes both the formal legal requirements in the UK, and good practice requirements for the standard also.

119. This standard is developed through a process (periodic reviews around 5 years) led by forestry authorities which identify the issues and areas of concern to improve, bringing in technical expertise to identify and deepen the evidence base, a consultation process which engages with stakeholders, and subsequently wider society. The spread of expertise brought into the process is considered a key part of its credibility. On the rigours of the review process, the same official stated:

> I think it does give a lot of gravitas to the standard. The fact that there is a dedicated research agency with a funded research programme as well as having experts and leads from the forestry authorities. You've often got world-class leading experts on forest management feeding in, you've got academic institutions feeding in. They're all part of the review process and also contributing

[13] Interviewee C (staff member at a forestry agency). Interview conducted by Gregory Messenger and Andrew Lang. 17 November 2023.

to the body of evidence that is accumulated between the review cycles. I think that is really important, because it does bring credibility to the standard.[14]

120. The relationship between the UKFS and private schemes (VSS) is important. The governments of the UK have endorsed the UKFS as the key reference document on forestry practice for the UK Woodland Assurance Standard (UKWAS), a certification standard adopted by FSC and PEFC for certifying responsible forest management in the UK. As such, developments in the UKFS are made with the FSC and PEFC in mind. Additionally, the UKFS can be used for assessing compliance as part of an environmental management system such as ISO 14001. The UKFS also underpins the Woodland Carbon Code, a government-backed quality assurance standard for woodland creation projects in the UK. Projects under the Code are required to comply with the UKFS, and this is checked by validation bodies (UKFS 2023 p2). The UKFS is set out in such a way to cover both legal requirements (statutory obligations) and good practice requirements (those important for SFM, though not legally mandated in the UK). Guidelines are also provided to provide guidance on how to implement these requirements (both legal and good practice). The UKFS sits at the base of a pyramid of increasing VSS requirements, as the (independent and private) UKWAS which meets the UKFS requirements but also includes FSC and PEFC requirements also. Here the certification standard (UKWAS) is used to tie the public (UKFS) and private (FSC and PEFC) standards together, simplifying different requirements and raising the level of protection.

121. Between FSC and PEFC standards, parallel national approaches (such as the UKFS), and the underpinning relevant international ISO standards (among others) – we can see that there is no shortage of standards in SFM. And some of the most influential standards are largely considered to offer high level quality (FSC), with appropriate levels of independent oversight through their certification processes. Indeed, for those involved in SFM, the duopoly of FSC and PEFC is seen as meeting the needs of what otherwise might be produced by international standards bodies. What do mandatory governmental requirements add to this? What is the relationship between mandatory (international and national) requirements, and how can standards help improve the effectiveness or ambition pull of such measures? In the following section we examine these questions through the use of a host of different legal instruments as levers: multilateral environmental agreements, free trade agreements, and unilateral regulation.

[14] Interviewee C (staff member at a forestry agency). Interview conducted by Gregory Messenger and Andrew Lang. 17 November 2023. Similar views shared by Interviewee D (staff member at a forestry agency). Interview conducted by Gregory Messenger. 21 November 2023

Development of international rules for sustainable forestry practices

122. A lack of effective *national* regulation of forestry management in forest-holding territories was a driver for international action in the early 1990s, with concerns both over the scope of any regulation but also its effective enforcement. But as we have seen, new internationally-agreed rules on sustainable forestry management were lacking – sparking the drive for VSS in SFM. Nonetheless, there have been relevant international instruments developed over this period, which create incentives for the creation or use of standards in relation to SFM.

<u>The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)</u>

123. CITES was established in 1973. With participation from 183 countries, CITES offers varying degrees of protection to more than 37,000 species of animals and plants. CITES classifies these species into Appendices I, II, or III, based on the degree of protection they require, with Appendix I containing the most endangered species, where commercial trade is generally prohibited.

124. CITES permits from issuing authorities confirm that the conditions for authorizing the trade of the covered flora or fauna are legal, sustainable, and traceable in accordance with Arts III, IV and V of the Convention. Parties have agreed on a standard format for CITES permits and certificates.[15] In many ways, CITES provides for the paradigmatic 'public' mechanism for regulating sustainable trade: national CITES bodies are authorised to grant permits, based on advice from national CITES scientific authorities and are governmental bodies (whether independent, arms-length, or part of central government). The CITES Standing Committee adopts standards and guidelines to support parties to meet their obligations (for example, in relation to traceability). These standards are embedded within the public international standardising environment, cross referencing ISO/IEC standards as much as instruments of international law (e.g., the Trade Facilitation Agreement).[16]

125. Much as CITES' strengths can be seen to stem from its status as a treaty under international law (its mandatory nature, specificity) so do its weaknesses: as a creature of international relations, it is prone to the political

[15] CITES Conference of the Parties, 12th meeting, 'Permits and certificates', Conf. 12.3 (Rev. CoP19).
[16] CITES Standing Committee, 'Traceability: Technical Standards', (SC70 Inf. 32 bis) 2018.

pressures of the parties, often criticised for prioritising 'charismatic' endangered species such as elephants that draw public attention (Glennon, 1990); further it is limited to its explicitly defined objectives and powers. As such, it covers only the *international trade* in the listed flora and fauna, not related activities such as deforestation per se. An export ban on an illegal logged endangered timber would eliminate concerns under CITES, even if that government continued to permit deforestation. Nor does it cover the trade in products which may not be endangered but the production of which has endangered flora or fauna (for example, the change of use of land through deforestation to rear cattle for beef production).

Rio Conventions and beyond

126. International action in relation to SFM began in earnest during the 1992 Rio Summit, although no dedicated forest agreement was concluded. The three Rio Conventions, the UNFCCC, the Convention of Biological Diversity (CBD), and the United Nations Convention to Combat Desertification (UNCDD) did have an important ancillary relationship to deforestation which was identified as an overlapping issue.

127. Within this framework, additional mechanisms were developed. Some, such as the Intergovernmental Panel on Forests (created in 1995 to pursue the Rio Forest Principles) made progress in some areas but largely at the level of statements and proposals, adopting a package of over 130 proposals to address a range of forest problems in 1997. More significant developments include 'reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries' (REDD) developed through the UNFCCC during COP 11 in Montreal in 2005.

128. REDD+ was developed to incorporate the broader roles of conservation, sustainable management, and enhancement of forest stocks. Its principal focus is the use of forests to combat climate change, rather than conservation for its own sake. REDD+ prioritises preventing the conversion of forests to other land uses, reducing forest degradation, conservation, sustainable management of forests, and enhancement of forest carbon stocks through activities such as reforestation and afforestation (the establishment of forests in areas where they did not recently exist).

129. The adoption of the SDGs has kept not only deforestation but sustainable forestry management on the international agenda also. This is made explicit in SDG target 15.2 which states that 'By 2020, promote the implementation of

sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally'.

130. Under the Paris Agreement, the nationally determined contributions (NDCs) of the parties also cover commitments in relation to forests, through the lens of climate action. Here, governments provide in relative detail how they link REDD+ targets and other forestry policies to their wider climate targets.

131. Much activity takes place through the UNFCCC process, often at the level of political rather than legal commitments, most notably the Glasgow Leaders Declaration on Forests and Land Use at COP26, where 145 governments agreed to 'commit to working collectively to halt and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation.' One element of the Glasgow Declaration was to '[f]acilitate trade and development policies, internationally and domestically, that promote sustainable development, and sustainable commodity production and consumption, that work to countries' mutual benefit, and that do not drive deforestation and land degradation' – something that necessarily entails the use of standards, whether public or VSS, though no mention was made at that level of detail.

132. Other mechanisms to encourage intergovernmental and multistakeholder engagement have also been introduced: the Forest, Agriculture and Commodity Trade (FACT) Dialogue seeks to reconcile potential conflicts between demand for increasing trade in agricultural commodities and the need to prevent deforestation. It takes a collaborative approach among producer and consumer countries (reminiscent of the structure of international commodity agreements of the past such as the International Sugar Agreements) to achieve shared goals related to sustainable supply chains and forest conservation.

133. Thus, while certification schemes for SFM developed actively over the years, so too did international (governmental) efforts to combat deforestation and support SFM. Despite the potential spill-over benefits of identifying priorities by governments, and the provision of financing in some (e.g., REDD+), unlike certification schemes, the commitments here are not addressed to economic actors but to governments, without aligning action. As such, we have not seen the potential positive relationship between standards and regulation that is identified in the literature review.

134. There are long running debates over whether international environmental law obligations are sufficiently precise or specific to have the desired effect (Bodansky, 2010). This is not helped by a preponderance of political statements and a shortage of hard law. A lack of specificity risks the key benefit of international commitments: their mandatory status. This is coupled with limited enforcement mechanisms ('sticks') to ensure governments comply with their obligations. We can contrast this with international trade law, where commitments are (often) more specific, and supported by enforcement mechanisms (albeit only effective in relation to international law). We can also contrast these international environmental law commitments with the SFM standards discussed above where specificity may be lacking in some areas but is sufficiently clear for economic actors to be able to rely on them to shape their business practices.

SFM requirements in importing markets

135. As international commitments have been considered insufficient to halt deforestation and support SFM, demand for national action has taken two forms. The first, that countries with forests manage them sustainably. This is at the crux of the forestry management challenge in a global economy, where governments that export timber or forest-risk commodities are not incentivised to restrict their own production absent compensation or mitigation. Thus, while many countries have binding rules around the management of forests, their implementation is often in question (Hermann et al, 2020). Second, at the same time, consumer and civil society demand for sustainably sourced products in (mostly developed) importer countries has increasingly been unmet by VSS alone, whether due to lack of implementation and effective oversight, lack of uptake by producers, or lack of credibility.

136. Thus, we have seen an increase in demand for mandatory requirements in importing countries that insist on sustainably-sourced timber or forest-risk commodities. These approaches have been introduced progressively over the past 15 years, building on approaches taken by SFM standards systems. These do not replace the VSS mechanisms, but instead run in parallel with them.

<u>EU</u>

137. EU legislation includes several commitments in relation to forestry management (e.g., the Habitats Directive, Birds Directive, and so on). The application of requirements on traders' behaviour outside of the EU, or the products they import, are newer, however. The 2010 EU Timber Regulation

(EUTR)[17] introduced obligations on importers of timber to demonstrate that they meet specific requirements relating to sustainability. Specifically, economic actors who place timber or timber products on the EU market must maintain a due diligence system that ensures that they only sell products that have been legally harvested. The due diligence system includes requirements in relation to information gathering, risk assessment and risk mitigation. Records must be kept to ensure traceability of their products. Businesses that do not comply face penalties by authorities within the EU Member States.

138. The EUTR has been further developed, replaced by the EU Deforestation Regulation (EUDR).[18] The EUDR takes a similar approach to the EUTR but expands its product coverage from timber and wood products to cattle, cocoa, coffee, oil palm, rubber, soya and wood and their derivatives. These products must be: deforestation-free (have been fed with or have been made using, relevant commodities that were produced on land that has not been converted from forest to agricultural use or in the case of wood did not involve the conversion of primary forests or naturally regenerating forests into plantation forests or into other wooded land); produced in accordance with the relevant legislation of the country of production; and covered by a due diligence statement indicating no more than a negligible risk of non-compliance. There are specific cut-off dates for the Regulation's application. Importantly, the deforestation-free criterion is separate from the legality criterion. That is, legally produced products that nonetheless were produced on land converted from forest to agricultural use would be prohibited from the EU market. The penalties for businesses that do not comply are significant: fines of up to 4% of EU turnover, restrictions on accessing EU funding or procurement contracts, or trading in those products within the EU.

139. While the EUDR places significant burdens on economic actors, it does not provide the level of guidance that one finds in, for example, CoC standards. Nor does the EUDR accept equivalence of any voluntary standard regimes, even where VSS bodies were engaged with the Commission during the design process. Art. 10(2)(n) recognised that as part of the risk assessment process, it must consider 'complementary information on compliance with this Regulation, which *may* include information supplied by certification or other third-party verified schemes, including voluntary schemes recognised by the Commission…' (emphasis added). Nonetheless, FSC and PEFC both market

[17] Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market.
[18] Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May 2023 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010.

their 'alignment' with the EUDR as a way for business to support their efforts to ensure compliance with the Regulation (while not stating that certification per se meets the requirements of the EUDR which they cannot confirm), including through (in the case of FSC) a dedicated 'EUDR Toolbox' which brings together FSC Blockchain and new risk assessments with existing and updated FSC standards to actively target EUDR requirements.

140. Under the Forest Law Enforcement, Governance and Trade (FLEGT) programme, there are certification schemes which the EU does recognise (at least in relation to timber products, previously under the EUTR), but these are formally developed through bilateral agreements, Voluntary Partnership Agreements (VPAs).[19] Unlike FTAs that often refer to specific *international* environmental obligations, VPAs require partners to introduce *national* legislation, which once the EU considers provides sufficient protection of sustainable forestry management, are able to grant FLEGT licenses which include a presumption of compliance with the EUTR.[20] Here we see the bridge between national and international obligations blurred as some EU FTAs include encouragement to develop VPAs,[21] or include implicit expectations that partners will introduce such schemes.[22] The EU has accepted in a recent WTO dispute that the FLEGT programme and VPAs 'are not so effective in preventing illegal destruction of forests',[23] hence its push for more onerous regulatory measures.

141. While the reception of the EUDR has been largely warm in academic and civil society circles, it has been much colder in many developing countries with important export interests where traders will be disadvantaged. As we will see below, the EU's proposed solution in another case (in relation to conditioning market access) may involve large-scale technical assistance and capacity-building to compensate for the additional burden for exporters. Linking this to a credible SFM standard regime would be a positive development to help all key stakeholders.

US

[19] Art. 10(3) EUDR.
[20] Though Honduras, Vietnam, Liberia, Congo, Cameroon, CAR, Ghana, DRC, Côte d'Ivoire, Gabon, Guyana, and Indonesia have concluded VPAs, to date only Indonesia has been authorised by the EU to provide certificates.
[21] E.g., Art. 289 EU – Central America FTA.
[22] E.g., Art. 273 EU – Colombia/Peru/Ecuador FTA.
[23] Panel Report, *European Union and Certain Member States—Certain measures concerning palm oil and oil palm crop-based biofuels*, para. 7.376.

142. The 1900 Lacey Act is the United State'' oldest wildlife protection statute. It was primarily aimed at conserving game and wild birds by making it a federal crime to poach game in one state with the purpose of selling the bounty in another. It developed over time to now form a centre piece of US conservation legislation. The 2008 amendments to the Lacey Act expanded its protections to a broader range of plants and plant products, including timber and wood-derived products.

143. Under the Lacey Act, businesses must complete a declaration identifying the scientific name, value, quantity, and country of harvest of the product. Importantly, it is unlawful to import, export, transport, sell, receive, acquire, or purchase in interstate or foreign (that is, international) trade any plant, taken or traded in violation of US law (state or federal) or any foreign law that protects plants. Businesses are required to exercise 'due care' in relation to their sourcing of material, meaning those in the supply chain need to take all necessary precautions to ensure that they are not trading in illegally sourced wood products.

144. As with the EUTR and EUDR, the Lacey Act does not accept SFM VSS certification as evidence of compliance. This presented a challenge for FSC when it was reported (incorrectly) that FSC-certified wood had been the subject of a US investigation into the importation of illegally sourced wood for guitar manufacturing in Tennessee.[24] There has been discussion of expanding the coverage of obligations placed on traders through The Fostering Overseas Rule of Law and Environmentally Sound Trade (FOREST) Act which would take a similar approach to the EUDR. However, the bill has languished in the committee stage in Congress since 2021.

National regulation with minimal obligations or lacking sanction (e.g., Japan)

145. A different scheme is used by Japan (the fourth largest importer of timber after China, the US, and the EU). The Clean Wood Act 2017 creates a voluntary register for companies that are able to demonstrate their responsible sourcing of legal timber.[25] The 'stick' under the Clean Wood Act is considerably less strict than that in the EU or US: under Art. 5 'Business entities must *endeavour* to use legally-harvested wood and wood products.' (emphasis added)

[24] See: <https://us.fsc.org/en-us/newsroom/newsletter/id/545> ; <https://www.justice.gov/opa/pr/us-corporation-sentenced-importing-illegally-sourced-wood-amazon>

[25] Act on Promotion of Use and Distribution of Legally-harvested Wood and Wood Products (Clean Wood Act) entered into force 20 May 2017. Available at <https://www.rinya.maff.go.jp/j/riyou/goho/english/english-index.html>.

146. Here the system is built around encouraging registration as a benefit in and of itself. It has been suggested, however, that the kudos attached to government recognition and support for such enterprises is considerable and that while a voluntary process of recognition, it is expected to produce successful outcomes in terms of supporting responsible sourcing.

147. An additional legal instrument provides some guidance as to how to ensure that businesses can demonstrate legality of the sourcing of their wood,[26] but this only provides high-level guidance and does not make explicit reference to any national or voluntary standard.

SFM requirements or incentives in exporting markets

148. The increase in international pressure and increasing rigour of SFM requirements in (some) large importers' regulations has led (as has been long hoped) to the uptake of stricter national forestry regulation in some exporter countries. The customary concern, however, remains that where new regulation is introduced, it is not enforced effectively. This is not necessarily an intentional prioritisation of economic interest, there are instances where lack of resource or capability are also important factors (Hoare, 2015).

149. Three additional possibilities exist. One is where the national regulation is *conditioned* on an existing VSS. For example, the government of Gabon has conditioned the grant of forestry permits on FSC certification. FSC Forest Management certificates cover more than 2 million hectares of forests by December 2019, almost 10% of the total forest area in Gabon. Similarly, the Malaysian Timber Certification Scheme (the national system, endorsed by the Programme for the Endorsement of Forest Certification – PEFC) is also made compulsory by the government (UNFSS, 2020).

150. An alternative, the mirror image of the first, is national incentives that draw on VSS. We see such examples in Brazil and Peru. In the case of Brazil, discounts of up to 5% on the royalty paid to the Brazilian Forest Service are granted for forest products extracted from public forests in Brazil that are certified either by the Brazilian Forest Certification Programme (a national scheme endorsed by the PEFC) or the FSC. In Peru, 'a rebate of up to 35% is applied to concession fees for voluntary forest certification, the adoption of good practices duly certified, and the certification of legal origin. An additional

[26] The Ordinance on Specifying the Standards of Judgment for the Wood-related Business Entities to Ensure the Use of Legally-harvested Wood and Wood Products (23 May 2017)

20% discount is available if these measures are maintained beyond the fifth year' (Karsenty, 2021).

151. The third possibility is where national measures are introduced to *counter* concerns over VSS schemes which may be considered too strict or inappropriate for the market in question. Indonesia provides a current example for this: in the case of palm oil, which is widely considered contentious due to its impact on deforestation, Indonesia has introduced mandatory certification for the Indonesian Sustainable Palm Oil System (ISPO). Unlike the voluntary Roundtable on Sustainable Palm Oil (RSPO) certification, ISPO certification is mandatory for all palm oil producers in Indonesia. This aims to standardize the sustainability practices across the entire Indonesian palm oil sector. Under the ISPO producers must follow a set of principles, criteria, indicators, and verifiers based on existing Indonesian regulations. These cover a range of issues, including legality, environmental management, and social aspects. ISPO aims to ensure compliance with Indonesian laws and regulations, reduce greenhouse gas emissions and mitigate environmental impacts, and improve the competitive standing of Indonesian palm oil in global markets. However, RSPO is considered stricter and more comprehensive than the ISPO, for example, on securing free prior and informed consent from communities or new planting procedures (ISPO-RSPO 2016). Concerns additionally exist around effective implementation (especially with regards to smallholder farmers) and the ISPO transparency and monitoring mechanisms.

152. Here we can see competing interactions between regulation and standards: standards as a 'gold standard' and efficient mechanism to side-step regulatory challenges at the national level by adopting internationally accepted best practice requirements; or alternatively being used to challenge another existing standard which is seen as presenting challenges for government and exporters. This latter dynamic, especially in relation to palm oil, is of particular interest given the introduction of innovative market access provisions in the Indonesia-EFTA FTA which conditions tariff preferences on palm oil being certified as sustainable. Indeed, FTAs provide an important bridge between different types of SFM-related standards and legal requirements that shape market behaviour.

Free Trade Agreements

153. The overlap between commitments in relation to trade liberalisation and consequences for the environment have a long tradition. In the EU context, this formed part of the underlying logic of European liberalisation and a

counter to the threat of a 'race to the bottom'. In the US context, the level playing field has long been a concern over 'social dumping' – the practice of competitors abroad reducing environmental or labour rights protection to gain an unfair competitive advantage over US producers. As it would happen, the EU first, and then the US, would have the most active free trade agreement programmes, thus shaping a network of agreements. While not the only international actors to link FTAs to SFM, they provide the largest range of examples. The relationship can be divided into cooperative obligations, specific commitments, explicit links to multilateral environmental agreements, conditioning agreements on SFM, or conditioning market access on SFM.

Cooperative obligations

154. In many FTAs that include commitments in relation to the environment they are often cooperative in nature. That is, they identify areas of importance where they wish to see progress. The EU-Andean FTA, Art. 273, is a case in point:

> In order to promote the sustainable management of forest resources, the Parties recognise the importance of having practices that, in accordance with domestic legislation and procedures, improve forest law enforcement and governance and promote trade in legal and sustainable forest products, which may include the following practices: (a) the effective implementation and use of CITES with regard to timber species that may be identified as endangered, in accordance with the criteria of and in the framework of such Convention; (b) the development of systems and mechanisms that allow verification of the legal origin of timber products throughout the marketing chain; (c) the promotion of voluntary mechanisms for forest certification that are recognised in international markets; (d) transparency and the promotion of public participation in the management of forest resources for timber production; and©) the strengthening of control mechanisms for timber production, including through independent supervision institutions, in accordance with the legal framework of each Party.

155. The progress on these objectives will depend on the willingness of the FTA parties to meet them. FTAs customarily include committee structures, often with periodic deadlines to meet. This provides a useful 'hook' to progress the agenda. As does (in the EU, and UK models) the creation of Domestic Advisory Groups (DAG), independent bodies made up of civil society, business, and independent experts, that advise government on the effective implementation of the sustainability provisions of the FTA in question. These DAGs periodically meet with partner DAGs through treaty mandated 'Civil

Society Forums' which also provides an opportunity to push specific points of interest. It should be noted that DAGs have been criticised for their lack of effectiveness (and/or lack of governmental engagement with their work). An additional challenge, were they to function effectively, is the lack of NSB or direct VSS involvement in any of these structures, although some key civil society bodies may be involved (e.g., WWF).

Specific commitments

156. A few FTAs include specific obligations in terms of enforcement mechanisms explicitly covering SFM. One such example is the US-Peru Trade Promotion Agreement. Under Annex 18.3.4, Peru undertakes a range of obligations in relation to effective forestry management. Peru commits to enhancing its legal frameworks, regulatory systems, and institutional structures to ensure effective monitoring, enforcement, and prosecution related to illegal logging activities. These commitments led to one dispute over US concerns for the independence of Peru's national forestry agency (resolved a few months later).

157. Annex 18.3.4 entails substantive detail on implementation of CITES including a focus on specific species and requires the development of strategic management plans. For example, this Annex includes the establishment of export quotas for bigleaf mahogany 'in a manner consistent with Article IV' CITES.[27]

158. The US-Peru agreement requires the development of a timber verification system to verify legality of timber harvested in Peru for export. A system (MC-SNIFFS) has been developed, though it is not clear to what extent this was a result of the FTA or the increasing requirements being placed in the key export markets of the US and EU, and questions around what China's Forest Law 2019 requires for exporters from Peru (Zunino, 2020).

159. Additionally, the Annex sets out commitments to facilitate the participation of civil society, indigenous communities, and other stakeholders in decision-making processes related to forest management and governance. Further structures for cooperation, capacity-building, and technical assistance are included also. Unusually for most non-US FTA commitments in relation environmental protection, the Annex is subject to formal legal dispute settlement procedures with potential for countermeasures.

[27] Art. 3(f) US-Peru Annex 18.3.4

Multilateral environmental agreements (MEAs)

160. We have noted how the overarching structure of SFM includes a set of multilateral environmental agreements. FTAs now increasingly link into these agreements as a way of both drawing on existing structures and commitments, as well as potentially strengthening the softer commitments found therein. For example, the Common Market for Eastern and Southern Africa (COMESA) provides for cooperation and supporting accession to United Nations Conference on Environment and Development (UNCED) agreements relating to climate change and biodiversity.[28]

161. The EU-Mercosur FTA provides an ongoing and potentially rich example. Agreement in Principle was reached in 2019 but a finalised text has been elusive. Recent talks have revolved around a 'Trade & Sustainable Development Joint Instrument' – leaked in February 2023.[29] In this text, the EU seeks to use the FTA as a way of tying the parties closer into their commitments under the Paris Agreement, 'that there will be no reduction in the level of ambition of each Party's NDC, including with respect to deforestation targets existing on 28 June 2019, i.e. the date of the political agreement on the EU-Mercosur text, and as reflected in each Party's national laws'.

162. Further, seeking to strengthen the commitments under the softer political declaration, the leaked text additionally notes:

> the two sides are signatories to the Glasgow Leaders' Declaration on Forests and Land Use, where both sides committed to: trade and development policies, internationally and domestically, that promote sustainable development, and sustainable commodity production and consumption, that work to countries' mutual benefit, and that do not drive deforestation and land degradation, halt and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation. To this end the EU and Mercosur will set an interim target of reduction of deforestation of at least 50% from current levels by 2025.

163. The negotiations are ongoing, with the EU reportedly committing to a significant climate fund to support Mercosur (principally Brazil)'s commitments. This is of relevance given the impact of the EUDR on Mercosur countries where, as we saw above, exporters of forest risk commodities will be subject to significant additional obligations and support both to meet

[28] Art. 124 Treaty Establishing the Common Market for the Eastern and Southern Africa (COMESA Treaty)
[29] See: https://friendsoftheearth.eu/wp-content/uploads/2023/03/LEAK-joint-instrument-EU-Mercosur.pdf

those requirements, and *show* that exporters meet those requirements will be needed to mitigate the secondary negative impact of the EUDR on economic development.

Preferences

164. We have mentioned already how preferences in FTAs could be structured in such a way to support SFM. The most notable example is the Indonesia-EFTA FTA and its commitments on palm oil. Under Art. 8.10:

> 1. *The Parties recognise the need to take into account the economic, environmental and social opportunities and challenges associated with the production of vegetable oils and that trade between them can play an important role in promoting sustainable management and operation of the vegetable oils sector.*
> 2. *With a view to ensuring economically, environmentally and socially beneficial and sound management and operation of the vegetable oils sector, the Parties commit to, inter alia:*
>   a. *effectively apply laws, policies and practices aiming at protecting primary forests, peatlands, and related ecosystems, halting deforestation, peat drainage and fire clearing in land preparation, reducing air and water pollution, and respecting rights of local and indigenous communities and workers;*
>   b. *support the dissemination and use of sustainability standards, practices and guidelines for sustainably produced vegetable oils;*
>   c. *cooperate on improving and strengthening government standards where applicable;*
>   d. *ensure transparency of domestic policies and measures pertaining to the vegetable oils sector; and*
>   e. *ensure that vegetable oils and their derivatives traded between the Parties are produced in accordance with the sustainability objectives referred to in subparagraph (a).*

165. Two important elements stand out here for our purposes. The most noted is Art. 8.10(2)(e) which is seen to condition market access on the sustainability of the palm oil. The scope of the commitment is also broad – it includes not only forests but also peatlands and 'related ecosystems' which are often excluded from SFM VSS. However, perhaps more significant are paras (b) and (c) which read in conjunction acknowledge the importance of both national 'government' standards but also 'sustainability standards, practices and guidelines' which necessarily implies their non-governmental voluntary status (lacking the 'government' condition in (c)). This is, indirectly, the first reference

to standards in an FTA that recognise the entire eco-system of standards both public and private.

166. A note of caution is useful here: this is the first provision of its type (that is, offering positive sustainability conditionality for products under an FTA) and was developed as a response to active and effective environmental lobby groups in Switzerland. The result is of limited impact, as most palm oil destined for the Swiss food industry is already certified sustainable, while those intended for animal feed are already tariff-free.[30] As such, while this provides an entry point for standards (and certification) to play an important incentivising role, it may not be a model that is commonly used.

Intra agreement rules

167. Finally, there are FTAs that go beyond the desire to liberalise trade in goods and services and have instead community building, collective, or integrationist purposes. The EU is the traditional example, but many others exist. In these cases, the creation of common policies within an FTA or customs union is more common and this happens in relation to SFM. For example, the East African Community (EAC) includes ample reference to coordinating and agreeing common forestry policies.[31] The EAC model, perhaps in light of its greater ambition, acknowledges the desire to use forests as economic resources and sites of economic growth – but that they should be sustainably used.[32] There has been considerable effort made to secure a common framework for the sustainable use of EAC forests: a Forests Management & Protection Bill 2015 passed by the East African Legislative Assembly (subject to ratification) includes requirements to secure immediate compensatory afforestation plans for instances of deforestation, ensure effective institutions to monitor and enforce forest management plans, maintain licensing schemes for logging including management plans, prohibit trade in uncertified forest products and produce, create transboundary bodies to monitor trade. National programmes have also been pursued in the EAC and wider region: Kenya's Forest Conservation and Management Act 2016; Uganda's National Forest and Tree Planting Act 2003; Tanzania's Forest Act 2002, Mozambique's Forest and Wildlife Act 1999.

[30] See <https://www.seco.admin.ch/seco/en/home/Aussenwirtschaftspolitik_Wirtschaftliche_Zusammenarbeit/Wirtschaftsbeziehungen/Freihandelsabkommen/partner_fha/partner_weltweit/indonesien.html>

[31] In particular, Arts 112.2, 114.2 EAC.

[32] E.g., Art. 105 EAC on agricultural and food security.

168. We can expect greater space here for either national standards fed 'upward' into the PEFC system, or the use of FSC-style certification to support businesses to meet the requirements of any new rules.

Overlapping policy tools

169. The outline so far has highlighted the 'entry points' for standards in the framework for supporting SFM. This mapping of entry points necessarily bridges multiple traditional divides: national/international, private/public, trade/environment, climate, and human rights. We can analyse the SFM picture through a sector-specific lens, focusing on a single jurisdiction to examine the interactions between standards and regulations. This presents a complex image, one that is (largely) focused on a single jurisdiction (from an 'internal' perspective). Pacheco et al. (2020) developed one such map in relation to palm oil, identifying the different modes of compliance and enforcement in place.

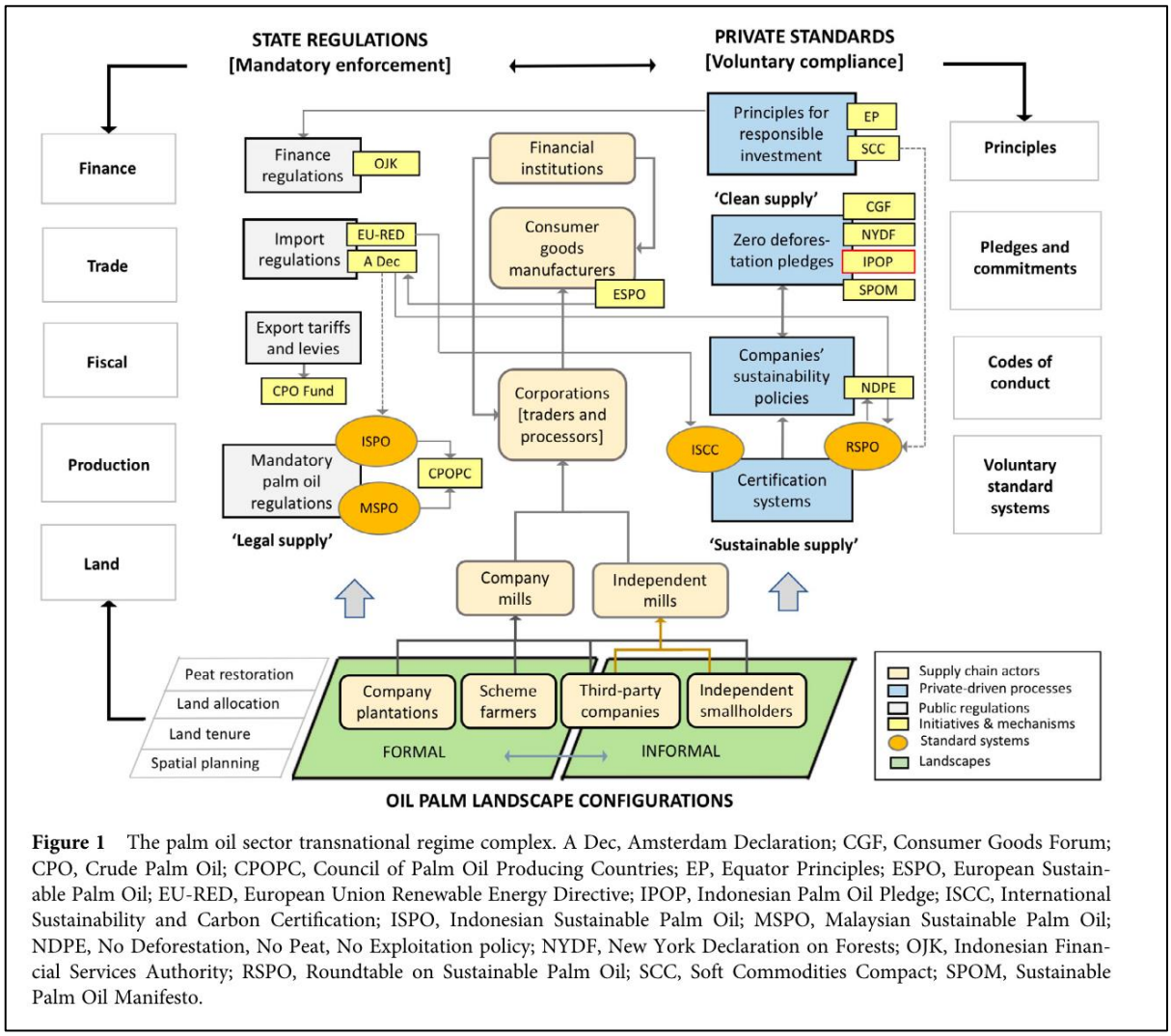


Figure 1 The palm oil sector transnational regime complex. A Dec, Amsterdam Declaration; CGF, Consumer Goods Forum; CPO, Crude Palm Oil; CPOPC, Council of Palm Oil Producing Countries; EP, Equator Principles; ESPO, European Sustainable Palm Oil; EU-RED, European Union Renewable Energy Directive; IPOP, Indonesian Palm Oil Pledge; ISCC, International Sustainability and Carbon Certification; ISPO, Indonesian Sustainable Palm Oil; MSPO, Malaysian Sustainable Palm Oil; NDPE, No Deforestation, No Peat, No Exploitation policy; NYDF, New York Declaration on Forests; OJK, Indonesian Financial Services Authority; RSPO, Roundtable on Sustainable Palm Oil; SCC, Soft Commodities Compact; SPOM, Sustainable Palm Oil Manifesto.

(P. Pacheco et al. 2018)

170. However, the 'internal' perspective approach does not adequately reflect a range of interactions flagged above, especially on the international plane. But if we take a traditional international governance perspective, we too are presented with a complex image albeit one with an 'external' focus concerned with import/export of specific products (in this case, forest and forest-risk commodities). Note how in the US unilateral measures (the Lacey Act) marry bilateral commitments under its FTAs (e.g., the US-Mexico-Canada agreement, USMCA) and an active litigation/enforcement policy (e.g., under US-Peru FTA). Similarly, the EU marries unilateral measures (the EUDR) with commitments under FTAs, as well as (historically) the development of bridging commitments, through VPAs and FLEGT licensing schemes.

171. Our task is to bridge these two perspectives through the ecosystem of standardisation to identify how SFM has developed through the use of international commitments, national regulatory frameworks, international and national public standardisation, and more than any, private VSSs. There are underutilised levers from the external perspective that can be used to support the activity of regulators and economic actors in the 'internal' perspective above.

Conclusions

172. The first point is to identify the added value that NSBs can provide in a space which has been dominated by VSSs to improve SFM.

<u>Bridging public and private standards</u>

173. We can see how with overlapping VSS, additionally overlapping with formal legal requirements at a national level, there is a benefit to having a body that provides a strategic overview, linking requirements and best practice, with a stamp of credibility (as we saw with the UK Forestry Standard). VSS still play an important role, as such standards must be certified, and the certification standards respond to market pressure to also align with VSS (in this case FSC and PEFC). Thus, a national standard (albeit non-NSB) acts as both baseline and magnet for further improvement via certification (an ecosystem that encourages upward pressure for improvements).

<u>Bridging North-South concerns</u>

174. A core feature of the public standardisation process is that it strives to be inclusive and ensure quality, reflecting the demands of its stakeholders.

Though there has traditionally been a concern in relation to the inclusion of civil society voices (Kallestrup, 2017), an adherence to (inter alia) the TBT Committee's Decision on Principles for the Development of International Standards, Guides and Recommendations (including an explicit development dimension) and wider commitments to inclusion have meant that a distinguishing feature of both the NSB process (ideally) and the international standardisation process, is that they include a range of stakeholders, including from the Global South. At the same time, VSS have come under criticism for their lack of inclusion, questions over credibility, and design (Marx et al., 2022). One potential avenue to explore would draw on the expertise of NSBs to review a VSS process or provide a form of certification or quality assurance. Alternatively, support could be provided to help the development of simplified standards at a national level which align with dominant standards – including private standards. For example, the Kenya Bureau of Standards (KEBS) Kenya Standard 1758 sets out hygienic and safety requirements to be followed during the production, handling, and marketing of flowers and ornamentals, fruits, vegetables, herbs and spices. It is based on the dominant private agricultural standards from GLOBAL GAP, simplified and streamlined to make it accessible with micro-, small-, and medium-sized enterprises in mind. NSBs could work internationally to support the development of similar standards in priority areas for meeting net zero.

175. A related dimension is through using standards to improve enforcement of existing legal obligations. Where commitments exist but implementation is poor (a typical challenge for SFM), focus standards or accompanying guidelines on the implementation elements (such as in the UKFS) and focus support through existing mechanisms of technical assistance and capacity-building (such as Aid for Trade). Such programmes could be pursued at a bilateral level or through international organisations (e.g., Joint UNECE/FAO Forestry and Timber Section and its work in Eastern and South Eastern Europe, the Caucasus and Central Asia). Such training programmes and wider technical assistance and capacity building programmes are of importance globally, but particularly acute in the Global South. Indeed, within the UK, despite a comparatively well-resourced State and stakeholders, forestry bodies nonetheless undertake training programmes to support the uptake and adherence to the UKFS. Rather than only looking to the content of either the standard or the rule, also support implementation through (freely provided) quality NSB standards.

Bridging the ambition gap

176. We have seen the risks that standards either fail to drive improved sustainability outcomes or, worse, conceal a race to the bottom in terms of outcomes. Standards can play an important role in improving the effectiveness of existing legal obligations, both in their monitoring but also by lifting ambition. In this sense, standards can act to give businesses certainty by gold plating their compliance practices to meet (less stringent) domestic legal requirements (Cerutti et al., 2011; Brandi, 2021). This has the added benefit of being able to draw on existing best practice, to shape higher standards, and increase ambition above the existing legal requirement.

177. There is a question over the mechanisms to support uptake of such an improved standard: the benefits of securing compliance would be one, but this alone may not be sufficient. Linking the development of a standard to a wider practice of trade diplomacy would be desirable, which necessarily requires close engagement with governments (for example, to support the uptake of such standards outside of the WTO, through FTA commitments, or decisions or discussions in committees, etc.).

Case Study 2: Standards governance in carbon offsetting

Introduction

178. In this second case study, we examine the development of standards in the field of carbon offsetting. Descriptively, we provide an overview of existing standards and their associated governance frameworks, covering both the compliance market and the voluntary market. In accordance with the priorities identified in the literature review, we focus on the ways in which international standards are (or are not) integrated into national regulatory frameworks, as well as on interactions between standards bodies and other actors, including private actors, in the standards governance space. Normatively, we provide an initial assessment, based primarily on existing literature, of the successes and failures of standards governance in the field of carbon offsetting. In the process, we identify some of the key governance challenges facing the sector. We offer, in the conclusion, some tentative lessons which may be drawn from our analysis. Again, in accordance with the priorities identified in the literature review, our focus is on mechanisms for the development of high integrity standards, the robustness and reliability of standards governance, as well as the acceleration of best practice and innovation in standardisation.

179. Standards governance in the field of carbon offsetting has a number of features which make it particularly relevant to the commissioned report. It is a field in which the challenge of ensuring high integrity standards has proved to be extremely difficult. In many ways, therefore, it is an example of governance failure, and for that reason can provide a useful counterpoint to the first case study, illustrating some of the limits and weaknesses of existing standards governance models, especially in relation to climate governance. It is also an area in which there has been (and continues to be) considerable governance experimentation. It therefore provides an interesting source of potential alternative governance models. Furthermore, substantively, it is a field of direct and central relevance to net zero governance, and one which has been identified as a priority by a number of UK and international bodies. The UK Climate Change Committee, for example, has recently called for continued efforts to 'protect and raise the integrity of carbon credit projects', given the important role that offsetting can play in lowering global emissions, and mobilising climate finance especially for projects in developing

countries.[33] The UK's 2017 Clean Growth Strategy identified the establishment of a stronger and more attractive domestic carbon offset market as an important priority.[34] Furthermore, the role that ISO has identified for 'high quality removals' within its Net Zero Guidelines further reinforces the need for reliable mechanisms for distinguishing high- and low-quality offsets as an important element of climate governance in the coming years.

Primer on carbon offsetting and its governance

180. In this study, the term 'carbon offset project' refers to a project which generates a net reduction of GHG emissions, as compared to some defined baseline. Broadly speaking, carbon offset projects fall into three categories: removal, avoidance and reduction of carbon emissions. In other words, some projects actively *remove* carbon from the atmosphere through, for example, soil carbon sequestration, afforestation, or ocean fertilization. Other projects *avoid* carbon emissions by preventing or replacing activities which would otherwise generate GHG emissions, for example, protecting forests that would otherwise be cleared, or using renewable sources for new energy generation instead of fossil fuel-based energy production. Alternatively, projects can generate credits by *reducing* existing emissions sources, for example, where a landfill owner chooses to collect and flare methane emissions. (In some taxonomies, 'reducing' and 'avoiding' emissions are treated as a single category).

181. 'Carbon credits' are the tradeable assets which are generated when such net reductions are recognised by, and authorised through, a specific governance mechanism. We call these carbon offset 'schemes', or equivalently 'governance mechanisms'. One carbon credit typically is equivalent to an emission reduction of one metric tonne of CO2 (or an equivalent amount of other GHG).

182. Generally speaking, carbon offset governance mechanisms must perform four core functions in order to produce carbon offsets as tradeable assets. First, they establish *methodologies* for assessing the claim that a planned project will result in a net reduction of GHG emissions. This, in turn, requires specific methodologies for assessing: (a) that the project's emissions are lower

[33] UK Climate Change Committee, *Voluntary Carbon Markets and Offsetting* (October 2022), https://www.theccc.org.uk/publication/voluntary-carbon-markets-and-offsetting/.
[34] HM Government, *The Clean Growth Strategy: Leading the way to a low carbon future* (2017), available at https://assets.publishing.service.gov.uk/media/5ad5f11ded915d32a3a70c03/clean-growth-strategy-correction-april-2018.pdf.

than if the project had not occurred; (b) that this effect is permanent in the sense that these emissions are not subsequently reversed over time; and (c) that the project and its associated lowering of emissions would not have happened anyway, even in the absence of the incentive provided by the allocation of carbon offsets to the project. These methodologies also set out methods for quantifying reduced emissions. Second, governance mechanisms must *validate* projects using these methodologies, or at least define a procedure for doing so. This can involve a subsidiary function of *accrediting* independent organisations to carry out validation. Third, governance mechanisms must *verify* validated projects, in the sense that they must ensure that the project is carried out as planned, and that its promised emissions reductions occur as promised. Fourth, carbon offsets must be rendered *enforceable and transferrable*, through a mechanism which formally issues credits, registers their ownership, records transactions, retires them as appropriate, and so on. Governance mechanisms which perform these functions can be public or private, national, regional, or international. Generally speaking, each governance mechanism which performs these functions produces its own kind of tradeable asset, with its own name, and its own registry.

183. In the present context, it is worth noting that 'standards' can be defined for each of these distinct governance tasks. That is to say, there may be standardised assessment methodologies, standardised processes for producing such methodologies, standardised techniques and procedures for validation and verification, and so on. There may also be standards for myriad other related matters, such as standards governing the ways that offsets can and cannot be used for the purposes of net zero reporting. Where we refer below to standards governance generally, we are referring to all these types of standards.

184. In this case study, we also refer to the concept of 'meta-standards'. 'Meta-standards' can be thought of as a layer of governance sitting above 'first order' standards. First order standards – such as those relating to assessment methodologies, validation / verification protocols, and so on – are produced and/or applied *by* schemes as they go about their work of assessing, validating and verifying projects, and establishing registries, while 'meta-standards' are used to assess the quality and credibility *of* the schemes themselves. By way of illustration:

A solar electrification **project** installing solar power in a Pacific island country, looks to generate carbon credits as an additional source of income.

Multiple carbon crediting **schemes** are available to the project (e.g., Verra, CAR, ACR, etc.). Each scheme has its own methodology for evaluating and quantifying the carbon credits associated with solar electrification projects. These technical methodologies are **first order standards**. The scheme issues **carbon credits**.

The Integrity Council for the Voluntary Carbon Market assesses these carbon credits against its Core Carbon Principles. These **meta-standards** do not determine the appropriate technical content of methodologies but instead require more generally that the carbon crediting scheme, e.g.,:

- has effective program governance;
- is fully transparent;
- is supported by robust and independent third party verification;
- only covers 'additional' and 'permanent' emissions reductions;
- is based on quantification methodologies which are robust and evidence-based; etc.

Carbon credits which **comply with eligibility criteria are endorsed**.

185. As noted above, in paras 77-82, the development of meta-standards has been in part a response to the proliferation of schemes, and to the consequent problem of establishing and ensuring standards of scheme quality.

186. A central distinction in offset governance is one between 'compliance markets' and 'voluntary markets'. The distinction is not a clean one, but its basic contours are reasonably intuitive. The 'compliance market' refers to markets for carbon credits used to offset legally binding emissions reduction obligations. These emissions reduction obligations might derive from legal regimes which are international, regional, or national. Probably the most important such market has been the international market for offsets created by the Clean Development Mechanism (CDM), under the UN Framework Convention on Climate Change (UNFCCC), and its Kyoto Protocol. But there are other compliance markets, including those created pursuant to a range of domestic and regional emissions trading schemes. 'Voluntary carbon markets', by contrast, are markets for carbon credits in which purchasers buy on a voluntary basis – that is to say, not in order to comply with mandatory

emissions reduction obligations, but rather to 'offset' emissions which they are responsible for, or simply in order to help finance action to combat climate change. The following case study will follow common practice in the existing literature by examining governance arrangements in the compliance and voluntary markets separately.

Standardisation in compliance markets

187. Over the last decade or so, there has been a substantial rise in the number of mandatory carbon pricing mechanisms established at the national and regional level. Some of these provide for the possibility of reducing emissions reduction liabilities by 'offsetting' measured carbon emissions through the use of purchased carbon credits. Of the 73 carbon pricing initiatives currently identified by the World Bank, 27 currently have carbon crediting mechanisms of some kind currently implemented, and a further five are under development (World Bank Carbon Pricing Dashboard [no date]). Prominent examples include: the Regional Greenhouse Gas Initiative CO2 Offset Mechanism, associated with the cap and trade system established by nine north-eastern US states; the China GHG Voluntary Emission Reduction Program, credits from which can be used for China's domestic emissions reduction scheme; the Australian Carbon Credit Unit Scheme which generates credits which are eligible offsets under the Australian Safeguard Mechanism; and the California Compliance Offset Program associated with California's cap and trade program (see also, generally, La Hoz Theuer et al., 2023).

188. Internationally, the UNFCCC, and its associated instruments, have established a number of distinct mechanisms for the creation of tradeable carbon credits. Under the Kyoto Protocol, for example, Certified Emissions Reductions (CERs) were issued to eligible projects under the Clean Development Mechanism, while Emissions Reduction Units (ERUs) were issued under the Joint Implementation mechanism. Both of these carbon credits were tradeable on the ETS established by the Kyoto Protocol. Successors to these mechanisms were subsequently incorporated into the Paris Agreement, as described further below. Separately, the International Civil Aviation Organization (ICAO) has created the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), under which all participating States are progressively bound to offset GHG emissions from international aviation. While this mechanism does not produce its own distinct carbon credit, it provides a framework for the recognition of eligible carbon credit schemes which can be used to meet obligations and commitments under CORSIA.

189. Although it is common in the literature to speak of 'the compliance market', in fact there is no single market-place in which all of these carbon credits can be traded. It is more accurate to think of linked but distinct markets for each of these credits, alongside a range of exchanges, each of which allows for the purchase and sale of some subset of them. As shall be explained further below, most of these credits are sold on both the voluntary and compliance 'markets', in the sense that demand for them derives both from those engaged in voluntary offsetting, and those who purchase credits because they are under a legal obligation to reduce emissions.

190. Of all of these carbon credit, it is the UNFCCC-based CDM which has received the most attention by far in the literature. For that reason, the remainder of this section will focus primarily on the CDM, as well as its successor mechanism under Art. 6 of the Paris Agreement.

Background to the CDM

191. The CDM was a product of the Kyoto Protocol, an international treaty concluded in 1997 under the auspices of the UNFCCC. As is well-known, the Kyoto Protocol set binding emissions reduction targets for a number of industrialised countries ('Annex I' countries). At the same time, it also established several market-based mechanisms, designed both to assist Annex I countries to meet their targets, and to facilitate emissions reduction efforts in 'non-Annex I' developing countries. The CDM was one of these mechanisms. It provided a structure through which authorised projects in non-Annex I countries could generate a particular kind of tradeable offset credit called a Certified Emissions Reduction credit (CER), which were allocated to project participants. Projects generating CERs could be pursued bilaterally, i.e. in partnership with an Annex I country, or unilaterally, i.e. where the project is designed and financed entirely by a host country project developer. The CERs generated by a project could be purchased and used by Annex I countries to meet part of their reduction obligations under the Kyoto Protocol. In addition, CERs issued to project participants could also be sold on secondary markets, including both compliance and voluntary markets, to individuals, companies and other institutions wishing to purchase them. Importantly, this included the EU's emission trading scheme, which in its first phases contained rules permitting EU operators to use CERs to offset their liabilities under the European ETS.

192. The CDM ran from 2001 to 2020, when the second commitment period under the Kyoto Protocol formally expired. Since 2020, it has ceased to accept new projects, though it continues to administer existing arrangements. As

noted above and discussed further below, the Kyoto Protocol has been superseded by the Paris Agreement, which in its Art. 6 creates a new mechanism to replace the CDM.

193. Initially, the CDM appeared to be a success, at least by some measures. Between its inception and 2012, over 6000 projects were registered. Volumes of CERs generated and traded grew very rapidly: over 1 billion CERs were issued by late 2012, with a peak of 330 million issued in that year along.[35] CER prices also initially grew, reaching a peak of €35 per tonne in 2008. In 2012, however, the market crashed, with the price falling to less than €1/tonne. The proximate reason for this, as noted below, was the decision on the part of the EU to phase out the recognition of CERs under the European ETS, and the Japanese government's decision to no longer purchase CERs. Together these actions removed a large part of the demand for CERs, and left project developers with significant surpluses of emissions credits. Notwithstanding some subsequent positive developments around both the liquidation of existing CERs, and their recognition in a number of new domestic ETSs, the market has never properly recovered.

CDM governance

194. The central institution of the CDM governance structure is the CDM Executive Board (EB), which exercises delegated authority from states parties, and is accountable to them. The EB consists of ten members, elected by states parties to the Kyoto Protocol. These members act in their personal capacity, but rules are in place to ensure that there is adequate representation on the EB of both developing and industrialised nations, as well as of different UN regional groupings. The EB exercises a number of functions, but for the purposes of this case study the most important are: (a) to approve methodologies for the evaluation of projects; (b) to approve independent auditing bodies (so-called Designated Operational Entities) to validate proposed projects, and to verify implemented projects; (c) to approve and register validated projects; and (d) to issue CERs and maintain a CER registry.

195. The EB has created a set of expert committees, panels and working groups to assist it in carrying out these tasks. Much like international standardising bodies, its work is heavily technical and consensus-based. Domestic governmental agencies – typically environment agencies, or emissions trading authorities – also play a direct role in CDM governance as Designated

[35] CDM data can be found at https://cdm.unfccc.int/Statistics/Public/CDMinsights/index.html.

National Authorities, with the responsibility to review and approve CDM projects at the national level, among other matters.

196. As noted above, the CDM is no longer accepting and authorising new projects. However, when it was operative, a proposed CDM project needed to meet a number of criteria in order to be approved:

- First, certain threshold elements had to be met. The project had to be, for example, of an eligible type – these included, for example, projects relating to renewable energy, improved energy efficiency, low carbon transport, agriculture and forestry, or fuel switching. It needed to mitigate at least one of the six designated GHGs. The technology to be used had to be proven, commercially feasible and replicable. The project, furthermore, had also to be acceptable to the host country. No public funding for the project was permitted to come from ODA or GEF sources, in order to ensure no diversion of climate finance.
- Then, second, the promised carbon removal or reduction was subject to detailed evaluation. The project had to be shown to produce *additional* emissions reductions, as compared to a business as usual baseline. This was to be measured according to an EB-approved methodology, including standardised baselines – though there was also the possibility of project developers proposing an alternative methodology for approval. It had also to be shown that the prospect of CDM-approved status was decisive for the project's financial viability ('investment or financial additionality'): this reflected the fact that the CDM procedure was not there to provide support to projects for which there was already a viable financial case, and which therefore would have gone ahead anyway.
- Third, and finally, a limited further screen was applied in relation to additional impacts of the project. The host country had to confirm, for example, that the project assisted it in meeting its sustainable development objectives. In addition, the project had to be shown not to have unacceptable negative non-climate environmental impacts.

197. Conformity with these requirements was assessed in the first instance by a Designated Operational Entity (DOE), and ultimately by the EB on the basis of the DOE's report.

<u>The CDM and its incorporation in national regulatory frameworks</u>

198. Aside from the requirement of national-level approval of CDM projects, then, the CDM mechanism operated largely independently of national law. The primary domain of relevance for CER credits was the international

emissions accounting system established under the Kyoto Protocol: CERs, in other words, were designed to be used by Annex I countries to offset their emissions reduction obligations under that agreement. However, it is also true that the CDM and its associated methodologies were the closest thing that the world had at the time to multilaterally-agreed international standards for measuring and approving carbon credit schemes. For that reason, and also because of a desire on the part of many countries to support the global climate change regime, CERs came to have a special status as a particularly credible and legitimate carbon credits. As a consequence, a number of governments sought to give some degree of recognition of CERs in their national carbon pricing frameworks. For example:

- In some countries, CERs have been formally accepted within domestic emissions trading schemes. As noted above, CERs were recognised, for example, within the EU emissions trading scheme for several years, and indeed the EU was the largest source of demand for CERs from 2008-2020. (Restrictions on the use of CER offsets in the EU ETS were progressively introduced from 2012 to 2020, and from 2020 were largely no longer permitted.) In New Zealand, international offsets, including CERs, were accepted on its domestic ETS from 2008 until 2015, when recognition was withdrawn as part of a fundamental review. The Korean ETS also permits the use of some CERs to offset emitters' liabilities, though they must first be converted into Korean Carbon Units, and quantitative limits apply. South Africa's carbon tax regime provides exemptions from tax liabilities where taxpayers voluntarily purchase and surrender CERs.
- Some national regulatory offsetting schemes use methodologies directly derived from the CDM for the purposes of validating domestic credits. This is the case, for example, under the Chinese Certified Emissions Reductions scheme, the Korean Credit Units scheme, and the Canadian Greenhouse Gas Offset Credit System. While this is not the same as directly recognising CERs, it can help to generate closer alignment between assessment methodologies used to validate credits sold on domestic and international compliance markets.
- The UK government has afforded some degree of recognition of CERs in its national regulatory framework regarding sustainability reporting. Under the UK's current Sustainability Reporting Guidance, carbon credits associated with the Kyoto Protocol, including CERs, are available to be accounted for as a reduction to overall carbon accounts. Separately, as discussed further below, in 2009 the UK government established a quality assurance kitemark for CDM-compliant offset schemes in the *voluntary* offset market.

199. In the context of this report, it is worth noting that we have found little by way of direct engagement between the CDM and national standards bodies. Given the structure of CDM governance, engagement between national bodies and the CDM would have primarily been channelled through the relevant Designated National Authority.

Criticisms and weaknesses of the CDM

200. While it is true that the CDM enjoyed considerable legitimacy for some time as the pre-eminent international body in the domain of carbon credit governance, it is also true that scepticism about the underlying quality of CERs grew over time. There is by now extensive critical literature on the CDM, and a widespread recognition that it has significant flaws. In the context of the present report, four main lines of criticism are worth noting.

201. *First*, concerns have been raised about the speed and efficiency of decision-making within the CDM system. From very early on, users of the system complained that procedures for validation, approval and verification were too slow, costly and cumbersome. For example, Streck (2007) reported that the 'approval of new methodologies can take between six months and two years' while 'different interpretations by the Methodology Panel and the EB lead to delays' and 'even the mandatory 90-day period for a submitted project to be registered is set back in practice' (Streck, 2007: 97). A 2011 survey similarly drew attention to the frequency of delays and postponements, and the slow pace of change (Nyaoro and Chatterjee, 2011).

202. Delays and costs can have a number of systemic consequences. For one thing, they can deter or delay investment in worthy projects. This is particularly problematic given the need for governance systems to facilitate rather than impede a rapid transition to more sustainable production systems. For another thing, additional costs can make it more difficult for small-scale projects to be commercially viable, even those which may have a large positive impact (Hickmann, 2015). Furthermore, difficulties and delays in approving new or revised methodologies can lead to a bias in favour of projects which comprise familiar and tested technologies. This is of particular concern given the central need for climate governance structures to promote and respond rapidly to technological innovation – for example, in relation to new methods of carbon capture and storage.

203. *Second*, attention has also been drawn to the need for greater transparency and stakeholder participation in decision-making within the CDM governance structure. Concerns have been raised about the use of

closed sessions of the relevant bodies, the relatively limited opportunities given to external stakeholders to consult on matters of direct relevance to them, a general lack of precedent and consistency in decision-making, and the limited opportunities for review of decisions (Streck, 2007; Voigt, 2009; Nyaoro and Chatterjee, 2010). This contributed, in some degree, to a loss of confidence in the system.

204. *Third*, and crucially, there is a set of concerns regarding the environmental integrity of CDM projects. These concerns implicate both the reliability of the CDM's methodologies to determine and quantify the net emissions impacts of projects, and the trustworthiness of its processes of verification and validation. Specifically:

- *Business-as-usual baselines*. The definition of business-as-usual benchmarks is notoriously fraught with difficulty. There are many reasons for this, but most fundamentally it is because the act of determining a realistic counterfactual inevitably involves a significant degree of speculative judgement, which no degree of evidence and expert input can entirely eradicate. There is thus considerable room for both manipulation (Hickmann, 2015) and error, and that the literature provides numerous examples of offset projects significantly overestimating the reductions they achieve (e.g., Schneider, 2011; Erickson et al., 2014; Stapp et al., 2023).
- *Secondary effects.* Projects may have unintended (and unmeasured) indirect effects, not taken into account in CDM assessment methodologies, which undermine some, or even all, of their climate benefit. One illustration, cited by Bohm et al, is a Thailand-based CDM project using rice husks as a renewable raw material for energy production: since these husks had previously been used as fertiliser, an indirect, climate-negative effect was the increased importation and use of commercial fertiliser (Bohm et al., 2012). Although it is in principle possible to take account of such effects once they become apparent, the key point is that such secondary effects are difficult to predict in advance. They can also be very difficult to quantify reliably, especially where the chain of causation which leads from the project to such effects contains several steps.
- *Financial additionality.* Further, some CDM offset projects generate significant additional sources of revenue beyond CERs, raising questions as to whether the project would have been financially viable, without the CDM mechanism. Fearnside provides the example of a CDM-approved Brazilian dam which maintains financial profitability notwithstanding the revaluation to zero of its allocated CERs (Fearnside, 2015). As noted above,

the CDM has rules in place to ensure that it only supports projects which would not otherwise have occurred, but the financial baseline for calculating 'financial additionality' is very difficult to set accurately.

- *Double-counting.* 'Double-counting' refers to the situation in which the same emissions reduction is claimed twice, in different contexts, or by different actors. It is typically the result of inadequate coordination between different crediting mechanisms, and although double-counting undermines the credibility of offsetting significantly, it can be difficult to eradicate entirely. Schneider, Kollnuss and Lazarus document the many ways in double-counting of carbon reduction can occur within the CDM system, including indirect ways which are difficult to detect (Schneider et al, 2015).

As a result of all these problems, and indeed others, it has been suggested that a significant percentage of CERs should be considered environmentally worthless. Moreover, and importantly, it is notable that many of these problems appear to be ineradicable, at least to some degree: counterfactual baselines are inherently uncertain, and both the nature and size secondary (or indeed tertiary) effects are very difficult to predict given changing conditions, especially over the longer term. More data, and more expertise, will only go so far in resolving these issues.

205. *Fourth*, it is also commonly noted that the CDM contained inadequate means for assessing the *non-climate* sustainability impacts of projects. Such impacts may be considerable, and numerous examples have been documented in the literature (e.g., He et al., 2014; Dirix et al., 2016; Carbon Market Watch, 2018; Hultman et al., 2020). Afforestation projects, for example, may reduce biodiversity if they take the form of monoculture plantations. They may also result in the displacement of indigenous communities from land. Waste incineration initiatives can reduce methane emissions, but may also release harmful pollutants. Although projects are required to be screened at the national level for their contribution to sustainable development, there are no clear or transparent criteria for this assessment, and national-level assessments of this kind have not been consistent (Olsen, 2007; Schneider, 2007). In 2012, in response to these concerns, the EB developed a voluntary sustainable development tool to assess the sustainability impacts of CDM projects, but it is still unclear whether or not this had a significant impact (Olsen et al., 2018).

206. *Fifth*, concerns have been raised about the distributional impact of the CDM mechanism. CDM projects have been distributed highly unevenly

between countries and regions, with well over 75% of projects located in Brazil, India, China or South Korea. While this geographic skew could in principle be consistent with rigorous and effective emissions reduction, it is less consistent with the broader goals of facilitating climate finance and sustainable development across all non-Annex I developing countries, and in particular to those countries least able to finance sustainability projects themselves. Qui (2018), for example, notes that 'the number of CDM projects in [small island developing states] and LDCs is disproportionately low despite the fact that these countries require climate finance in excess of what is currently available'.

Paris Agreement Article 6

207. All of these weaknesses were already well-documented by the conclusion of the Paris Agreement in 2015, and that agreement accordingly provides for a new set of mechanisms to take the place of those established under the Kyoto Protocol. One of these is the Paris Agreement Crediting Mechanism (PACM), which is established under Paris Agreement Art. 6.4, and takes the place of the CDM, with a view to building on the experience gained and lessons learned from the CDM's problems. In addition, Art. 6.2 establishes a separate, decentralised mechanism for the generation of emissions reduction projects, and associated tradeable credits (internationally traded mitigation outcomes, or ITMOs) on a bilateral or plurilateral basis. Such ITMOs are removal or reduction credits which are authorised at a national level according to national-level criteria and procedures, albeit in accordance with UNFCCC guidance and oversight.

208. Under both of these mechanisms, national-level authorities will play significant roles in the authorisation of internationally traded carbon offsets. This potentially opens avenues of cooperation with national standards bodies with activities in this area. At the same time, however, it has given rise to concerns that national authorisation practices may come to align with national industrial and other interests that run counter to sustainability goals.

209. Most of the detailed rules and procedures outlining how the Art. 6.4 mechanism will work are still under development – eight years after the conclusion of the Paris Agreement – and the mechanism is unlikely to start issuing or trading credits before 2025, perhaps later. And while the first bilateral agreements under Art. 6.2 are already in place, observers agree it will likely be some time before trading in ITMOs on such platforms occurs at scale.

As such, an analysis of these mechanisms is beyond the scope of this study – other than to note the general point that revising and updating offsetting standards through multilateral processes, in the context of treaty-based mechanisms, can be an immensely lengthy and time-consuming process. To that extent, at least, it is poorly suited to the demands of properly adaptive climate governance.

The relation between the CDM and private schemes

210. As discussed in detail in the next section, the CDM mechanism has developed alongside a parallel ecosystem of *private* schemes for assessing offset projects, and issuing carbon credits, destined for the voluntary market. Here, in line with our 'ecosystem approach' outlined earlier, we draw attention to four specific ways in which the CDM has interacted with private schemes at the organisational and institutional level, to prompt reflection on the different ways in which public and private governance mechanisms might productively be combined in global standards-setting frameworks.

211. First, it is clear that CDM-defined standards have had a very significant shaping impact on the activity of private schemes. It is very common, for example, for private offsetting schemes operating in the voluntary market to draw heavily on assessment methodologies developed by the CDM – either adopting them wholesale, or adapting and developing them to suit their own needs. (Private schemes also frequently use CDM-accredited bodies for auditing and certification under their own schemes.) As we were told by one interviewee:

> You often hear people say, oh, the VCM was just unregulated, and I suppose that's technically true, but it gravitated to the norms of the UN, which you can say now in hindsight, were the norms.[36]

This is partly because CDM-defined standards are an important marker of credibility in the voluntary market (Lovell, 2010; Hickmann, 2015), where standards-setting organisations do not have the institutional legitimacy of a multilateral body such as the CDM. It is also because some degree of alignment saves both development and compliance costs. Bumpus and Livermore (2008) suggest this alignment may also reflect a structural connection between the CDM and voluntary markets: CDM projects can sell credits onto the voluntary market while CDM registration is pending, and the

[36] Interviewee A (staff member at a non-governmental carbon crediting scheme). Interview conducted by Andrew Lang and Gregory Messenger. 24 November 2023

commercial benefits of doing so play strongly in favour of at least partial alignment of standards across the two markets. The standardising work of the EB and its subsidiary bodies, then, has clear impacts well beyond the relatively limited confines of the market for CERs, and this is so irrespective of the extent to which these standards are embedded within national-level regulation.

212. Second, and conversely, the EB, through its subordinate expert bodies, has drawn extensively on the experience and expertise of private schemes in the development of new CDM assessment methodologies. Hickman (2015) reports, for example, that private schemes operating in the voluntary carbon market have been a driver of methodological innovation, and to some extent have helped to overcome some rigidity in the CDM process. In the same vein, Bumpus and Livermore (2008) note that efficient cook stoves – a form of offset project which is amongst the most beneficial for poor communities in developing countries – were included in voluntary offset schemes well before they were followed by the CDM. There is some evidence, then, of mutually beneficial cooperation between the CDM and private schemes, with the CDM providing a source of credibility on which private schemes can draw, while private schemes provide in return some degree of adaptive and developmental capacity on which the CDM in turn can rely. This relationship between UNFCCC bodies and private schemes was confirmed by one of our interviewees, who saw it as likely to continue in the context of the new Paris Agreement Art. 6 arrangements:

> There's already a load of good work that's being done in this space. They're going to lean heavily on the voluntary carbon market. They may look to raise the bar in certain areas … but again, that kind of remains to be seen.[37]

213. Third, and importantly, some private schemes have sought to remedy certain defects in the CDM process by building on and supplementing it. The best example here is the Gold Standard, a market-leading multistakeholder scheme which aims broadly to subject CDM-approved projects to further and stricter assessment of their sustainable development impacts than the CDM itself is able to do.[38] Levin et al. refer to this as the 'symbiotic' model of public-private governance relationships, because it is a model of interaction in which private schemes do not compete with international governance arrangements, but rather seek to support, complement and expand them (Levin et al., 2009; see also Lang et al., 2019). For these authors, the benefits of this model are at least fourfold. (1) It provides a mechanism for

[37] Interviewee B (staff member at a company engaged in carbon credit trading). Interview conducted by Andrew Lang and Gregory Messenger. 12 December 2023.
[38] See https://www.goldstandard.org.

strengthening and improving government and intergovernmental standards without the need for renegotiation. Renegotiation is not only difficult, but may result in backsliding. (2) Done well, this model can increase the legitimacy of, and public support for, governmental and intergovernmental standards. (3) In this model, the work of private schemes entrenches and supports state-led processes rather than competing with them. (4) This model can help relieve pressure on governments' limited resources for standard-setting, augmenting it where appropriate with private sector capacity.

214. At the time that Levin et al. (2009) were developing their conception of the 'symbiotic model', the relationship between the CDM and Gold Standard was relatively new, and the ultimate fate of the CDM was not known. It is probably fair to say that the Gold Standard did not have quite the broader systemic impacts in compliance offset markets for CERs that these authors identified as possible over a decade ago in 2009. Gold Standard has also branched out considerably since that time, expanding the certification services that it offers, and moving beyond its original goal of adding sustainability to the CDM. Indeed, even some early Gold Standard credits have come under some of the same criticisms as set out above. That said, they have been relatively successful on their own terms: Gold Standard credits are indeed amongst the most highly trusted carbon offsets available, and they command a premium price as compared to others. In our view, then, there may be scope for adopting variations of the 'symbiotic model' in other standards-setting contexts.

215. Fourth, and relatedly, highly credible private schemes were themselves indirectly incorporated into the CDM governance structure. The best example is again the Gold Standard, which is purportedly used by some host countries in making their own determination, required under the CDM, regarding the impact of proposed projects on sustainable development (Levin at al., 2009; Hickmann, 2015).

Reflections

216. Ultimately, the compliance market for CERs established by the CDM is not generally considered as a model of successful standards governance. On the whole, it has probably made limited contributions to reduce global emissions. Indeed, for many observers it has even legitimised and entrenched business-as-usual. Perhaps for that reason, however, there are several valuable lessons which can be derived from the literature in this area for standards-setting more generally. We would draw attention to the following six points.

217. *First*, the CDM story illustrates how difficult it is to get standards 'right' in the field of carbon governance, especially standards for the validation and quantification of carbon reduction. This is especially the case given the rapidly evolving state of existing knowledge, the very high commercial stakes, and the immense complexity of assessing diverse and often indirect impacts. As one of our interviewees noted, specifically in respect of carbon compensation:

> 'it's just too hard to quantify this stuff to that level of accuracy … what it's trying to do is just too hard for the instrument to sustain … it will always be easy to point out a flaw … there are just really hard, hard difficulties in there, unbelievable uncertainties which are necessarily there ….'[39]

This suggests **that it is crucial to have a functioning mechanism for identifying flaws and weaknesses in existing standards, and rapidly revising them in response**. One of the key flaws of the UNFCCC's CDM framework, in retrospect, was the lack of adequate mechanisms of this type.

218. *Second*, for the same reasons, **any single standards-setting mechanism –** such as the CDM itself **– is unlikely to be adequate on its own**, not only in terms of capacity, but also as reads susceptibility to blind spots, prevalent uncertainties, inflexibility, path dependency and/or capture. This seems to be the case even in those compliance markets in which the development of ambitious standards has progressed the furthest (Haya et al., 2020). Again, this view was reflected in an interview:

> 'if you've got one sole issuer of the truth, if that sole issuer goes wrong, the world falls apart. So plurality is important.'[40]

219. *Third*, for all their flaws, the CDM's **multilateral and technical processes for setting standards do yield a reasonably high degree of 'compliance pull'**. The evidence shows that private schemes often base their methodologies on CDM methodologies, for a number of reasons, including as a way of enhancing their market credibility.

220. *Fourth*, **private standardisation can in principle complement and extend the work of intergovernmental standardisation**. In offset governance, private schemes have often been the source of methodological innovation, and the CDM has relied on the experience and expertise of private

[39] Interviewee A (staff member at a non-governmental carbon crediting scheme). Interview conducted by Andrew Lang and Gregory Messenger. 24 November 2023.
[40] Interviewee A (staff member at a non-governmental carbon crediting scheme). Interview conducted by Andrew Lang and Gregory Messenger. 24 November 2023.

schemes. Private schemes have also helped to fill an important gap in the CDM governance structure, namely assessment of the non-climate sustainability impacts of projects. On this evidence, **the 'symbiotic' model, illustrated by the relationship between the CDM and the Gold Standard, may be adaptable to other standards-setting contexts**.

221. *Fifth*, distributional questions, and equity concerns more broadly, are central to the legitimacy and success of standards-setting initiatives in the offset market, and probably of carbon governance more broadly. The CDM has been criticised not only for its record on climate impacts, but also for the ways in which it has, in practice, channelled investment to a relatively small number of developing countries – and not necessarily those in most urgent need of investment. It is therefore likely to be **important to integrate consideration of macro- and micro-distributional impacts at some level into even technical standards-setting arrangements** in this field.

222. *Sixth* and more specifically, it is worth noting that, given the significant new role played by national authorities under Paris Agreement Art.6, t**he implementation of Art.6 may provide an important space for engagement of standards bodies** in the coming years.

Standardisation in voluntary markets

Background

223. As noted above, 'voluntary' offset markets are markets in which purchasers buy offsets on a voluntary basis, rather than for the purpose of complying with mandatory emissions reduction obligations. While the first voluntary carbon offset was established as long ago as the late 1980s, the voluntary market as we currently know it has largely developed over the last two decades. Over that period, the number of carbon credits issued and sold into voluntary markets annually has grown very rapidly, from under 10 MtCO2e in 2008 to around 350MtCO2e in 2021, albeit with a significant drop since then (Climate Focus, 2022). While there are now hundreds of private schemes certifying offsets for sale into the voluntary market, a very large proportion of all offsets traded are issued by a core group of around ten major schemes. The Gold Standard, launched by the World Wide Fund for Nature in 2003, and mentioned above, is one such scheme, which offers high quality credits for a premium price. Another is the Verified Carbon Standard (VCS), jointly developed by the Climate Group, the International Emissions Trading Association and the World Economic Forum in 2007, and currently managed by Verra. By some measures, Verra accounts for fully two-thirds of all credits

issued in the voluntary market. Other major providers include the American Carbon Registry (ACR), Climate Action Reserve (CAR), Global Carbon Council (GCC), Climate Forward and Plan Vivo. Each of these schemes has its own validation standards and procedures, its own registries, and its own distinct set of interests, priorities and backers.

224. It is also worth noting that government-backed carbon credits can also be sold into the voluntary market. Individuals looking to purchase credits on a voluntary basis can, for example, purchase CERs for cancellation from the UN Carbon Offset Platform. The Australian government's Australian Carbon Credit Unit, which is issued by the Australian Clean Energy Regulator in respect of approved GHG emissions reductions activities, can also be sold on secondary markets to organisations wanting to reduce emissions voluntarily. In the UK, two government-based offset schemes have been established, under the Woodland Carbon Code and Peatland Code, both of which sell offsets into voluntary markets. Rules regarding eligibility and methodologies for assessment are established directly by governmental agencies in both of these schemes.

Credibility challenges

225. As is well documented, voluntary markets suffer from even greater credibility problems than compliance markets, and at even greater scale. A considerable literature provides evidence of many of the same flaws as noted above in relation to compliance offsets (e.g., Millard-Bell et al., 2013; Broekhoff et al., 2019; Climate Change Committee, 2022; Haya et al., 2023; *The Guardian*, 2023a and 2023b; *Financial Times*, 2023). According to this literature, meaningful transparency is lacking across much of the sector, including as regards basic matters such as project details and methodologies. The vast majority of projects appear to overclaim the emissions that they are removing or reducing. A large proportion of voluntary offsets relate to avoidance projects, including avoided deforestation – which are, in general, a less reliable and valuable form than removals. There is significant evidence of double-counting. Carbon offset projects can have significant adverse impacts on local communities, and can have serious negative (non-climate) environmental impacts (e.g. on biodiversity, habitat, pollution).

226. The generally low integrity of voluntary offsets is reflected in the market price of offsets, which have a history of cyclical boom and bust. The sector is typically seen, therefore, as an example of weak – even failed – governance, and there have been calls for strengthened oversight and regulation of

voluntary markets for many years (e.g., Millard-Bell et al., 2013; Broekhoff et al., 2019; Climate Change Committee, 2022; Haya et al., 2023; *The Guardian*, 2023a and 2023b; *Financial Times*, 2023).

227. In the context of the present study, however, it is worth noting one way in which the voluntary market has performed well, at least in comparison with the compliance market. The literature suggests that the voluntary market has been relatively successful as an 'incubator of innovation', especially in driving the development of new methodologies for evaluating novel removal and reduction technologies which would otherwise not be eligible for carbon credits in the much more conservative compliance market (e.g., Lang et al., 2019). Voluntary market initiatives, for example, drove the development of new methodologies for fuel efficient cook stoves projects, as well as for a variety of recent technologies in the area of carbon capture and storage. In this respect, at least, it seems that the voluntary market compares favourably to the CDM compliance market, in which gaining approval for new methodologies was notoriously slow, costly and difficult, as noted above.

Recognition of voluntary schemes in regulatory frameworks

228. One strategy by which governments have sought to improve voluntary markets has been to formally recognise high quality voluntary offsets in their national legislative and regulatory frameworks. By providing this formal recognition, and the regulatory advantages which go with it, governments seek to distinguish clearly between higher- and lower-quality offsets, and to incentivise and encourage the use of the former.

229. Four main forms of regulatory recognition are noted in the literature. First involves linking voluntary offsets with compliance markets, to enable economic actors to meet some of their domestic emissions reduction obligations through the purchase of approved voluntary offsets. Both the Californian and Quebec emissions trading schemes, for example, have recognised a limited set of non-governmental offset methodologies as compliant with their ETS requirements. The Swiss government recognised Gold Standard offset credits as compatible with its domestic ETS in 2013. The South African carbon tax legislation permits companies to use VCS and Gold Standard credit to reduce their liabilities. Similarly, Colombia has recognised credits issued by certain voluntary schemes as a means of complying with its domestically imposed carbon tax obligations.

230. A second mechanism involves governmental purchases of credits on voluntary markets – for example to offset travel-related emissions for governmental officials. A number of countries have specified that they will only purchase approved, high quality voluntary offsets. For example, in 2009, the UK government determined that at that time it would only purchase Gold Standard credits to offset its rail and airline travel. Other UK governmental bodies, including local authorities, have made their own decisions regarding their preferred offsets. Some, for example, have decided only to purchase credits produced for the voluntary market under the UK-based and backed Woodland Carbon Code or Peatland Code.

231. Third, ESG reporting requirements can also be leveraged to incentivise the use of approved, high quality offsets. The UK's ESG reporting guidelines, for example, encourage organisations to compensate for their emissions by purchasing credible offsets. Credible offsets are in turn defined to include a defined list of international voluntary carbon credits, as well as UK government-backed offsets under the Woodland and Peatland Codes.

232. Fourth, governments can work with selected offset schemes in the context of their development aid and assistance programs. The German Federal Ministry for Economic Affairs and Climate Action, for example, has worked with the Gold Standard Foundation to facilitate access to voluntary carbon markets for small-scale projects in lowest income countries. More directly, recognised certification from private voluntary schemes can be used to access finance, including in terms of development aid and climate finance for GHG emissions reduction projects. That said, for many countries there will be strong reasons to use Paris Agreement Art.6 mechanisms as a vehicle for such programs, rather than non-governmental crediting schemes.

233. It is fair to say that, so far at least, these mechanisms have relatively seldom been used, and have had only a minor impact on the governance of voluntary markets. Very few private voluntary programs are considered credible enough to warrant formal government recognition, and for the most part such mechanisms have mostly been used with respect to Gold Standard certification, UNFCCC credits sold into the voluntary market, and government-backed voluntary programs. But it is also worth noting that these examples are far from exhaustive. Virtually any action which a government takes to promote sustainable production of goods or services – from tax incentives, to mandates, public subsidies and market access – can indirectly be used to promote the use of high quality offsets, by formally recognising the use of such offsets in associated standards of sustainability, or by condition access

to regulatory benefits on certification by favoured schemes. A potentially significant illustration may be standards for sustainable steel, currently under development in a variety of international and regional venues, some of which may be used as conditions for preferential access to transatlantic markets under the proposed US-EU Global Arrangement on Sustainable Steel and Aluminium. We shall return to this observation below.

Meta-standards

234. Alongside formal recognition of specific offsetting schemes, another approach has been the development of *meta-standards* to assess the credibility of offset schemes. Recall from above (paras 77-82) the distinction between 'first order' (technical) standards and 'second order' (meta) standards. While the precise boundary between the categories may not always be clear – and there is some overlap between them – we follow the literature in making a distinction between the two. First order standards are used and implemented by schemes to assess, validate, and verify projects, and operate carbon registries. Often, they are developed by schemes themselves, though they need not be. Second order 'meta-standards', on the other hand, are standards governing offset schemes themselves. They are used to establish basic criteria of credibility for offset schemes, as well as to distinguish between more and less credible schemes, often with a view to encouraging dynamics of upward governance competition in the voluntary offset sector. First order standards, then, are used in the assessment and valuation of projects; meta-standards are used in the assessment and evaluation of schemes.

235. Some meta-standards initiatives are not governmental, but rather industry or multistakeholder led. One prominent example, and probably the first, is the International Carbon Reduction and Offsetting Alliance (ICROA) initiative. Established in 2008, ICROA describes itself as 'a leading industry Accreditation Programme committed to enhancing integrity in the voluntary carbon market in support of the Paris Agreement Goals'. ICROA offers endorsement for carbon credit schemes which comply with its Standards Endorsement Review Criteria and Carbon Crediting Principles, as assessed by a designated third-party Assessor. These criteria are quite general, but cover such matters as scheme governance, verification procedures, offset quality standards, the role of stakeholder consultation in standard development, broader environmental and social impacts, and scale. A lighter touch endorsement procedure is provided for government- or UN-approved offsets. In practice, most of the major players in the voluntary market are ICROA-accredited, including the American Carbon Registry, Climate Action Reserve, Global Carbon Council,

Verra, Gold Standard, Plan Vivo, Puro Earth, and the UK Woodland Carbon Code, among others. One of our interviewees noted that companies engaged in carbon credit trading 'gravitate towards those [credits] that are first of all endorsed by ICROA … we use them as a bit of a starting point for then doing our own due diligence on the standards.'[41]

236. A more recent and apparently more ambitious attempt to improve the quality of offsets is the Integrity Council for the Voluntary Carbon Market (ICVCM), established in 2021 by the Taskforce on Scaling Voluntary Carbon Markets (TSVCM). The ICVCM is a private sector-led initiative, but it has the direct and indirect backing of a number of public authorities, and has emerged in part under the leadership of the UN Special Envoy for Climate Action. The ICVCM has adopted the 'Core Carbon Principles' which it describes as a 'global benchmark for high-integrity carbon credits that set rigorous thresholds on disclosure and sustainable development'. Those schemes which meet this benchmark, are approved as 'CCP-eligible and given the CCP label'.[42] Thus, schemes approved under this initiative will be able to market themselves as ICVCM-approved in respect of ICVCM-approved categories of carbon credits. The Principles are again very generally stated, but are coupled with an Assessment Framework establishing more detailed criteria. In terms of scheme governance, for example, the Principles require 'effective governance', adequate tracking, 'comprehensive and transparent information' and 'robust independent third party validation and verification'. In terms of offset quality, they restate the core principles of additionality, permanence, robust quantification and no double counting, and also include a number of distinct sustainable development criteria.

237. One interesting feature of these initiatives, in the context of the present project, is their approach to the ratcheting up of meta-standards over time. For example, the ICVCM initially proposed to include two levels of meta-standards: 'initial' standards, which would indicate progress achieved towards credibility; and 'full' standards which would set higher thresholds of quality for full certification. This was in part in recognition of the fact that even market-leading schemes would necessarily take considerable time and investment of resources to achieve acceptable levels of credibility. This proposal was strongly resisted by major schemes – not least because it constituted an implicit criticism of their existing practices. As a result of this resistance, the ICVCM decided to pursue continuous improvement through the regular updating of the CCPs themselves, coupled with requirements for periodic

[41] Interviewee B (staff member at a company engaged in carbon credit trading). Interview conducted by Andrew Lang and Gregory Messenger. 12 December 2023
[42] See, e.g., https://icvcm.org/assessment-framework .

scheme re-approval. The next iteration of the CCP Assessment Framework is planned for implementation in 2026, and the ICVCM has already established some of the topics to be covered by that iteration.[43]

238. Other meta-standards initiatives have been pursued by national (or regional) public authorities. One form this may take is through the creation of a governmental certification mechanism for high quality offset schemes. The UK's 2009 Quality Assurance Standard for offset providers in the voluntary market was an early initiative along these lines. Under this government-led initiative, offset providers meeting the requirements of the government's Code of Best Practice for Voluntary Carbon Offset Providers were entitled to use the QAS quality kitemark. Participation in the scheme, and the use of the kitemark, was entirely voluntary. Significantly, however, the scheme was not successful: in the end fewer than ten providers were approved, while the major private carbon credit providers essentially boycotted the scheme. They argued that the meta-standards were unnecessarily and unreasonably strict, reflected out of date practice, and were poorly informed about recent methodological developments in the sector (Lovell, 2010). Without the voluntary participation of most of the major providers in the sector, the core objectives of the scheme could not be met, and in 2012, the programme was re-launched as an independent, not-for-profit organisation, with a new 40-point checklist of quality criteria. Only five organisations are currently listed on the QAS website as QAS-certified.

239. A more recent initiative along similar lines is the EU's proposed Carbon Removal Certification Framework. Adopted in November 2022, and followed more recently by a provisionally agreed Carbon Removal Certification Framework Regulation in February 2024, this initiative envisages the creation of a mechanism for quality assessment and certification of carbon removals within the territory of the EU. According to the limited information currently available, the certification process will result in the issuing of EU-backed certificates of compliance and in the recording of carbon removal units in public registries managed by certification schemes (European Commission, 2022). Under the provisionally agreed regulation, other schemes for carbon removals will be able to apply for recognition by the Commission, where they meet the relevant quality criteria, though they will not be obliged to do so. Specific criteria and associated methodologies are still under development, and so little at present can be said about the prospective impacts of this scheme on the quality of the European voluntary offset market. It is also significant that this only covers carbon removals, not all carbon credits. Notably, however, there is the prospect of linking EU certification under this

[43] See, e.g., https://icvcm.org/continuous-improvement-work-programs/.

scheme to specific European regulatory requirements – for example, EU certification may become a precondition for producers seeking to use removals to demonstrate eligibility for sustainable farming payments, conformity with sustainability criteria for renewable energy, or compliance with mandatory sustainable forestry practices. Conceivably, EU certified removals credits may also be integrated more directly into the EU ETS.

240. Still other initiatives of this type are international in nature. Here, we would draw attention to two further initiatives. The first is the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), established in 2016 by the International Civil Aviation Organization (ICAO). As noted above, this is a scheme under which all participating states are (or will be) bound to offset GHG emissions from international aviation, with binding commitments brought in progressively from 2019 through to 2035. In order to meet these offsetting requirements under CORSIA, participants may only use offsetting schemes which meet requirements established by the CORSIA Emissions Unit Eligibility Criteria and Carbon Offset Credit Integrity Assessment Criteria. A procedure is stipulated for the recognition of VCM offset providers. For the pilot phase of the programme, running from 2021-23, a wide range of schemes were listed as eligible, including the American Carbon Registry, Architecture for REDD+ Transactions (ART), BioCarbon Fund, the CDM, Climate Action Reserve, Global Carbon Council, Gold Standard, Social Carbon and the Verified Carbon Standard. For the next phase, running from 2024-26, only the American Carbon Registry and ART have been listed as eligible.[44]

241. The second is the work of ISO (the International Organization for Standardization) itself, which has developed a number of initiatives with direct or indirect relation to offsetting. One example is the Net Zero Guidelines, which address aspects of offsetting in Clause 10, on 'Counterbalancing residual emissions'. These guidelines reaffirm that, for the purposes of net zero targets, removals must be based on credible accounting standards, must be additional, adequately monitored, sufficiently long-term, not double counted, must do no social or environmental harm, and must not be beyond what a country can achieve through unilateral action. Further principles cover inclusive governance, the appropriate balancing of trade-offs, adaptive management, and biodiversity, among other matters. Importantly, the Guidelines note generally that organizations should invest only in 'high quality' offsets, and explicitly cross-refer to the ICVCM's Core Carbon Principles as setting out the basis for what counts as a 'high quality' carbon credit for the purposes of the Guidelines. While the Net Zero Guidelines cover

[44] See https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/CORSIA%20Eligible%20Emissions%20Units_Nov2023.pdf.

the use of offsets to meet 'net zero' targets, ISO 14068 provides guidance in relation to the use of offsets for the purposes of claims of 'carbon neutrality'. Furthermore, ISO 14064, relevant to GHG accounting generally, recommends offsetting (as part of any compliant set of accounts) to conform to the meta-principles of relevance, completeness, consistency, transparency, accuracy, and conservativeness.

Reflections

242. What lessons can be drawn from the literature on governance of the voluntary carbon market, specifically regarding the role of standards? A number of the features of this field of governance make it difficult to draw generalisable lessons: the highly dynamic environment of global climate governance, the relatively recent provenance of some of the initiatives described, and the dynamic technological environment, all make it difficult to draw specific conclusions for standards governance generally from the failure of the voluntary market so far. Nevertheless, we would make the following observations.

243. First, and perhaps most basically, this is a field in which **purely voluntary standards initiatives are certain to be inadequate**. 'At a high level', noted one of our interviewees, 'our view has always been we will not voluntary our way to net zero - that's impossible'.[45] The history of the sector makes it clear that there are simply too few incentives for private, market-based certification schemes to align over time, or to engage in dynamics of upward competition. The commercial stakes are so high, and the complexity and uncertainty of quantifying carbon reductions are so great, that opportunities and incentives will always exist for new initiatives to emerge at lower levels of quality and reliability. Furthermore, as one of our interviewees noted, there are structural difficulties with placing responsibility on the consumer to ensure the credibility of the credits she buys:

> 'I think the problem with the voluntary market versus the compliance market at the moment is the fact that it's actually the consumer or the retirer of the credits who in the majority of circumstances is culpable for what they're buying, which feels a little unfair given the complexity of the voluntary carbon market and the nuance around the various different projects and credits that you can buy … putting that responsibility on the

[45] Interviewee A (staff member at a non-governmental carbon crediting scheme). Interview conducted by Andrew Lang and Gregory Messenger. 24 November 2023

> end user, you know I think is part of the reason that the market is struggling right now.'[46]

Left to itself, then, we should expect the voluntary carbon market to be characterised by competition amongst proliferating private schemes with varying levels of credibility and quality, and periodic crises of credibility.

244. Second, we would reiterate the observation we made above, that one of the core governance challenges in this field is that defining appropriate methodologies is inevitably in part a matter of (contestable) judgment, not just a matter of objective evidence and rigorous processes. The specification of an appropriate baseline for the purposes of determining additionality, for example, will always involve a balance between rigour, practicality, and evolving views about more and less desirable technologies and policies. Important uncertainties and inaccuracies will always remain in any assessment methodology, and the question, ultimately, is the level of uncertainty and imprecision which is acceptable in light of the need for urgent action. One implication of this is the **need for continual improvement of standards in light of evolving knowledge and evolving policy**: as one interviewee remarked, 'everyone is saying that the standards can't be static … so the methodologies need to evolve over time and there are going to be multiple iterations as a result of either issues identified or potentially improvements identified and implemented'.[47] Thus, as the UK Climate Change Committee has noted, it is a high priority to ensure that standards governance includes 'mechanisms … to provide expert oversight, embed an evolving evidence base, and identify unintended consequences'. More fundamentally, the inevitable contestability of assessment methodologies makes it difficult for the legitimacy of offsetting governance to be based solely on expertise and technical processes.

> '20 years of collaboration with the deepest experts … and the highest-minded people of carbon markets … And it's still evolved to the point where you're like, oh God, I'm not sure you'd issue those credits today in that way. I mean that's what makes it a feature, not a bug, right.'[48]

[46] Interviewee B (staff member at a company engaged in carbon credit trading). Interview conducted by Andrew Lang and Gregory Messenger. 12 December 2023

[47] Interviewee B (staff member at a company engaged in carbon credit trading). Interview conducted by Andrew Lang and Gregory Messenger. 12 December 2023.

[48] Interviewee A (staff member at a non-governmental carbon crediting scheme). Interview conducted by Andrew Lang and Gregory Messenger. 24 November 2023

At the very least, **governance mechanisms, including standards governance, should be crafted to promote expert reflexivity, including explicit acknowledgement and awareness of the limits of existing methods**.

245. Third, attempts by national and regional governments to encourage upward alignment by providing regulatory/legislative advantages to selected 'best practice' offsetting schemes (e.g., through procurement practices, kitemarks, regulatory advantages, and to a lesser extent ETS eligibility) have showed some promise, but have not so far succeeded at sufficient scale. The failed attempt fifteen years ago by the UK government to set a strict quality assurance standard for the UK voluntary carbon market is, in our view, a particularly good illustration of some of the limits and weaknesses of these approaches, at least as they have been pursued in the past.

246. One lesson from that experience is that it is very difficult for a jurisdiction the size of the UK to simply work unilaterally in providing incentives for higher quality offsets. **International cooperation is likely to be necessary** for the incentives to be large enough to promote alignment. In addition, incentives could be significantly increased simply by **providing more, and more varied, regulatory benefits to approved high quality offsets**. For example, project certification by publicly recognised schemes could be a condition for eligibility for public and private climate financing; favoured high quality offsets could be given preferential treatment in government procurement markets; corporate reporting standards can explicitly incorporate reference to high quality standards, and high quality offsets could be accepted for the purposes of defining 'sustainable' products and processes eligible for tax and other regulatory advantages, including preferential market access.

247. Another lesson is that international convergence around a single set of methodologies for quantifying carbon reductions, and validating projects, looks very difficult to achieve. As one interviewee noted:

> 'Harmonisation' sounds good in principle, but again could be quite difficult to implement in practice because there's a lot of stakeholders there and there's a lot of difference of opinion and it's going to require more time, a lot more effort, a lot more resource to find that common alignment … I think having that competitive environment could actually be more productive than trying to spend ages aligning on one particular view.'[49]

[49] Interviewee B (staff member at a company engaged in carbon credit trading). Interview conducted by Andrew Lang and Gregory Messenger. 12 December 2023

This is partly because of the sheer diversity of existing schemes, each with their own methodologies, but also partly because the cutting edge of best practice in the voluntary market can change so rapidly in response to new information, new science, and new technologies. There is likely **considerably more political space, even in the short term, for alignment at the level of meta-standards**, and this is where the work of international standards bodies, working together with organisations such as the ICVCM, may be particularly valuable. The ISO Net Zero Guidelines are a useful exemplar in this respect.

248. Fourth, we see a **strong case for integrating such meta-standards more closely with domestic regulatory frameworks**. There are **a number of ways this might be done**. The UK's CCC suggests one model, namely, integrating the ICVCM's CCPs into a UK standard, required in UK Environmental Reporting Guidelines, to encourage existing standards to adopt ICVCM's 'Core Carbon Principles'. (There would be no need to limit this merely to integration with reporting guidelines – all the regulatory levers identified in the previous paragraph are potentially available.) In another, complementary, model, drawn from the experience of organics regulation, national authorities could recognise standards which conform to certain internationally-defined principles defining good practice in standards-setting, while at the same time entering into a variety of bilateral mutual recognition agreements which provide the basis for inter-jurisdictional cooperation around aligned standards and their implementation.

249. Fifth, and importantly, **meta-standards are only as strong as their application and implementation**. Meta-standards which are too easy to meet, and which do not adequately distinguish between higher- and lower-quality schemes, do little to incentivise upward competition in the sector. While our interviewees expressed the view that the establishment of the ICVCM represents a potentially very significant development in the voluntary market, it was also noted that much depends on implementation:

> 'The ICVCM standard is still a bit of a black box for [us], so we're not quite sure how high the bar is going to be raised … the fear is that [some] are lobbying hard for that bar to be as low as possible … and I still do fear that the ICVCM core carbon principle accreditation is only as good as the first bit of bad negative press.'[50]

[50] Interviewee B (staff member at a company engaged in carbon credit trading). Interview conducted by Andrew Lang and Gregory Messenger. 12 December 2023

Furthermore, **it is important for meta-standards initiatives to include 'ratcheting up' mechanisms – that is to say, mechanisms which push even leading schemes to improve and strengthen** their methodologies and governance arrangements over time. The ICVCM's proposal to distinguish between 'Initial' and 'Full' compliance is fundamentally sound as a way of facilitating improvement over time, notwithstanding the pushback it created. Such an approach could even be expanded to include more levels, including special recognition for significant and innovative improvements on existing best practices.

250. Finally, it is worth noting one particular **strength of the voluntary market, which has been its role in driving the development of new methodologies for novel project and technology types**. As noted above, many traditional standardisation procedures have proved to be poor at this. It is a strong indication of the need for a governance framework which combines the sometimes competing demands for legitimacy, innovation and authority.

Conclusions

251. Here, we draw together some of the reflections offered above, and tie them back also to the specific focus questions set out in the introduction.

<u>Key challenges: uncertainty, legitimacy and dynamic change</u>

252. The development of standards in the area of offsets faces special challenges as a result of the *complexity* and *uncertainty* of assessing and quantifying the emissions saved by a particular project.

253. In part as a result of this uncertainty, and also partly as a result of rapidly changing contexts and technologies, it is crucial to have functioning mechanisms for *identifying flaws and weaknesses* in existing standards, and *rapidly revising* them in response.

254. Given the evolving state of our knowledge and systems of measurement and accounting, given the very high commercial stakes, and given that the choice of standards creates winners and losers, broad-based legitimacy is difficult to achieve. Traditional reliance on *expert-based legitimacy* is important, but *unlikely to be sufficient on its own*.

<u>The promise of an 'ecosystem approach' to these challenges</u>

255. Any single standards-setting mechanism is unlikely to be adequate on its own to solve these challenges. Solutions, where they exist, are more likely to be an overall effect of the larger ecosystem of standards, standards bodies, meta-standards, voluntary initiatives, and so on.

256. 'Public' and 'private' standards action can, in principle, complement one another, provided their relations are appropriately structured. Strong traditional international standards (i.e. those developed by NSBs and international standards bodies like the ISO) are a necessity, and form the backbone of standards governance in this space. They have a reasonably strong 'compliance pull'. However, 'private' standards can complement them in a number of ways, including by driving innovation, raising ambition, and filling gaps as they emerge. The 'symbiotic' model, illustrated by the relationship between the CDM and the Gold Standard, may be adaptable to other standards-setting contexts.

The role of national standards bodies (NSBs)

257. While this case study found little evidence of direct engagement between NSBs in the governance of offset standards, it does offer some useful insights into the potentially important roles of such bodies in this and similar spaces. NSBs may have a particularly important role to play in the development of high-quality meta-standards, leveraging their experience and expertise in stakeholder engagement, as well as their status as authoritative and credible organisations in the standards space. This could be pursued through the ISO system, through selective alliances of ambitious NSBs, or even nationally.

Standards and regulation working together

258. We have identified a wide range of ways in which regulatory 'levers' can be used, and at times have been used, to incentivise the use of high-quality carbon credit schemes. These include the recognition of particular carbon credits in domestic carbon pricing systems, the use of government procurement to favour specific schemes, government-backed kitemarks for favoured schemes, preferential tax treatment, and compliance with recognised standards as a condition for access to markets, to climate and development finance, and to other regulatory benefits.

259. There is scope to use regulatory frameworks much more extensively to provide preferential treatment to schemes which meet high meta-standards of credibility. This would likely be more effective where it is combined with

cross-jurisdictional cooperative arrangements to pool market power and thus more strongly incentivise high quality offsets.

Section III: Conclusions & Recommendations

260. Drawing on the initial findings from **Section I** and the case studies in **Section II**, we note the challenges in providing predictive accounts of how standards and regulation relate to one another, given the differences across jurisdictions, sectors, and socio-economic conditions. Some practices of regulation (for example, 'cooptation') which are intuitively appealing, are very limited in practice (save for organic labelling) while others (such as 'steering') are more commonly identified though in idiosyncratic circumstances (for example, the EU's use of anti-deforestation requirements to drive VSS development).

261. Within this space, we note the risk of competition driving down quality and trust in standards, but also note examples where different standards regimes are able to support each other. We note that there are instances where regulation acts not as a floor but at its most effective drives continued improvement in the standards space. This rejects assumptions of a potentially confrontational account of the relationship between standards and regulation, or different standards. Instead, we acknowledge two core underlying dynamics of relevance for this study: the distinct logics underpinning the use of standards and regulation, and the importance of incentives to drive the constructive relationship between standards and between standards and regulation. These observations inform our responses to the research questions:

What regulatory/non-regulatory levers are available and effective to deliver policy outcomes?

262. Using the map of the ecosystem of standardisation we outline a wide range of potential levers that include both regulatory and non-regulatory interventions that NSBs can use independently or in collaboration with government(s). The effectiveness of the levers depends largely on the responses to the following questions. These are outlined below.

Under what conditions/in what roles do standards bodies interact successfully with actors in the standards and regulatory governance space to: ensure successful development and application of high integrity standards; accelerate alignment of best practice and innovation in standards; and help implement robust governance of regulatory requirements?

263. We have seen how across the case studies, the evidence base and quality of standards development process (including inclusive engagement with stakeholders) drives appeal of specific standards, drawing on the perceived added-value of standards bodies in the wider governance framework: technical expertise and access to networks of stakeholders. At the same time, we have seen very little evidence, or indeed discussion of, active NSBs in the discussion. The 'top-down' drive of regulation, where regulators seek to prioritise specific objectives that would not otherwise be prioritised (e.g., net zero) has not traditionally been the approach of standards bodies. Finding ways to align the technical and working strengths of standards bodies with the policy drive of governmental actors is therefore key.

264. Importantly, we find that the conditions for successful interaction will vary from sector to sector. In relation to carbon crediting, for example:

- The current state of the voluntary market, with depressed demand and relatively low prices for most carbon credits, may create an opportunity for cooperative working between the public sector, standards bodies and private actors. There is a recognition that the market as a whole would benefit from an improved governance structure, to the extent that this could drive increased demand, and improve credibility and reliability (and thus prices) of credits.
- The work currently underway to design and implement credit mechanisms under Art. 6 of the Paris Agreement also provides an opportunity for cooperation and upward alignment. There will be strong incentives for schemes to ensure some degree of alignment and compatibility with the rules and standards developed under Art. 6. At the same time, methodologies developed in the Art. 6 context will necessarily draw on, and build on, current best practice in the voluntary sector.
- Successful interactions can build on the relative strengths of different organisations. Government and intergovernmental institutions can enjoy a relatively high degree of legitimacy, and can be well-placed to establish mandates which drive demand and set minimum levels of quality. National and international standards bodies bring credibility, technical expertise, and established mechanisms of stakeholder engagement. Private actors tend to be more rapidly responsive to new information and new technologies: they can help to fill gaps, drive innovation, and encourage continuous improvement. They can also help compensate for limitations in public resources.

What factors drive the integration of a standard into the national regulatory infrastructure? What barriers, drivers and criteria are relevant to policymakers' decisions regarding how their policy should be governed?

265. At the national level we have seen how different jurisdictions approach the use of standards differently. In some (e.g., Mexico) we saw how there is a *gap-filling* function with (international) standards acting as a resource supporting clarity and detail and rule-making or regulatory functions (similarly seen in the US). In others, the use of standards within regulatory systems supporting economic integration and the development of cross-border supply chains at the regional level (such as the EU), while for others on an international level (e.g., China). The drive to use standards in these cases is instructive: the value placed on them by regulators is similar to that by economic operators, their technical detail and perceived quality. We have fewer examples of VSS being incorporated into national regulatory systems, though some were identified (e.g., in relation to Gabon and FSC certification). In the case of carbon credits, the recognition of specific schemes by national regulatory systems can act as both an incentive for uptake but also a form of quality control.

266. Within the international 'regulatory' framework of treaty obligations we have seen how standards are either used to provide the type of additional technical detail that international actors cannot master (as we have seen at the national level) or as a means to reduce regulatory divergence between different markets (especially under commitments of the WTO and FTAs). Where we have noted the potential for further activity is in underutilised structures of regulatory diplomacy (especially committees at the WTO or under FTAs) to further support their integration.

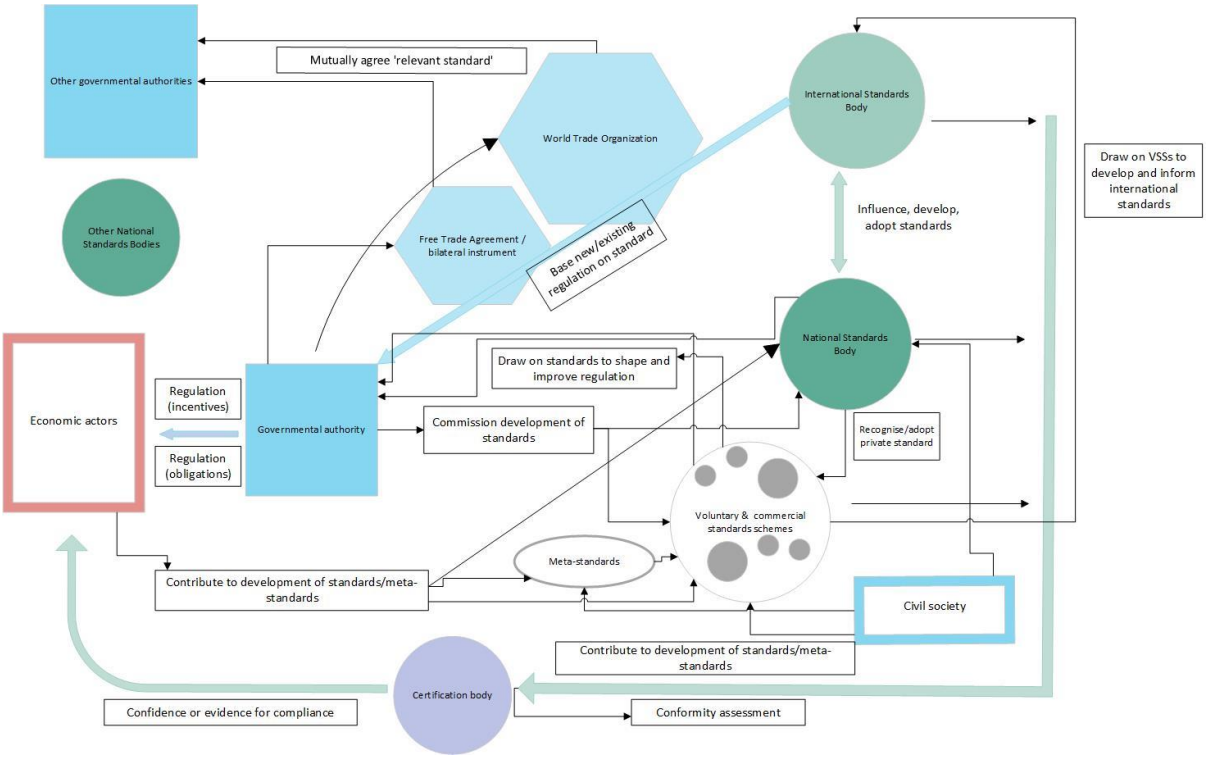
267. We note that a core factor driving the integration of a standard into the national regulatory infrastructure (and beyond) is its quality and the level of trust that it engenders. A recent decline in levels of trust in carbon offsetting mechanisms has increased calls for an additional degree of regulatory oversight, including through the development of international standards and their integration into regulatory frameworks. In the case of the dominant forestry standards bodies (FSC and PEFC) their non-governmental status is considered of lesser importance as they are considered to be of high quality, reducing demand for international standards bodies to develop competing standards. Another driver of integration is the benefits that can be gained through interoperability with government-based schemes that generate demand for carbon credits. There are strong commercial incentives, for

example, for private schemes to align with methodologies developed under the new Art. 6 mechanism, and to achieve recognition within domestic emissions trading schemes. A third driver is the desire on the part of certain countries to cooperate in building new markets for sustainable products and technologies. Such cooperation requires some degree of regulatory alignment, to define common standards of sustainability, and to ensure their integrity.

Levers

268. In considering levers, we focus here on the potential role of NSBs to drive the uptake of high-quality standards through active engagement with a range of public and private actors. In some cases, NSBs can act independently, in others they would need to work with private actors, including other voluntary or commercial standards schemes. In some of the most ambitious, they will need to work closely with government partners (at home and abroad).

269. NSBs are customarily constrained (formally or culturally) in the levers available to them as government departments most commonly 'own' policy areas. This underplays the significant range of levers available to NSBs where their expertise, networks, and cultural capital constitute an important resource. Nonetheless, it is useful to distinguish between those levers where (i) NSBs can act by supporting government policy and programmes (ideally engaging early in the policy development process), and (ii) those levers where NSBs can act independently. We identify the locus of these levers on the ecosystem map.

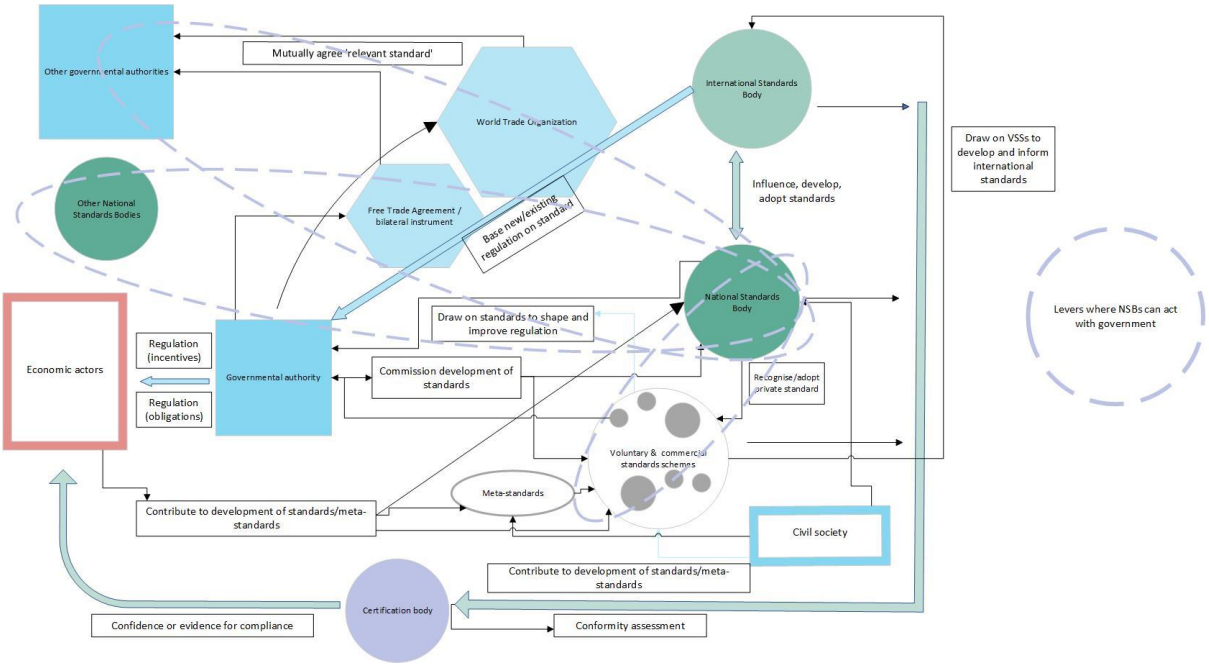


270. **Working collaboratively with government(s)**, NSBs can:

- Develop agreed and ambitious government-backed meta-standards, at national, regional, or ideally international level, incentivised through a suite of preferential instruments for compliant schemes and projects certified by them, potentially including (but not limited to): access to procurement contracts, relaxation of regulatory burdens, and provision of regulatory benefits, public certification, preferential access to finance, access to markets, and/or differential tax treatment, where appropriate. These incentives will need to be operationalised by government either nationally or with other partner governments.
- Contribute to the development of systems for benchmarking schemes against such agreed meta-standards, including the identification and endorsement of market-leading schemes.
- Work with governmental actors to pursue an active policy of regulatory diplomacy to support existing standards, new standards, and new meta-standards through inter-governmental structures where standards are embedded directly or indirectly, including leveraging:
    - free trade agreements during negotiations for new agreements or the modernisation of current agreements to ensure recognition of specific standards, or to recognise standards or guidelines through decisions or declarations of FTA committees or working groups;

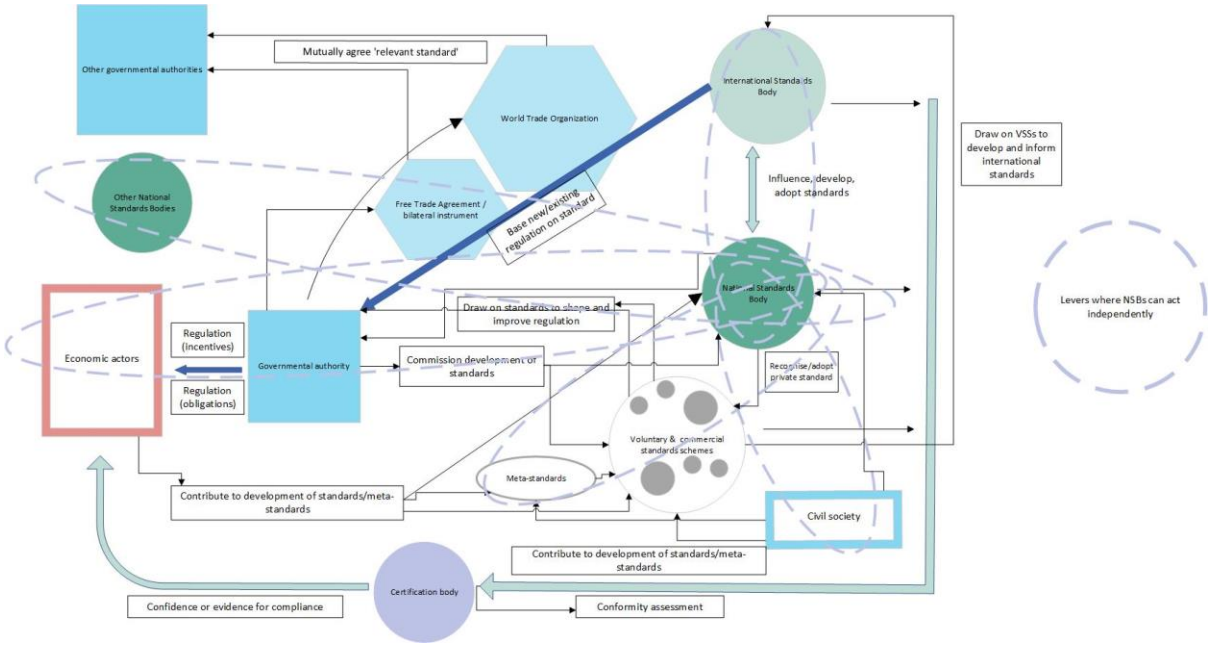
    - mutual recognition arrangements to recognise specific standards or standards bodies;
    - other bilateral or plurilateral instruments which includes leveraging political commitments under green economy agreements (such as the UK-Singapore Memorandum of Understanding on the Green Economy Framework) to further prioritise the development/uptake of key standards, and through bilateral or plurilateral 'regulatory clubs' or other plurilateral initiatives such as the Agreement on Climate Change, Trade and Sustainability (ACCTS);
    - partnerships at the WTO to drive the adoption of statements of recognition of specific standards in relevant committees (such as the Technical Barriers to Trade Committee or the Committee on Trade & Environment), or in forums of groups of members such as the Trade and Environmental Sustainability Structured Discussions (TESSD). The adoption of Guidelines can also serve as useful drivers to bring together common approaches (for example, the TBT Committee 2024 Guidelines on Conformity Assessment Procedures);
    - other institutions of economic governance which can support the collection of data and analysis to support the uptake of standards (e.g., OECD).

- Actively support technical assistance and capacity building whether through government programmes such as Aid for Trade, or independently through private partners, or public private partnerships to drive uptake of quality standards (including considering incentive packages that makes sets of standards open access).



271. **Working independently**, NSBs can:

- Seek more active government involvement to direct the development of specific standards by NSBs where such standards are in the public interest (such as on net zero).
- Collaborate with other NSBs to pursue the above, including but not limited to regional standards bodies. This may include cooperating to develop accessible localised versions of international standards to help micro-, small-, and medium- sized enterprises, especially in developing countries.
- Work with private standards bodies or schemes, including:
    - Provision of meta-standards or guidelines to support development of, and confidence in, high quality (private) standards.
    - Supporting processes of quality assurance of rigorous private (commercial or voluntary) standards (including consideration of quality marks).
- Contribute to the development and enhancement of 'challenge' processes to drive improvement and upgrading of existing standards. The high level of complexity and uncertainty in climate governance means that current best practice is far from perfect, and that it is crucial to have better mechanisms for identifying flaws and weaknesses in existing standards, and rapidly revising them in response.


Other governmental authorities
Mutually agree 'relevant standard'
World Trade Organization
International Standards Body
Draw on VSSs to develop and inform international standards
Other National Standards Bodies
Free Trade Agreement / bilateral instrument
Base new/existing regulation on standard
Influence, develop, adopt standards
National Standards Body
Levers where NSBs can act independently
Economic actors
Regulation (incentives)
Regulation (obligations)
Governmental authority
Draw on standards to shape and improve regulation
Commission development of standards
Recognise/adopt private standard
Voluntary & commercial standards schemes
Meta-standards
Contribute to development of standards/meta-standards
Civil society
Contribute to development of standards/meta-standards
Certification body
Confidence or evidence for compliance
Conformity assessment

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