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SUSTAINABLE PRODUCTION OF AGRICULTURAL AND FOREST COMMODITIES: A SCOPING STUDY TO COMPARE CONCEPTS AND APPROACHES AND TO REVIEW EVIDENCE OF IMPACTS

FINAL REPORT

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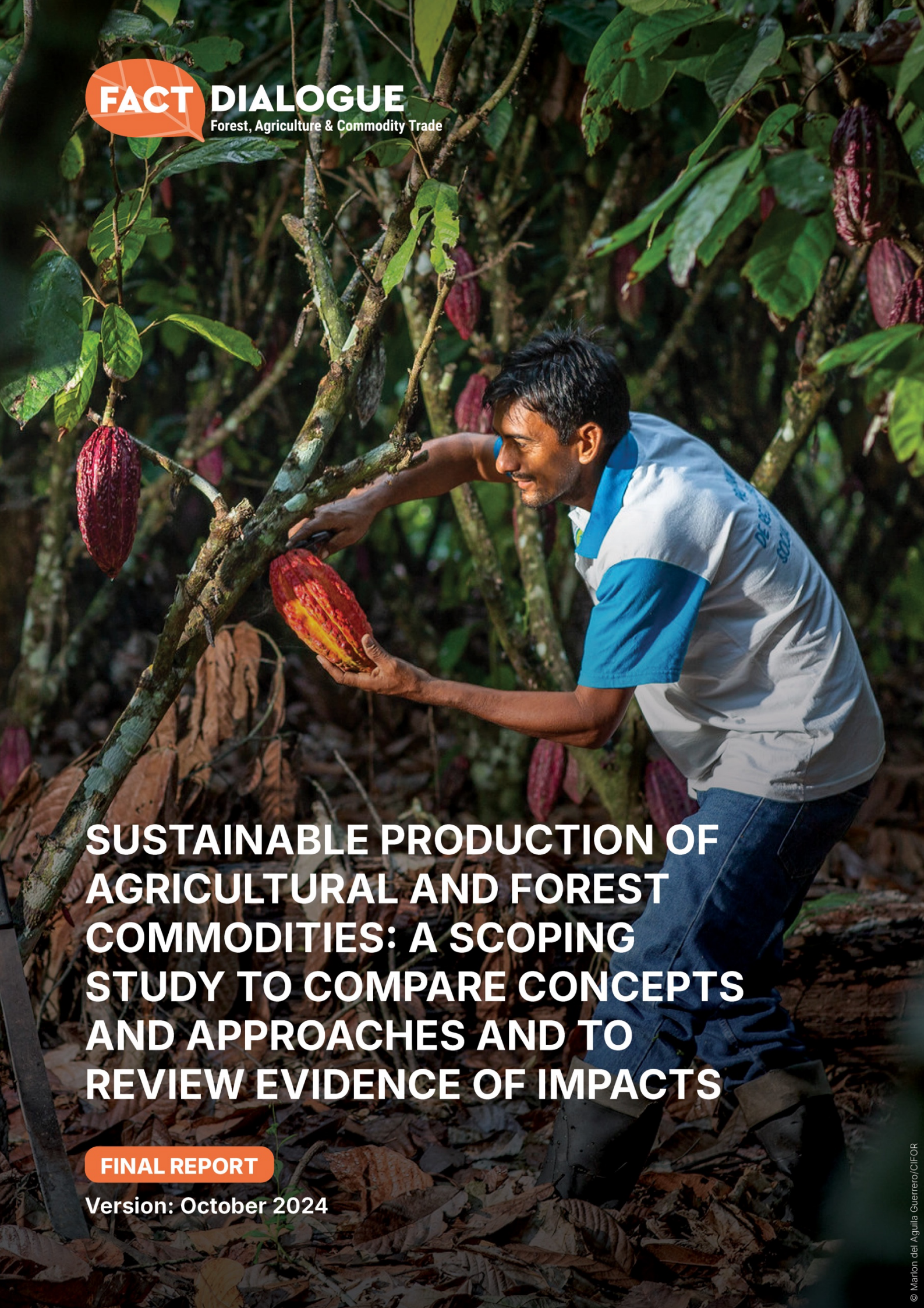

SUSTAINABLE PRODUCTION OF AGRICULTURAL AND FOREST COMMODITIES: A SCOPING STUDY TO COMPARE CONCEPTS AND APPROACHES AND TO REVIEW EVIDENCE OF IMPACTS

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Report prepared for the FACT SECRETARIAT
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INTRODUCTION

This report presents the findings of a scoping study to explore perspectives and approaches to sustainability in the agricultural and forestry sectors.

Commissioned for the FACT Dialogue, it provides a comparison of conceptions of, and approaches to, sustainable production, focusing on four commodities – beef, cocoa, palm oil and timber. It aims to establish whether such an approach could be of value in helping to identify areas for further engagement by members of the FACT Dialogue, and so if this initial study would be worth extending and building on.

In addition, it provides an overview of recent research and understanding of the effectiveness of initiatives aimed at promoting sustainable production, with the aim of stimulating and enriching discussions about the sustainable production of commodities.

RESEARCH SCOPE & METHODOLOGY

The research underlying this report entailed two elements:

- An analysis of existing concepts of, and approaches to, sustainability in the agricultural and forestry sectors.
- A review of the literature to explore the effectiveness of efforts to promote sustainable commodity production, and to identify the challenges and opportunities faced in their implementation.

The focus of this report is on sustainable production, considering how this is conceived of and defined. However, it also considers how policies and initiatives on trade and consumption influence the sustainability of production. Thus, its scope extends beyond producer countries to encompass policies and initiatives in some of the main importing and consumer countries of the commodities in question.

As a scoping study, the research was limited to four commodities and three producer countries for each commodity. The four commodities were: beef, cocoa, palm oil and timber. These were selected because of their relevance to the FACT Dialogue's objectives, given their impact on forests and importance in trade between Dialogue member countries. Thus, they are amongst the seven so called 'forest-risk commodities' whose production has accounted for the bulk of deforestation in recent decades (the other three being coffee, rubber and soy).[1] These particular four were selected because they encompass a range of different production models, ecosystems and geographies. In particular, two of the commodities, beef and timber, were selected as they are produced in countries that are at different stages of the 'forest transition'.[2] Thus, the four commodities enabled a broad range of issues and perspectives on sustainability to be considered.

The countries were selected from amongst the FACT Dialogue member countries (see table 1 for a list of the focus countries). For each commodity, the largest producing country was included within the selection. The other two countries were selected to ensure that at least two continents were included, and that a variety of environmental, economic and social contexts were represented. The availability of information in English was an additional factor.

[1] https://www.wri.org/insights/just-7-commodities-replaced-area-forest-twice-size-germany-between-2001-and-2015
[2] Rudel, T.K. et al. (2010) Forest Transitions: An introduction. Land Use Policy 27(2): 95-97; https://doi.org/10.1016/j.landusepol.2009.09.021

In addition, for each commodity two or three importing countries were included. Those selected included the country representing the largest market for exports of the particular commodity, as well as one or two additional countries (or jurisdictions) that have introduced measures to promote the import of sustainably produced commodities.

The main initiatives and tools aimed at promoting sustainability in the supply chains of the commodities were identified from an online search and initial review of the literature.

A matrix was developed to enable the presentation and comparison of the concepts of, and approaches to, sustainability for each of the four commodities.[3] The matrix lists four categories of sustainability – environmental, social, economic and political; and within these, various criteria by which sustainability is defined and pursued (see Annex 5). These categories reflect a common approach to defining sustainability based on 3 pillars – environmental, social and economic (see further below). The fourth category, included here as the political pillar, is commonly described as the enabling environment or governance context.

A comparison of the sustainability initiatives was made for each of the commodities and across the four commodities to identify those issues that are most commonly prioritised and those to which little attention is being given. This entailed reviewing the websites and strategy documents of the initiatives to determine their core vision and objectives and their main areas of intervention. The objectives and action areas were then listed in the matrix, under the relevant categories and criteria for sustainability. The number of times that the different criteria were listed as priority objectives or actions was counted to assess the level of attention being given to the different sustainability issues. This was also used to identify potential areas of alignment between the initiatives, based on those issues that were identified as priorities across all or most of the initiatives.

A review of the literature was undertaken to compile information on the factors that have influenced the implementation and effectiveness of sustainability initiatives for the four commodities. This was a scoping review, rather than a systematic review, due to the time limitations for the study. The literature review began with a search of 'Google scholar', using the search terms 'sustainable production', plus the commodity and country names. From a review of the abstracts or summaries, articles were selected based on their relevance to the aims of the review – i.e. to explore the factors underlying the impact of the sustainability initiatives from the four sectors, focused on the sustainability issues of most priority for each commodity (e.g. for beef, these were ecosystem protection, climate change and workers' rights). Additional literature was identified from the reference lists of this initial set of articles and reports. The review was mainly limited to English language material with some French language material also included.

	BEEF	COCOA	PALM OIL	TIMBER
PRODUCER COUNTRIES	Brazil Uruguay USA	Cote d'Ivoire Ghana Peru	Colombia Indonesia Nigeria (Edo State)	Canada (British Columbia) Germany Indonesia
IMPORTING COUNTRIES	China EU	EU	EU India	EU Japan USA

Table 1: Focus countries for study

[3] The draft matrix was presented at the FACT Dialogue retreat, held in March 2023, and was subsequently revised in response to the feedback received.

CONCEPTS & DEFINITIONS OF SUSTAINABILITY

Varying perceptions

The concept of sustainability as applied to agricultural and forest commodities concerns the ways in which they are produced, traded and consumed. Within this broad framing, there are wide variations in how sustainability is conceived and understood.

The UN defines sustainable agriculture as that which "meet[s] the needs of present and future generations, while ensuring profitability, environmental health, and social and economic equity",[4] and it defines sustainable forestry as "a dynamic and evolving concept, [that] is intended to maintain and enhance the economic, social and environmental values of all types of forests, for the benefit of present and future generations".[5]

These definitions reflect the concept of sustainability that prevails at the international level and in 'western' discourse. Thus, they distinguish three interdependent pillars of sustainability – economic, social and environmental – and they recognise the issue of inter-generational equity.

This dominant concept of sustainability is often contrasted with more holistic and systems-based concepts, in particular, those found within indigenous cultures. For many indigenous peoples, humans and nature are integral to one another, with all forms of life being considered as part of the biosphere.[6] Furthermore, culture and spirituality are seen as interwoven with the natural world and are part of the process of maintaining and regenerating nature.[7]

Greater recognition has been given to indigenous concepts of sustainability at the international level. For example, the UN's Intergovernmental Panel on Climate Change (IPCC) convened an international research process to examine the role of culture and heritage in global climate science and in the response to climate change.[8] However, there remains a tendency to consider indigenous concepts and approaches as subjective or situated cultural knowledge,[9] and so they are often not fully accepted as sources of ideas and knowledge to inform 'mainstream' approaches. Nor are they usually accepted as presenting viable alternatives. Consequently, the space for indigenous peoples to engage in the agricultural and forestry sectors – both politically and geographically – typically remains narrowly defined.

A changing global context

The UN's definition of sustainable forestry, quoted above, also recognises that the concept of sustainability is dynamic. This is partly because of shifts in understanding and also because of the changing nature of the world. Such changes include, most notably, continuing globalization, increasing levels of consumption, a growing world population, and the increasing impacts of climate change and environmental degradation.

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[4] https://www.fao.org/sustainability/en/

[5] UN General Assembly (2007) Non-legally binding instrument on all types of forests: resolution / adopted by the General Assembly. https://digitallibrary.un.org/record/614195

[6] Ramcilovic-Suominen, S., (2022) Envisioning just transformations in and beyond the EU bioeconomy: inspirations from decolonial environmental justice and degrowth. Sustain. Sci. 1 https://doi.org/10.1007/s11625-022-01091-5

[7] Throsby, D., & Petetskaya, E. (2016) Sustainability Concepts in Indigenous and Non-Indigenous Cultures. *International Journal of Cultural Property, 23*(2), 119-140. doi:10.1017/S0940739116000084

[8] The International co-sponsored meeting on Culture, Heritage and Climate Change published 4 reports in 2022, available at: https://www.cultureclimatemeeting.org/

[9] Ramcilovic-Suominen, S., (2022)

This global context is raising new questions as to what is meant by sustainability, as well as new challenges about how it can be achieved. A number of interlinked themes can be identified from recent discussions about sustainability and these are briefly presented here.

Sustainability in the Anthropocene

The current era, in which the impacts of humans on the world have become increasingly evident, has been termed the Anthropocene. This framing, in highlighting the integral relationship between humans and the environment,[10] has reopened discussions about the prevailing concept of sustainability which, it has been argued, creates a false separation between people and nature.[11] Such a dichotomy is considered to have led to overly technocratic and simplistic approaches, and also a failure to consider the need for deep-rooted societal change, for example, to tackle the over-consumption of resources.[12]

There has been a shift towards more integrated and systems-based approaches, for example, with increased focus on concepts of transformation and transition within some international forums.[13] However, the tendency to separate the three 'pillars' of sustainability remains, in part because it is deeply embedded within many institutional structures – for example, with ministries and departments dedicated to the environment.[14]

The need for more recognition of the dynamic nature of processes has also been called for, in which the concepts of feedback, adaptive management and emergence are fully integrated.[15] This has started to happen within the forest and agricultural sectors, with the growing attention being given to regenerative practices. These are defined as practices which enhance the functioning of the systems on which agriculture relies – ecological, economic and social systems – and so the concepts of adaptation and emergence are an integral part.[16]

Sustainability & economic growth

With increasing evidence of the impact of humans on the world, the finite nature of resources has also become more apparent. One response to this has been increased interest in the concepts of green growth and the green economy, which seek to achieve economic growth but with reduced or minimal impacts on the environment.

While there has been limited progress with delinking national economies from their material footprint[17], there have been cases within the agriculture sector where increased production has been achieved with reduced environmental impacts, at least with respect to its land-use footprint. For example, Brazil over the period 2004-2017 achieved increased agricultural production while also reducing deforestation rates.[18]

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[10] Leach, M., *et al*., 2018. Equity and sust ainability in the Anthropocene. A social-ecological systems perspective on their intertwined futures. Global Sustainability, 1, 1–13. doi:10.1017/sus.2018.12

[11] Biermann F (2020) The future of 'environmental' policy in the anthropocene: time for a paradigm shift. Environ Polit. https://doi.org/10.1080/09644016.2020.1846958

[12] Biermann F (2020) The future of 'environmental' policy in the anthropocene: time for a paradigm shift. Environ Polit. https://doi.org/10.1080/09644016.2020.1846958

[13] Scoones, I. (2016) The politics of sustainability and development. Annu Rev Environ Resour 41:293–319. https://www.annualreviews.org/doi/full/10.1146/annurev-environ-110615-090039

[14] Biermann, F (2020) The future of 'environmental' policy in the anthropocene: time for a paradigm shift. Environ Polit. https://doi.org/10.1080/09644016.2020.1846958

[15] Leach, M., *et al*., (2018)

[16] https://regenerativeagriculturefoundation.org/about/what-is-regenerative-agriculture/

[17] Parrique, T. et al. (2019) Decoupling Debunked. Evidence and arguments against green growth as a sole strategy for sustainability, European Environmental Bureau, July 2019. https://eeb.org/library/decoupling-debunked/

[18] Stabile, M.C.C. et al. (2020) Solving Brazil's land use puzzle: Increasing production and slowing Amazon deforestation. Land Use Policy 91. https://doi.org/10.1016/j.landusepol.2019.104362

However, it has been argued that 'greener' growth is not sufficient, given the scale of the challenges presented by climate change and environmental degradation.[19] Instead, the case has been made for shifting away from the paradigm of economic growth and towards one of de-growth, to ensure that we stay within the planetary boundaries. This entails a re-think of the economy, in which the focus is on well-being rather than profit and in which global resources are shared more equally through a planned reduction in resource and energy usage by rich nations.[20]

While there is discussion of these ideas with the agricultural and forestry sectors, the prevailing narrative remains based on a model of increased sustainable production. For example, the producer countries of cocoa and palm oil aim to increase both the sustainable production and consumption of these commodities. Similarly, Canada and Germany are both seeking to increase demand for renewable and sustainably sourced forest products, in particular those that can replace energy intensive or non-renewable petroleum based products, such as mass timber for building construction, and biochemicals and biomaterials. This is being supported by the development of the circular economy, which seeks to do more with less and optimize the use of forest biomass. While it is intended that much of these increases in production are to be achieved through improvements in efficiency and productivity, this will inevitably come with trade-offs.[21]

Whether these can be balanced in a just and equitable way, and what trade-offs are acceptable, is the subject of ongoing debate, as is the question of whether an alternative approach, such as a 'well-being economy'[22], should be pursued.

Just & equitable sustainability

A third theme that has received increased attention in discussions of sustainability is that of justice and equity. This has in part come out of a critique of the focus on resource scarcity within debates about sustainability. This focus, it has been argued, neglects the fact that resource scarcity does not only reflect the availability of resources but also access to and control of resources – for example, scarcity of land for a particular group of people may result from the tenure system, as well as their political and economic power. Consequently, considering justice and equity are fundamental to understanding the distribution of resources and, where needed, to finding ways of reallocating these.[23]

These principles have also risen up the agenda because of increased awareness and recognition of the legacy of colonialism within current economic and political systems. Thus, there have been increasing calls for de-colonial environmental justice; this also integral to the de-growth movement.[24] As well as highlighting the need for cultural and political self-determination, this calls for re-thinking the place of humans in the world and establishing more regenerative relationships.[25]

The principles of justice and equity have been given increased recognition within international debates. For example, they are central to the UN's Sustainable Development Goals which include the goal to reduce inequality.[26] They have also been recognised as fundamental to addressing climate change

[19] Ramcilovic-Suominen, S., (2022)
[20] Hickel, J. (2021) The Anti-Colonial Politics of De-growth. Political Geography 88, https://doi.org/10.1016/j.polgeo.2021.102404; World Economic Forum (2022) Degrowth – what's behind the economic theory and why does it matter right now? 15 June, 2022, WEF. https://www.weforum.org/agenda/2022/06/what-is-degrowth-economics-climate-change/
[21] International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) (2008) Global Summary for Decision Makers. https://www.globalagriculture.org/original-reports.html; Meyfroidt, P. et al. (2022) Ten facts about land systems for sustainability. 119 (7) e2109217118, https://doi.org/10.1073/pnas.2109217118
[22] Chrysopoulou, A. (2020) The Vision of a Well-being Economy. 16 December 2020, Standford Social Innovation Review, https://ssir.org/articles/entry/the_vision_of_a_well_being_economy
[23] Scoones, I. (2016)
[24] Hickel, J. (2021)
[25] Ramcilovic-Suominen, S., (2022)
[26] Leach, M., et al. (2018)

which has been described as a crisis of social justice.[27] Calls for climate justice have highlighted not only the differential responsibilities for climate change of the rich and poor (both nations and groups within society), but also that there are differences in the extent to which they will be impacted and already have been impacted by climate change.

These debates have also been an important part of international discussions regarding global efforts to reduce deforestation. Many forest-rich countries have not made any significant contribution to historical emissions of greenhouse gases, but they have high levels of rural poverty and so increasing agricultural and forestry production is a priority. Furthermore, many of the richer countries have only succeeded in protecting their own forests by exporting their deforestation to other countries.[28] Recognition of these differential responsibilities, and the implications of this for how sustainability is perceived and understood, is fundamental to finding just and equitable solutions.

TOOLS TO ACHIEVE SUSTAINABILITY

A dense network of policies, initiatives and tools has developed around the concept of sustainability. These include: international commitments and agreements, both voluntary and legally binding; national strategies, policies and laws; private sector initiatives and standards; civil society initiatives, as well as standards and certification schemes; and multi-stakeholder initiatives. These can be categorised as: informational or persuasive (e.g., labelling and information campaigns), (ii) cooperative (e.g. roundtables and certification schemes), (iii) economic (e.g. carbon taxes and subsidies), and (iv) regulatory policy instruments.[29] The variety of these can be seen from the matrices compiled for the four commodities covered by this study (see Annex 5).

There has long been a debate over the relative merits of different approaches, and in particular, on the benefits of government versus private sector led initiatives. In recent years, there has been a shift towards focusing on business as a key agent in addressing sustainability. For example, this is seen in the increased attention given to 'inclusive business' as a means of achieving sustainable development.[30] Similarly, the rise of market-based regulations as a tool to promote more sustainable production practices, for example, as seen within the EU, also reflects this focus on the private sector as an agent of change.

A swing away from this focus has however been observed in some quarters. For example, with respect to efforts to promote inclusive business models, it was recently noted that there has been a realization that a broader approach is needed and that 'the state needs to be brought back'.[31] Similarly, this is seen in the increased attention being given to jurisdictional approaches. For example, one outcome of the Consumer Goods Forum review of its members' progress towards their commitments to eliminate deforestation was the decision to shift to work more at the landscape level so that more systemic issues could be addressed.[32]

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[27] Biermann, F. (2020) The future of 'environmental' policy in the Anthropocene: time for a paradigm shift. Environ Polit. https://doi.org/10.1080/09644016.2020.1846958

[28] Pendrill, F. et al. (2019) Deforestation displaced: trade in forest-risk commodities and the prospects for a global forest transition. Environmental Research Letters 14(5), 055003, **DOI** 10.1088/1748-9326/ab0d41

[29] Böcher, M. (2012) A theoretical framework for explaining the choice of instruments in environmental policy. Forest Policy and Economics 16 (2012) 14–22, doi:10.1016/j.forpol.2011.03.012

[30] German, L.A. et al. (2020) "Inclusive business" in agriculture: Evidence from the evolution of agricultural value chains. World Development 134:105018. doi.org/10.1016/j.worlddev.2020.105018

[31] Guarin, A. et al. (2022) Taking stock of smallholder inclusion in modern value chains. Ambitions, reality and signs of change. Working Paper, IIED. https://www.iied.org/sites/default/files/pdfs/2022-09/21086iied.pdf

[32] Consumer Goods Forum: Forest Positive Coalition - Paper, Pulp & Fibre-based Packaging (PPP) Roadmap. Version 1.4, February 2023, https://www.theconsumergoodsforum.com/environmental-sustainability/forest-positive/key-projects/commodity-specific-roadmaps-and-reporting/

Linked to this recognition of the limitations of a singular focus on the private sector, it has been highlighted that different policy tools and initiatives are best seen as part of a network or ecosystem. [33] Thus, rather than seeing them as independent or even competing, policies and initiatives often complement and reinforce each other. For example, voluntary standards in the agricultural sector have been found to be far more effective when government policies are aligned with these.[34] Thus, theories of change need to consider this web of interactions[35] and synergies and interactions encouraged to help create more conducive environments for sustainable production.[36]

One issue to which there has been increased attention in recent years is that of greenwashing. For example, there have been a number of legal cases brought regarding the validity of sustainability claims. These have mostly related to the private sector (both finance, and manufacturing and retail businesses), but there have also been claims of greenwashing by certification bodies. For example, two cases have recently been brought to the Canada's Competition Bureau for greenwashing of forest products by certification bodies.[37]

Concern about greenwashing has prompted the development of standards and tougher regulations in a number of countries. For example, in the case of the EU, new regulations are being considered on environmental claims and labelling[38] as well as more rigorous requirements for corporate reporting on sustainability.[39]

SUSTAINABILITY CONCEPTS & APPROACHES IN THE FOUR SECTORS

Undertaking a comparison of the concepts and approaches to sustainability across a wide range of initiatives, and in different sectors, is challenging. This is in part because of the differences in their level and types of engagement, from inter-governmental partnerships through to local-level engagement with farmers. It is also because of the variety of ways in which objectives and interventions are described, with differences in language and levels of details. (e.g. halting deforestation may be listed, but not climate mitigation; restoration may be identified as an objective or as an activity; etc.) However, despite these limitations, certain themes do emerge and so some general remarks can be made.

Priorities & gaps

From comparing the high-level objectives and priority areas for intervention of the sustainability initiatives, it can be seen that there are a number of issues that predominate across all four sectors (see table 2).

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[33] Lambin, E.F. et al. (2014) Effectiveness and synergies of policy instruments for land use governance in tropical regions. Global Environmental Change 28: 129-140; https://doi.org/10.1016/j.gloenvcha.2014.06.007;
[34] UNEP and ITC (2023) Sustainability standards and requirements for agriculture: international trade considerations. https://tessforum.org/latest/sustainability-standards-and-requirements-for-agriculture-international-trade-considerations
[35] Wardell, D.A. et al. (2021) Reviewing initiatives to promote sustainable supply chains. The case of forest-risk commodities. FTA Working Paper 8, https://www.cifor.org/publications/pdf_files/FTA/WPapers/FTA-WP-8.pdf; Pirard, R. et al. (2023) The role of hybrid governance in supporting deforestation-free trade. Ecological Economics 210, 107867, https://doi.org/10.1016/j.ecolecon.2023.107867
[36] UNEP and ITC (2023) Sustainability standards and requirements for agriculture: international trade considerations.
[37] https://ecojustice.ca/news/competition-bureau-launches-investigation-into-greenwashing-complaint-against-north-americas-largest-forest-certification-scheme/
[38] https://environment.ec.europa.eu/publications/proposal-directive-green-claims_en
[39] https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en

Regarding environmental issues, ecosystem protection is commonly prioritised in all four sectors, primarily of forests, although in the beef sector, grasslands are also a priority. Climate change is also prioritised, with most attention being given to mitigation rather than resilience.

With respect to the social aspects of sustainability, workers' rights are widely prioritised. This is mainly with respect to child and forced labour in the cocoa sector, while working conditions and job opportunities are highlighted more in the other three sectors. Land and resource rights are also prioritised in all four sectors, although within the timber sector, these issues are often framed in terms of the livelihoods of forest dependent peoples.

Regarding economic issues, most commonly prioritised in all four sectors are issues related to livelihoods, focusing on farmers and smallholders within the beef, cocoa and palm oil sectors, and on forest dependent peoples and rural communities in the timber sector.

With respect to political issues, transparency is widely prioritised in all four sectors, although to a lesser extent in the timber sector. This is primarily focused on supply chain data, but in the cocoa sector, transparency regarding prices is also a priority. Legal compliance is also frequently mentioned, but law enforcement less so.

The comparison of high-level objectives and priority areas for intervention also enables identification of those issues that are receiving relatively little attention. It should be noted that because this review only covers a selection of initiatives for each of the commodities, these issues are not necessarily being overlooked. Rather, it indicates where there may be potential gaps.

With respect to environmental issues, one issue that is given relatively little attention in all four sectors is that of agrochemical usage and pollution. This is not prioritised at all in the timber sector initiatives reviewed, and rarely so in the other sectoral initiatives.

In the social sphere, food security is only occasionally highlighted within the cocoa and palm oil sectors, and is not explicitly mentioned in the beef or forestry sectors. Cultural issues are also given little attention, these only being occasionally mentioned in the beef and forest sectors.

The different aspects of sustainability related to communities are not universally addressed within the four sectors. Thus, benefit sharing is not prioritised within the beef and cocoa sectors, while the strengthening of community institutions is not a priority in the beef or timber sectors. While this may reflect a gap, it also partly reflects the different land-use and production models. For example, a relatively small proportion of cocoa is produced on large-scale plantations, and so benefit-sharing arrangements with communities is not an issue in this context. With respect to workers' rights, issues related to equity and discrimination are not prioritised in the beef sector. Furthermore, workers' rights are given far less attention than environmental issues in this sector.

Regarding economic issues, the tax regime and compliance with this are not prioritised in any of the four sectors. Furthermore, commodity prices, and in particular prices for farmers, are high up the agenda in the cocoa sector but are rarely mentioned in the other three sectors.

Within the political sphere, compliance with the tax regime is not prioritised in any of the sectors. Financial management (i.e. by the government, and by the private sector – including large corporations, smallholders and their associations) is prioritised in the cocoa sector, but not in the other three sectors. And in the beef sector, the legal framework and its enforcement is also not prioritised.

	BEEF	COCOA	PALM OIL	TIMBER
MOST COMMONLY PRIORITISED	**ENV:** **Ecosystem protection & management** (forests & grasslands); Restoration; Climate mitigation; Animal welfare; **SOC:** **Working conditions & rights**; Land & resource rights; **EC:** **Livelihoods**; **POL:** Transparency; Legal compliance;	**ENV:** **Ecosystem protection & management** (forests); Restoration; **SOC:** **Working conditions & rights** (child & forced labour); Land & resource rights; **EC:** **Livelihoods** (living income); Prices & premiums; Investment; **POL:** Transparency;	**ENV:** **Ecosystem protection & management** (forests & peatlands); Climate mitigation; Biodiversity protection; **SOC:** **Working conditions & rights**; Land & resource rights; **EC:** **Livelihoods** (smallholders); Investment; **POL:** Transparency; Legal compliance & enforcement;	**ENV:** **Ecosystem protection & management** (forests); Climate mitigation; **SOC:** **Working conditions & rights**; **EC:** **Livelihoods** (IPLCs); **POL:** Legal compliance & enforcement;
SOMETIMES PRIORITISED	**ENV:** Climate resilience; Water management; Soil conservation; Waste & chemicals; Biodiversity protection; **SOC:** Communities (social infrastructure); Culture; **EC:** Investment; **POL:** Research & training; Institutional framework; Financial management; Participation in policy-making;	**ENV:** Climate resilience & mitigation; Biodiversity protection; Soil conservation; Water management; Waste & chemicals; **SOC:** Equity & discrimination (gender); Community institutions & social infrastructure; Food security; **EC:** **POL:** Legal compliance & enforcement; Legal & policy framework; Participation in policy-making; Financial management; Research & training;	**ENV:** Restoration; Climate resilience; Water management; Soil conservation; Waste & chemicals; **SOC:** Equity & discrimination; Communities – benefit sharing; institutions; social infrastructure; Food security; **EC:** Prices & premiums; **POL:** Participation in policy making; Research & training; Institutional framework; Legal & policy framework;	**ENV:** Biodiversity protection; Restoration (reforestation); Climate resilience; Water management; Soil conservation; **SOC:** Land & resource rights; Communities – benefit sharing; social infrastructure; Equity & discrimination; Culture; **EC:** Investment; Prices & premiums; **POL:** Transparency; Research & training; Participation in policy-making; Institutional framework; Legal & policy framework;
NOT PRIORITISED	**ENV:** **SOC:** Communities (institutions; benefit sharing;); Equity & discrimination; Food security;	**ENV:** **SOC:** Communities – benefit sharing; Culture; **EC:** **Taxes**;	**ENV:** **SOC:** Culture; **EC:** **Taxes**;	**ENV:** Waste & chemicals; **SOC:** Community institutions; Food security; **EC:** **Taxes**;

	EC: **Taxes**; Prices & premiums; **POL:** Law enforcement; Legal & policy framework; Financial management;	**POL:** Institutional framework;	**POL:** Financial management;	**POL:** Financial management

Table 2: Frequency of issues prioritised as objectives & potential gaps

KEY: ENV – Environmental issues; SOC – Social issues; EC – Economic issues; POL – Political issues;
Orange text indicates issues commonly prioritised in all 4 sectors
Blue text indicates issues not prioritised in all 4 sectors

Areas of alignment & divergence

In all four sectors, the scope of issues considered within sustainability initiatives has broadened over the last decade. Thus, there has been increased recognition of social and economic issues within many initiatives that had previously focused primarily on environmental issues, and vice versa.

One consequence of this is that there has been increased alignment between initiatives, with agreement on the range of sustainability issues found within the four sectors as well as greater recognition that they are interlinked.

Three particular issues are commonly prioritised in all four sectors (as noted above), suggesting a high level of agreement on their importance. These are: ecosystem protection and management (especially of forests); livelihoods; and workers' rights. However, there remains significant divergence in the priority that is given to these different issues, and thus, in what the best entry points for intervention are considered to be.

Some alignment can be found within the types of activities and interventions that are prioritised, even where there are differences in the main objectives. For example, improving agricultural or forestry practices is one activity that is common to many initiatives, both those with the aim of enhancing livelihoods and those targeting forest loss and degradation. However, these may be designed very differently depending on what the main objectives are and there can be trade-offs between different outcomes. For example, increasing the intensity of agricultural practices may boost farmer incomes but also increase forest clearance.

Alignment can also be found with respect to some of the political aspects of sustainability. For example, improved transparency is prioritised in many initiatives, in part because this is considered fundamental to addressing many of the other aspects of sustainability – for example, to support compliance with legal and market requirements, strengthen the voice of smallholders and monitor the effectiveness of interventions. Improved legal compliance is another issue which is common to many initiatives, this perhaps reflecting the strong focus on market-led interventions (discussed further below).

ACHIEVING IMPACT: KEY LESSONS FROM THE FOUR SECTORS

Based on the literature review undertaken for each of the target commodities, some general lessons regarding the implementation and effectiveness of sustainability initiatives can be identified.

Determining impacts is challenging

One theme that emerged from the literature review for the four commodities is the lack of robust evidence for the impact of many sustainability initiatives. One reason for this is the complexity of the issues and the multiple factors influencing them. Consequently, establishing causal links is difficult. Furthermore, methodologies are often inadequate or not transparent – for example, in the case of studies into the effectiveness of approaches to tackle deforestation, it has been noted that the issue of leakage has not always been addressed.[40] Reporting of impacts is also often variable in quality, which has also hindered learning between initiatives.[41] For example, many private sector initiatives

[40] Ingram, V., et al. (2020) The outcomes of deforestation-free commodity value chain approaches. Forest and Nature Conservation Policy Group, Wageningen University & Research. https://www.evidensia.eco/resources/1107/download/
[41] Ingram, V., et al. (2020)

have been criticized for only reporting on their activities rather than on the levels of implementation or on their outcomes.[42]

Certification & its limitations

While sustainability certification has been, and remains, a priority in all four sectors, challenges continue to be faced in increasing its uptake, particularly amongst small producers. One reason for this is that smallholders are, inevitably, at a disadvantage compared to larger businesses, having less capacity and financial resources. They also can face additional hurdles – for example, due to complex or unclear legal requirements. These challenges are well known, and significant resources have been dedicated to help overcome these. Strengthening producer organisations has proven one effective route to improving smallholder practices and to enabling their participation in certification schemes, although these do not always ensure inclusion of marginalized groups, including women.[43]

One important factor limiting uptake of certification has been the lack of a price premium. This is the case for all producers, but again, is more of a concern for smallholders who typically have very small profit margins. The use of procurement policies (both public and private sector)[44] and consumer awareness campaigns to increase demand for certified products has been influential, while the use of tax incentives and subsidies has potential to increase prices.[45]

Evidence for the impact of sustainability certification is in fact somewhat mixed. This is partly because outcomes are dependent on the broader socio-economic and governance context.[46] For example, the impact of certification on environmental outcomes is influenced by the effectiveness of land-use planning and implementation for the wider landscape[47], and its impacts on economic outcomes is influenced by the existence of market linkages and infrastructure. Addressing these broader issues requires a suite of measures beyond certification itself.

There is also an ongoing debate regarding certification with respect to the balance between what have proven relatively niche, civil-society led certification approaches versus scaled-up, private sector approaches.[48] Thus, the need to scale-up certification, to reach a greater proportion of producers, has led the private sector to develop their own schemes, which they argue are more cost-

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[42] Dodson, A. et al. (2021). Oil palm and biodiversity: Company commitments and reporting in 2020. SPOTT. London: Zoological Society of London, https://www.spott.org/news/oil-palm-biodiversity-report-2021/; Wahba, J. & E. Higonnet (2020) ISCO Scorecard. Mighty Earth, https://www.mightyearth.org/isco-scorecard-examines-public-private-platforms-for-sustainable-cocoa/; EFI EU Redd Facility (2021) Sustainability initiatives in Ivorian and Ghanaian cocoa supply chains: benchmarking and analysis. https://efi.int/sites/default/files/files/flegtredd/Cocoa%20sustainability%20report.pdf; Parra-Paitan, C. et al. (2023) Large gaps in voluntary sustainability commitments covering the global cocoa trade. Global Environmental Change 81, 102696, https://doi.org/10.1016/j.gloenvcha.2023.102696

[43] Macqueen, D and Mayers, J (2020) Unseen foresters - an assessment of approaches for wider recognition and spread of sustainable forest management by local communities. WWF, Stockholm, Sweden. https://wwfeu.awsassets.panda.org/downloads/report_wwf_iied_unseen_foresters_2020_1.pdf; Mithöfer, D. et al. (2017) Unpacking 'sustainable' cocoa: do sustainability standards, development projects and policies address producer concerns in Indonesia, Cameroon and Peru?, International Journal of Biodiversity Science, Ecosystem Services & Management, 13:1, 444-469, DOI: 10.1080/21513732.2018.1432691; Guarin, A. et al. (2022)

[44] For palm oil, see for example, Voora, V. et al. (2023) Palm oil prices and sustainability. Global Market Report, IISD & SSI. https://www.iisd.org/system/files/2023-06/2023-global-market-report-palm-oil.pdf

[45] Karsenty, A. & S. Salau (2023) Fiscal incentives for improved forest management and deforestation-free agricultural commodities in Central and West Africa. International Forestry Review Vol.25(1), 2023, https://doi.org/10.1505/146554823836838691

[46] Noted by VoiceNetwork in: https://international-partnerships.ec.europa.eu/system/files/2021-04/meeting-2-summaryreportstandards_en.pdf;

[47] Kosar, M. et al. (2019) PHPL. From Legality to Sustainability. Independent Forest Monitoring Network (JPIK). https://jpik.or.id/en/phpl-from-legality-to-sustainability/

[48] Krauss, J.E. & S. Barrientos (2021) Fairtrade and beyond: Shifting dynamics in cocoa sustainability production networks. Geoforum 120: 186-197, https://doi.org/10.1016/j.geoforum.2021.02.002

effective than many of the third-party verified schemes. But this has been at the risk of lowering standards.[49] While there is no right answer, it is worth noting that these schemes do not work in isolation. Different standards and schemes are part of a network of policies, which all interact. Certification schemes are often in competition with each other which can lead to a race to the top, and they also interact with and influence public policies.[50]

Poverty reduction: the importance of robust theories of change

Poverty levels remain high for many producers of the four commodities and also within those communities in the areas of production. One criticism made of a number of poverty alleviation interventions in both the cocoa and palm oil sectors has been that these are often based on overly simplistic theories of change. In particular, there has been a tendency to focus primarily on increasing income for smallholders while neglecting the multiple other aspects of poverty, such as access to social infrastructure and the power to engage in decision-making.[51] Furthermore, many interventions do not adequately consider the diversity of smallholders and community members. Often, it is the better off farmers who benefit the most, resulting in increased inequality between farmers and within communities.[52]

Furthermore, interventions do not always meet the needs and priorities of farmers – for example, many initiatives prioritize enhancing the productivity of farms. While this aligns with the priorities of big business, who are concerned with the security of their supplies, many farmers are more interested in the resilience of their farms, for example, through increasing their diversity of crops and production systems.[53]

Similarly, interventions are often focused on approaches that fail to acknowledge or consider existing knowledge and expertise. This can both serve to undermine existing systems of agriculture or forestry, as well as the social and cultural systems linked with this, or it can result in interventions that are inappropriate to the local context and so ineffective.[54]

One suggested reason for this misalignment is that farmers continue to be poorly represented in many sustainability initiatives. For example, very few of the multi-stakeholder initiatives in the palm oil sector have smallholders represented in their executive boards.[55]

Poverty reduction: the role of government

Another important means of poverty reduction is through the allocation of government revenues to support rural development. The importance of increasing production of these commodities is often

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[49] EFI EU Redd Facility (2021)

[50] Lambin, E.F. & T. Thorlakson (2018) Sustainability Standards: Interactions Between Private Actors, Civil Society, and Governments. Annual Review of Environment and Resources. Vol. 43:369-393. https://doi.org/10.1146/annurev-environ-102017-025931

[51] Hirons, M. et al. (2018) Understanding Poverty in Cash-crop Agro-forestry Systems: Evidence from Ghana and Ethiopia. Ecological Economics, 154, 31–41. https://doi.org/ 10.1016/j.ecolecon.2018.07.021;; Adams, M.A. & S. Carodenuto (2023) Stakeholder perspectives on cocoa's living income differential and sustainability trade-offs in Ghana, World Development 165 (2023) 106201. https://doi.org/10.1016/j.worlddev.2023.106201;

[52] Guarin, A. et al. (2022); Solidaridad (2022) Palm Oil Barometer, https://www.solidaridadnetwork.org/wp-content/uploads/2022/09/Palm-Oil-Barometer-2022_solidaridad.pdf; Santos, C.O.d.; et al. (2022) Assessing the Wall-to-Wall Spatial and Qualitative Dynamics of the Brazilian Pasturelands 2010–2018, Based on the Analysis of the Landsat Data Archive. Remote Sensing,14, 1024, https://doi.org/10.3390/rs14041024;

[53] Mithöfer, D. et al. (2017)

[54] Ruggia, A. et al. (2021) The application of ecologically intensive principles to the systemic redesign of livestock farms on native grasslands: A case of co-innovation in Rocha, Uruguay. *Agricultural Systems*, 191:103148, https://doi.org/10.1016/j.agsy.2021.103148;

[55] Solidaridad (2022) Palm Oil Barometer. https://www.solidaridadnetwork.org/wp-content/uploads/2022/09/Palm-Oil-Barometer-2022_solidaridad.pdf

justified by governments on this basis. However, the extent to which revenues from the agricultural and forestry sectors are actually benefiting rural communities has received relatively little attention.

There has been some focus on this within the forestry sector, with research and advocacy work by civil society, as well as government initiatives aimed at enhancing the collection and distribution of benefits. These have met with some success, but in many countries, governments and citizens are not benefiting to the extent that they should from the sector.[56]

Commodity prices: structural issues are key

In the cases of cocoa and palm oil, improving the price of commodities has been a key area of intervention as part of efforts to tackle poverty amongst farmers and farming communities – not just the price of certified products but of the commodities in general. This has been a particular issue within the cocoa sector, where low prices of cocoa are a major factor undermining farmers' ability to earn a living income. In the palm oil sector, price fluctuations are the main concern, with smallholders facing poverty at times of low prices.[57]

One issue is that farmers have limited ability to negotiate the price for their crops, in part due to their weak position in the supply chain, which is often exacerbated by a lack of transparency with respect to prices. In the cocoa sector for example, the failure to publish buying prices, as well as opaque financial management by some cooperatives, has meant that certification premiums are often not passed on to farmers.[58]

There is also a more fundamental issue that limits the prices of these commodities, which is that these are set by international buyers. For example, in the cocoa sector the Ghanaian and Ivorian governments attempted to increase prices for farmers through the introduction of price premiums. However, the impact of this has been limited as the basic price dropped following their introduction.[59] With no mechanism in place to decide on production levels and to control supplies, producer countries have limited ability to influence prices. One proposed way forward has been to establish a living income benchmark,[60] and including such a standard has been called for within the EU's proposed legislation on corporate due diligence.[61]

In the case of beef, relatively little attention has been given to the question of price in relation to sustainability of the sector, even though low prices have meant that ranchers are often not able to earn enough to invest in their farms, or in some cases, that they are not able to continue with ranching. In the US, concern about the declining price that ranchers have been receiving for their cattle[62] has prompted the government to strengthen anti-trust measures and to support farmers in

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[56] Cerutti et al. (2021) Voluntary Partnership Agreements: Assessing impacts for better policy decisions. Forest Policy and Economics 124. https://doi.org/10.1016/j.forpol.2020.102386; Hoare, A.L. & T. Uehara (2022) Forest Sector Revenues in Ghana, Liberia and the Republic of the Congo. Chatham House. https://www.chathamhouse.org/2022/03/forest-sector-revenues-ghana-liberia-and-republic-congo/03-disbursement-forest-revenues

[57] Voora, V. et al. (2023) Palm oil prices and sustainability. Global Market Report, IISD & SSI. https://www.iisd.org/system/files/2023-06/2023-global-market-report-palm-oil.pdf

[58] EFI EU Redd Facility (2021) Sustainability initiatives in Ivorian and Ghanaian cocoa supply chains: benchmarking and analysis, https://efi.int/sites/default/files/files/flegtredd/Cocoa%20sustainability%20report.pdf; Ruf, F., et al. (2019) Des certifications inutiles? Les relations asymétriques entre coopératives, labels et cacaoculteurs en Côte d'Ivoire' Revue Internationale Des Études Du Développement, 240: 31–61. https://doi.org/10.3917/ried.240.0031

[59] Odijie, M. (2021) Why efforts by Côte d'Ivoire and Ghana to help cocoa farmers haven't worked. The Conversation. 29 June 2021. https://theconversation.com/why-efforts-by-cote-divoire-and-ghana-to-help-cocoa-farmers-havent-worked-162845;

[60] Guarin, A. et al. (2022)

[61] Solidaridad (2022) 10 changes needed for the EU's CSDD to have an impact on the ground, 6 April 2022, https://www.solidaridadnetwork.org/news/10-changes-needed-for-the-eus-csdd-to-have-an-impact-on-the-ground/

[62] Reuters (2021) Explainer: How four big companies control the U.S. beef industry. 17 June 2021, https://www.reuters.com/article/us-usa-meat-explainer-idCAKCN2DT182

getting a fair price.[63] Calls have also been made, both in the USA[64] and Brazil[65], for a more fundamental restructuring of the sector, through establishing locally-based food systems, as a strategy to improve the livelihoods of farmers and to reduce the risks of environmental damage and human rights abuses in supply chains.

Inclusive business models: the need for a broader definition

One area that has received much attention is that of establishing more inclusive business models and a variety of models and partnerships have been developed and implemented. While positive impacts on livelihoods, poverty and equity have been found in some cases, there are other examples that have had mixed or minimal impacts.[66]

Some approaches have been criticized for having a narrow approach to inclusion. For example, inclusion has at times been defined only with respect to the participation of farmers and smallholders in supply chains, rather than a broader meaning to include aspects such as participation in decision-making, and having the ability to capture value or to manage risks.[67] Thus, many approaches do not address the 'deep imbalances in information, power and resources' between farmers and businesses higher up the supply chain.[68]

Concerns have also been voiced that gender is often given little attention within such efforts, and so is not fully integrated into the design and implementation of projects, and that the particular challenges faced by the poorest farmers are often not adequately considered, leading to their exclusion from 'inclusive' approaches.[69]

The private-sector as an agent of change

In many countries and in many international institutions, large corporations have come to be regarded as the main agent of change to facilitate a transition towards more sustainable production practices. This is both because of their extensive presence in many rural landscapes as well as the limited capacity of some producer country governments – either because of a lack of resources or because of political choices regarding priorities.[70] However, there are some risks with this. One reason for this is that there are potential conflicts of interest between large businesses and smallholders. In the cocoa sector, for example, it has been observed that many private-sector led initiatives have a strong focus on increasing productivity, an approach that aligns with their wish to improve security of supply, while giving little attention to the price being paid for cocoa, which may be more effective at increasing farmer income.[71]

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[63] The White House (2021) Fact Sheet: Executive Order on Promoting Competition in the American Economy. 9 July 2021. https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/09/fact-sheet-executive-order-on-promoting-competition-in-the-american-economy/

[64] National Sustainable Agriculture Coalition (2022) 2023 Farm Bill Platform. https://sustainableagriculture.net/wp-content/uploads/2022/11/2023-Farm-Bill-Platform.pdf

[65] Sharma, S. (2017);

[66] Jezeer, R. et al. (2019) Improving smallholder inclusiveness in palm oil production — a global review. ETFRN News, 59. Tropenbos. https://www.tropenbos.org/resources/publications/etfrn+news+59:+exploring+inclusive+palm+oil+production; Nicolini, G. & A. Guarin (2022) Redefining smallholder farmer inclusion in modern value chains: three ways forward. IIED Blog. 15 Sept. 2022. https://www.iied.org/redefining-smallholder-farmer-inclusion-modern-value-chains-three-ways-forward

[67] Slingerland, M. et al. (2019); Ichsan, M. et al. (2021); Jezeer, R. et al. (2019); German, L.A. et al. (2020);

[68] Guarin, A. et al. (2022)

[69] Guarin, A. et al. (2022)

[70] German, L.A. et al. (2020)

[71] Cocoa Barometer, 2022

The increased embeddedness of multi-nationals within producer countries has also been identified as a potential risk to efforts to empower farmers.[72] Thus, the implementation of private sector sustainability initiatives risks exacerbating existing power asymmetries, for example, reducing the ability of farmers to choose what to grow, who to sell to, or at what price.[73] Value chains are typically managed for competitiveness and efficiency, and this is not necessarily compatible with the goal of inclusivity for smallholders.[74]

The private sector is also limited in its ability to bring about change. Thus, establishing truly inclusive and equitable forestry and agricultural sectors can only be achieved where the broader governance context is conducive to this – for example, with a supportive legal and policy framework, effective law enforcement, and mechanisms to enable participation and accountability.[75]

Models for strengthening rural economies

The four commodities provide livelihoods for millions of farmers and smallholders, and have helped to reduce poverty in many communities. It is also hoped that they will do so for the many millions of people who still live in poverty; this is a key objective behind the strategies to expand production of these commodities.

However, one criticism that has been made is that these strategies are often based on a model in which big business dominates, on the assumption that this provides the best route to economic development. Thus, large-scale agriculture and forestry holdings are prioritized on the assumption that these provide the most efficient means of providing jobs and boosting revenues.[76] However, the evidence for this is mixed. For example, in the case of oil palm production, its expansion has not always benefited the poorest farmers while communities not currently engaged in the market economy have at times been negatively affected.[77]

This approach also has potentially huge cultural implications for many rural communities, such as the loss of local and indigenous crops, impacts on culturally important landscapes, and disruption to beliefs and traditional ways of life. These have been largely overlooked in investigations into the impacts of expanding commodity production.[78]

Calls have been made for the instigation of national dialogues to explore the best ways forward, considering not just the balance to be sought between large-scale business and smallholders, but

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[72] Krauss, J.E. & S. Barrientos (2021); Obeng Adomaa, F., et al. (2022) Justice and Inclusiveness: The Reconfiguration of Global–Local Relationships in Sustainability Initiatives in Ghana's Cocoa Sector. *J Agric Environ Ethics* 35, 22, https://doi.org/10.1007/s10806-022-09895-2; Delabre et al. (2020) Strategies for tropical forest protection and sustainable supply chains. Sustainability Science (2020) 15:1637–1651 https://doi.org/10.1007/s11625-019-00747-z ; Maguire-Rajpaul, V.A. et al. (2022);

[73] Krauss, J.E. & S. Barrientos (2021); Obeng Adomaa, F., et al. (2022);

[74] German, L.A. et al. (2020); Diaw, C.M. et al. (2023) ACM and Model Forests, A new paradigm for Africa, Chapter 10, in: Colfer, C. & R. Prabhu (Eds.) Responding to Environmental Issues through Adaptive Collaborative Management: From Forest Communities to Global Actors. CIFOR-ICRAF. https://doi.org/10.4324/9781003325932

[75] German, L.A. et al. (2020)

[76] Li, T.M. (2022) Deforestation and development: A decolonial perspective from Indonesia. Blog, February 2022. https://decolonisegeography.com/blog/2022/02/deforestation-and-development-a-decolonial-perspective-from-indonesia/

[77] Santika, T. et al. (2019) Does oil palm agriculture help alleviate poverty? A multidimensional counterfactual assessment of oil palm development in Indonesia. World Development 120: 105-117, https://doi.org/10.1016/j.worlddev.2019.04.012; Solidaridad (2022) Palm Oil Barometer. https://www.solidaridadnetwork.org/wp-content/uploads/2022/09/Palm-Oil-Barometer-2022_solidaridad.pdf

[78] Schaafsma, M. et al. (2022) A framework to understand the social impacts of agricultural trade. Sustainable Development 31(1) pp.138-150. https://doi.org/10.1002/sd.2379

also the potential for alternative and new economic models.[79]

The political pillar of sustainability

A common theme for many of the sustainability initiatives is that their effectiveness is constrained by the broader governance context – for example, due to unclear or complex laws, weak law enforcement or a lack of transparency.[80] Recognition of this has led to the shift away from supply chain and single actor initiatives, and towards landscape and multi-stakeholder approaches.[81]

Experience from existing approaches highlight the challenges of ensuring that there is true multi-stakeholder engagement so that these processes do not reinforce or exacerbate existing inequalities.[82] They also highlight the importance of effective coordination of actors and interventions to ensure that they work in concert with each other.[83]

RECOMMENDATIONS

This research had two aims: to compile information to inform discussions within the FACT Dialogue related to sustainable production; and to consider whether a comparison of concepts of sustainability between different commodities could be of value in helping to identify areas for further engagement by Dialogue members.

Comparing sustainability concepts & approaches: what can be learnt?

From a rapid comparison of initiatives for the four commodities, as was implemented for this study, it is possible to identify the broad issues that are common priorities across these sectors and the potential areas of alignment. Those issues that are receiving little or no attention in certain sectors can also be identified, although determining whether this is because they have been overlooked or because they are not a problem within the sector requires further investigation.

However, any findings can be indicative only because of the high-level nature of the comparison. For example, it is often the broader categories of 'issue' that are highlighted as the core objectives or action areas, for example, climate change or ecosystem protection; other issues may be of critical importance to achieving these goals, but they might not be mentioned in the over-arching strategy documents, for example, reducing agrichemical usage as a key means of tackling climate change, or improving water management may be a priority for achieving the protection of ecosystems.

There are similar limitations with identifying areas of alignment. While the frequency with which issues are prioritised can give an indication of this, this is not always the case. For example, two initiatives may have the same objectives but differ on the best means of achieving these.

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[79] Diaw, C.M. et al. (2023); Prabhu, R. & C. Colfer (2023) Changing the game. An economy built around stewardship. Chapter 11, in Colfer, C. & R. Prabhu (Eds.) Responding to Environmental Issues through Adaptive Collaborative Management: From Forest Communities to Global Actors. CIFOR-ICRAF. https://doi.org/10.4324/9781003325932;

[80] Cerutti, P. & R. Nasi (2020) Sustainable forest management (SFM) of tropical moist forests: the Congo Basin. http://dx.doi.org/10.19103/AS.2020.0074.41; Nelson et al. (2020) Evaluating Transformative Change in Tropical Forest Landscape Initiatives. Evaluative Learning Team Briefing. LTS International, Aid Environment, NRI. https://www.evidensia.eco/resources/1112/evaluating-transformative-change-in-tropical-forest-landscape-initiatives/

[81] TradeHub (2022) How do we link local and national measures with international policy and private initiatives on sustainable trade for agricultural commodities? https://tradehub.earth/wp-content/uploads/2022/10/FAQ7-finalcopy.pdf

[82] Barletti, S. & A. Larson (2021) Introduction - Multi-stakeholder forums and the promise of more equitable and sustainable land and resource use: perspectives from Brazil, Ethiopia, Indonesia, and Peru. International Forestry Review 23 (S1), https://doi.org/10.1505/146554821833466086

[83] Lambin, E.F. & T. Thorlakson (2018); Wardell, D.A. et al. (2021)

Furthermore, two initiatives may choose to focus on different issues, not because they disagree on their importance, but because of their particular expertise or to avoid overlap in their work.

More in-depth analysis would enable a better understanding of the areas of alignment, however undertaking this for a broad range of commodities would be very time intensive. In addition, it would risk coming up with somewhat generic findings. In this study of four commodities, the issues identified as common priorities – ecosystem protection, workers' rights, livelihoods and traceability – are already fairly well documented. Thus, they could perhaps be more easily identified from a different methodology – for example, from interviewing a number of key experts within the different sectors or from a literature review.

Where the comparison is perhaps of more value is in enabling identification of those issues that may have been overlooked in certain sectors and so may warrant further attention. For such issues, establishing cross-sectoral exchanges of knowledge could be particularly valuable in helping to drive faster progress.

For the four commodities included in this study, the potential gaps identified were:

- Beef:
  - Social: community institutions and benefit sharing arrangements; equity and discrimination with respect to workers; food security;
  - Economic: tax compliance; commodity prices and sustainability premiums;
  - Political: legal framework and law enforcement; management of sectoral revenues;
- Cocoa:
  - Social: cultural issues;
  - Economic: tax compliance;
  - Political: institutional framework;
- Palm oil:
  - Social: cultural issues;
  - Economic: tax compliance;
  - Political: management of sectoral revenues;
- Timber:
  - Environmental: agrochemical management;
  - Social: community institutions; food security;
  - Economic: tax compliance;
  - Political: management of sectoral revenues.

The impacts of sustainability initiatives: potential areas of engagement

Based on the analysis of approaches to sustainability in the four sectors and of the findings from the literature review, a number of areas have been identified where future engagement within the FACT Dialogue could be valuable. This could entail international dialogues, exchange visits, commissioning of research and other activities.

Defining sustainable production & harvesting in the context of climate change. With the impacts of climate change becoming increasingly apparent, there is greater urgency to adapt forestry and agricultural systems to increase their resilience and adapt to new weather patterns. Potential issues for further exploration include:

- the resilience of existing agricultural and forestry practices and production systems to a changing climate, and exploration of potential new approaches, drawing on both scientific, local and indigenous expertise.

- the impact of bio-economy strategies on all aspects of sustainability and the development of rigorous standards and safeguards for these.

Land-use priorities for poverty reduction & climate resilience. Demand for land is set to increase, for agriculture, forestry and other land-uses, including mining and ecosystem protection for climate mitigation. Potential issues for further exploration include:
- the implications of intended future production levels of commodities for land-use, food security, climate strategies and economic trajectories.
- potential mechanisms and approaches to regulate levels of consumption and demand of different commodities, from the national through to the global level.

Resilient & diverse economic models. The 'small-scale sector' plays an important role in supporting thriving rural economies. However, in many countries the approach that is being pursued for the development of their agricultural and forestry sectors is through the expansion of large-scale systems of production. Potential issues for further exploration include:
- the impact of different development models on poverty, food security and climate resilience
- the implications of different development models for maintaining cultural diversity and integrity, including indigenous agricultural and forestry systems and the related knowledge systems and crops.
- the role of different policy tools and government interventions in shaping rural trajectories.

Strengthening the voice of smallholders & rural communities. The position of smallholders in the forestry and agricultural sectors remains marginalised, hindering their ability to influence decision-making. Potential issues for further exploration include:
- strategies and approaches to strengthening the capacity and voice of smallholders.

Inclusive business models. A diversity of models and approaches are being developed and implemented for the establishment of more inclusive business practices. Potential issues for further exploration include:
- the impact of different business arrangements, including contractual arrangements and financial models, on equity and inclusion, including consideration of how inclusion is being understood and defined.
- policy tools and mechanisms through which governments are supporting successful business models and scaling these up.

Commodity prices. Producers are vulnerable to price fluctuations and prices often do not reflect the environmental and social impacts of production. Potential issues for further exploration include:
- potential mechanisms to regulate prices to help ensure the provision of living incomes for farmers.
- mechanisms by which the sustainability of production can be reflected in the price of commodities.

Fiscal and benefit-sharing regimes. The generation of revenues from the agriculture and forestry sectors is an important means of supporting rural development within producer countries, however, these sectors are often not contributing as they should to government revenues. Potential issues for further exploration include:
- the design and implementation of fiscal regimes and how these influence the generation of government revenue.
- benefit-sharing mechanisms between governments and rural stakeholders, and between the private sector and rural stakeholders.

- approaches to improving transparency and accountability to strengthen the management of sectoral finances.
- the roles of government and the private sector in providing benefits and rural services to rural communities.

Poverty reduction. The role of production of these commodities in reducing poverty has been mixed and poverty levels remain high in many countries and areas of production. Potential issues for further exploration include:

- the impact of different production models on the various aspects of poverty, including income levels, access to education and health facilities, and voice and participation.
- the design of theories of change that can take into account the breadth of factors influencing poverty.

Transparency & traceability. A wide range of transparency initiatives are being implemented, these variously aiming to improve accountability, legal compliance and law enforcement, and to enable monitoring and evaluation. Potential issues for further exploration include:

- strategies and mechanisms to enhance transparency and traceability.

ANNEXES 1-4

Please find below the following:

- Annex 1 – Beef
- Annex 2 – Cocoa
- Annex 3 – Palm Oil
- Annex 4 – Timber

ANNEX 1 - BEEF

Introduction

This chapter reviews perspectives on, and approaches to, the sustainable production of beef, identifying areas of alignment and divergence regarding principles for sustainable production. It also provides the findings of a review of the literature related to the sustainable production of beef, summarizing the available evidence on progress with improving sustainability and the factors influencing this.

It focuses on Brazil, Uruguay and the USA as beef producers, and China and the EU as consumers. The USA and Brazil are the two largest producers of beef globally.[84] Uruguay produces a much smaller volume, but cattle farming is a major contributor to the economy with beef accounting for 20% of the country's total exports.[85] China is the largest importer of beef globally. The EU is ranked 8th, but is included because of its recent regulation on deforestation-free products.[86]

The beef industry is closely linked with the dairy, leather and soy industries, the latter as a source of cattle feed, and sustainability issues within these industries are similarly interconnected. The scope of this review is limited to the beef industry.

Definitions and approaches to sustainability

The main initiatives aimed at enhancing the sustainability of beef production, and their scope of engagement, are summarized in figure 1. Their sustainability objectives and priorities for intervention are listed in the attached matrix.

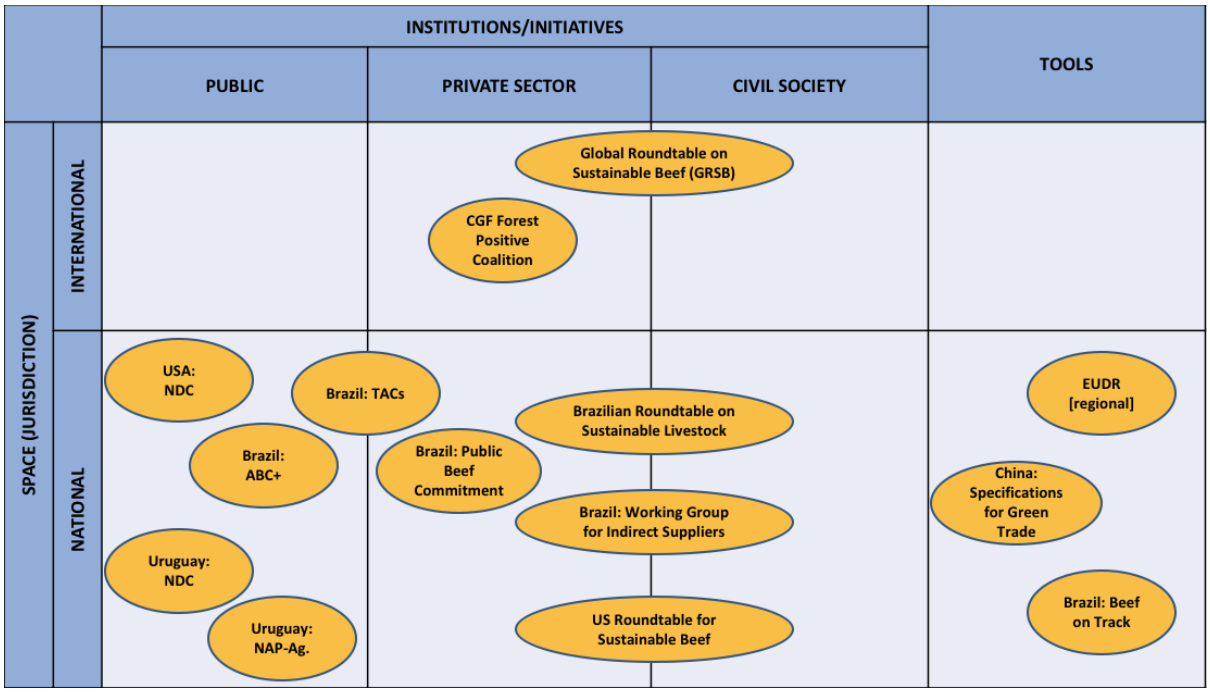

Figure 1: Beef sustainability initiatives & tools covered in this report

[84] https://ourworldindata.org/meat-production
[85] INAC (2021) Uruguay beef and sheepmeat industry. https://uruguayanmeats.uy/wp-content/uploads/2021/07/INAC_Factsheet-2021-26_7.pdf
[86] https://beef2live.com/story-world-beef-imports-ranking-countries-0-106900

International level: multi-stakeholder & private-sector initiatives
At the international level, the private sector and civil society have been the main actors, with no government-led initiatives focused solely on beef.

The **Global Roundtable for Sustainable Beef (GRSB)**[87] has members from the private sector (from across the beef supply chain) as well as civil society and national roundtables, these representing 24 countries. The national roundtables include those in Brazil (from which the GRSB drew lessons and built on) and the USA (these both described below).

Established in 2012, the mission of the GRSB is to 'advance, support, and communicate continuous improvement in sustainability of the global beef value chain through leadership, science, and multi-stakeholder engagement and collaboration'. It developed a guiding framework for defining sustainable beef, with the aim of providing 'a common baseline understanding of sustainable beef that national roundtables and other initiatives can use to meet their needs'.[88] The principles for sustainability encompass: natural resource management and ecosystem health; human rights and community relations and impacts; animal health and welfare; food safety and quality; and efficiency and innovation.

In 2021 the GRSB established 3 sustainability goals for its global network: [89]
- Provide cattle with a good quality of life and an environment where they can thrive
- Globally reduce the net warming footprint of each unit of beef by 30% by 2030, on a pathway to climate neutrality.
- By 2030, GRSB and its members will ensure the beef value chain is a net-positive contributor to nature.

In support of its goal to move towards climate neutrality, in 2022, guidelines were published for calculating the carbon footprint of beef production.[90]

The Consumer Goods Forum is a global organization for consumer goods retailers and manufacturers. One of its priorities is to accelerate efforts to halt deforestation and forest degradation from supply chains, which is being pursued by the **Forest Positive Coalition**, a group of 21 companies.[91] Within this the beef working group has developed a beef roadmap, this setting out a series of commitments and proposed actions whereby its members could help drive change.[92] These focus on reducing deforestation and degradation, as well as reducing the risks of human rights violations and of land conflict with indigenous peoples and local communities.

National strategies
Within **Brazil** there are a large number of initiatives focused on sustainable beef and livestock. The agricultural sector is prioritized within the country's climate strategies, including its Nationally Determined Contribution (NDC) and National Adaptation Plan (NAP). Central to the implementation of both of these policies is the Brazilian Plan for Adaptation and Low Carbon Emission in Agriculture:

[87] https://grsbeef.org/
[88] https://wa.grsbeef.org/resources/Documents/Principles%20and%20Criteria/GRSB_Principles_F.pdf
[89] GRSB Global Beef Sustainability Goals, V1/5.31.2021/100. Available at: https://grsbeef.org/sustainability-goals/
[90] https://grsbeef.org/grsb-beef-carbon-footprint-guideline/
[91] https://www.theconsumergoodsforum.com/environmental-sustainability/forest-positive/key-projects/coalition-wide-actions/
[92] https://www.theconsumergoodsforum.com/wp-content/uploads/2022/02/CGF-FPC-Beef-Roadmap-EN.pdf

Strategic Vision for a New Cycle (ABC+ 2020-2030)[93] – this was preceded by the ABC Plan for 2010-2020.

The broad aim of the ABC+ plan is to strengthen the country's position as a 'sustainable powerhouse' for sustainable, resilient and productive farming systems. A strong emphasis is given to the need to improve the resilience of the country's agricultural systems due to the impacts of climate change. It is based on 3 pillars: an integrated landscape approach; the synergy of adaptation and mitigation strategies; and fostering adoption and maintenance of Sustainable Systems, Practices, Products and Production Processes.

Specific to the beef sector, a number of companies operating in the Legal Amazon have made voluntary commitments as well as formal agreements to reduce their impacts on forests and address land-use conflicts. These include the 2009 Public Beef Commitment[94], signed by the 3 largest meat processing companies in Brazil, and a series of 'Terms of Adjustment of Conduct' (TAC) agreements made between companies and the Federal Public Prosecutor's Office. Both the Commitment and TACs require companies not to source cattle and their products from farms linked with deforestation, invasion of indigenous lands and protected areas, and use of slave labour.[95]

To support compliance with these agreements, the Beef on Track initiative (Boi na Linha)[96] was established by the NGO Imaflora in partnership with the Federal Prosecutor's office. It provides technical guidance and support, and has developed a 'Monitoring Protocol for Cattle Suppliers in the Amazon' and an 'Audit Protocol', to support compliance by the signatory companies.[97] A voluntary monitoring protocol for cattle suppliers has also been developed by civil society for the cerrado biome, aimed at supporting those companies seeking to improve their sustainability.[98]

The Brazilian Roundtable on Sustainable Livestock is a multi-stakeholder organization, with members from the private sector, research institutions and civil society.[99] It was founded in 2009 in response to national and international concern about impacts on deforestation and biodiversity. Its mission is to foster the development of sustainable livestock through chain articulation, continuous improvement and information dissemination. It has five working groups, these focusing on: land, climate, traceability, payment for environmental services and animal welfare. Its activities have included the development of the 'Guide of indicators on sustainable livestock' to assess the sustainability of operations, based on Brazilian law, good practice protocols and international standards.[100]

The Working Group for Indirect Suppliers, an initiative established in 2015, includes members from the private sector and civil society. It has been working to develop good practices for monitoring indirect suppliers and support their implementation.[101]

In **Uruguay**, the beef sector is as an important source of the country's greenhouse gas emissions.

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[93] Ministério da Agricultura do Brasil (2021) Brazilian Plan for Adaptation and Low Carbon Emission in Agriculture: Strategic Vision for a New Cycle (ABC+ 2020-2030). DOI:10.13140/RG.2.2.18326.88640

[94] https://www.beefontrack.org/wp-content/uploads/2022/10/Beef-Public-Commitment.pdf

[95] MPF & Imaflora (2021) Monitoring Protocol for Cattle Suppliers in the Amazon, Version 1.1. 22 November 2021. https://www.beefontrack.org/publications/

[96] www.boinalinha.org/; https://www.beefontrack.org/

[97] MPF & Imaflora (2021) Monitoring Protocol for Cattle Suppliers in the Amazon, Version 1.1. 22 November 2021. https://www.beefontrack.org/publications/

[98] https://www.proforest.net/news-events/news/the-new-voluntary-monitoring-protocol-for-cattle-suppliers-in-the-cerrado-14111/

[99] https://pecuariasustentavel.org.br/en/

[100] https://www.gips.org.br/

[101] https://gtfi.org.br/en/

This is reflected in the country's NDC, which includes the objective to reduce the intensity of emissions resulting from beef production.[102] Mitigation measures include the improvement of management practices of pastures to enhance soil organic carbon sequestration, a genomics programme to reduce methane emissions from cattle, and research into the links between animal health and methane emissions.

Furthermore, the National Adaptation Plan to Climate Variability and Change for the Agriculture Sector of Uruguay (NAP-Ag)[103] aims to improve the livelihoods of rural populations through the adoption of sustainable animal and plant production systems that are less vulnerable to the impacts of climate variability and change. The Plan seeks to:

- develop and adopt animal and plant production systems that are less vulnerable to impacts of climate variability and change;
- preserve agroecosystems and their services;
- improve the livelihoods of rural populations; and
- strengthen institutional capacities for the management of these sustainable and adapted production systems.

The World Bank is supporting the government's efforts to enhance sustainability in Uruguay's livestock sector, through helping farmers adopt climate-smart practices and the development of a guide for investing in sustainable livestock.[104]

The climate policies of the **USA** also recognize the contribution of the livestock sector to the country's emissions. In its NDC the government commits to the 'scaling of climate smart agricultural practices (these including rotation grazing) and to providing programmes aimed at improving agricultural productivity while also reducing agricultural methane and N_2O emissions.'[105]

The US Roundtable for Sustainable Beef has members from the private sector and civil society.[106] Its mission is to 'advance, support and communicate continuous improvement of sustainability across the U.S. beef value chain.' To help achieve this, it has identified 6 goals for the US beef supply chain:

1. to achieve climate neutrality by 2040.
2. to maintain and improve grazing lands under the care of U.S. beef producers.
3. to improve water management strategies and improve water quality by 2050.
4. to continuously improving the safety, development and well-being of individuals working throughout the industry.
5. to improve animal health and well-being.
6. to improve efficiencies, enhance product value and increase demand, which collectively will enable operations and businesses to maintain and improve individual and community financial health.

Certification schemes & policy tools

There is no international certification scheme for beef, but at the national level, a range of standards and certification schemes have been developed.

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[102] 2nd NDC, December 2022; https://unfccc.int/sites/default/files/NDC/2022-12/Uruguay%20Segunda%20CDN.pdf

[103] Executive Summary, 2019, https://www4.unfccc.int/sites/NAPC/Documents/Parties/NAP%20agriculture%20Uruguay%20executive%20summary%20ENG.pdf

[104] https://www.worldbank.org/en/topic/agriculture/brief/moving-towards-sustainability-the-livestock-sector-and-the-world-bank

[105] NDC, 2022. https://unfccc.int/sites/default/files/NDC/2022-06/United%20States%20NDC%20April%2021%202021%20Final.pdf

[106] https://www.usrsb.org/

In Brazil, protocols and a certification system for carbon neutral Brazilian beef (CNBB) and low carbon Brazilian beef (LCBB) have been developed by Embrapa, the national agricultural research institute.[107] This has been part of the agency's work to implement the country's ABC+ strategy through reducing emissions from the sector. The Pará state government, together with the Federal University of Minas Gerais, has developed the Selo Verde (Green seal) platform to ensure traceability of the livestock production chain within the state. It aims to both support producers in registering their properties, and enable monitoring of compliance with environmental and labour laws, with labelling of those products that are compliant.[108]

In the US, there are a wide range of certification systems, these including grass-fed[109], organic[110], low carbon[111] and animal welfare approved.[112] In Uruguay, there are certification systems for carbon neutral beef,[113] natural meat[114] and regenerative beef[115].

These various schemes have been developed partly in response to the growing demands from international markets and investors for more sustainably produced beef, and in particular, deforestation-free and low carbon beef.

A number of countries have been considering market regulations relevant to beef. Considered in this report is the EU Regulation on Deforestation Free Supply Chains (EUDR). The EUDR, which came into force in 2023, applies to cattle and six other commodities, and prohibits placing these on the market if their production has caused deforestation or forest degradation or has not been in compliance with the law.[116]

China has not introduced legislation, but the private sector has made a series of commitments to promote sustainable beef production. These have included the development of 'Specifications for Meat Industry Green Trade' by the China Meat Association, working with WWF, which were published in 2021.[117] China's Council for International Cooperation on Environment and Development (CCICED) has a task force on sustainable supply chains, which recently recommended the establishment of a trade agreement with Brazil on sustainable beef.[118]

Shifts in approach, and areas of alignment and divergence

Before comparing approaches to sustainability in the beef sector, a few provisos should be mentioned. Most of the initiatives covered within this review are at the national level. Consequently,

[107] https://www.embrapa.br/en/busca-de-noticias/-/noticia/61446348/new-low-carbon-brazilian-beef-protocol-allows-increased-stocking-rates-with-sustainability; Macedo, M. et al. (2021) Low Carbon Brazilian Beef Platform. 2nd World Congress on Integrated Crop-Livestock-Forestry Systems, 4-5 May 2021; https://www.researchgate.net/publication/355056343_LOW_CARBON_BRAZILIAN_BEEF_PLATFORM/link/615ba98f622f1852244ff519/download

[108] https://www.semas.pa.gov.br/seloverde/ & https://csr.ufmg.br/csr/wp-content/uploads/2021/06/FinancialTimes_SeloVerde-Brazil-plan-to-thwart-cattle-laundering.pdf

[109] https://www.americangrassfed.org/about-us/our-standards/

[110] https://truorganicbeef.com/pages/our-certifications

[111] https://www.lowcarbonranch.com/

[112] https://agreenerworld.org/certifications/animal-welfare-approved/standards/beef-cattle-and-calves-standards/

[113] https://www.gub.uy/ministerio-ambiente/comunicacion/noticias/primer-sello-carne-carbono-neutral-del-uruguay

[114] https://www.inac.uy/innovaportal/v/9894/14/innova.front/programa-de-carne-natural-certificada-del-uruguay---pcncu

[115] https://rurales.elpais.com.uy/mercados/uruguay-obtiene-la-primera-verificacion-internacional-de-carne-vacuna-de-origen-regenerativo

[116] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1115

[117] https://accountability-framework.org/news-events/news/chinese-meat-industry-pursuing-sustainable-development-with-new-accountability-framework-aligned-green-trade-specifications/

[118] https://cciced.eco/research/special-policy-study/sps-trade-and-sustainable-supply-chains/

these reflect the particular context of each of the three countries covered. Furthermore, a greater number of Brazilian initiatives are included within the study – five Brazilian initiatives are reviewed in this study, compared to two for both Uruguay and the US – this partly a reflection of the wealth of initiatives that are being implemented in Brazil. Consequently, the assessment of the frequency with which issues are highlighted is skewed towards the Brazilian context.

Shared priorities

Despite the different national contexts, there are two issues that are prioritised in all three countries – ecosystem protection and management, and climate change. These are of course, closely linked, with the protection and improved management of ecosystems playing a central role in reducing GHG emissions and/or improving resilience to climate change.

In the case of Brazil, most attention is on ecosystem protection – primarily of forests, but there has been growing attention to savannah ecosystems. In Uruguay and the USA, the main focus is on management of natural grasslands. In all three countries, improved management of both natural grasslands and of pastures is also prioritized with the aim of improving productivity. Of the areas of intervention, improving agricultural practices is most commonly prioritised.

While most initiatives focus on reducing GHG emissions, attention to climate adaptation and resilience has increased in recent years. For example, Brazil's ABC+ strategy, which is for the decade 2020–2030, gives greater emphasis to adaptation than its predecessor.

In comparison to the attention given to these environmental aspects of sustainability, far less is given to the social aspects. For example, many of the frameworks and guidance documents for beef sustainability in the US include far fewer criteria and indicators on social issues compared to environmental issues.[119] Similarly, the various roundtables for sustainable beef give less attention to these issues,[120] although there have been some shifts in this, for example, in the case of the Brazilian roundtable.[121] Of the issues covered, workers' rights and land and resource rights predominate, although this mainly reflects approaches in Brazil. Here initiatives are primarily focused on slave labour and on the rights of indigenous peoples.

Regarding economic issues, the provision of livelihoods is most commonly cited. Some attention is given to prices in the sector, focused on expanding mechanisms that would provide financial incentives for sustainable production.

Considering the political aspects, traceability and transparency within supply chains is frequently prioritized, as is legal compliance by the private sector.

Gaps

The comparison of high level objectives highlighted a number of issues that are being given little attention. With respect to environmental issues, the management of waste and chemicals, and biodiversity protection, are only specifically mentioned by a couple of initiatives. However,

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[119] Gosnell, H. et al. (2021) Taking Stock of Social Sustainability and the U.S. Beef Industry. *Sustainability 13*(21), 11860; https://doi.org/10.3390/su132111860; Ahlering, M. et al. (2021) A Synthesis of Ranch-Level Sustainability Indicators for Land Managers and to Communicate Across the US Beef Supply Chain. Rangeland Ecology & Management 79: 217-230, https://doi.org/10.1016/j.rama.2021.08.011

[120] Buckley, L. et al. (2019) Pursuing sustainability through multi-stakeholder collaboration: A description of the governance, actions, and perceived impacts of the roundtables for sustainable beef. World Development 121: 203-217, https://doi.org/10.1016/j.worlddev.2018.07.019

[121] Hajjar, R. et al. (2019) Scaling up sustainability in commodity agriculture: Transferability of governance mechanisms across the coffee and cattle sectors in Brazil. Journal of Cleaner Production 206: 124-132, https://doi.org/10.1016/j.jclepro.2018.09.102

biodiversity is of course integral to ecosystem protection and managing pollution is an important element of agricultural practices. Both of these are frequently prioritized, and so waste management and biodiversity are probably being addressed as part of interventions in these areas.

Regarding social issues, impacts on rural communities and on culture are given little attention, these only being noted by the Global Roundtable on Sustainable Beef in their criteria for sustainable beef. Where workers' rights are a priority, no specific mention is made of equity and discrimination, for example, against marginalized groups or women.

With respect to economic issues, compliance with taxes is not prioritized by any of the initiatives reviewed, although within Brazil there has been a focus on legal compliance, of which payment of taxes would be a part. Investment (this including access to credit and investments in sustainability measures) is also not explicitly targeted, although a number of initiatives do aim to strengthen the livelihoods of farmers, and so it is likely that such elements would be included within this.

Regarding political issues, financial management within the sector is not prioritized. Furthermore, while legal compliance is prioritized, there is no specific mention of law enforcement nor of legal and policy reform.

	ENVIRONMENTAL	SOCIAL	ECONONOMIC	POLITICAL
ISSUES MOST FREQUENTLY PRIORITISED	Ecosystem protection & management (forests)	Land & resource rights	Livelihoods	Transparency
	Climate mitigation	Workers' rights		Legal compliance
	Animal welfare			
ISSUES SOMETIMES PRIORITISED	Restoration	Communities (social infrastructure)	Investment	Participation in policy-making
	Water management	Culture		Research & training
	Soil conservation			Institutional framework
	Waste & chemicals			
	Climate resilience			
	Biodiversity protection			
ISSUES NOT PRIORITISED		Equity & discrimination	Taxes	Law enforcement
		Community institutions & benefit sharing	Prices & premiums	Legal & policy framework
		Food security		Financial management

Table 1: Frequency of issues cited as priority objectives in beef sustainability initiatives
Key: Issues most frequently prioritised – those listed more than 5 times; Issues also prioritised – those listed between 1 and 5 times;

	ENVIRONMENTAL	SOCIAL	ECONONOMIC	POLITICAL
ACTIONS MOST FREQ	Agricultural practices (land management)		Training & outreach to farmers	Information dissemination (to markets)

			Developing finance mechanisms	Improving sectoral data & information
				Implementing traceability systems
ACTIONS ALSO PRIORITISED	Agricultural practices (herd management)		Improving market access / share	Monitoring impacts
	Implementing jurisdictional approaches			Research

Table 2: Frequency of actions cited as priority areas for intervention in beef sustainability initiatives
Key: Actions most frequently prioritised – those listed more than 5 times; Actions also prioritised – those listed between 1 and 5 times

Literature review: summary of evidence on level of implementation & impact

The literature review focused on the evidence for progress with addressing ecosystem protection and management, climate change and workers' rights. As noted earlier, the literature review was not comprehensive and the inclusion of only English language material – and so the findings presented here are indicative only.

Impact: evidence for achievement of their social, environmental & economic objectives

Ecosystem loss and degradation due to cattle ranching have been, and remain, problematic in all three countries. While most attention has been given to its role in driving deforestation, particularly in Brazil's Amazon region, cattle ranching has also had severe impacts on natural grasslands.

With respect to deforestation, in Brazil, cattle ranching has been a major driver of deforestation in the Amazon region as well as in the country's dry forest biomes. Deforestation rates did decline over the period 2004-2014, however, the contribution of initiatives within the beef sector to this was minimal. Thus, while the 2009 Beef Commitment was found to have reduced deforestation in those ranches that supplied directly to the signatory firms, this was not the case amongst indirect suppliers. Consequently, at the regional level implementation of this commitment had minimal impact on rates of forest loss.[122] Over the last decade, deforestation in beef supply chains has continued to be documented[123] and was reported to have increased over the period 2019 to 2021.[124]

[122] Barreto, P., et al. (2017) Will meat-packing plants help halt deforestation in the Amazon? (p. 158). Belém: Imazon. https://imazon.org.br/en/publicacoes/will-meat-packing-plants-help-halt-deforestation-in-the-amazon/; Gibbs, H. et al. (2015) Did Ranchers and slaughterhouses respond to zero-deforestation agreements in the Brazilian Amazon? Conservation Letters, 9(1): 32-42, 10.1111/conl.12175; Shimada, J. & D. Nepstad (2018) Beef in the Brazilian Amazon. Profor, World Bank. https://www.profor.info/sites/profor.info/files/Beef_Case%20study_LEAVES_2018.pdf; TFA (2022a) Targeted Technical Expert Discussions (TTED) on Commodity-Driven Deforestation and Sustainable Production in Brazil and Colombia. Summary Report, November 2022. https://www.tropicalforestalliance.org/assets/Uploads/TTED-final-report-ENG_2003-Latest.pdf

[123] Greenpeace (2020) How JBS is still Slaughtering the Amazon, https://www.greenpeace.org.uk/resources/industrial-meat-deforestation-jbs/; Rajao, R. et al. (2020) The rotten apples of Brazil's agribusiness. Science 369 (6501): 246-248, DOI: 10.1126/science.aba664; Skidmore, M.E. et al. (2021) Cattle ranchers and deforestation in the Brazilian Amazon: Production, location, and policies. Global Environmental Change 68, https://doi.org/10.1016/j.gloenvcha.2021.102280;

[124] Mighty Earth (2021) Mighty Earth's new monitoring data reveals deforestation connected to soy trader and meatpackers in Brazil more than doubled over two-year period. 28 April 2021, https://www.mightyearth.org/2021/04/28/mighty-earths-new-monitoring-data-reveals-deforestation-connected-to-soy-trader-and-meatpackers-in-brazil-more-than-doubled-over-two-year-period/

The impacts of ranching on native grasslands include their degradation (due to poor management practices, invasion of non-native species and climate change) and their conversion to cultivated pasture (i.e. with planted grasses). These phenomena are taking place in all three of the countries included in this report.

In Brazil, the proportion of cultivated pastures has been increasing for several decades – in 2015, 60% were cultivated and 40% were native grasslands.[125] About half of this total area is estimated to be degraded.[126] Considerable effort has been put into restoring these and improving their productivity, including under the country's climate strategies for the agriculture sector, the ABC Plans. These have seen some success. For example, the proportion of degraded pasture was reported to have declined over the period 2010-2018. However, this reduction was only partly due to improved agricultural practices and land management. Additional factors were that some of the most degraded lands were converted to crops and that new areas of native grassland were converted to cultivated pasture.[127]

In both Uruguay and the USA the majority of pasture is native grassland – 80% in Uruguay.[128] (No national level data were found for the USA.) However, similar challenges are faced in these two countries, with degradation of native pastures and their conversion to cropland. For example, in the USA, over the last 15 years extensive areas of native grasslands in the Northern Great Plains, which cover both the US and Canada, have been converted to cropland, and at times this has reportedly been at a rate similar to that of deforestation in the Brazilian Amazon.[129] In Uruguay, increased stocking of some native grasslands has led to their degradation, while others are being converted either to cultivated pastures or other crops.[130] There have been successful initiatives to restore grasslands and improve their productivity in both Uruguay[131] and the USA[132], but these have yet to be implemented at sufficient scale.

Much of the focus to improve agricultural practices has been on reducing greenhouse gas emissions (GHG), although with ranching increasingly being affected by climate change, the need for greater

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[125] Pedreira, B.C. et al. (2015) Use of grazed pastures in the Brazilian livestock industry: a brief overview. International Conference on Forages in Warm Climates. https://www.researchgate.net/publication/280492425_Use_of_grazed_pastures_in_the_Brazilian_livestock_industry_a_brief_overview

[126] Libera, C. et al. (2020) Brazil's Path to Sustainable Cattle Farming. Bain & Company, 29 Oct. 2020, https://www.bain.com/insights/brazils-path-to-sustainable-cattle-farming/; Santos, C.O.d.; et al. (2022) Assessing the Wall-to-Wall Spatial and Qualitative Dynamics of the Brazilian Pasturelands 2010–2018, Based on the Analysis of the Landsat Data Archive. Remote Sensing,14, 1024; https://doi.org/10.3390/rs14041024

[127] Santos, C.O.d.; et al. (2022)

[128] Lanfranco, B. (2021) Uruguay: a sustainable green country for the past 400 years. Conference: Agro Talks Around the World. Hohenheim University. Germany, May 2021. https://www.researchgate.net/publication/356354826_Uruguay_a_sustainable_green_country_for_the_past_400_years/link/61964e50d7d1af224b02c54a/download

[129] WWF Sustainable Ranching Initiative, https://www.worldwildlife.org/projects/sustainable-ranching-initiative

[130] Modernel, P. et al. (2016) Land use change and ecosystem service provision in Pampas and Campos grasslands of southern South America. *Environmental Research Letters* 11 113002 DOI: 10.1088/1748-9326/11/11/113002; Ruggia, A. et al. (2021) The application of ecologically intensive principles to the systemic redesign of livestock farms on native grasslands: A case of co-innovation in Rocha, Uruguay. *Agricultural Systems*, 191:103148, https://doi.org/10.1016/j.agsy.2021.103148; Tittonell, P. (2021) Beyond CO_2: Multiple Ecosystem Services From Ecologically Intensive Grazing Landscapes of South America. Front. Sustain. Food Syst., 22 June 2021, Sec. Agroecology and Ecosystem Services 5, https://doi.org/10.3389/fsufs.2021.664103

[131] Jaurena, M. et al. (2021) Native grasslands at the core: A new paradigm of intensification for the campos of southern South America to increase economic and environmental sustainability. Frontiers in Sustainable Food Systems 5: 11, 10.3389/fsufs.2021.547834; Tittonell, P. (2021); Ruggia, A. et al. (2021);

[132] Spiegal, S. et al. (2020) Beef Production in the Southwestern United States: Strategies Toward Sustainability. Frontiers in Sustainable Food Systems, Volume 4, https://doi.org/10.3389/fsufs.2020.00114;

attention to climate resilience has been highlighted.[133] There has been extensive research in all three countries to explore the most effective strategies to reduce the intensity of emissions from beef production. These have shown that significant reductions in intensity can be achieved – as much as 50% from improved land management, and nearly 10% from efficiency improvements in herd management.[134]

In the USA, much of its beef production is already highly efficient in terms of GHG emissions, and it has been estimated to be amongst the most carbon intensive globally.[135] However, this has been achieved in part through using high levels of agro-chemical inputs and antibiotics, which have other environmental and social impacts. This highlights the trade-offs between the various aspects of sustainability that different modes of production can entail – although assessing these was beyond the scope of this review.[136]

With respect to **workers' rights**, breaches of these are reported in much of the beef sector. Abuse of workers has received the most attention in Brazil and in more recent years, the USA. In Brazil, the abolition of slave labour from supply chains was part of the Beef Commitment made in 2009, however, there have continued to be reports of violations of workers' rights.[137] In the USA, poor labour practices have also been documented. Reports have mainly related to workers in slaughterhouses,[138] particularly during the COVID pandemic,[139] but unsafe working practices have also been reported higher up the supply chain on feedlots for cattle.[140]

Challenges faced in achieving impact

While improvements have been seen in many parts of the sector, problems remain widespread. A range of challenges are identified in the literature that have hindered progress.

One important factor that has undermined efforts to improve the sustainability of beef production has been the **lack of traceability** in the sector. This is partly a reflection of the complexity of supply chains, as cattle are moved between different properties and facilities at different stages of their life.[141]

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[133] Holechek, J.L. et al. (2020) Climate Change, Rangelands, and Sustainability of Ranching in the Western United States. Sustainability 12(12), 4942; https://doi.org/10.3390/su12124942

[134] Cusack, D. F. et al. (2021) Reducing climate impacts of beef production: a synthesis of life cycle assessments across management systems and global regions. *Global Change Biology* 27, 1721–1736, DOI: 10.1111/gcb.15509

[135] US Cattle Production, Sustainability Overview, 2020. https://www.beefresearch.org/Media/BeefResearch/Docs/us-cattle-production-sustainability-overview_11-28-2020-101.pdf; https://www.beefresearch.org/programs/beef-sustainability/sustainability-quick-stats/us-vs-global-emission-intensity

[136] See for example, Castonguay, A.C., et al. (2023) Navigating sustainability trade-offs in global beef production. *Nature Sustainability* 6, 284–294 https://doi.org/10.1038/s41893-022-01017-0

[137] Reporter Brasil (2021) Slave labour in Brazil's meat industry. Monitor 8, January 2021, https://reporterbrasil.org.br/wp-content/uploads/2021/01/Monitor-8-Slave-labor-in-Brazils-meat-industry.pdf; Greenpeace (2020);

[138] Human Rights Watch (2019) When We're Dead and Buried, Our Bones Will Keep Hurting. Workers' Rights Under Threat in US Meat and Poultry Plants. 4 September 2019. https://www.hrw.org/report/2019/09/04/when-were-dead-and-buried-our-bones-will-keep-hurting/workers-rights-under-threat

[139] Chandar, V. (2020) COVID-19 hit U.S. meat, poultry plant workers hard in April, May: U.S. report, 7 July 2020, https://www.reuters.com/article/us-health-coronavirus-usa-meatprocessing-idUSKBN2482PN; Specht, J. (n.d.) Coronavirus in the Slaughterhouse. https://histecon.fas.harvard.edu/climate-loss/slaughterhouse/index.html

[140] Ramos, A.K. et al. (2022) Protecting Cattle Feedyard Workers in the Central States Region: Exploring State, Regional, and National Data on Fatal and Nonfatal Injuries in Agriculture and the Beef Production Sector. Journal of Extension 60(3): DOI: 10.34068/joe.60.03.13

[141] Ahlering, M. et al. (2021) A Synthesis of Ranch-Level Sustainability Indicators for Land Managers and to Communicate Across the US Beef Supply Chain. Rangeland Ecology & Management 79: 217-230, https://doi.org/10.1016/j.rama.2021.08.011

In Brazil, this has been a factor behind the failure of the large beef companies to tackle deforestation and labour abuses in their supply chains, although civil society has also questioned their level of engagement in these efforts – in 2017 Greenpeace suspended its involvement in the Beef Commitment for this reason.[142] The difficulties of tracking cattle through supply chains has been exacerbated by **poor transparency** of sectoral data. Thus, while there are various government databases in place, these are not joined up and the quality of data is often poor.[143] This has hindered the efforts of both law enforcement agencies and civil society to monitor activities, enabling forgery and fraud to proliferate.[144] Improvements have been seen but the need to establish a culture of transparency within government institutions has been highlighted.[145]

Another implication of the complexity of supply chains in the sector is that there is a disconnect between ranchers and the retailers and final consumers of beef. Consequently, **economic incentives** for ranchers to improve their practices are often absent or weak.[146] This has been suggested as one reason why certification has not been widely adopted in the sector – with no price premium available for sustainably produced beef (or these being low or intermittent), farmers are not willing or able to make the necessary investments to achieve certification.[147]

In addition, the basic **price for beef** is also insufficient to enable many farmers to reinvest in their farms and to adopt more sustainable practices. For example, the model adopted for Brazil's beef sector has been based on the expansion of large-scale agribusinesses and the export of lower-value-added products.[148] A similar model is in place in the USA, and rates of return for many ranchers are low.[149] In recent years concerns have been raised about unfair competition in the sector, evidenced by an increasing gap between the price of cattle and the price of beef.[150] To help address this, a Presidential Executive Order was passed in 2021, including measures to strengthen enforcement of the country's anti-trust law and to support farmers in getting fair contracts and prices.[151]

The low prices being received by farmers for their cattle is not only hindering their ability to implement more sustainable practices, but in many cases, is prompting them to leave the sector – either switching to other crops, or selling their land. This has been documented in all three countries. For example, in Uruguay, traditional livestock production systems are being replaced by fields for the production of crops, such as soy, wheat and maize;[152] in Brazil's pampa biome, these

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[142] https://www.greenpeace.org/static/planet4-international-stateless/2020/07/eb870452-greenpeacebrazilslaughterhouseannouncement.pdf

[143] Libera, C. et al. (2020); Valdiones, A.P. et al. (2021) Illegal Deforestation and Conversion in the Amazon and MATOPIBA: lack of transparency and access to information. ICV, Imaflora & Lagesa, with WWF & GEF support. https://www.icv.org.br/publicacao/illegal-deforestation-and-conversion-in-the-amazon-and-matopiba-lack-of-transparency-and-access-to-information/; Nakagawa, L. et al. (2021) Private governance initiatives and commodity production in Brazil: Roundtables and the socio-environmental commitments in beef and soybean production. CEBRAP Sustentabilidade. Working Paper 1(3) June 2021. https://cebrapsustentabilidade.org/assets/files/Cadernos_Cebrap_Sustentabilidade_n_3_2021.pdf#page=38

[144] Gibbs, H. et al. (2015);

[145] Valdiones, A.P. et al. (2021);

[146] Ahlering, M. et al. (2021);

[147] de Koning, P. (2020); Hajjar, R. et al. (2019) Scaling up sustainability in commodity agriculture: Transferability of governance mechanisms across the coffee and cattle sectors in Brazil. Journal of Cleaner Production 206: 124-132, https://doi.org/10.1016/j.jclepro.2018.09.102; Shimada, J. & D. Nepstad (2018);

[148] Libera, C. et al. (2020); Sharma, S. (2017) The Rise of Big Meat. Brazil's Extractive Industry. https://www.iatp.org/documents/rise-big-meat-brazils-extractive-industry-executive-summary

[149] Spiegal, S. et al. (2020);

[150] Reuters (2021) Explainer: How four big companies control the U.S. beef industry. 17 June 2021, https://www.reuters.com/article/us-usa-meat-explainer-idCAKCN2DT182

[151] The White House (2021) Fact Sheet: Executive Order on Promoting Competition in the American Economy. 9 July 2021. https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/09/fact-sheet-executive-order-on-promoting-competition-in-the-american-economy/

[152] Tittonell, P. (2021);

systems are being converted to produce soy or for forestry;[153] and in the USA, extensive areas of ranchland are being lost to urban expansion and commercial developments.[154]

Improving the productivity of ranching has been one response to this, with considerable resources invested in research, outreach and the provision of financing for farmers to enable them to **improve agricultural practices**. However, the political, economic and institutional support required for this has often been intermittent and unreliable.[155]

Furthermore, in many such interventions, there has been a strong focus on reducing carbon emissions and on increasing productivity, sometimes at the expense of other environmental issues and social issues.[156] For example, in Uruguay, agricultural policies have often focused on intensive livestock or grain production rather than supporting traditional systems, with negative social and environmental consequences.[157] The launch of Uruguay's National Plan for Agroecology in 2022[158] perhaps marks a shift away from this.

With respect to GHG emissions from the sector, while some reductions have been seen in the intensity of emissions from beef production, and there remains significant potential for further reductions, these will be more than cancelled out by the forecast rise in consumption.[159] A reduction in consumption and production will be required to reduce emissions. The private sector does not have the motivation to encourage this[160] and so achieving this will require action from governments, civil society and consumers.

Returning to the issue of outreach and training programmes, a further critique of these has been that they have tended to focus on the transfer of technology and expertise, rather than seeking to support and encourage local innovation[161] or to build on local knowledge and resources.[162] Thus, they focus on particular interventions, rather than taking a systems-based approach.[163]

Such an approach not only risks undermining traditional systems of farming, but can also favour larger farmers, as they tend to have more access to resources.[164] For example, in Brazil rural credit has been provided under the ABC Plans to enable farmers to invest in their farms,[165] however low rates of disbursement were reported in 2016 because of reported challenges for small farmers to

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[153] De Freitas, D.S. et al. (2019) Sustainability in the Brazilian pampa biome: A composite index to integrate beef production, social equity, and ecosystem conservation. Ecological Indicators 98, 317-326, https://doi.org/10.1016/j.ecolind.2018.10.012;

[154] GAP Initiative (n.d.) America's Disappearing Farm and Range Land. https://globalagriculturalproductivity.org/case-study-post/americas-disappearing-farm-and-range-land/

[155] Cusack, D. F. et al. (2021);

[156] Dick, M. et al. (2021). Environmental impacts of Brazilian beef cattle production in the Amazon, Cerrado, Pampa, and Pantanal biomes. Journal of Cleaner Production. 311. 127750. Doi: https://doi.org/10.1016/j.jclepro.2021.127750

[157] Tittonell, P. (2021);

[158] https://www.gub.uy/ministerio-ganaderia-agricultura-pesca/comunicacion/boletines/presentacion-del-plan-nacional-agroecologia; https://planagroecologia.uy/

[159] OECD-FAO Agricultural Outlook, 2022-2031, https://www.oecd-ilibrary.org/sites/ab129327-en/index.html?itemId=/content/component/ab129327-en

[160] Buckley, L. et al. (2019) Pursuing sustainability through multi-stakeholder collaboration: A description of the governance, actions, and perceived impacts of the roundtables for sustainable beef. World Development 121: 203-217, https://doi.org/10.1016/j.worlddev.2018.07.019

[161] Ruggia, A. et al. (2021);

[162] Pacheco, P. et al. (2017) Beyond zero deforestation in the Brazilian Amazon: Progress and remaining challenges to sustainable cattle intensification. CIFOR Infobrief. https://www.cifor.org/knowledge/publication/6394/

[163] Ruggia, A. et al. (2021);

[164] Pacheco, P. et al. (2017);

[165] TFA (2022a);

access these funds.[166] Similarly, research into changes in pasture quality in Brazil found that there had been fewer improvements amongst small farmers.[167]

As well as increasing and improving outreach and **support for small farmers**, there is also the need to review institutional and policy frameworks, which often favour the large-scale industry. In the USA for example, small farmers face significant barriers to accessing training, capital and insurance. To address this, a call has been made for strengthening local and regional food systems, including through providing technical assistance, scaling up credit, strengthening anti-trust enforcement, and developing local infrastructure.[168] Similarly in Brazil, a call for supporting agroecological family farms has been made, including through removing subsidies for large agri-businesses and supporting local meat production and processing.[169]

One factor that has been of critical importance in the success of efforts to improve the sustainability of beef production – both with respect to social and environmental issues – is **law enforcement**. As was noted earlier, there was a marked reduction in deforestation rates in Brazil during the period 2004-2014, and a key factor in this was strengthened law enforcement.[170] The following years saw a decline in political support for, and investment in, law enforcement, resulting in a surge in deforestation.[171] The recent change in government has seen attention return to law enforcement, and deforestation rates have declined since 2022.[172]

Weak enforcement has also undermined efforts to ensure that workers' rights are respected. In Brazil a key tool to address this is the 'dirty list' – a list of those companies found to have exploited their workers. Under the Beef Commitment, the signatory companies pledged not to source beef from any such companies. However, with a dramatic reduction in the number of inspections by enforcement officials over the last decade, fewer cases are being identified and so fewer companies are being listed.[173]

The USA has faced similar challenges, with under-resourcing of the government agency, OSHA, that is responsible for overseeing compliance with health and safety regulations. Cut-backs to its funding resulted in a reduction in the number of inspections it undertook over the period 2016-18.[174]

As noted above, a challenge for ranchers is the lack of a strong incentive for them to implement sustainable practices, with limited price premiums. An additional factor is the lack of **market demand** for sustainable beef. For example, in Brazil, the majority of beef production is for the domestic market, where demand for sustainable beef is relatively low[175]; while a large proportion of its exports are destined for markets that are also not demanding sustainability.[176]

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[166] Pacheco, P. et al. (2017);
[167] Santos, C.O.d.; et al. (2022);
[168] National Sustainable Agriculture Coalition (2022) 2023 Farm Bill Platform. https://sustainableagriculture.net/wp-content/uploads/2022/11/2023-Farm-Bill-Platform.pdf
[169] Sharma, S. (2017);
[170] Shimada, J. & D. Nepstad (2018);
[171] TFA (2022a);
[172] Deforestation in the Amazon rainforest continues to plunge, 8 September 2023, Mongabay. https://news.mongabay.com/2023/09/deforestation-in-the-amazon-rainforest-continues-to-plunge/
[173] Reporter Brasil (2021);
[174] Human Rights Watch (2019);
[175] Ermgassen, E. K. H. J. zu et al. (2020) The origin, supply chain, and deforestation risk of Brazil's beef exports. https://www.pnas.org/doi/full/10.1073/pnas.2003270117
[176] Hajjar, R. et al. (2019);

This is shifting, with an increasing number of campaigns targeted at Brazilian consumers as well as initiatives by retailers.[177] There could also be a further shift if the Chinese guidelines for 'green trade' in meat are implemented well. China is the largest export market for beef from Brazil as well as for Uruguay, and it is the third largest for the USA. Thus, concerted action in China would have a significant impact on the market. However, whether the guidelines will achieve this is uncertain because of their voluntary nature. Furthermore, their effectiveness has been questioned as they call for a boycott of beef from high-risk areas and so they don't create incentives for compliance or improvement in these regions.[178]

Gaps & opportunities

Based on the literature review, a number of issues can be identified where further attention could be useful.

- Low prices for beef are hindering the ability of farmers to adopt more sustainable practices and in some cases, to remain in the sector. Exploration is needed of potential measures to support fair competition and help ensure that ranchers receive fair prices for their cattle.
- An additional strategy to increase prices for farmers, while also potentially reducing the risks of labour exploitation and poor animal welfare, is through promoting local and regional food systems for the production and consumption of beef. Exploration is needed of strategies and policies that can support the establishment of such systems.
- Many traditional ranching systems are being lost to more profitable land uses. Exploration is needed to find ways of increasing the economic incentives for these, given their range of social and environmental values.
- More support is needed for small and medium farmers to enable them to implement more sustainable practices, including access to information, training, finance and insurance. Training and support services should build on local expertise and knowledge.
- Significant effort has been put into reducing the intensity of GHG emissions from the beef sector, and a similar effort is needed to explore and implement strategies to reduce the consumption of, and overall production, of beef globally.
- Many natural ranching systems are highly vulnerable to climate change, and so more attention is needed to enhance their resilience.
- Greater attention is needed of the social aspects of sustainability within the sector, including community welfare and cultural values.

[177] See for example, https://www.idhsustainabletrade.com/news/carrefour-brazil-group-and-idh-brazil-achieve-traceable-beef/

[178] TFA (2022b) Comparative Analysis of Sustainable Beef Protocols, Platforms, and Initiatives. https://www.tropicalforestalliance.org/assets/Uploads/TFA_Comparative-Analysis_200722_Final-v2.pdf

ANNEX 2 - COCOA

Introduction

This annex reviews perspectives on, and approaches to, the sustainable production of cocoa. It identifies areas of alignment and divergence regarding the principles for sustainable production. It also provides the findings of a review of the literature on the various initiatives, standards and certification schemes for cocoa, summarizing the available evidence on their impact and the factors influencing this.

It covers Ghana, Cote d'Ivoire and Peru. Ghana and Cote d'Ivoire are the two largest producers of cocoa globally. Peru is the 3rd largest producer in South America (after Ecuador and Brazil). It also covers the EU, as a consumer of cocoa.

The literature review focuses mainly on Ghana and Cote d'Ivoire, with only limited information on Peru. This is because the review was limited to English (and some French) language material.

Definitions and approaches to sustainability

A wide range of initiatives have been developed within the cocoa sector aimed at enhancing the sustainability of its production and of the sector as a whole. These include those led by governments, the private sector, civil society, as well as multi-stakeholder initiatives.

The main initiatives, and their scope of engagement, are summarized in figure 2. Their sustainability objectives and priorities for intervention are listed in the attached matrix.

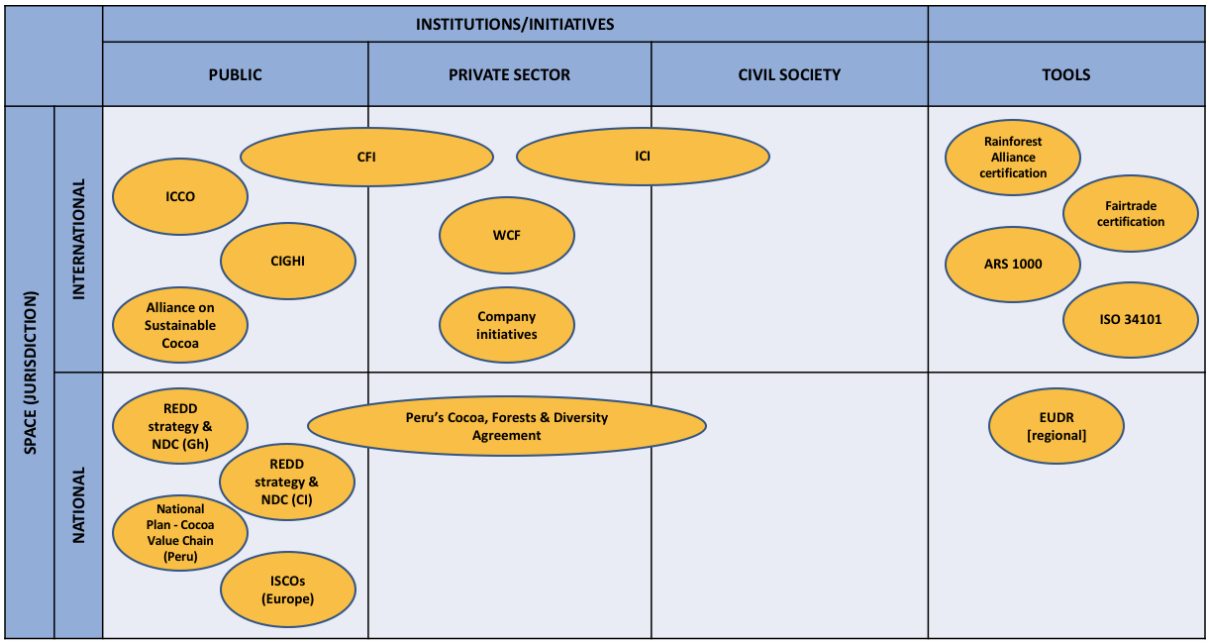

Figure 2: Cocoa sustainability initiatives & tools covered in this report

Inter-governmental initiatives

Inter-governmental initiatives include: the International Cocoa Organisation (ICCO), an inter-governmental organization established under the auspices of the UN in 1973, comprised of 51

member countries[179]; the Cote d'Ivoire and Ghana Cocoa Initiative (CIGHCI)[180], a partnership between the two countries established in 2018; and the Alliance on Sustainable Cocoa[181], which brings together the EU, Cote d'Ivoire and Ghana. Complementary to the latter Alliance, the EU has established bilateral cooperation arrangements with these two countries under its 'Team Europe Initiative', these focusing on climate smart agriculture in the case of Ghana[182] and sustainable cocoa in the case of Cote d'Ivoire[183].

The ICCO is concerned with the sustainability of the sector as a whole. How this is conceived of has broadened over time and it has also been given greater priority.[184] Thus, the 2001 International Cocoa Agreement defined this as 'maintaining productivity at levels that are economically viable, ecologically and culturally acceptable through the efficient management of resources', while the subsequent agreement in 2010 added the need to consider living and working conditions as part of this.[185] In 2012, the Global Cocoa Agenda was agreed, setting out a roadmap to a sustainable world cocoa economy. This explicit mandate for sustainability is described as a 'breakthrough' by the ICCO.[186]

Much of the ICCO's work is focused on improving policy dialogue and collaboration internationally, as well as enhancing the quality of information on the sector. Poor data and knowledge of the sector is considered a major hindrance to the development of rational policies for the sector.

The concept of a sustainable cocoa sector is based on the assumption that achieving this is dependent on its growth. This is indicated by the priority areas of its current strategic plan, for 2019-24[187], which include the promotion of the consumption of cocoa products.

Poverty is considered to lie at the core of the challenges faced by the sector, and reflecting this, the focus of its work is on the economic and social aspects of sustainability. But the interlinked nature of these with environmental aspects is recognized. Thus, it is noted that farmers are not able to achieve a decent standard of living from cocoa, and that this has resulted in deforestation due to the expansion of farms, as well as a lack of investment in, and abandonment, of farms.[188]

The strategic plan lists the following priority areas related to production:

- cocoa farmers: Improve significantly the living income and the working conditions of cocoa farmers
- environmental sustainability: Improve the environmental footprint of the cocoa supply chain, in the global context of climate change
- cocoa development: Implement and support national cocoa development plans, embedded in holistic rural development plans

The **CIGHCI** was established in 2018 in order to 'to correct the market failures one by one, so that

[179] https://www.icco.org/
[180] https://www.cighci.org/
[181] https://policy.trade.ec.europa.eu/news/eu-cote-divoire-ghana-and-cocoa-sector-endorse-alliance-sustainable-cocoa-2022-06-28_en
[182] https://europa.eu/capacity4dev/tei-jp-tracker/tei/ghana-smart-green-and-digital-recovery
[183] https://europa.eu/capacity4dev/tei-jp-tracker/tei/cote-divoire-sustainable-cacao
[184] Mithöfer, D. et al. (2017) Unpacking 'sustainable' cocoa: do sustainability standards, development projects and policies address producer concerns in Indonesia, Cameroon and Peru?, International Journal of Biodiversity Science, Ecosystem Services & Management, 13:1, 444-469, DOI: 10.1080/21513732.2018.1432691
[185] International Cocoa Agreement 2010. Geneva: United National Conference on Trade and Development. https://unctad.org/system/files/official-document/tdcocoa10d5_en.pdf
[186] See 'Our Vision & Mission', at: https://www.icco.org/about-us/international-cocoa-agreements.html
[187] https://www.icco.org/who-we-are/#vision
[188] https://www.icco.org/economy/#sustainability

the price reflects the social value of the product'.[189] Thus, it focuses primarily on the economic aspects of sustainability, with the objective to 'achieve remunerative prices and improve the livelihoods of cocoa farmers'. Like the ICCO, it also sees the expansion of cocoa consumption as one element of ensuring the sustainability of the sector.

Its vision is to provide decent wages to cocoa producers, contribute to the protection of forests and biodiversity, and be exemplary in terms of fundamental social and human rights. Tackling poverty however is considered as fundamental to achieving better social and environmental outcomes.

Under the partnership, Cote d'Ivoire and Ghana have been collaborating to explore mechanisms by which prices and farmer incomes could be enhanced, with the goal of establishing an 'economic pact'. A Living Income Differential (LID) was introduced in 2019, a premium payed by cocoa buyers, and since 2022 the two countries have also been publishing their baselines for the cocoa origin differential.

The **Alliance on Sustainable Cocoa**[190] was established in 2022, developing out of the EU Sustainable Cocoa Initiative[191]. Its stated aims are to:

- improve the incomes of cocoa farmers and close the living income gap;
- protect the environment and forests; and
- eliminate child labour in the cocoa sector.

Thus, the environmental aspects of sustainability – and specifically forests – are on a par with the economic and social aspects. Actions include: dialogues on cocoa prices and markets; establishing national traceability systems, and monitoring systems for child labour and deforestation; support for smallholders to enable compliance with the EU due diligence regulation on deforestation; support for agro-ecological approaches; and support for farmer organizations.

In the EU's bilateral cooperation with Ghana, as set out within its TEI, greater focus is given to the economic and social aspects. This aims to 'Enable more sustainable and inclusive agribusiness value chain in the cocoa sector', for which the indicator is the number of cocoa farmers with increased revenues. This is to be achieved through working with smallholders, to increase their sustainable production, access to markets and security of land.[192]

The TEI with Cote d'Ivoire has an exclusive focus on sustainable cocoa,[193] for which 4 pillars are identified:

- Economic sustainability, including: production management; fair prices; quality R&D; development of value chain; local transformation; financial inclusion;
- Social sustainability, including: fight against child labour; access to social protection; food security; migration
- Environmental sustainability, including: stop deforestation; environmental protection; agroforestry research; sustainable soil management
- Political sustainability, including: political management; governance; public financial management; land security; civil society.

[189] https://www.cighci.org/about-us/
[190] https://policy.trade.ec.europa.eu/news/eu-cote-divoire-ghana-and-cocoa-sector-endorse-alliance-sustainable-cocoa-2022-06-28_en
[191] https://knowledge4policy.ec.europa.eu/global-food-nutrition-security/topic/sustainable-food-systems/eu-sustainable-cocoa-initiative_en
[192] https://europa.eu/capacity4dev/tei-jp-tracker/tei/ghana-smart-green-and-digital-recovery
[193] https://europa.eu/capacity4dev/tei-jp-tracker/tei/cote-divoire-sustainable-cacao

Multi-stakeholder initiatives

Three multi-stakeholder initiatives are considered here, the Cocoa and Forests Initiative (CFI), Peru's Cocoa, Forests and Diversity Agreement and the International Cocoa Initiative (ICI). The first two of these focus on forests, and the ICI focuses on child and forced labour.

The **CFI**[194], launched in 2017, brings together the governments of Cote d'Ivoire and Ghana (as well as Colombia), and over 30 companies. As reflected in its name, environmental issues – and specifically forests – are at the core of the initiative. Frameworks of action have been signed in both countries, these focusing on 3 areas:

- **Conservation** of National Parks and forested land, as well as **restoration** of forests that have been degraded by cocoa farm encroachment.
- **Sustainable intensification** and **diversification** of income in order to increase farmers' yields and livelihood, to grow "more cocoa on less land" and thereby reduce pressure on forests.
- **Engagement** and **empowerment** of cocoa-growing communities. In particular mitigation of the social impacts and risks of land-use changes on affected cocoa farmers and their communities.[195]

In bringing together companies and the two country governments, the initiative seeks to enhance and align company actions and to address the broader governance of the sector.[196]

Peru's **Cocoa, Forests and Diversity Agreement** was established in 2020, within the framework of the Coalition for Sustainable Production, a multi-stakeholder initiative aimed at promoting sustainability and deforestation free supply chains in the country.[197] The goal of the cocoa agreement is to promote Peruvian cocoa on the basis of its quality, diversity, and sustainability (defined as being deforestation-free and contributing to land restoration). Its priorities for action for the period 2021-24 include to: identify and develop tools for monitoring and tracing deforestation-free cocoa; establish a service platform to support deforestation-free production; and develop incentives for producers for the sustainable production of cocoa.[198]

The **International Cocoa Initiative (ICI)**[199] was founded in 2002. It emerged from the Harkin-Engel Protocol which aimed at ending the worst forms of child labour and forced labour in the cocoa sector. The vision of the ICI is for thriving cocoa-growing communities within a dignified, sustainable and responsibly managed cocoa supply chain, where child rights and human rights are protected and respected, and where child labour and forced labour have been eliminated.

Its 2021-26 strategy sets out 3 areas of work:

- **responsible supply chains** built on systems and services that responsibly and transparently prevent and remediate child labour and forced labour across the entire cocoa supply chain;
- **a supportive enabling environment** with local, national and international policies and laws;
- **co-ordinated approaches to support collaboration**, alignment and accountability across the cocoa sector.

The focus of its work is on identifying and refining effective practices, developing shared metrics, advocacy and strengthening of capacity and systems.

[194] https://www.worldcocoafoundation.org/initiative/cocoa-forests-initiative/
[195] https://www.idhsustainabletrade.com/initiative/cocoa-and-forests/
[196] https://efi.int/sites/default/files/files/flegtredd/Cocoa%20sustainability%20report.pdf
[197] https://www.tropicalforestalliance.org/assets/Infografia-del-Fact-Sheet-ENG.pdf
[198] https://produccionsostenible.org.pe/actualidad/cacao-bosques-y-diversidad-reporte-del-cacao-peruano-2023/
[199] https://www.cocoainitiative.org/our-work/policies-practices-and-standards

National level initiatives
There are a number of different initiatives aimed at promoting sustainable cocoa in the 3 countries.

Ghana has prioritised the cocoa sector in its strategy to tackle deforestation. The country's REDD+ strategy aims to transform its agricultural sector to climate-smart production systems and landscapes.[200] Programmes for particular commodities were developed, including the Ghana Cocoa Forest REDD+ Programme (GCFRP).[201] This aims to secure the future of Ghana's forests, and to significantly improve incomes and livelihood opportunities for farmers and forest users. This is to be achieved through the implementation of landscape management plans, support (including access to finance) for climate-smart cocoa production, policy reforms and law enforcement.[202]

Cote d'Ivoire's REDD+ strategy also includes a focus on cocoa. Its objectives for the agricultural sector include: increasing the productivity of farms (including for cocoa) in order to reduce poverty; promoting the cultivation of food crops alongside cash crops, to enhance food security; restoring forest cover in order to improve the resilience of agricultural systems; and enabling communities to take an active role in forest management through strengthening their rights and building capacities.[203]

In Peru, a 'National Plan for the development of the Cocoa Chocolate Value Chain to 2030' was agreed in 2020, this developed through a multi-stakeholder process.[204] This sets out a strategy to promote Peru as a source of high quality and sustainable cocoa. The goal is to mitigate climate change through supporting agroforestry systems and sustainable production landscapes, and to improve farmers' quality of life through increasing incomes and ensuring the provision of basic services.

This sits within a broader strategy on forests and climate change, approved in 2016.[205] This includes the objective to promote sustainable and competitive agricultural production, that is adapted to the climate and reduces pressure on forests. Cocoa is one of the target crops, and areas of intervention include improving environmental and social standards in the sector, strengthening equitable value chains, promoting access to markets for deforestation free products and promoting agroforestry systems.

Private sector initiatives
Over the last two decades, there has been a proliferation of sustainability initiatives by the cocoa traders, processors and manufacturers.[206] These have been prompted by calls from civil society, increasing government regulation, as well as growing concerns about the sustainability of their supplies.

The focus areas of the companies are closely aligned, but they have each developed their own

[200] https://reddsis.fcghana.org/admin/controller/publications/Ghana%20Redd+%20Strategy-SOI-Ghana%20REDD+%20Strategy.pdf
[201] https://reddsis.fcghana.org/admin/controller/publications/Emission%20Reduction%20Program%20Document_GCFRP.pdf
[202] Implementation Plan for the GCFRP, 2016, https://redd.unfccc.int/files/gcfrp_final_implementation_plan.pdf
[203] National REDD+ Strategy, 2017, https://www.un-redd.org/sites/default/files/2021-10/REDD%2B%20STRATEGY%20DOCUMENT%20-%20ANGLAIS%20%28002%29%20%28791646%29.pdf
[204] Plan Nacional para el desarrollo de la Cadena de Valor de Cacao - Chocolate al 2030, https://www.gob.pe/institucion/midagri/normas-legales/3685974-017-2022-midagri
[205] https://cdn.www.gob.pe/uploads/document/file/3249412/ENBC.pdf.pdf?v=1654958720; & https://www.gob.pe/institucion/bosques/informes-publicaciones/3119805-estrategia-nacional-sobre-bosques-y-cambio-climatico
[206] https://www.cocoafederation.com/education/sustainable-cocoa

strategies and interventions.[207] Since 2017, many companies have shifted away from the use of third party certification schemes to the use of their own standards, this as a means of reducing costs and increasing reach.[208]

Priority areas are: farmer livelihoods, with activities aimed at improving agricultural practices to enhance productivity and economic resilience; social aspects, with a particular focus on the elimination of child labour; and environmental aspects, with a particular focus on tackling deforestation. The main assumption on which these programmes have been based is that increasing cocoa yields and the productivity of cocoa farmers, is the key to establishing a sustainable sector.[209]

In part to improve coordination between companies and to combine efforts, the **World Cocoa Foundation (WCF)** was established in 2000, and it now has more than 100 members from around the world.[210] Its vision is for 'a thriving and sustainable cocoa sector, where farmers prosper, communities are empowered, and the planet is healthy.'

Its objectives, which encompass the economic, social and environmental aspects of sustainability, are that:

- Prosperous cocoa farmers become truly sustainable and profitable, with transformation of traditional smallholder farming into modern business that deliver sustainable livelihoods for farmers and their families;
- Empowered cocoa-growing communities lead their own development, human rights are protected, and safety and well-being of children and families are strengthened;
- A healthy planet is conserved and enhanced, with resilient and biodiverse landscapes in cocoa geographies, and the carbon footprint of the sector is reduced.

It seeks to achieve these through: providing support for farmers and farmer organisations, to improve professionalization, productivity, quality and resilience; mapping to improve traceability; implementation and support for child and forced labour monitoring and remediation; enabling access to education; supporting women's financial independence; and support for forest protection and reforestation.

Certification schemes & standards

The two main voluntary certification schemes in the cocoa sector are the Rainforest Alliance and Fairtrade. As noted above, there are also a number of private-sector led certification schemes, although these tend to be less demanding and less transparent.[211] In addition, two international standards have been established – ISO 34101 and the African Regional Standard on Sustainable Cocoa (ARS 1000).

The **Rainforest Alliance**[212] was originally set up with the primary aim to protect forests, but it has been subject to regular revisions which have resulted in it broadening in scope, with the addition of economic and social criteria. In 2017 it merged with Utz, which had also been providing sustainability certification for cocoa. This merger resulted in the most recent revision to the

[207] This is true of the initiatives of the 3 largest traders/processors (Barry Callebaut, Cargill, OFI), and 3 largest manufacturers (Mars, Mondelez and Nestle). These companies were identified as the largest in the Cocoa Barometer, 2022, https://cocoabarometer.org/en/.
[208] Mithöfer, D. et al. (2017)
[209] https://efi.int/sites/default/files/files/flegtredd/Cocoa%20sustainability%20report.pdf
[210] https://www.worldcocoafoundation.org/about-wcf/vision-mission/
[211] Brack, D. (2023) Sustainability and Standards in Global Agriculture Value Chains: The African Standard for Sustainable Cocoa. A Paper for GISCO. 16 February 2023.
[212] https://www.rainforest-alliance.org/commodity/cocoa/

standard, which was completed in 2020. The requirements for farms fall into 6 categories: management; traceability; income & shared responsibility; farming; social; environment.

Fairtrade certification[213] focuses primarily on social issues, with the goal to deliver fair prices to farmers. As with the Rainforest Alliance, it has also broadened in scope, with the strengthening of environmental and social criteria. The latest revision to the standards for cocoa were in 2022. The standard's criteria encompass**:** management systems; human rights & environmental due diligence; labour conditions, child protection & social development; deforestation prevention & environmental development; living income. In addition to a premium (also paid under the Rainforest Alliance standard), Fairtrade requires buyers to pay a minimum price to producers.

More recently, the concept of **Climate Smart Cocoa** has emerged as a response to the need for the sector to respond to the challenges of climate change.[214] Thus, in implementing such practices, the aim is to enhance productivity, and support both adaptation to and mitigation of climate change. Certification is not provided, but guidance has been developed by the Rainforest Alliance and the WCF, and the uptake of this approach to farming is being supported by various international initiatives, including the WCF and as part of Ghana's REDD strategy.[215]

The ISO 34101 for sustainable cocoa[216] was developed in order to standardize definitions and approaches in the sector. It was finalized and published in 2019, and is the first sustainability standard for an agricultural product adopted by the ISO. It has yet to be taken up by any companies or governments, but it has fed into the development of the African Regional Standard for Cocoa.

The **African Regional Standard on Sustainable Cocoa (ARS 1000)**[217] was developed partly in response to the concerns of the governments of Ghana and Cote d'Ivoire that the ISO cocoa standard would be too burdensome for farmers. It includes many of its elements, but has a stronger focus on farmer development. Thus, it is noted that farmers are a 'key delivery mechanism for a sustainable cocoa economy,' and its stated aims are 'to empower cocoa farmers to make informed choices about economic, social and environmental impacts of activities and investments planned on their farms'.

The standards cover: promoting, structuring and supporting farmers/ farmer organization efficiently; improving farmer's income and resilience of their livelihoods; addressing cocoa quality; addressing traceability from the farm to export; addressing worst forms of child labour; and addressing deforestation and climate change.

The standard is to become mandatory in both Ghana and Cote d'Ivoire, and implementation guides are currently under development for each country. One element that remains to be clarified is whether the ARS standard will recognize the existing voluntary certification schemes, which would help to avoid duplication of effort.[218]

[213] https://www.fairtrade.net/standard/announcements
[214] https://climatesmartcocoa.guide/
[215] Ghana Cocoa Forest REDD+ Programme (GCFRP) FCPF Proposal, 2017. https://reddsis.fcghana.org/admin/controller/publications/Emission%20Reduction%20Program%20Document_GCFRP.pdf
[216] https://www.cacaoforest.org/en/news/iso-34101-an-international-standard-for-sustainable-cocoa and https://www.iso.org/news/ref2387.html
[217] https://members.wto.org/crnattachments/2020/TBT/KEN/20_6055_00_e.pdf
[218] Brack, D. (2023)

Shifts in approach, and areas of alignment and divergence

Over the last couple of decades there has been a broadening in scope of the issues that have been considered and prioritized under the umbrella of 'sustainability' by stakeholders in the cocoa sector. This has resulted in increased alignment between initiatives. These changes reflect the growing recognition of the interlinked nature of the different aspects of sustainability – economic, social and environmental.

This has been seen at the international level, for example, with the integration of living and working standards as part of the definition of a sustainable cocoa economy into the International Cocoa Agreement.[219] Similarly, as noted above, there has been convergence of the two main voluntary certification standards, Fairtrade and the Rainforest Alliance, with both of them broadening the scope of their standards.

However, differences remain in the priority that is given to particular issues. Thus, within the ICCO, the prime focus has remained on economic and social issues, as has that of the Ghana-Cote d'Ivoire Alliance. In contrast, the CFI and the EU give much greater priority to environmental issues, and in particular, to forest loss.

Shared priorities

A review of the high-level objectives of the initiatives and certification schemes included within this study shows that three sustainability issues are most commonly prioritized:

- Livelihoods – this mainly framed in terms of reducing farmer poverty and focusing on farmer income and cocoa prices;
- Workers' rights – mostly focused on tackling child labour, but also with some attention to other issues, including other types of forced labour and discrimination, including of women;
- Ecosystems – this primarily focused on reducing deforestation, although forest and ecosystem restoration are also common priorities, sometimes linked with the issue of climate resilience. (see table 1)

With respect to the 'political' aspects of sustainability, transparency (of data and information, both within supply chains and more broadly for the sector) is the issue most commonly identified as a priority. Legality (both enforcement and legal compliance) is less frequently prioritized. Where it is, this is often with a focus on certain aspects of the law, for example, the CFI only considers legality with respect to protected areas, while the ARS standard only refers to legality with respect to 'ownership rights over the land, if applicable'.[220]

Considering the types of actions and interventions that are prioritized within the various initiatives and schemes, most attention is given to improving agricultural practices as well as strengthening the capacity of farmers and rural communities. Improving transparency of data and establishing traceability of supply chains is also a common priority, as a means to achieve environmental, social and economic sustainability goals.

Common to many of the 'sustainability' initiatives is a strong focus on productivity, and on maintaining if not increasing supplies. Indeed, it has been suggested that private sector sustainability initiatives are primarily aimed at securing cocoa supplies.[221] Similarly, there is an underlying

[219] Mithöfer, D. et al. (2017)

[220] Para. 4.2.3.2

[221] EFI EU Redd Facility (2021) Sustainability initiatives in Ivorian and Ghanaian cocoa supply chains: benchmarking and analysis. https://efi.int/sites/default/files/files/flegtredd/Cocoa%20sustainability%20report.pdf; Krauss, J.E. & S. Barrientos (2021) Fairtrade and beyond: Shifting dynamics in cocoa sustainability production networks. Geoforum 120: 186-197, https://doi.org/10.1016/j.geoforum.2021.02.002

assumption within many of the government and international initiatives that continued growth of the sector is needed to ensure its economic sustainability; thus, their objectives include the continued expansion of production and consumption, both at the national and global levels. This neglects the question of what level of cocoa production and consumption could be sustainable, i.e. how to balance the needs for food production, commodity production and ecosystem protection, both at the national level and globally.

One issue that is being given greater attention is that of inclusivity, both with respect to processes and outcomes. For example, more inclusive approaches have been adopted for the development and revision of certification standards, and in the processes for designing action plans and strategies of the multi-lateral initiatives. Inclusion and participation has also been given greater priority as an objective for interventions. For example, a number of initiatives are working to establish more inclusive and equitable farmer cooperatives and community institutions, and greater attention has been given to the empowerment of farmers and farmer cooperatives within the certification standards.[222]

Gaps

Several issues have also been given relatively little attention. These include the issue of agrochemicals and pollution, and cultural aspects. Furthermore, while transparency is prioritized, other governance aspects are given much less attention – such as land-use governance, and legal compliance and enforcement.

[222] Mithöfer, D. et al. (2017)

	ENVIRONMENTAL	SOCIAL	ECONOMIC	POLITICAL
ISSUES MOST FREQUENTLY PRIORITISED	Ecosystem protection & management (forest loss & degradation) Restoration	Working conditions & rights (child & forced labour) Land & resource rights	Livelihoods (living income) Prices & premiums Investment	Transparency
ISSUES ALSO PRIORITISED	Climate resilience & mitigation Biodiversity protection Soil conservation Water management Waste & chemicals	Equity & discrimination (gender) Community institutions & social infrastructure Food security		Legal compliance & enforcement Legal & policy framework Participation & inclusion Financial management Research & training
ISSUES NOT PRIORITISED		Communities – benefit sharing Culture	Taxes	Institutional framework

Table 1: Frequency of issues cited as priority objectives in cocoa sustainability initiatives
Key: Issues most frequently prioritised – those listed more than 5 times; Issues also prioritised – those listed between 1 and 5 times;

	ENVIRONMENTAL	SOCIAL	ECONOMIC	POLITICAL
ACTIONS MOST FREQUENTLY PRIORITISED	Agricultural practices - including agroforestry, climate smart production & intensification Forest & land-use monitoring	Development of traceability & monitoring systems Community empowerment	Farm development & farmer capacity strengthening Cocoa prices - enhancing transparency Increasing local processing Promoting cocoa consumption Improving market access / competitiveness	Improving sectoral data & information - quality & availability Traceability of supply chains
ACTIONS ALSO PRIORITISED	Restoration & maintenance of protected areas Land-use planning	Securing land tenure Increasing access to social protection	Access to credit & insurance Alternative livelihoods Cocoa prices - implementation of benchmarks, supply management, strengthening institutional & legal frameworks	Legal reforms Law enforcement Policy dialogue - international collaboration & multi-stakeholder engagement Monitoring of impacts

Table 2: Frequency of actions cited as priority areas for intervention in cocoa sustainability initiatives
Key: Actions most frequently prioritised – those listed more than 5 times; Actions also prioritised – those listed between 1 and 5 times

Literature review: summary of evidence on level of implementation & impact

Impact: evidence for achievement of their social, environmental & economic objectives
The available evidence for the three 'priority' issues – farmer poverty, child labour and deforestation – is considered here. The general picture that emerges is one of piecemeal progress. It is reported that there have been positive impacts at the level of particular projects and activities on these various aspects of sustainability. However, these have remained limited in scale and the sector is far from being sustainable, nor is it yet on a trajectory towards achieving the various objectives that have been set.

With respect to poverty, while some improvements have been seen, a significant proportion of smallholder farmers and their families in Cote d'Ivoire and Ghana continue to live below the poverty line.[223]

Efforts to tackle poverty have primarily focused on improving farm productivity and on increasing prices. Regarding the former, while productivity has been raised through changes to farming practices (including through increased inputs, new cocoa varieties, irrigation, etc.), adoption of these has remained limited.[224]

With respect to prices, the payment of premiums for certification has faced multiple challenges, including the non-payment of premiums because of lack of demand and a failure to distribute these to farmers. Furthermore, the majority of farmers are not certified. The efforts of the governments of Ghana and Cote d'Ivoire to improve prices for farmers have also had limited success. In 2019 they introduced the LID, but this did not succeed in increasing farmer income, primarily because the benefits were cancelled out by a reduction in the overall price of cocoa.[225]

There is also the fact that for many farmers – such as those with the smallest land parcels – cocoa will not be able to provide them with a living income, even with increased productivity and prices. For such farmers, changes in livelihood may be the best option, an area on which more focus is needed.[226]

Broader questions have also been raised as to the extent to which increased farm income can reduce poverty. Its ability to do so is dependent on a number of other factors, and simply targeting increased income can in fact further marginalize the poorest and least powerful.[227] Income is only

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[223] Waarts, Y. et al. (2019) A living income for smallholder commodity farmers and protected forests and biodiversity: how can the private and public sectors contribute? Wageningen Economic Research | White paper on sustainable commodity production. https://edepot.wur.nl/507120; Cocoa Barometer, 2022, https://cocoabarometer.org/en/;

[224] Wessel, M. & P.M. Foluke Quist-Wessel (2015) Cocoa production in West Africa, a review and analysis of recent developments. Wageningen Journal of Life Sciences Volumes 74–75, December 2015, Pages 1-7, https://doi.org/10.1016/j.njas.2015.09.001; Van Vliet et al. (2021) A Living Income for Cocoa Producers in Côte d'Ivoire and Ghana? Frontiers in Sustainable Food Systems, Volume 5 – 2021, https://doi.org/10.3389/fsufs.2021.732831; Sanial, E. et al. (2020) Agroforestry in cocoa, a need for ambitious collaborative landscape approaches. Cocoa Barometer. https://voicenetwork.cc/wp-content/uploads/2020/08/Consultation-Barometer_paper-2020_final-PDF.pdf

[225] Odijie, M. (2021) Why efforts by Côte d'Ivoire and Ghana to help cocoa farmers haven't worked. The Conversation. 29 June 2021. https://theconversation.com/why-efforts-by-cote-divoire-and-ghana-to-help-cocoa-farmers-havent-worked-162845; Adams & Carodenuto (2023) Stakeholder perspectives on cocoa's living income differential and sustainability trade-offs in Ghana, World Development 165 (2023) 106201. https://doi.org/10.1016/j.worlddev.2023.106201; EFI EU Redd Facility (2021);

[226] Van Vliet et al. (2021); Waarts, Y. et al. (2019); Wessel, M. & P.M. Foluke Quist-Wessel (2015);

[227] Adams, M.A. & S. Carodenuto (2023);

one aspect of poverty, and the need to target other aspects in parallel has been highlighted – for example, health, education, and power.[228]

Regarding efforts to tackle child labour, similarly, there is some evidence that these have had a positive impact at the level of specific interventions. For example, the ICI reported marked reductions in child labour in those communities where it had been working. However, it also noted that 'effective, industry-backed child protection systems cover just 10-20% of the cocoa supply chain in 2020'.[229] A review of progress in the cocoa sectors of Ghana and Cote d'Ivoire between 2013/14 and 2018/19, found that while the worst forms of child labour had declined, the prevalence of all child labour had stayed at the same level, and that the absolute number of children involved had increased because of an increase in the number of households involved in production.[230] The need for scaled up, and more strategic interventions, were highlighted.

With respect to the impacts of cocoa on **forests**, deforestation rates in the forest producing regions of Ghana and Cote d'Ivoire have not declined, and encroachment of cocoa farming has continued into protected areas.[231] While efforts to establish agroforestry have met with some success, their impacts have been limited by, amongst other factors, low tree survival rates as well as low rates of adoption.[232] Research from Peru found no evidence that improved farmer livelihoods was linked with reduced deforestation. While establishing agroforestry concessions could improve livelihoods, it was suggested that tackling deforestation would require much broader interventions to address migration, land rights and speculation.[233]

Challenges faced in achieving impact

Multiple reasons are given as to the reasons for the slow progress. One factor identified in the literature is the scale of the challenges and their complexity. This has led to calls for significantly scaled-up resources and more coordinated efforts. The need to scale-up initiatives in part underlies the private sectors' response of developing their own certification schemes, which they argue are more cost-effective than the third-party verified schemes.[234] This reflects a long-standing debate in relation to sustainability regarding the benefits of what have proven niche, civil-society led certification approaches versus scaled-up, private sector approaches.[235] While the latter potentially benefit far greater numbers of farmers, this is at the risk of lowering standards.

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[228] Hirons, M. et al. (2018) Understanding Poverty in Cash-crop Agro-forestry Systems: Evidence from Ghana and Ethiopia. Ecological Economics, 154, 31–41. https://doi.org/ 10.1016/j.ecolecon.2018.07.021; Waarts, Y. et al. (2019);

[229] International Cocoa Initiative, 2021-2026 Strategy https://www.cocoainitiative.org/sites/default/files/resources/ICI-2021-2026-Strategy_EN.pdf

[230] Sadhu, S. et al. (2020) NORC Final Report: Assessing Progress in Reducing Child Labor in Cocoa Production in Cocoa Growing Areas of Côte d'Ivoire and Ghana. NORC at the University of Chicago, Chicago, US. https://www.norc.org/PDFs/Cocoa Report/NORC 2020 Cocoa Report_English.pdf

[231] Kroeger, A. et al. (2017) Eliminating Deforestation from the Cocoa Supply Chain. A report for the World Bank Group. https://www.worldbank.org/en/news/feature/2017/05/22/cutting-deforestation-out-of-the-cocoa-supply-chain; Mighty Earth (2022) Sweet Nothings. How the Chocolate Industry has Failed to Honor Promises to End Deforestation for Cocoa in Cote d'Ivoire and Ghana. https://www.mightyearth.org/wp-content/uploads/MightyEarthSweetNothingsReportFINAL.pdf

[232] Cocoa Barometer, 2022; Sanial, E. et al. (2020); Brako, D.E. et al. (2021) Do voluntary certification standards improve yields and wellbeing? Evidence from oil palm and cocoa smallholders in Ghana, International Journal of Agricultural Sustainability, 19:1, 16-39, DOI: 10.1080/14735903.2020.1807893

[233] Pokorny, B. et al. (2021) The potential of agroforestry concessions to stabilize Amazonian forest frontiers: a case study on the economic and environmental robustness of informally settled small-scale cocoa farmers in Peru. Land Use Policy 102, https://doi.org/10.1016/j.landusepol.2020.105242

[234] EFI EU Redd Facility (2021)

[235] Krauss, J.E. & S. Barrientos (2021)

Another factor identified in the literature as underlying the slow progress has been a lack of coherence and coordination between initiatives.[236] While this has been addressed to a degree – for example, with the establishment of multi-stakeholder initiatives and jurisdictional level approaches – further improvements are said to be needed. In particular, there have been calls for greater recognition of the inter-linkages between the different aspects of sustainability and of potential trade-offs between them. Without this there is a risk of initiatives undermining each other, for example, efforts to enhance farmer productivity and income could result in increased deforestation or pollution from agrochemicals, while initiatives focused on deforestation risk negatively impacting livelihoods.[237] This critique has been made of 'climate-smart' approaches for example, many of which have focused primarily on intensification of production and on tackling deforestation, at the risk of increasing agrochemical dependence and exacerbating social inequities.[238]

An additional factor identified as hindering the achievement of objectives has been that many of the theories of change, and their underlying assumptions, are too simplistic. For example, there is a frequent assumption that increasing farmer income will result in reduced poverty. However, this has been found to be contingent on other factors, for example, security of tenure, access to education and to health facilities, and the particular social context. Thus, while increasing farmer income is recognized as essential, this needs to be coordinated with broader poverty alleviation measures.[239]

A lack of transparency regarding the impact of initiatives has also been highlighted. Private sector initiatives in particular have been criticised for often reporting on their activities rather than the outcomes of these. They also tend to use different methodologies for evaluation and reporting, hindering efforts to learn lessons and to ensure accountability.[240]

The broader governance context has also reportedly constrained the impact of many interventions. For example, farmers have not always benefited from certification premiums due to poor governance of cooperatives, exacerbated by a lack of fiscal transparency at government level.[241] Furthermore, in Ghana agroforestry and reforestation initiatives have been hampered by the policy framework on tenure, which fails to create incentives for tree planting and protection.[242]

Fundamental to strengthening governance of the sector is consideration of the power dynamics and structure of the sector. For example, the fact that producer countries have limited power to negotiate prices has undermined efforts to increase cocoa prices, as has the marginalised status of

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[236] International Cocoa Initiative, 2021-26 Strategy; Stanbury, P., & Webb, T. (2020). How to deliver real sustainability in the cocoa sector? Collaborative development governance. Innovation Forum. https://www.innovationforum.co.uk/articles/how-to-deliver-real-sustainability-in-the-cocoa-sector-collaborative-development-governance; EFI EU Redd Facility (2021); Parra-Paitan, C. et al. (2023) Large gaps in voluntary sustainability commitments covering the global cocoa trade. Global Environmental Change 81, 102696, https://doi.org/10.1016/j.gloenvcha.2023.102696

[237] Adams, M.A. & S. Carodenuto (2023); EFI EU Redd Facility (2021); Cocoa Barometer, 2022; Sadhu, S. et al. (2020); Stanbury, P., & Webb, T. (2020);

[238] Maguire-Rajpaul, V.A. et al. (2022) Climate-smart cocoa governance risks entrenching old hegemonies in Cote d'Ivoire and Ghana: a multiple environmentality analysis. Geoforum 130. https://doi.org/10.1016/j.geoforum.2021.09.015; Nasser, F., et al. (2020) Climate-smart cocoa in Ghana: How ecological modernisation discourse risks side-lining cocoa smallholders. Front. Sustain. Food Syst. 4 https://doi.org/10.3389/fsufs.2020.00073

[239] Hirons, M. et al. (2018); Adams, M.A. & S. Carodenuto (2023);

[240] EFI EU Redd Facility (2021); Parra-Paitan, C. et al. (2023)

[241] Cocoa Barometer, 2022; EFI EU Redd Facility (2021); Ruf, F., et al. (2019) Des certifications inutiles? Les relations asymétriques entre coopératives, labels et cacaoculteurs en Côte d'Ivoire' Revue Internationale Des Études Du Développement, 240: 31–61. https://doi.org/10.3917/ried.240.0031; Adams & Carodenuto (2023); Carimentrand, A. 2020. Cacao: Etat des lieux sur la déforestation et les standards de durabilité. Rapport d'étude du Cirad. Commanditaire: CST Forêts de l'AFD, Abidjan, Côte d'Ivoire. https://publications.cirad.fr/une_notice.php?dk=596409

[242] Ghana Cocoa Forest REDD+ Programme (GCFRP) FCPF Proposal, 2017. https://reddsis.fcghana.org/admin/controller/publications/Emission%20Reduction%20Program%20Document_GCFRP.pdf

farmers. Many initiatives remain top-down, and farmer perspectives in particular are lacking.[243] For example, this has been suggested as underlying the strong focus on increasing farmer productivity as a strategy to address poverty; while this approach aligns with the priorities of the private sector, farmers' needs may be better met through increasing price and diversifying income sources.[244] Top-down approaches also risk undermining local innovations and knowledge, which may be more effective and appropriate.[245]

The increased embeddedness of multi-nationals within producer countries has been identified as a potential risk to efforts to empower farmers.[246] Thus, the implementation of private sector sustainability initiatives risks exacerbating existing power asymmetries, for example, reducing the ability of farmers to choose what to grow, who to sell to, or at what price.[247] Governments can play a role in mitigating this, and COCOBOD for example, has been cited as playing an important role in mediating relations between farmers and companies, through its policies regulating sourcing contracts, pricing and provision of inputs.[248] But experiences with implementation of the LID have illustrated the constraints on government influence in an international market.[249]

The predominance of multi-nationals also risks continued marginalisation of farmers in setting the agenda, so that their priorities and needs remain overlooked.[250] The establishment and strengthening of community mechanisms for land management – as is prioritised in Ghana's REDD+ strategy for example, through Community Resource Management Areas – has been highlighted as a potential means of countering the dominance of multinationals. As well as giving greater voice to rural peoples in policy making and implementation, such mechanisms could play a role in their monitoring and enforcement; concerns have been raised over the side-lining of rural people from the implementation of satellite monitoring systems for example.[251]

Gaps & opportunities

Based on the literature review, a number of issues can be identified where further attention could be useful.

- Improved understanding of the interactions between different interventions and of their sequencing would help to ensure that the coordination and integration of initiatives is as effective as possible.
- Power dynamics within the sector are often not fully acknowledged, nor the different priorities of stakeholders and the potential conflicts of interest between them. Further analysis and understanding of these would help to strengthen interventions and minimise the risk of unintended adverse consequences.
- The position of farmers in the sector remains marginalised. Scaling up efforts to strengthen the voice of farmers would enhance their ability to shape agendas and decision-making.

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[243] Mithöfer, D. et al. (2017); EFI EU Redd Facility (2021); Hirons, M. et al. (2018);
[244] Cocoa Barometer, 2022
[245] Maguire-Rajpaul, V.A. et al. (2022)
[246] Krauss, J.E. & S. Barrientos (2021); Obeng Adomaa, F., et al. (2022) Justice and Inclusiveness: The Reconfiguration of Global–Local Relationships in Sustainability Initiatives in Ghana's Cocoa Sector. *J Agric Environ Ethics* 35, 22, https://doi.org/10.1007/s10806-022-09895-2; Delabre et al. (2020) Strategies for tropical forest protection and sustainable supply chains. Sustainability Science (2020) 15:1637–1651 https://doi.org/10.1007/s11625-019-00747-z ; Maguire-Rajpaul, V.A. et al. (2022);
[247] Krauss, J.E. & S. Barrientos (2021); Obeng Adomaa, F., et al. (2022);
[248] Obeng Adomaa, F., et al. (2022);
[249] Odijie, M. (2021); Adams & Carodenuto (2023); EFI EU Redd Facility (2021);
[250] This has also been noted in Brazil for example, see: Delabre et al. (2020) Strategies for tropical forest protection and sustainable supply chains. Sustainability Science (2020) 15:1637–1651 https://doi.org/10.1007/s11625-019-00747-z ;
[251] Maguire-Rajpaul, V.A. et al. (2022); Nasser, F. et al. (2020);

- Governments play an important role in mediating between the interests of farmers and big-business. Strategies to strengthen this role should be explored further to help reduce power disparities.
- The implications of cocoa production and consumption for food security, rural development and climate change, at the national, regional and global levels are largely overlooked. Further consideration of this is needed for the development of equitable and resilient land-use strategies at the national level, and to inform global strategies for the sector.

ANNEX 3 - PALM OIL

Introduction

This annex reviews perspectives on, and approaches to, the sustainable production of palm oil. It identifies areas of alignment and divergence regarding the principles for sustainable production.

It also provides the findings of a review of the literature on the various initiatives, standards and certification schemes for palm oil, summarizing the available evidence on their impact and the factors influencing this.

It considers three producer countries: Indonesia, Colombia and Nigeria, the latter focused on Edo State. Indonesia is the largest producer of palm oil globally and has been at the forefront of discussions related to sustainability. Colombia and Nigeria are the largest producers in the Americas and Africa respectively, and both have prioritised the sustainability of production. It also covers initiatives in India and the EU, as the two biggest importers of palm oil.

Within the literature review, most attention is given to Indonesia – this country dominates the literature reflecting its position as the largest producer of palm oil. Conversely, relatively little material was found on Nigeria, where oil palm has been relatively limited in its extent. The literature review on Colombia was limited by the fact that only English language material has been covered.

Definitions and approaches to sustainability

A wide range of initiatives have been developed within the cocoa sector aimed at enhancing the sustainability of its production and of the sector as a whole. The main initiatives, and their scope of engagement, are summarized in figure 3 and their sustainability objectives and priorities for intervention are listed in the attached matrix.

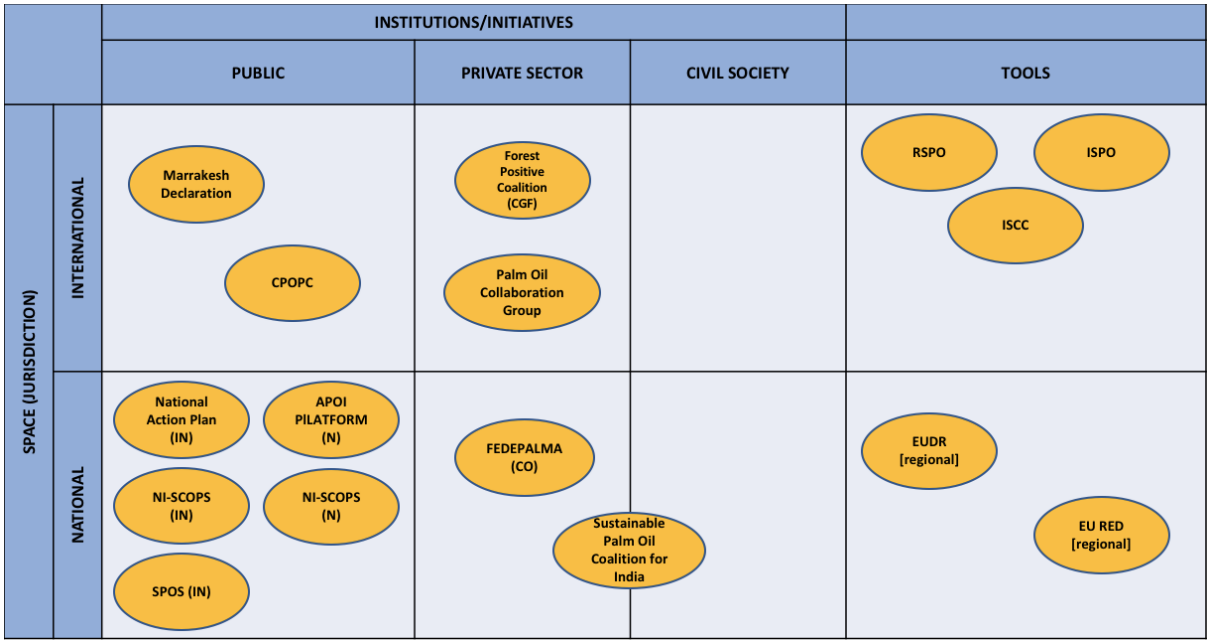

Figure 3: Palm oil sustainability initiatives & tools covered in this report

International

At the **international level**, two inter-government initiatives are considered here. The Marrakesh Declaration for the Sustainable Development of the Oil Palm Sector in Africa, an initiative of the Tropical Forest Alliance, was signed in 2016 by 10 African governments. The signatories pledged to implement national action plans for 'sustainable oil palm sector development'.[252] This subsequently led to the establishment of the Africa Palm Oil Initiative (APOI), outlined below.

The Council of Palm Oil Producing Countries (CPOPC) was established in 2015 by the governments of Indonesia and Malaysia, with the aim to strengthen cooperation and collaboration between palm oil producing countries.[253]

National

At the national level, within **Indonesia** a National Action Plan was finalised in 2018, this developed by the Sustainable Palm Oil Platform, a government-led, multistakeholder process.[254] The government also established the initiative 'Strengthening Palm Oil Sustainability (SPOS) in Indonesia to improve the welfare of palm oil smallholders and stop the conversion of natural forest and peatland.[255] The Indonesian government is also collaborating with the Dutch government under the National Initiative for Sustainable and Climate Smart Oil Palm Smallholders (NI-SCOPS) Indonesia, for which Solidaridad and IDH are implementing partners.[256]

In **Nigeria**, the focus of this report is Edo State, which has been a partner in the Africa Palm Oil Initiative (APOI) since 2018. APOI was established to support implementation of the Marrakesh Declaration, working through country level teams. APOI was changed into the Africa Sustainable Commodities Initiative (ASCI) in 2022.[257] Under the National Initiative for Sustainable and Climate Smart Oil Palm Smallholders (NI-SCOPS) Nigeria, Solidaridad and IDH are working at both national and state levels to expand the implementation of climate smart oil palm cultivation amongst smallholders.[258]

In **Colombia,** the Sustainable Palm Oil Program has been established by, Fedepalma, the National Federation of Oil Palm Growers, this providing a roadmap to enhance the sustainability of the sector.[259] The government also partnered with the Tropical Forest Alliance in 2017, signing a Zero Deforestation Agreement for Palm Oil and establishing a national chapter of the TFA to support its implementation.[260]

In **India**, the Sustainable Palm Oil Coalition for India (I-SPOC) is an NGO and private sector initiative. Established in 2018, it works to promote demand for sustainable palm oil and its derivatives in India.[261]

Private sector

Two **private sector led initiatives** are considered here. Firstly, within the Consumer Goods Forum, a number of coalitions of its members have been established to address priority issues. These include

[252] https://www.proforest.net/fileadmin/uploads/proforest/Documents/News/tfa2020_marrakesh_declaration_post-embargoed_april.pdf
[253] https://cpopc.org/
[254] https://sekretariat-ranksb.id/rencana-aksi-nasional
[255] https://sposindonesia.org/
[256] https://www.idhsustainabletrade.com/publication/ni-scops-indonesia/
[257] https://www.proforest.net/resources/publications/the-africa-sustainable-commodities-initiative/
[258] https://www.idhsustainabletrade.com/publication/ni-scops-nigeria/
[259] https://web.fedepalma.org/international/colombias-sustainable-palm-oil-program/
[260] https://gggi.org/press-release/colombia-launches-national-alliance-for-deforestation-free-value-chains/
[261] https://www.indiaspoc.org/

the Forest Positive Coalition, which is working to accelerate efforts to halt deforestation and forest degradation from supply chains[262] and its Human Rights Coalition which is focused on ending forced labour.[263] The second private sector initiative is the Palm Oil Collaboration Group (POCG). This brings together companies in order to accelerate implementation of No Deforestation, No Peat Expansion, No Exploitation (NDPE) commitments.[264]

Policy tools

Amongst the potential tools to promote sustainable palm oil, **certification** has been at the forefront of efforts within the sector. The schemes included in this report are, the Roundtable for Responsible Palm Oil (RSPO), Indonesia Sustainable Palm Oil (ISPO) and International Sustainability and Carbon Certification (ISCC). The RSPO is a voluntary standard, established in 2004. It is reviewed every five years, with the most recent revision to be completed in 2023.[265] The ISPO is a government standard based on Indonesian regulations, which will become mandatory for all producers in 2025. Established in 2011, the ISPO was most recently updated in 2020. The International Sustainability and Carbon Certification (ISCC) scheme was established in 2006. It is not specific to palm oil but covers various types of agricultural and forest biomass. It is recognised within the EU as providing sustainability certification under its Renewable Energy Directive.[266]

A number of countries have **market regulations** relevant to palm oil. Considered in this report are the EU Renewable Energy Directive and the EU Regulation on Deforestation Free Supply Chains (EUDR). The Renewable Energy Directive (RED), amended in 2018, promotes the use of energy from renewable sources, which sets limits on the use of those biofuels at high risk of causing land-use change – these including palm oil.[267] The EUDR, which came into force in 2023, applies to palm oil and six other commodities, and prohibits placing these on the market if their production has caused deforestation or forest degradation or has not been in compliance with the law.[268]

Shifts in approach, areas of alignment & divergence

As has been seen in the agricultural sector more broadly, there has been a broadening in approach within many sustainability initiatives for palm. This partly reflects increased recognition of the interlinked nature of the issues and of the need for coordinated and collaborative actions between stakeholders. For example, this has been seen in the RSPO's 2018 Theory of Change which identified its jurisdictional approach as a key element of its strategy to increase the production of sustainable palm oil. Similarly, the adoption of the CGF's 'Forest Positive Strategy' entailed a shift away from focusing on individual supply chains, to a business and landscape approach. Furthermore, the African Palm Oil Initiative (APOI) has broadened in scope to encompass multiple commodities – so becoming the African Sustainable Commodities Initiative (ASCI).

This broadening has also seen greater awareness and recognition of some of the social aspects of sustainability. This has included increased focus on workers' rights, as well as recognition of the rights of IPLCs. For example, provisions on IPLC rights were added in the latest version of the Forest Positive Coalition roadmap, while in Edo State, FPIC was identified as a priority area for engagement and policy reform, and in Indonesia, provisions on FPIC were added in the latest revision to the ISPO

[262] https://www.theconsumergoodsforum.com/environmental-sustainability/forest-positive/key-projects/coalition-wide-actions/
[263] https://www.theconsumergoodsforum.com/social-sustainability/human-rights-ending-forced-labour/
[264] https://palmoilcollaborationgroup.net/
[265] https://rspo.org/
[266] https://www.iscc-system.org/
[267] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R1115
[268] https://www.europarl.europa.eu/doceo/document/TA-9-2023-0109_EN.html

standards. This shift has also seen increased attention being given to the issue of prices and income. For example, RSPO introduced more rigorous requirements on living wages in its 2018 review and approved a new strategy for this issue in 2023.[269]

Shared priorities

From comparing the main objectives and priority areas of the initiatives (see tables 3 and 4), for the three sustainability pillars, the issues that are most often prioritized are:

- Environmental: the impact of oil cultivation on forests and peatlands, and linked to this, climate mitigation;
- Social: land and resource rights, and workers' rights;
- Economic: livelihoods, primarily with respect to smallholders, but also in relation to job opportunities.

These can be seen as reflecting two narratives; one focusing on the role of the sector in providing jobs and supporting livelihoods; and the other focusing on the impact of oil palm cultivation on forests and peatlands, and on the implications of this for rural communities and indigenous peoples as well as for biodiversity and climate change.

Thus, on the basis of the former narrative, a number of initiatives aim to increase the production of, and demand for, palm oil, in order to provide jobs, a source of income for smallholders and government revenues. For example, this is prioritised by the governments of Edo State in Nigeria, Indonesia and Colombia. In contrast, based on the latter narrative, the EU has legislated with the aim of reducing European demand for palm oil whose production has been linked with deforestation.

These narratives have often been, and continue to be, seen as being in conflict. However, areas of alignment do exist between these two narratives in relation to the areas of intervention that are prioritised. Thus, improving agricultural practices to increase yields has been prioritised both to improve economic outcomes and reduce pressure on forests. Indeed, this is an approach prioritised by the private sector, whose interests span these two narratives. Thus, they are concerned not only with ensuring future supplies of palm oil, but also with complying with market requirements to exclude deforestation from their supply chains.

Supporting the inclusion of smallholders is another area of intervention where there seems to be some alignment, however, it often means very different things to different people. Thus, for some, inclusion entails enabling participation in supply chains, whereas for others, it means enabling participation in decision-making and in policy-making.

Workers' rights is an issue on which there is also some alignment. This is widely (if not universally) prioritized, and it is an issue that does not conflict with other sustainability issues. Workers' rights are mostly considered with respect to working conditions, including pay and contractual arrangements.

Alignment can also be found with some of the political aspects of sustainability, reflecting their cross-cutting nature. Thus, there is broad recognition of the need to improve both transparency as well as law enforcement and compliance in the sector. Improving the availability of, and access to, data is prioritised as part of efforts to support smallholders, to encourage investment, and to eliminate deforestation from supply chains.

[269] https://rspo.org/a-living-wage-rspos-strategic-direction/

Gaps

While the scope of many initiatives has broadened, there are a number of aspects of sustainability that are given no, or relatively little attention.

Regarding environmental issues, pollution from agrichemicals is given relatively little attention, although this is an integral part of agricultural practices and so interventions in this area would encompass this to an extent. Climate resilience and adaptation area also not frequently mentioned, this in spite of growing evidence of the sector's vulnerability to the effects of climate change.[270]

Within the social pillar, while community welfare and rights are increasingly being highlighted, no specific mention is made of cultural issues. Linked to this, relatively little mention is made of livelihood diversity.

Furthermore, prices and value distribution along the supply chain are given little attention, although discussions about living income have risen up the agenda in recent years. Increasing yield has tended to be the main route through which farmer income is sought to be improved, rather than potential reform of pricing mechanisms and controls.[271] Little mention is also made of compliance with and enforcement of the fiscal regime, nor of benefit-sharing regimes for the sector.

[270] Murphy, D. J., et al. (2021) Oil palm in the 2020s and beyond: Challenges and solutions. CABI Agriculture and Bioscience, 39, Article 2. https://cabiagbio.biomedcentral.com/articles/10.1186/s43170-021-00058-3; Voora, V. et al. (2023) Palm oil prices and sustainability. Global Market Report, IISD & SSI. https://www.iisd.org/system/files/2023-06/2023-global-market-report-palm-oil.pdf

[271] Solidaridad (2022) Palm Oil Barometer. https://www.solidaridadnetwork.org/wp-content/uploads/2022/09/Palm-Oil-Barometer-2022_solidaridad.pdf; Voora, V. et al. (2023)

	ENVIRONMENTAL	SOCIAL	ECONOMIC	POLITICAL
ISSUES MOST FREQUENTLY PRIORITISED	Ecosystem protection & management (deforestation; peatland protection; high carbon stock (HCS) ecosystems) Climate mitigation Protection of biodiversity (& high conservation value (HCV) ecosystems)	Working conditions & rights Land & resource rights (IPLCs)	Livelihoods (smallholders) Investment	Transparency Legal compliance & enforcement
ISSUES ALSO PRIORITISED	Restoration Climate resilience Water management Soil conservation Waste & chemicals	Equality & discrimination Communities – benefit sharing; institutions; social infrastructure Food security	Prices & premiums	Participation in policy making Research & training Institutional framework Legal & policy framework
ISSUES NOT PRIORITISED		Culture	Taxes	Financial management

Table 3: Frequency of issues cited as priority objectives in palm oil sustainability initiatives
Key: Issues most frequently prioritised – those listed more than 5 times; Issues also prioritised – those listed between 1 and 5 times;

	ENVIRONMENTAL	SOCIAL	ECONOMIC	POLITICAL
ACTIONS MOST FREQUENTLY PRIORITISED	Protection of forests & ecosystems Improved agricultural practices (including climate smart production) Land-use planning & management	Due diligence for human rights risks	Increased productivity/yields Promoting certification	Monitoring of impacts (including satellite monitoring) Traceability & transparency of supply chains Multi-stakeholder engagement Investing in research & innovation
ACTIONS ALSO PRIORITISED	Reducing GHG emissions in operations Promoting palm oil as renewable energy Restoration of forests / ecosystems Efficient use of natural resources (including water) Fire prevention & management Integrated pest management Soil management Prevention & mitigation of pollution Monitoring Compliance with environmental laws Due diligence for environmental risks	Dispute handling measures / remediation Clarification / legalisation of land tenure Empowerment of local & indigenous groups Training of workers Equality / inclusiveness for marginalised people (including women) Legal reform (of labour regulations)	Training/extension for smallholders Inclusion of smallholders in production systems / supply chains Promoting / enabling investment Improved agricultural practices Promoting palm oil Developing new technologies Use / development of by-products	Legal compliance / enforcement Legal reform Institutional reform / strengthening Increased access to policy information International collaboration & coordination

Table 4: Frequency of actions cited as priority areas for intervention in palm oil sustainability initiatives
Key: Actions most frequently prioritised – those listed more than 5 times; Actions also prioritised – those listed between 1 and 5 times

Impact: evidence for achievement of their social, environmental & economic objectives
The available evidence for three issues is considered here – livelihoods of smallholders and rural communities, forest and ecosystem impacts, and workers' rights. Much of the evidence comes from Indonesia, reflecting the country's position as the largest producer of palm oil. The impact of specific initiatives is not evaluated here. This would require a more in-depth study, and would be challenging given the multiple interactions between initiatives.

The impact of oil palm cultivation on the **livelihoods of smallholders and rural communities** has been found to be highly variable, depending on the type of production models and on the socio-economic and governance context.[272] This variation can exist at a very local level, as in many landscapes there exists a complex of oil palm developments, in which smallholders and communities are engaged in a variety of ways. Consequently, its impacts can be specific to particular individuals or groups.

While it is widely reported that the adoption of oil palm has improved the income of many smallholders and has contributed to reducing poverty, this has sometimes been at the expense of social equity, with wealthier farmers and landholders benefiting the most.[273] Furthermore, where smallholders have become heavily reliant on oil palm, this has sometimes reduced economic resilience because of the crop's price volatility,[274] although in another study, a reduction in economic risk was reported.[275]

Differences in the economic impact of oil palm cultivation on communities have been found depending on the extent to which they are engaged in commercial agriculture. Thus, research in Indonesia reported that in those communities with established links to markets, oil palm cultivation had some positive economic impacts, but the opposite was found in subsistence-based communities.[276]

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[272] Dharmawan, A.H., et al. (2020) Dynamics of rural economy: A socio-economic understanding of oil palm expansion and landscape changes in East Kalimantan, Indonesia. *Land 9*(7), 213; https://doi.org/10.3390/land9070213; Aubert, P. et al. (2017) Implementation and effectiveness of sustainability initiatives in the palm oil sector: a review. IDDRI Study, No. 11/17, October 2017. https://www.iddri.org/sites/default/files/import/publications/st1117_pma-et-al._oil-palm-southeast-asia.pdf; Mehraban, N., et al. (2021) Oil palm cultivation, household welfare, and exposure to economic risk in the Indonesian small farm sector. Journal of Agricultural Economics 72(3), 901–915. https://onlinelibrary.wiley.com/doi/10.1111/1477-9552.12433

[273] Ayompe, L.M. et al. (2020) Towards sustainable palm oil production: The positive and negative impacts on ecosystem services and human wellbeing. Journal of Cleaner Production, Vol. 278. https://doi.org/10.1016/j.jclepro.2020.123914;; Castellanos-Navarette, A. et al. (2021) The impact of oil palm on rural livelihoods and tropical forest landscapes in Latin America. Journal of Rural Studies 81: 294-304. https://doi.org/10.1016/j.jrurstud.2020.10.047; Jezeer, R. et al. (2019) Improving smallholder inclusiveness in palm oil production — a global review. ETFRN News, 59. Tropenbos. https://www.tropenbos.org/resources/publications/etfrn+news+59:+exploring+inclusive+palm+oil+production; Potter, L. (2020) Colombia's oil palm development in times of war and 'peace': Myths, enablers and the disparate realities of land control. Journal of Rural Studies, 78: 491-502. https://doi.org/10.1016/j.jrurstud.2019.10.035;

[274] Cadman et al. (2019) Making palm oil sustainable and inclusive: incentives and disincentives in Indonesia. ETFRN News, 59. Tropenbos. https://www.tropenbos.org/resources/publications/etfrn+news+59:+exploring+inclusive+palm+oil+production; Slingerland, M. et al. (2019) Improving smallholder inclusivity through integrating oil palm with crops. ETFRN News, 59. Tropenbos. https://www.tropenbos.org/resources/publications/etfrn+news+59:+exploring+inclusive+palm+oil+production;

[275] Mehraban, N., et al. (2021)

[276] Santika, T. et al. (2019) Does oil palm agriculture help alleviate poverty? A multidimensional counterfactual assessment of oil palm development in Indonesia. World Development 120: 105-117, https://doi.org/10.1016/j.worlddev.2019.04.012

Land distribution and the effectiveness of land governance is another factor influencing impacts on communities. For example, in Colombia, unequal land distribution in concert with weak governance has led to the displacement of farmers by large-scale oil palm plantations.[277]

Research has documented the role of training and outreach for smallholders, the existence of effective cooperatives and community associations, as well as legal rights to the land, in helping to ensure more positive outcomes of oil palm cultivation.[278]

The role of certification in improving outcomes is not clear. While some research has found that certification is linked with increased yields and income,[279] elsewhere the benefits were either uncertain or mixed.[280] For example, in Colombia certified smallholdings were found to be getting higher prices and paying higher wages, but fewer workers were employed.[281]

Furthermore, the uptake of certification remains low, particularly amongst smallholders. In 2021 about 20% of the world's production had been certified under the RSPO scheme.[282] In terms of land area, in 2021 4.5 million hectares were certified under RSPO, and the same areas was certified under ISPO in Indonesia, (equivalent to just over a quarter of the country's oil palm plantations),[283] and 1.9 million hectares were certified under ISCC.[284]

The uptake of certification is particularly low amongst smallholders, and even more so amongst the smallest and lowest capacity of these. For example, of the estimated 7 million smallholders involved in oil palm production, 165,000 are certified with RSPO.[285] Thus its effectiveness as a tool to address poverty has been constrained.

Regarding the impact of oil palm cultivation on **forests and biodiversity**, despite governments and the private sector making a range of commitments to eliminate deforestation, the production of this crop continues to be linked with loss of forests and other ecosystems.[286] Of the three countries considered here, deforestation is mainly an issue in Indonesia – in Colombia, most oil palm

[277] Castellanos-Navarette, A. et al. (2021); Furumo, P.R. & T.M. Aide (2017) Characterizing commercial oil palm expansion in Latin America: land use change and trade. *Environmental Research Letters* 12(2), **DOI** 10.1088/1748-9326/aa5892
[278] Ichsan, M. et al. (2021) Oil Palm Smallholders on the Edge: Why Business Partnerships Need to be Redefined. SPOS Indonesia. https://sposindonesia.org/wp-content/uploads/2021/07/28.-eng-Oil-palm-smallholders-on-the-edge-Why-business-partnerships.pdf; Maat, H. et al. (2019) Good agricultural practices in oil palm and smallholder inclusion in Indonesia. ETFRN News, 59. Tropenbos. https://www.tropenbos.org/resources/publications/etfrn+news+59:+exploring+inclusive+palm+oil+production
[279] Morgans, C.L. et al. (2018) Evaluating the effectiveness of palm oil certification in delivering multiple sustainability objectives. Environmental Research Letters 13(6), **DOI** 10.1088/1748-9326/aac6f4
[280] Jezeer, R. et al. (2019)
[281] Furumo, P.R. et al. (2020) Field evidence for positive certification outcomes on oil palm smallholder management practices in Colombia. Journal of Cleaner Production 245, 118891, https://doi.org/10.1016/j.jclepro.2019.118891
[282] RSPO Impact Report, 2022. Available at: https://rspo.org/resources/?id=23841
[283] https://gapki.id/en/news/20739/gapki-4-53m-ha-palm-oil-plantations-certified-with-ispo
[284] ISCC Impact Report, 2022. Available at: https://www.iscc-system.org/wp-content/uploads/2022/07/ISCC-Impact-Report-2022.pdf
[285] RSPO Impact Report, 2022. Available at: https://rspo.org/resources/?id=23841
[286] Tropenbos Indonesia (2020) New ISPO – A New Hope to Strengthen Oil-Palm Governance? Info Brief, October 2020. https://www.tropenbos-indonesia.org/resources/publications/new+ispo:+a+new+hope+to+strengthen+oil-palm+governance%3F

cultivation is on degraded land[287]; and in Nigeria, while oil palm has been linked with deforestation,[288] it is not a major driver.[289]

Indonesia has achieved significant reductions in deforestation driven by the oil palm sector[290], the result in large part of the implementation of a moratorium on peatlands and increased investment in law enforcement. However, deforestation continues, both planned and illegal.[291]

There is some evidence that certification has reduced forest and biodiversity loss, however these impacts are often small and not universal.[292] For example, one piece of research from Indonesia reported that while deforestation was lower within certified plantations, such plantations typically had less forest when they became certified.[293] Other research, also in Indonesia, found no difference in the incidence of fires or biodiversity between certified and non-certified plantations.[294] In Colombia, certified plantations were found to have set aside more areas for conservation.[295]

With respect to **workers' rights**, forced labour has been reported as an issue in the sector.[296] Particular risks have been linked with the use of migrant workers, the prevalence of subcontracting and low levels of unionisation (the latter in Colombia).[297] There is some evidence that certification has improved labour conditions for estate workers in Colombia.[298] With respect to the provision of living wages, progress with achieving this has reportedly been slow in all parts of the world. For example, few companies have complied with the RSPO standard to apply the Global Living Wage Coalition (GLWC) Framework.[299]

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[287] TFA (2022) Targeted Technical Expert Discussions (TTED) on Commodity-Driven Deforestation and Sustainable Production in Brazil and Colombia. Summary Report, November 2022. https://www.tropicalforestalliance.org/assets/Uploads/TTED-final-report-ENG_2003-Latest.pdf

[288] Ojo, G.U. (2017) Oil palm in the wider landscape and threats to Nigeria's forests. Tropenbos, https://www.tropenbos.org/resources/publications/oil+palm+in+the+wider+landscape+and+threats+to+nigeria%E2%80%99s+forests

[289] Global Forest Watch, Nigeria dashboard, https://gfw.global/44OZnhv

[290] Gardner, T. & Y. Rylander (2022) Indonesia makes progress towards zero palm oil deforestation – but gains in forest protection are fragile. Blog, Stockholm Environment Institute, 15 September 2022 https://www.sei.org/featured/zero-palm-oil-deforestation/

[291] Wijaya, A. et al. (2019) Indonesia is Reducing Deforestation, but Problem Areas Remain. Global Forest Watch Blog, 24 July 2019, https://www.globalforestwatch.org/blog/data-and-research/indonesia-is-reducing-deforestation-but-problem-areas-remain/; Gaveau D.L.A., et al. (2022) Slowing deforestation in Indonesia follows declining oil palm expansion and lower oil prices. PLoS ONE 17(3), https://doi.org/10.1371/journal.pone.0266178; https://chainreactionresearch.com/the-chain-top-ten-deforesters-clear-8100-hectares-on-oil-palm-concessions-during-1h-2022-a-significant-increase-versus-2021/

[292] Meijaard, E., et al. (2020) The environmental impacts of palm oil in context. *Nat. Plants* 6, 1418–1426. https://doi.org/10.1038/s41477-020-00813-w;

[293] Carlson, K. M., et al. (2018) Effect of oil palm sustainability certification on deforestation and fire in Indonesia. *Proceedings of the National Academy of Sciences*, *115*(1), 121-126. https://doi.org/10.1073/pnas.1704728114

[294] Morgans, C.L. et al. (2018)

[295] Furumo, P.R. et al. (2020) Field evidence for positive certification outcomes on oil palm smallholder management practices in Colombia. Journal of Cleaner Production 245, 118891, https://doi.org/10.1016/j.jclepro.2019.118891;

[296] CGF Human Rights Coalition – Working to End Forced Labour. Maturity Journey Framework for the Implementation of Forced-labour Focused HRDD Systems in Palm Oil Supply Chains: Version 1.0, October 2022 https://www.theconsumergoodsforum.com/wp-content/uploads/2022/10/2022-HRC-HRDD-Framework-for-Palm-Oil.pdf

[297] Fair Labor Association (2018) Assessing Forced Labor Risks in the Palm Oil Sector in Indonesia and Malaysia. A research report for the Consumer Goods Forum. November 2018. https://www.theconsumergoodsforum.com/wp-content/uploads/2018/11/201811-CGF-FLA-Palm-Oil-Report-Malaysia-and-Indonesia_web.pdf; Quiroz, D., et al. (2021) Sector Analysis: Latin American Palm Oil. CNV Internationaal and Profundo.

[298] Potter, L. (2020);

[299] POIG (2023a) The Living Wage. A crucial building block for responsible palm oil growers. Palm Oil Innovation Group. https://poig.org/wp-content/uploads/2023/04/POIG-Publication-Living-Wage-2023-web.pdf

Challenges faced in achieving impact

While progress in improving sustainability within the oil palm sector has been made, this has not been sufficient. A range of factors have been identified that have hindered improvements.

Increasing the levels of **sustainability certification** within the sector has been, and continues to be, a priority for many initiatives. In spite of this, as noted above, uptake remains low. One reason for this is the lack of demand for certified products and, thus, the lack of a price premium.[300] In 2021, just over 60% of RSPO certified palm oil was sold as such – although this proportion is increasing (this figure was just over 50% in 2019).[301] Unless the economic incentives are in place for certification, its adoption will remain low, particularly amongst smallholders for whom price is the main motivation for certification.[302]

Smallholders face particular challenges in achieving certification, as has been widely documented. Thus, they have limited capacity and resources, and may also face barriers such as a lack of legal tenure or no access to credit.[303] Both RSPO and ISPO have sought to address this through adapting their standards and providing outreach and training for smallholders.[304] However, given the number of smallholders engaged in the sector (estimated at 7 million), resources remain insufficient. Thus, support for this part of the sector needs to be scaled up.

More fundamentally, the position of smallholders in the sector is often a marginal one. The need for **greater inclusion of smallholders** in the sector is widely recognised. In spite of this, its implementation remains insufficient. For example, within very few of the multi-stakeholder initiatives is there adequate representation of smallholders, limiting their ability to inform and shape these.[305]

Within the private sector, while many companies have been implementing more **inclusive business models**, and different approaches are being explored, these are often limited in scope. Thus, inclusion may be defined only in terms of engaging smallholders in supply chains or of providing market opportunities, for example, through contractual relations or the provision of technical training or resources. This is in contrast to a wider concept of inclusion, which would enable

[300] Solidaridad (2022); Voora, V. et al. (2023)
[301] RSPO Impact Report 2022, file:///Users/Alison/Downloads/RSPO-Impact-Report-2022-4.pdf
[302] Furumo, P.R. et al. (2020)
[303] Solidaridad (2022); Jezeer, R. et al. (2019); Calderon, D. & C.A. Perez (2019) Smallholder oil palm producers contributing to peace and sustainability in Colombia. ETFRN News, 59. Tropenbos. https://www.tropenbos.org/resources/publications/etfrn+news+59:+exploring+inclusive+palm+oil+production; Dharmawan, A. et al. (2021) The Agrarian, Structural and Cultural Constraints of Smallholders' Readiness for Sustainability Standards Implementation: The Case of Indonesian Sustainable Palm Oil in East Kalimantan. Sustainability 13, 2611. https://doi.org/10.3390/su13052611; Ichsan, M. et al. (2021); Bakhtary, H. et al. (2021) Promoting sustainable oil palm production by independent smallholders in Indonesia: Perspectives from non-state actors. Climate Focus & the Meridian Institute. https://merid.org/wp-content/uploads/2021/02/Indonesian-Palm-Oil-Smallholders_Briefing-Paper.pdf; Watts, J. et al. (2021) Challenges faced by smallholders in achieving sustainable palm oil certification in Indonesia. World Development 146, https://doi.org/10.1016/j.worlddev.2021.105565; Jaramillo, M. et al. (2020) Complying with Zero-Deforestation Agreements in Colombia. Barriers and opportunities. Solidaridad, Climate Focus, Tropical Forest Alliance. https://climatefocus.com/wp-content/uploads/2022/06/TFAColombia_ComplyingWithZeroDeforestationAgreements.pdf;
[304] On ISPO see: EFECA (2020) Palm Oil Certification Schemes: ISPO. March 2020, https://www.efeca.com/wp-content/uploads/2020/03/Certification-Scheme-ISPO-Infobriefing-5-Part-2-Final.pdf; On RSPO see: Selvaraj, A. & F. Richards (2019) RSPO's vision and progress toward inclusivity. ETFRN News, 59. Tropenbos. https://www.tropenbos.org/resources/publications/etfrn+news+59:+exploring+inclusive+palm+oil+production
[305] Solidaridad (2022)

smallholders to have a say on whether and how they engage in the sector, on their modes of production and on prices.[306]

Greater attention has been called for on strengthening producer cooperatives and other local level institutions, as these have proven an effective means of increasing the voice of smallholders in the sector and giving them greater bargaining power.[307] Furthermore, the need for companies to invest in long-term trading relationships, rather than the provision of shorter-term technical assistance, has been highlighted.[308]

One consequence of this limited engagement is the continued focus on growing palm oil as a monoculture, and on 'upgrading' smallholders to meet the needs of export markets.[309] This is in spite of many smallholders wanting to maintain diverse agricultural systems.[310]

A further reflection of the marginal position of many smallholders in the sector is in the value distribution along the supply chain, with smallholders receiving a disproportionately small part of the profits.[311] The need for palm oil to provide a living income for those engaged in the sector has risen up the agenda, but it is still failing to do so for many.[312] The lack of transparency over prices by processors and manufacturers is one factor underlying this, as this hinders fair negotiations over price.[313] Prices are also primarily determined by international markets; these have been volatile, and living incomes have not been achieved by many producers at times of low prices (although the governments of Colombia and Indonesia have both introduced price controls to try and mitigate the impact of this.)[314]

Questions have also been asked about the extent to which the sector is supporting development through the collection and redistribution of revenues by the government. For example, Indonesia's low tax regime for palm oil potentially reduces the benefits to be shared with those communities impacted by plantations.[315]

As noted above, the **broader governance context** has an important role in determining the impact of the sector on sustainability outcomes. Recognition that particular projects or initiatives focused on management units can only have a limited impact is reflected in the shift towards landscape or jurisdictional approaches. For example, conservation of some species requires broader land-use planning, so that habitats can be linked up, while improving livelihoods may require the provision of health and education facilities and transport infrastructure to enable market access.[316]

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[306] Slingerland, M. et al. (2019); Ichsan, M. et al. (2021); Jezeer, R. et al. (2019); Purwanto, E. & D. Tjawikrama (2019) The role of village assemblies in overcoming barriers to smallholder inclusiveness: examples from Indonesia. ETFRN News, 59. Tropenbos. https://www.tropenbos.org/resources/publications/etfrn+news+59:+exploring+inclusive+palm+oil+production;

[307] Purwanto, E. & D. Tjawikrama (2019); Maat et al. (2019);

[308] Solidaridad (2022)

[309] Solidaridad (2022); Potter, L. (2020);

[310] Slingerland, M. et al. (2019); Quiroz, D., et al. (2021);

[311] Rijk, G. et al. (2021) FMCGs, Retail Earn 66%of Gross Profits in Palm Oil Value Chain, https://chainreactionresearch.com/wp-content/uploads/2021/06/FMCGs-Retail-Earn-66-of-Gross-Profits-in-Palm-Oil-Value-Chain.pdf; Voora, V. et al. (2023)

[312] Solidaridad (2022)

[313] Ichsan et al. (2021); Mehraban, N., et al. (2021); Sri Rahayu, N., et al. (2022). Exclusion of smallholders in the Indonesia palm oil industry. KnowledgeE Social Sciences, 1158–1182. http://doi.org/10.18502/kss.v7i9.11010

[314] Voora, V. et al. (2023) EIA (2022) Creating Clarity. An analysis of the challenges and opportunities in the new Indonesian Sustainable Palm Oil (ISPO) certification scheme. https://eia-international.org/report/creating-clarity-an-analysis-of-the-challenges-and-opportunities-in-the-new-indonesian-sustainable-palm-oil-ispo-certification-scheme/

[315] Santika et al. (2019)

[316] Morgans, C.L. et al. (2018)

Some of the governance factors that have been identified as hindering progress include weak law enforcement,[317] particularly with respect to land governance. Displacement of rural communities, and conflict linked with oil palm plantations have been reported in Colombia,[318] Indonesia[319] and Nigeria.[320]

Gap & opportunities

Based on the literature review, a number of issues can be identified where further attention could be useful.

- Greater attention should be given to the exploration and evaluation of different types of production system, in particular, to determine their appropriateness to different social and cultural contexts, as well as their resilience to climate change.
- The position of smallholders in the sector remains marginalised. Further exploration of the impact of different business arrangements and models on equity and inclusion is needed to identify and share best practice. Exploration of the ways in which governments can support successful models – for example, the role of subsidies, tax incentives, or information campaigns – is also needed to help in the development of strategies to scale these up.
- Strengthening the voice of smallholders and rural communities will require scaling up resources and improving the effectiveness of interventions. This would be facilitated by improved coordination between public and private actors in their efforts to strengthen capacity.
- The price of palm oil is primarily determined by international markets, and does not reflect the environmental and social impacts of its production. Research is needed to explore ways in which sustainability issues could be reflected in the price, such as import or export duties, minimum price requirements, etc., in order to ensure the provision of living incomes, and encouragement of sustainable practices.
- How fiscal and benefit-sharing regimes can best be designed to maximise the role of the palm oil sector in supporting rural development has been little explored. Exploring different models and their impacts could be used to strengthen existing regimes and inform those implementing reforms.
- The implications of palm oil production and consumption for food security, rural development and climate change, at the national, regional and global levels needs further consideration for the development of equitable and resilient land-use strategies at the national level and to inform global strategies for the sector.
- With migration likely to increase, reducing risks of labour violations for migrant workers will become a more urgent issue. Attention to this issue is also set to grow, this being an area of increased legislative focus within some consumer markets.

[317] TFA (2022)
[318] Castellanos-Navarette, A. et al. (2021); Potter, L. (2020); Quiroz, D., et al. (2021); TFA (2022);
[319] Abram, N.K. et al. (2017) Oil palm–community conflict mapping in Indonesia: A case for better community liaison in planning for development initiatives. Applied Geography 78, 33-44; https://doi.org/10.1016/j.apgeog.2016.10.005; Ichsan, M. et al. (2021); Li, T.M. (2015) Social impacts of oil palm in Indonesia: A gendered perspective from West Kalimantan. Occasional Paper 124. Bogor, Indonesia: CIFOR. https://www.cifor.org/publications/pdf_files/OccPapers/OP-124.pdf
[320] Ojo, G.U. (2017)

ANNEX 4 - TIMBER

Introduction

This annex reviews perspectives on, and approaches to, the sustainable production of timber and wood fibre. It identifies areas of alignment and divergence regarding the principles for sustainable production. It also provides the findings of a review of the literature on the various initiatives, standards and certification schemes for timber, summarizing the available evidence on their impact and the factors influencing this.

The annex covers Canada, Indonesia and Germany as timber producers, and also considers policy tools in the EU, Japan and US related to the import of timber.

The literature review focuses mainly on Indonesia and Canada, with only limited information on Germany. This is because the review was limited to English language material. For Canada, while the majority of the text applies nationally, where examples are given, they are mainly drawn from British Columbia.

Definitions and approaches to sustainability

Within the timber sector, sustainability has primarily been considered in relation to sustainable forest management (SFM).[321] Thus, the objectives of many initiatives and interventions are defined in relation to the extent of forest under such regimes, rather than in terms of its outcomes, for the environment, economy and society.

The main initiatives and their scope of engagement are summarized in figure 4. Their sustainability objectives and priorities for intervention are listed in the attached matrix.

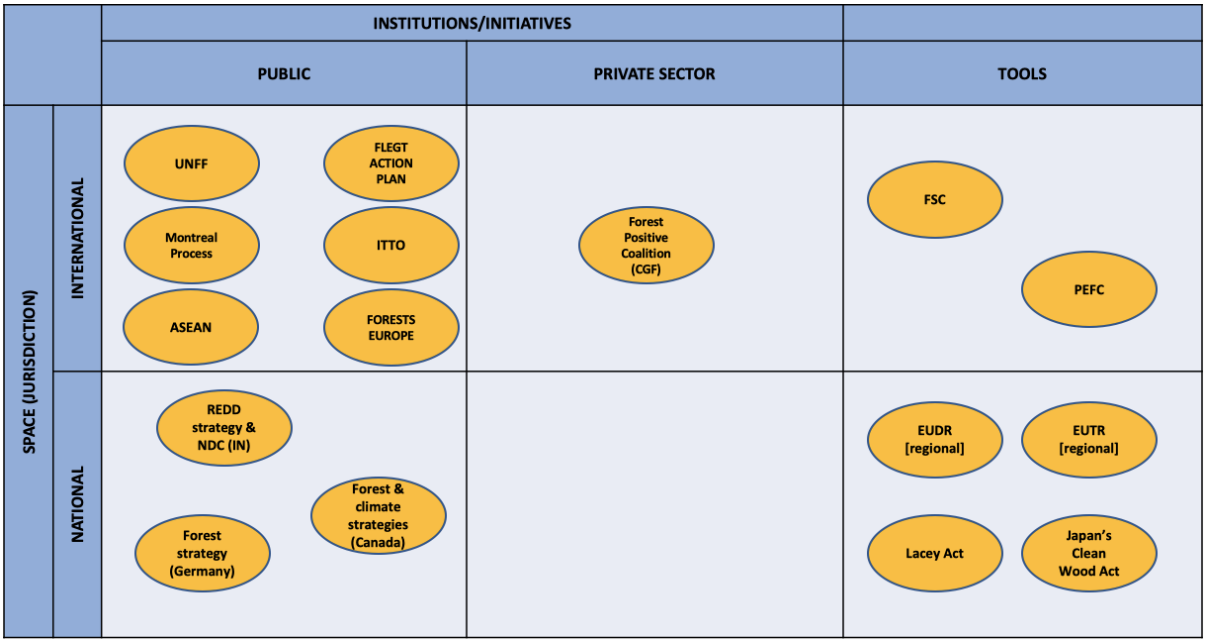

Figure 4: Timber sustainability initiatives & tools covered in this report

[321] Cerutti, P. & R. Nasi (2020) Sustainable forest management (SFM) of tropical moist forests: the Congo Basin. http://dx.doi.org/10.19103/AS.2020.0074.41

International level

The sustainable management of forests was a core element of the Non-Legally Binding Instrument on all Types of Forests (NLBI), adopted in 2007 by the **UN Forum on Forests**.[322] This was reiterated in the UN Strategic Plan for Forests that followed in 2017. This sets out a framework to 'sustainably manage all types of forests and trees outside forests and halt deforestation and forest degradation', this based on six Global Forest Goals. These include the objectives to: reverse the loss of forest cover worldwide through sustainable forest management; significantly increase the area of forests under long-term forest management plans; significantly increase the proportion of forest products from sustainably managed forests; and to mobilize significant resources to finance SFM.[323]

Similarly, the **ITTO** works to promote the sustainable management and conservation of tropical forests and the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests.[324] ITTO pioneered the development of criteria and indicators (C&I) for the sustainable management of natural tropical forests in the early 1990s.

These subsequently informed the development of standards for forest certification schemes, and C&I for non-tropical forests were also established. C&I for the sustainable management of temperate and boreal forests were established under the **Montreal Process**,[325] while **FOREST EUROPE** (the Ministerial Conference on the Protection of Forests in Europe) established C&I for European forests.[326]

Within the UN climate negotiations, **REDD+** was established as a means to address deforestation and forest degradation while also contributing to the maintenance and enhancement of forest carbon stocks.[327] Within this framework, sustainable forest management is recognised as one means to achieve these goals, albeit as part of a suite of measures that need to be adopted as part of landscape or jurisdictional approaches.

At the regional level, **ASEAN – The Association of Southeast Asian Nations** has been working on forestry since the 1970s, with the aim of enhancing the competitiveness of the region's forest products, to promote trade and greater private sector investment.[328] Its goal for cooperation in the sector is to "enhance sustainable forest management for the continuous production of forest goods and services in a balanced way and ensuring forest protection and biological diversity conservation, as well as optimise their utilisation, compatible with social and ecological sustainability".[329]

Similarly, **FOREST EUROPE** works to develop 'common strategies for its 46 signatories on how to protect and sustainably manage their forests'.[330] It currently has 3 workstreams; on sustainable forest management, green jobs and education; and the Pan-European forest risk knowledge mechanism. The latter was established in 2021, and aims to provide information and enable

[322] UN General Assembly (2007) Non-legally binding instrument on all types of forests: resolution / adopted by the General Assembly. https://digitallibrary.un.org/record/614195
[323] https://www.un.org/esa/forests/news/2017/01/six-global-forest-goals/index.html
[324] https://www.itto.int/about_itto/
[325] https://montreal-process.org/
[326] https://foresteurope.org/workstreams/sustainable-forest-management/
[327] https://unfccc.int/topics/land-use/workstreams/reddplus
[328] https://forestry.asean.org/
[329] https://forestry.asean.org/wp-content/uploads/2018/04/Strategic-Plan-of-Action-for-ASEAN-Cooperation-on-Forestry-2016-2025.pdf
[330] https://foresteurope.org/

knowledge exchange to support forests adaptation to changing climatic conditions and enhance their resilience and mitigation potential.

While SFM continued to be regarded as a core goal, in the early 2000s attention shifted to improving law enforcement and governance. This was in response to growing awareness that illegal practises were undermining efforts to implement sustainable forest management. Within **the EU, the FLEGT Action Plan** was launched in 2003. This sought to tackle illegal logging and the related timber trade. While the focus was on legality, the EU hoped to foster sustainable forest management and to improve rural livelihoods and support sustainable development more broadly.[331] Two core elements of the Action Plan have been the development of Voluntary Partnership Agreements between the EU and timber producing countries and the introduction of the EU Timber Regulation, which prohibits the import and sale of illegal timber (see further details below).

National level

Within **Indonesia**, a range of strategies and policy reforms have been implemented aimed at enhancing sustainability within the country's forest sector.

Under the framework of the FLEGT Action Plan, Indonesia established a Voluntary Partnership Agreement (VPA) with the EU, this with the objective to ensure that all timber imports [of those products within scope] into the EU from Indonesia were legally produced, and furthermore, to enhance forest law enforcement and governance.[332] In the preamble, it is noted that implementation of the agreement was a means to 'reinforce sustainable forest management and contribute to combating climate change through… REDD+'.

A range of measures have been taken under the framework of the VPA, these including the development of a national timber tracking system, the SVLK, launched in 2009. It was developed through an in-depth, participatory process. The prime focus of the system is to verify the legality of timber but it also provides assurance of those aspects of sustainability that are covered by the legal framework. In the last few years, the government has been giving greater emphasis to the sustainability requirements of the system, this prompted in part by the development of the EU regulation on deforestation. Thus, in 2021, the name of the tracking system was changed – from the 'Timber Legality Verification System' to the 'Sustainability and Legality Verification System' – and a number of revisions to the system were made, including requirements for verification of compliance with sustainability provisions.[333]

Indonesia's climate change commitments rely heavily on the forest sector. The strategy to further reduce emissions from the sector, as set out in the country's enhanced NDC, includes the implementation of land use and spatial planning, and sustainable forest management, this including social forestry. In addition, controlling illegal logging and increasing the establishment and productivity of plantations, are identified as strategies to tackle forest degradation.[334] As part of its climate strategy, Indonesia has also set the objective that its forest and land-use sector will become

[331] Commission of the European Communities (2003), Communication from the Commission to the Council and the European Parliament: Forest Law Enforcement, Governance And Trade (FLEGT) – Proposal for an EU Action Plan, May 2003, COM(2003) 0251 final, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52003DC0251

[332] Voluntary Partnership Agreement between the European Union and the Republic of Indonesia on forest law enforcement, governance and trade in timber products into the European Union, 2015. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02014A0520%2802%29-20150801

[333] https://flegtimm.eu/wp-content/uploads/Booklet_MFP4-Indonesia-Supplies-Responsibly-Sourced.pdf

[334] Enhanced Nationally Determined Contribution, 2022. https://unfccc.int/NDCREG

a net sink by 2030.[335] This aims to enhance sustainable practices, and law enforcement and compliance, to strengthen forest and land governance and improve the livelihoods of forest dependent people.

In Canada, responsibility for public forests is shared between national and sub-national levels of government Provincial and territorial governments have jurisdiction over the majority of Canada's forests and are responsible for implementing laws and regulations based on principles of sustainable forest management. There is also federal legislation in place which applies to all forestry operations.[336] In 2019, the Council of Forest Ministers set out the following vision for the country's forests over the following decade: 'Canada's sustainable forest management practices maintain resilient, healthy forests that support vibrant communities, stronger collaborations with Indigenous peoples and competitive economies'.[337] There are 5 focus areas for achieving this vision: collaboration with indigenous peoples; innovation; wildland fires and other disturbances; climate change; and Canada's environmental reputation.

The country's forest sector also has a central role in the government's climate strategy – as set out in its Pan-Canadian Framework on Clean Growth and Climate Change,[338] its Strengthened Climate Plan to Create Jobs and Support Communities[339] and its NDC.[340] Its strategy focuses on: reforestation, with a goal to plant 2 billion trees; forest protection, with the goal to protect 30% of its land area by 2030; and transformation of its forest sector to establish a world leading forest bio-economy. The government seeks to achieve the latter through improving forest management practices, promoting the use of wood products in construction and through expanding the production of biomass.

The vision for **Germany**'s 2020 Forest Strategy[341] is to preserve and develop robust forests that are adaptable to climate change through their sustainable management. Further, through 'equal consideration of the three dimensions to sustainability (ecological, economic and social)', its goal is to 'develop a viable balance, adapted to future requirements, between the growing demands made on forests and their sustainable performance'. Thus, the countries forests are to be managed for their multiple functions. It highlights the need for the sector to adapt to climate change, while also maintaining jobs and providing raw materials for the timber, paper and energy industries.

The government also published a Bioeconomy Strategy in 2021[342], through which it seeks to 'strengthen its role as a bioeconomy leader.' This includes the goals to: harness the potential of the bioeconomy within ecological boundaries; and to establish a sustainable raw material base for industry'.

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[335] Ministry of Environment & Forestry, 2022. Forestry and Other Land Use (FOLU) NET SINK 2030. Available at: https://foresthints.news/indonesia-folu-net-sink-2030-operational-plan-released/

[336] https://www.ncasi.org/resource/canadian-forestry-regulations-and-standards/

[337] CCFM (2019) A Shared Vision for Canada's Forests: Towards 2030. Canadian Council of Forest Ministers, https://www.ccfm.org/releases/a-shared-vision-for-forests-in-canada-toward-2030/

[338] Government of Canada (2016) Pan-Canadian Framework on Clean Growth and Climate Change. https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework.html

[339] A Healthy Environment and a Healthy Economy. Canada's Strengthened Climate Plan to Create Jobs and Support Communities (2020) https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/healthy-environment-healthy-economy.html

[340] Canada' 2021 Nationally Determined Contribution Under the Paris Agreement. https://unfccc.int/sites/default/files/NDC/2022-06/Canada%27s%20Enhanced%20NDC%20Submission1_FINAL%20EN.pdf

[341] https://www.bmel.de/EN/topics/forests/forests-in-germany/forest-strategy-2020.html

[342] https://www.bmbf.de/SharedDocs/Publikationen/de/bmbf/FS/31617_Nationale_Biooekonomiestrategie_Langfassung_en.pdf?__blob=publicationFile&v=5

Private sector
Within the private sector, those companies seeking to enhance the sustainability of their operations have typically done so through seeking third-party certification. In response to growing concern about deforestation, there has been a shift towards engaging beyond the boundaries of their concessions, and thus to engage at the landscape or jurisdictional level.

This is seen in the **Forest Positive Coalitio**n of the Consumer Goods Forum, which has shifted its main focus for engagement from supply chains to the business level, and from 'deforestation free' to 'forest positive'. Forest positive businesses are described as ones that make 'systemic efforts to remove deforestation, forest degradation and conversion from key commodity supply chains, while supporting sustainable forest management and restoration, to ensure the business is positively impacting the world's forests, supporting the rights of workers and local communities and improving their livelihoods'. Within its roadmap for pulp, paper and fibre-based packaging (PPP) (its initial priority for engagement within the forest sector), increasing the area of certified forest is highlighted as a priority while also engaging more broadly on governance issues.[343]

Policy tools
There are a range of tools that are being used to promote sustainable timber. These include certification, public procurement policies, and trade or market regulations.

Certification has been one of the key tools aimed at expanding the implementation of SFM. Two voluntary **certification schemes** predominate in the timber sector – FSC and PEFC.

FSC,[344] founded in 1993, aims to promote environmentally sound, socially beneficial, and economically viable management of the world's forests.[345] FSC certification is based on 10 principles, covering legality, workers' rights, well-being of communities, Indigenous Peoples' rights, conservation and enhancement of ecosystem services, and forest management to maintain or improve long-term economic viability, social benefits, and environmental benefits. Its websites states that it 'gives equal weight to economic, environmental, and social chambers.'

Since its founding, the organisation has taken steps for it to be more representative, for example, with the establishment of a committee for indigenous peoples in 2013. Its standards have also been regularly updated, with recent changes including the integration of ILO principles into its labour requirements in 2020, and updates to its group standard to improve smallholders' access, also in 2020.

PEFC[346] was set up in 1999 to protect forests by promoting sustainable forest management through certification, with the goal that 'we can all benefit from the many products that forests provide now, while ensuring these forests will be around for generations to come.'

Unlike FSC, which is a certification organization, PEFC gives endorsement to nationally developed schemes if they conform with their international benchmark. This includes standards related to the maintenance and enhancement of biodiversity, respect for human rights and workers' rights, gender

[343] https://www.theconsumergoodsforum.com/environmental-sustainability/forest-positive/key-projects/commodity-specific-roadmaps-and-reporting/
[344] https://fsc.org/en/businesses/wood
[345] https://fsc.org/sites/default/files/2020-12/FSC%20GLOBAL%20STRATEGY%202021-2026%20%28English%20version%29%20%282%29.pdf
[346] https://www.pefc.org/

equality, community well-being, respect for land tenure rights, and free, prior and informed consent of indigenous peoples.[347]

Public procurement has increasingly been used as a tool to promote sustainable timber, particularly in the last decade. Such policies typically rely on certification schemes to ensure sustainability. A number of tropical forest countries have also developed policies for legal and/or sustainable timber, many of which were supported by the EU as part of its efforts to promote legal markets.[348]

A number of countries have introduced **market regulations** to prohibit the import and trade in illegal timber, or to promote legal timber. These have included the US Lacey Act, amended in 2008, the EU Timber Regulation, introduced in 2013, and Japan's 2016 Clean Wood Act.

In recent years, the EU, UK and US have increased their attention to the issue of deforestation, and have been developing legislation aimed at reducing the import and consumption of commodities whose production is linked with deforestation. Europe introduced the Regulation on Deforestation-free supply chains in 2023, this prohibits placing timber products (as well as 6 agricultural commodities) on the EU market or exporting these, if their production resulted in deforestation. This regulation replaces the EUTR, which applied to illegal timber.

Shifts in approach, and areas of alignment and divergence

The core concerns and focus of 'sustainability' initiatives in the forest sector have evolved over the last few decades. In the 1990s, the main focus was on deforestation and the protection of biodiversity. Subsequently, greater recognition has been given to social issues.

This has been seen within the certification schemes that have included stronger provisions related to the land and resource rights of forest dependent peoples. It has also been reflected in national forest strategies, for example, those of Canada and Indonesia both prioritise the participation of indigenous peoples in the forest sector, including through integration of their traditional knowledge.

Implementing SFM has remained at the core of efforts to improve sustainability, although perspectives on how this can best be achieved have evolved. Early efforts focused on the technical aspects of (natural) forest management, and saw the development of certification schemes. In the early 2000s, there was a shift to governance and law enforcement, with awareness of high levels of illegality in the sector. SFM was still an intended outcome of this, although the theory of change was different – thus, interventions were aimed at levelling the playing field to enable businesses to implement SFM, and also at increasing government revenues to support this. The recent focus on deforestation from some consumer countries has, potentially, shifted the focus back to the forest rather than that of the broader governance context – thus, the EU regulation on deforestation-free commodities focuses strongly on the need to monitor production areas and to ensure transparency of supply chains.

Approaches to SFM have also changed over time, reflecting both shifts in priorities and also changes to the sector itself. One change has been a broadening of the purposes of forest management, with increased recognition of a wider range of objectives for forestry.

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[347] https://www.pefc.org/what-we-do/our-approach/what-is-sustainable-forest-management ; https://cdn.pefc.org/pefc.org/media/2019-01/b296ddcb-5f6b-42d8-bc98-5db98f62203e/6c7c212a-c37c-59ee-a2ca-b8c91c8beb93.pdf

[348] Navarro, G. & R. Abruzzese (2021) Promoting Legal Timber Markets: the Role of Public Procurement Policies in the Tropics. Chatham House, 16 February 2021, https://forestgovernance.chathamhouse.org/publications/promoting-legal-timber-markets-the-role-of-public-procurement-policies-in-the-tropics

.Thus, rather than focusing primarily on timber production, other forest products and ecosystem services are increasingly considered as part of the core objectives for forest management. For example, the State of Indonesia's Forests report for 2020, notes that 'a paradigm shift is underway from timber management to forest landscapes management', this entailing re-orienting forest management from focusing only on timber production toward multiple uses.[349] In response to these shifts, the certification schemes have also broadened their scope to cover other forest products and carbon.[350]

These shifts are partly a response to increased pressure on forests, as allowing different forest uses is one way to address conflicts over land use. In addition, it is intended as a means of addressing the economic sustainability of the sector – valuing additional products and services from forests can help to increase the economic incentives for SFM so that it can compete with other land uses. Thus, one reason for Indonesia's increased focus on multipurpose forestry is to increase the economic value of its production forests.[351]

The bioeconomy strategies of Canada and Germany are also seen as a means of enhancing the economic sustainability of the sector. For example, they prioritise the economic opportunities that are presented by growing demand for existing and new products, in terms of job opportunities and continued growth of the sector.

Greater priority is also being given to enabling and increasing the participation of IPLCs in forest management and in the sector more broadly.[352] This is the result of increased recognition of the rights of IPLCs, and of their role as effective stewards and managers of forests and forest lands. This is seen in the increased opportunities for the participation of IPLCs in decision-making, as well as the greater priority being given to the implementation and support of community and social forestry regimes. For example, British Columbia's 2021 plan for 'Modernizing Forest Policy' aims to: increase forest sector participation, enhance stewardship and sustainability, and strengthen the social contract.[353] This is to be achieved through a range of actions, including by working with Indigenous Nations to ensure that the sector incorporates their interests, and by increasing tenure opportunities for Indigenous Nations and other rural communities. In Indonesia, ambitious targets have been set to expand social forestry, an approach that is recognised as part of its strategy to reduce emissions from the forestry sector, as set out in its NDC and FOLU Net Sink strategy. Increased attention is also being given to enhancing the resilience of forests, for example, with the development and implementation of climate smart approaches to forest management in both Canada and Germany.[354]This is in response to the growing impact of climate change on forests, seen most starkly in the increasing frequency and extent of forest fires around the world, as well as increased incidences of pests and disease.

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[349] Ministry of Environment and Forestry (2020) The State of Indonesia's Forests 2020. https://kemlu.go.id/oslo/en/news/10525/e-book-the-state-of-indonesias-forests-2020

[350] McDermott, C.L., et al. (2023) Forest Certification in Boreal Forests: Current Developments and Future Directions. In: Girona, M.M., Morin, H., Gauthier, S., Bergeron, Y. (eds) Boreal Forests in the Face of Climate Change. Advances in Global Change Research, vol 74. Springer, Cham. https://doi.org/10.1007/978-3-031-15988-6_21

[351] Ministry of Environment and Forestry (2020)

[352] Cerutti, P. & R. Nasi (2020); Colfer, C. & R. Prabhu (2023) A time to change direction. Chapter 1, in: Colfer, C. & R. Prabhu (Eds.) Responding to Environmental Issues through Adaptive Collaborative Management: From Forest Communities to Global Actors. CIFOR-ICRAF. https://doi.org/10.4324/9781003325932

[353] Ministry of Forests, Lands, Natural Resource Operations and Rural Development, British Columbia (2021a) Modernizing Forest Policy in British Columbia. Setting the Intention and Leading the Forest Sector Transition. https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry

[354] The State of Canada's Forests. Annual Report 2022. Natural Resources Canada. https://natural-resources.canada.ca/our-natural-resources/forests/state-canadas-forests-report/16496 ; https://www.thuenen.de/en/thuenen-topics/forests/forests-in-climate-change

Shared priorities

A comparison of the high-level objectives of the various initiatives is shown in table 5. Of the environmental issues, those most commonly cited are halting deforestation and forest degradation. Climate mitigation is also frequently mentioned, with climate resilience given less attention.

With respect to economic outcomes, the provision of rural livelihoods including through providing job opportunities, are most often prioritized. Some attention is given to investment in sustainable forestry.

With respect to social aspects, the issue most frequently prioritized is that of workers' rights. Communities are quite often cited, mainly with respect to benefit sharing and community wellbeing.

Often, these various objectives are framed in terms of process rather than ultimate outcomes or impacts. Thus, implementing and improving SFM is often cited as an objective, including through implementing community and social forestry (although to a lesser extent).

Regarding the political elements of sustainability, law enforcement and compliance are most commonly mentioned. The institutional and policy frameworks are also frequently prioritized.

Gaps

Of the environmental issues, the issue of agrochemical waste (a potential issue in the plantation sector) is not prioritized. With respect to social issues, food security is not prioritized – although this would be integral to community wellbeing, which is cited. Relatively little attention is given to cultural issues, although this has been changing with the increased recognition of indigenous peoples' rights. For example, the NDCs of both Canada and Indonesia highlight traditional knowledge and the role of indigenous peoples in the sector.

With respect to the economic sustainability of forestry, the appropriateness of the fiscal framework and compliance with this is not often identified as amongst the main objectives of sustainability initiatives. Furthermore, the price of timber products is not given much attention – either with respect to increasing prices or value distribution along the supply chain.

	ENVIRONMENTAL	SOCIAL	ECONOMIC	POLITICAL
ISSUES MOST FREQUENTLY PRIORITISED	Ecosystem protection & management (forest loss & degradation) Climate mitigation	Working conditions (job opportunities)	Livelihoods	Legal compliance & enforcement
ISSUES ALSO PRIORITISED	Biodiversity protection Climate resilience Soil conservation Water management Restoration (reforestation)	Land & resource rights Communities – benefit sharing; social infrastructure; institutions Equity & discrimination (gender) Culture	Investment Prices & premiums	Legal & policy framework Institutional framework Transparency Research & training Participation in decision-making
ISSUES NOT PRIORITISED	Waste & chemicals	Food security	Taxes	Financial management

Table 5: Frequency of issues cited as priority objectives in timber sustainability initiatives

Key: Issues most frequently prioritised – those listed more than 5 times; Issues also prioritised – those listed between 1 and 5 times;

	ENVIRONMENTAL	SOCIAL	ECONOMIC	POLITICAL
ACTIONS MOST FREQUENTLY PRIORITISED	Extend area of forest under SFM Afforestation, reforestation & restoration (including plantation development)		Maintain/increase trade in forest products Mobilise financial resources for SFM	Strengthen forest governance Law enforcement Mobilise financial resources for SFM Research & development
ACTIONS ALSO PRIORITISED	Enhance the climate resilience of forests Forest conservation	Enhance/expand community/social forestry Promote gender equality Partnerships with indigenous peoples	Implement community/social forestry Maintain/increase processing of forest products	Licensing & traceability Enhance international cooperation Improve forest sector data and information Forestry training & education

Table 6: Frequency of actions cited as priority areas for intervention in palm oil sustainability initiatives
Key: Actions most frequently prioritised – those listed more than 5 times; Actions also prioritised – those listed between 1 and 5 times

Literature review: summary of evidence on levels of implementation & impact

As noted above, sustainability initiatives in the forest sector have focused primarily on the implementation of SFM. The available evidence for progress towards this goal is first reviewed, before considering the evidence for its impact on deforestation, and on livelihoods and poverty.

Evidence for levels of implementation of SFM

At the global level, progress has been made towards increasing the adoption of SFM practices. Some evidence for this is provided by the data on forest area under management plans, as well as the area under a sustainability certification scheme. Over the decade 2010-2020, the area of forest with management plans in place increased by 7%. The area of forest under a voluntary sustainability certification scheme also increased, by 35%. However, much of the expansion of certification took place during the first half of the decade.[355] Furthermore, the majority of certified forests are to be found in temperate forests and within the large-scale sector.[356]

In Canada, over 70% of the managed forest area is under a third-party certification scheme,[357] in Germany 70% of the total forest area is certified,[358] and in Indonesia, 10% of the area of production forest is certified.[359] In Canada and Indonesia the certified area has declined slightly since 2020, while in Germany there has been a slight increase.[360]

Indonesia also has a national, mandatory scheme, the SVLK that provides assurance of both legality and sustainability within natural forest concessions. The number of certified concessions has continued to increase since requirements for licensing were first introduced in 2013 (these being implemented in a step-wise process), and in 2020, two thirds of forest concessions were certified.[361]

SFM may be implemented either through large-scale, industrial concessions or smaller-scale operations – community forestry (variously called collective, communal, social …) or smallholder forestry. It has been reported that community forestry can 'present better prospects for reducing poverty than industrial-scale forestry', and that it has the potential to achieve broader dimensions of prosperity, such as environmental and cultural stewardship, material health and wellbeing, justice and security.[362] However, a global review reported that despite increasing legal recognition of

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[355] SDG Indicators Data Portal, Indicator 15.2.1 - Progress towards sustainable forest management. https://www.fao.org/sustainable-development-goals/indicators/1521/en/; Ehrenberg-Azcárate, F., & M. Peña-Claros, (2020) Twenty years of forest management certification in the tropics: Major trends through time and among continents. Forest Policy and Economics111: 102050; https://doi.org/10.1016/j.forpol.2019.102050

[356] McDermott, C.L., et al. (2023)

[357] The State of Canada's Forests, Annual Report 2022

[358] https://www.forstwirtschaft-in-deutschland.de/index.php?id=81&L=1

[359] SDG Indicators Data Portal, Indicator 15.2.1 - Progress towards sustainable forest management. https://www.fao.org/sustainable-development-goals/indicators/1521/en/

[360] SDG Indicators Data Portal, Indicator 15.2.1 - Progress towards sustainable forest management. https://www.fao.org/sustainable-development-goals/indicators/1521/en/

[361] Berning, L. et al. (2022) Forest Law Enforcement, Governance, and Trade (FLEGT) implementation in Europe and Indonesia, and the implications of timber legality and deforestation policy changes in the EU, UK, USA and China. Final study report. University of Freiburg, Germany, and Universitas Gadjah Mada, Yogyakarta, Indonesia. https://sebijak.fkt.ugm.ac.id/2022/12/07/research-on-flegt-implementation-in-europe-and-indonesia/

[362] Macqueen, D. & Mayers, J. (2020) Unseen foresters - an assessment of approaches for wider recognition and spread of sustainable forest management by local communities. WWF, Stockholm, Sweden. https://wwfeu.awsassets.panda.org/downloads/report_wwf_iied_unseen_foresters_2020_1.pdf; see also Oldekop, J. et al. (2020) A global analysis of the social and environmental outcomes of community forests. Nature Sustainability. https://doi.org/10.1038/s41893-020-00633-y

community forestry, its potential has yet to be fully realised, with low levels of implementation and participation by communities in many countries.[363]

Germany and Indonesia have both identified the small-scale sector as a crucial part of their strategies to enhance the sustainability of the forestry sector. In Germany, half of its forests are owned privately, and the vast majority of these (96%) are small-scale (<20 hectares in size).[364] Indonesia has made progress with the expansion of social forestry and in the allocation of customary forests. It has a target of allocating 12.7 million hectares for social forestry, and nearly a third of this had been reached by 2020.[365] In Canada, over 90% of managed forests are publicly owned and managed by provinces and territories. This part of the country's forest sector is dominated by large-scale businesses; however 80% of Canada's privately managed forests are small, family-owned woodlots[366]. As noted earlier, there are also efforts to increase the engagement of Indigenous communities in forestry. . For example, the recent strategy document for British Columbia's forest sector sets out the province's intention to increase opportunities for Indigenous peoples and rural communities to engage in forestry through reviewing tenure arrangements.[367]

Impact: evidence for achievement of social, environmental & economic objectives

The impact of sustainability initiatives on **deforestation, forest degradation and biodiversity loss** can be considered at two levels: within the forest management unit; and at the national or jurisdictional level.

Certification operates at the level of the forest management unit. Evidence for its environmental impacts is mixed and often context specific, making it difficult to draw general conclusions.[368] One global review of the literature examining the impact of certification concluded that outcomes for biodiversity and ecosystem services were better compared with non-certified forests, although this was only the case where logging intensity was low and if the certified forests were surrounded by relatively intact forests.[369] In another review, it was reported that most studies reported positive impacts of certification on environmental outcomes, such as forest degradation, biodiversity and carbon stocks. [370]

Within Indonesia, the SVLK system has been reported to have resulted in improved implementation of SFM with positive impacts on forest integrity and health,[371] although improved compliance was

[363] Aggarwal, S. et al. (2021) Tenure reform for better forestry: An unfinished policy agenda. Forest Policy and Economics. https://doi.org/10.1016/j.forpol.2020.102376

[364] Joa, B. & U. Schraml (2020) Conservation practiced by private forest owners in Southwest Germany – The role of values, perceptions and local forest knowledge. Forest Policy & Economics 115, 102141; https://doi.org/10.1016/j.forpol.2020.102141

[365] Ministry of Environment and Forestry (2020)

[366] https://www.forestowners.ca/

[367] Ministry of Forests, Lands, Natural Resource Operations and Rural Development, British Columbia (2021a) Modernizing Forest Policy in British Columbia. Setting the Intention and Leading the Forest Sector Transition. https://www2.gov.bc.ca/gov/content/industry/forestry/competitive-forest-industry

[368] Van der Ven, H. & B. Cashore (2018) Forest certification: the challenge of measuring impacts. Current Opinion in Environmental Sustainability, Volume 32, June 2018, Pages 104-111. https://doi.org/10.1016/j.cosust.2018.06.001

[369] Di Girolami, E. & B. Arts (2018) Environmental Impacts of Forest Certifications. Forest and Nature Conservation Policy Group, Wageningen University and Research. https://www.wur.nl/upload_mm/6/e/6/998c6e88-c6e2-4a38-92e3-c883ea847cee_20181010_Environmental_impacts_forest_certifications.pdf;

[370] Wolff, S. & J. Schweinle, (2022) Effectiveness and Economic Viability of Forest Certification: A Systematic Review. Forests 2022, 13, 798. https://doi.org/10.3390/f13050798

[371] Neupane, P.R. et al. (2019) How REDD+ and FLEGT-VPA processes are contributing towards SFM in Indonesia – the specialists' viewpoint. International Forestry Review 21(4)

only seen in the large-scale sector and not amongst smallholders.[372] Lower rates of deforestation have also been reported in those concessions certified as sustainable under the SVLK system, although it was noted that the impact of certification on sustainability outcomes was undermined by overlapping land-uses, such as oil palm and mining.[373]

Considering impacts at the national level, it is difficult to establish causality because of the multitude of factors influencing forest resources and land-use. However, some trends can be observed.

In Indonesia, notable progress has been made with reducing deforestation, rates of forest loss declining significantly over the period 2015-2021.[374] This has been attributed to a range of policies and actions from the government, including implementation of the SVLK as well as strengthened law enforcement within both the forest sector and other land-use sectors. However, deforestation and forest degradation remain problems in parts of the country.[375]

Canada and Germany, despite having low deforestation rates, are among the many countries that have experienced severe damage to their forests due to fires, pests and drought.[376] While climate change is a major cause of this, there is evidence that prevailing forest management practices have been a contributory factor, as they have made some forests more vulnerable to fire and disease.[377]

Thus, in all three countries, two of the core objectives of SFM – of maintaining forest integrity while ensuring economic returns – have proven challenging, particularly as the impacts of climate change have worsened. In Indonesia for example, while there have been significant reductions in deforestation, natural forests continue to be cleared for the establishment of pulp plantations. Furthermore, a significant proportion of this has taken place on peatlands where the long-term viability of such plantations has been questioned.[378] In Canada and Germany, forest fires and outbreaks of disease and pests have become more widespread and severe, bringing into question existing models for SFM. As recognized by the British Columbian government in 2021, its forest policy has 'not evolved quickly enough to adapt to the impacts of climate change on our forests.'[379]

Considering impacts on **livelihoods and poverty reduction**, these can also be considered at the management unit level (i.e. job opportunities, sources of income and access to benefits) and jurisdictional level (i.e. government revenues).

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[372] Susilawati, D. & P.J. Kanowski (2022) Improving Indonesia's timber legality and sustainability verification system: Proposals based on case studies of natural forest-, corporate tree plantation- and smallholder-based value chains. Environmental Science & Policy 137,384-395; https://doi.org/10.1016/j.envsci.2022.09.009

[373] Kosar, M. et al. (2019) PHPL. From Legality to Sustainability. Independent Forest Monitoring Network (JPIK). https://jpik.or.id/en/phpl-from-legality-to-sustainability/

[374] https://www.globalforestwatch.org/dashboards/country/IDN

[375] Dwisatrio et al. (2021) The Context of REDD+ in Indonesia. Drivers, agents and institutions. CIFOR. https://www.cifor.org/knowledge/publication/7952/; TRASE (2021) Indonesia Pulp Sector's Progress Hangs in the Balance. https://insights.trase.earth/insights/indonesia-pulp-sector-deforestation-hangs-in-balance

[376] For data on Canada see: The State of Canada's Forests. Annual Report 2022; For data on Germany see: https://www.thuenen.de/en/thuenen-topics/forests/forests-in-climate-change/1/forest-damage-due-to-drought-and-heat; Holzwarth, E. et al. (2020) Earth Observation Based Monitoring of Forests in Germany: A Review. *Remote Sensing*, *12*(21), 3570; https://doi.org/10.3390/rs12213570

[377] Boucher, Y. et al. (2017) Cumulative patterns of logging and fire (1940–2009): consequences on the structure of the eastern Canadian boreal forest. Landscape Ecology 32, 361–375, https://doi.org/10.1007/s10980-016-0448-9
Girona, M.M. *et al.* (2023). Challenges for the Sustainable Management of the Boreal Forest Under Climate Change. In: Girona, M.M., Morin, H., Gauthier, S., Bergeron, Y. (eds) Boreal Forests in the Face of Climate Change. Advances in Global Change Research, vol 74. Springer, Cham. https://doi.org/10.1007/978-3-031-15988-6_31; Wood, P. (2021) Intact Forests, Safe Communities. Reducing community climate risks through forest protection and a paradigm shift in forest management. Sierra Club, B.C. https://sierraclub.bc.ca/intact-forests-safe-communities-sierra-club-bc-report/

[378] TRASE (2021) Indonesia Pulp Sector's Progress Hangs in the Balance.

[379] Ministry of Forests, Lands, Natural Resource Operations and Rural Development, British Columbia (2021a) Modernizing Forest Policy in British Columbia.

With respect to government revenues, one of the assumptions underlying the FLEGT Action Plan was that improved legal compliance would increase revenue collection from the sector.[380] The VPAs were reported to have helped to streamline and improve tax collection in some countries,[381] however elsewhere the collection and management of sectoral revenues remains poor and so the sector is not contributing as it should to the public purse.[382]

At the level of forest concessions, there is some evidence that VPAs have improved benefit-sharing between industrial actors and local communities, due to governance reforms and improvements in transparency.[383] However, benefit-sharing remains inadequate in many countries.

With respect to livelihoods, the VPAs have been reported to have had little impact on job opportunities and on working conditions. Considering their impact on SMEs, the VPAs have helped to establish a more inclusive business sector and increased the voice of SMEs in the sector. However, this has not always translated into their improved participation in supply chains.[384] For example, a number of studies from Indonesia have reported that SMEs have been negatively impacted by the licensing requirements.[385]

As noted above, evidence for the impacts of voluntary certification is somewhat limited.[386] However, research into the social impacts of FSC certification of large-scale concessions in the Congo Basin found that it did bring additional positive impacts on the working conditions of employees and benefit-sharing arrangements with local populations.[387] A global review of the literature on the impacts of certification found that its economic impacts were mixed – while most studies reported positive outcomes on economic viability, price premiums and household incomes, the findings for revenues and profitability were more varied.[388]

Research in Indonesia into the impacts of FSC certification also reported some socio-economic benefits for communities, although it was noted that longer-term monitoring would be needed to determine whether these benefits would be maintained.[389]

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[380] Commission of the European Communities (2003), Communication from the Commission to the Council and the European Parliament: Forest Law Enforcement, Governance And Trade (FLEGT) – Proposal for an EU Action Plan, May 2003, COM(2003) 0251 final, https://op.europa.eu/en/publication-detail/-/publication/75fd864e-9f38-41c0-beab-fca3abfb1877/language-en

[381] Cerutti et al. (2021) Voluntary Partnership Agreements: Assessing impacts for better policy decisions. Forest Policy and Economics 124. https://doi.org/10.1016/j.forpol.2020.102386

[382] Hoare, A.L. & T. Uehara (2022) Forest Sector Revenues in Ghana, Liberia and the Republic of the Congo. Chatham House. https://www.chathamhouse.org/2022/03/forest-sector-revenues-ghana-liberia-and-republic-congo/03-disbursement-forest-revenues

[383] Fern (2021) FLEGT Voluntary Partnership Agreements 2.0. A response to the European Commission FLEGT Fitness Check, and options for the future. https://www.fern.org/publications-insight/flegt-voluntary-partnership-agreements-2-0-2444/; Hoare, A.L. & T. Uehara (2022)

[384] Cerutti et al. (2021); Villanueva, F. et al. (2022) Effects of EU illegal logging policy on timber-supplying countries: A systematic review. Journal of Environmental Management 37 https://doi.org/10.1016/j.jenvman.2022.116874

[385] Maryudi, A. & R. Myers (2018) Renting legality: How FLEGT is reinforcing power relations in Indonesian furniture production networks. Geoforum 97: 46-53, https://doi.org/10.1016/j.geoforum.2018.10.008; Acheampong, E. & A. Maryudi (2020) Avoiding legality: timber producers' strategies and motivations under FLEGT in Ghana and Indonesia. Forest Policy & Economics 111, 102047 https://doi.org/10.1016/j.forpol.2019.102047

[386] Van der Ven, H. & B. Cashore (2018)

[387] Cerutti et al. (2014) Social impacts of the Forest Stewardship Council certification. An assessment in the Congo basin. Occasional Paper 103, CIFOR

[388] Wolff, S. & J. Schweinle (2022)

[389] Miteva et al. (2015) Social and Environmental Impacts of Forest Management Certification in Indonesia. PLOS ONE 10(7): e0129675, https://doi.org/10.1371/journal.pone.0129675

However, the adoption of certification remains low in many countries, and particularly amongst community and small-scale producers.[390] Consequently it has been criticised for giving market advantage to industrial-scale operators at the expense of small producers.[391] This raises questions about the effectiveness of certification as a tool to enhance livelihoods, in light of evidence that community forestry can 'present better prospects for reducing poverty than industrial-scale forestry'.[392]

Challenges faced in achieving impact

The forest sector continues to face many challenges in improving sustainability. As noted above, certification has been one of the main tools applied, and while it has had positive impacts these have been limited in scope.

One reason for this has been the lack of price premiums for certification. This, in concert with the additional costs and requirements for certification, has limited its uptake. This is true for big businesses, but particularly so for SMEs, who are far more constrained in their resources and capacity. This is exacerbated by the fact that the policy framework is often poorly adapted for SMEs, and so they face additional hurdles to operate legally and to implement SFM.[393] Thus, while there have been targeted resources and support aimed at smallholders, these have been insufficient to redress this imbalance.

The impact of SFM, and of certification, on sustainability outcomes is of course limited by the fact that it is focused at the level of the forest management unit. The implementation of SFM has at times been constrained by the broader governance context, and in particular, the absence of effective land-use governance. For example, as noted earlier, overlapping land-use concessions were reported to have undermined the environmental outcomes of SFM in Indonesia.[394]

Recognition of this lay at the root of the FLEGT initiative, in which governance reform was fundamental to its theory of change. Significant progress was made in the case of Indonesia within the framework of the VPA, but further improvements are needed. One factor that was identified as hindering progress was inadequate law enforcement, this undermined by a lack of transparency and corruption.[395]

A further challenge has been power imbalances within the sector, which have hindered reform efforts, and in particular, efforts to strengthen the role of small-scale and community forestry – a challenge also noted in the case of British Columbia.[396] Thus, while small-scale operators have increasingly been recognised as essential for the establishment of a more sustainable sector, efforts to increase their role have made slow progress. One problem has been that while resources have been provided to strengthen the capacity of SMEs, there have not been the policy reforms needed

[390] Ehrenberg-Azcárate, F., & M. Peña-Claros, (2020) Twenty years of forest management certification in the tropics: Major trends through time and among continents. Forest Policy and Economics111: 102050, https://doi.org/10.1016/j.forpol.2019.102050

[391] Macqueen, D. & Mayers, J. (2020)

[392] Macqueen, D. & Mayers, J. (2020)

[393] Riggs, R.A. et al. (2023) One Size Does Not Fit All: Constraints and Opportunities for Small-Scale Forestry in British Columbia, Canada. *Small-scale Forestry* 22, 583–606. https://doi.org/10.1007/s11842-023-09544-0; Maryudi, A. & R. Myers (2018); Acheampong, E. & A. Maryudi (2020);

[394] Kosar, M. et al. (2019)

[395] CIFOR. 2020. Collecting Evidence of FLEGT-VPA Impacts for Improved FLEGT Communication. Desk Review-Indonesia. Bogor, Indonesia: CIFOR. https://www.cifor.org/publications/pdf_files/Reports/FLEGT-VPA_Indonesia.pdf

[396] Riggs, R.A. et al. (2023)

to rebalance the sector. Thus, the policy framework continues to favour big business and not to reflect the priorities of small producers and rural communities.

Finally, one other challenge to achieving sustainability in the forest sector has been the concept of SFM itself. There has long been a debate about the validity of the prevailing approach to SFM, both its appropriateness to diverse tropical ecosystems[397] and its ability to ensure the maintenance of forest resources and sustained yields.[398] This latter question has been cast into further doubt with the increasing impacts of climate change on forests.

Furthermore, in focusing primarily on timber as a commodity, it has been criticised for overlooking the diverse values of forests and for excluding rural communities from playing a role in the sector.[399] Thus, while the small-scale sector has increasingly been recognised as essential for the establishment of a more sustainable sector, policy frameworks are not yet designed to reflect the priorities of small producers and of rural communities, nor to create sufficient space for their forest management systems.

There have been shifts in approach in all three countries, with increased attention to the need for climate resilient forestry practices, and to explore and facilitate the implementation of a wider range of models and approaches, such as those of indigenous peoples. However, these are not yet widespread. As noted by the ministry responsible for forests in British Columbia, its policy 'has… not evolved quickly enough to adapt to the impacts of climate change on our forests'.[400]

Gaps & opportunities

Based on the literature review, a number of issues can be identified where further attention could be useful.

- The prevailing concept of SFM needs to be reviewed, particularly in the context of climate change. Further research into new models and approaches to increase the resilience of forests to climate change is required, alongside the exchange of knowledge and expertise internationally. More collaborative research is needed between scientific and indigenous experts as the perspectives and knowledge of indigenous peoples remains marginalised in the sector. These new approaches and best practice need to be integrated into the education curriculum for the next generation of foresters.
- More consideration is needed of how to meet global demand for timber products, while at the same time maintaining the environmental and social functions of forests. This includes the question of what balance should be given to different production models (e.g. smallholder and community forests, natural forest concessions, plantations), as well as consideration of how to balance forestry with other lands-uses, such as agriculture and mining.
- The bio-economy is being promoted as a means of enabling continued growth in the forest sector. Research and analysis is needed to consider the impact of such strategies, in particular on land-use requirements and on rural peoples, and to develop standards and safeguards to ensure that bio-economies have rigorous sustainability principles.

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[397] Cerutti, P. & R. Nasi (2020)

[398] Gauthier, S. *et al.* (2023). Ecosystem Management of the Boreal Forest in the Era of Global Change. In: Girona, M.M., Morin, H., Gauthier, S., Bergeron, Y. (eds) Boreal Forests in the Face of Climate Change. Advances in Global Change Research, vol 74. Springer, Cham. https://doi.org/10.1007/978-3-031-15988-6_1

[399] Diaw, C.M. et al. (2023) ACM and Model Forests, A new paradigm for Africa, Chapter 10, in: Colfer, C. & R. Prabhu (Eds.) Responding to Environmental Issues through Adaptive Collaborative Management: From Forest Communities to Global Actors. CIFOR-ICRAF. https://doi.org/10.4324/9781003325932; Aggarwal, S. et al. (2021); Macqueen, D. & J. Mayers (2020);

[400] Ministry of Forests, Lands, Natural Resource Operations and Rural Development, British Columbia (2021a);

- There has been increased recognition of the role of rural communities, indigenous peoples and SMEs in establishing a sustainable and inclusive sector. Acknowledgement of power imbalances in the sector is needed, and consideration of the need for policy reforms to help address these. Further research is needed to explore existing policy frameworks and options for reform, including approaches that would help to establish more equitable power dynamics in the sector, including for example, tenure arrangements, and requirements for participation.
- The forest sector remains dominated by large-scale businesses. Further efforts are needed to strengthen the voice of SMEs and to reform policy frameworks, so that they are able to compete on an equal footing and the sector meets their needs.
- More attention is needed to the transparency and management of sectoral finances to ensure that the citizens of forest countries see the potential benefits. Further consideration is needed of the roles of government and big business in the provision of benefits to rural communities.
- Further research is needed into the effectiveness of different policies (such as subsidies, logging bans, tax incentives) in encouraging the manufacturing of timber within producer countries, and so increasing government revenues and job opportunities.

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