

Overview

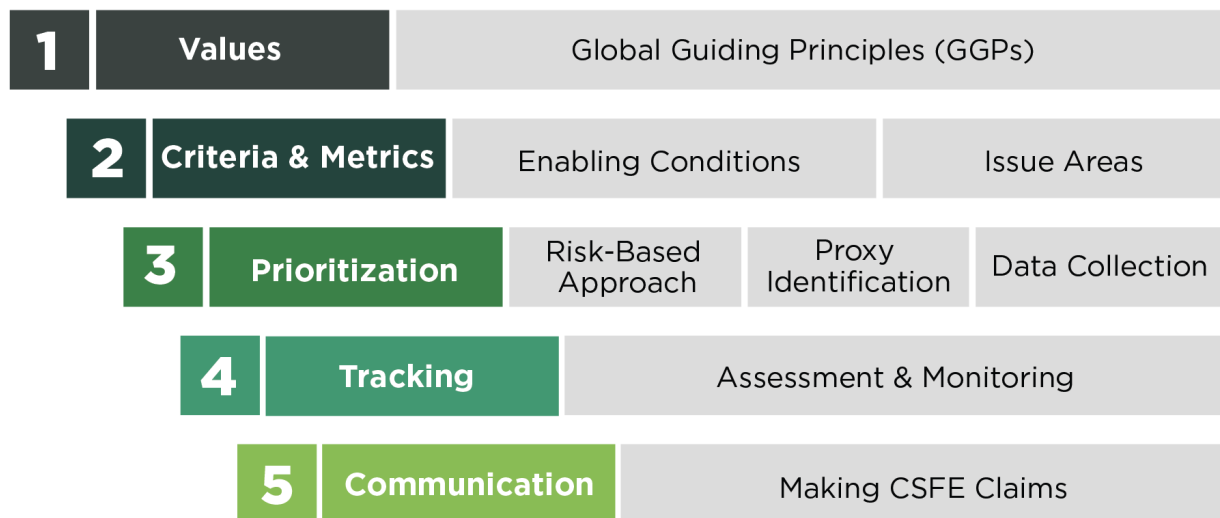
Safeguards for a Climate-Smart Forest Economy

A climate-smart forest economy (CSFE) refers to forest management, production, and consumption activity that restores, not depletes, natural resources; reduces, not increases, emissions from value chains; and safeguards, not exploits, interests of smallholder and forest-dwelling communities. Equitable and impactful global application of CSFE social and environmental standards, and the ability for actors to make reliable claims about safeguards implementation, require diverse actors coming to a shared understanding of CSFE social and environmental safeguard definitions. This includes outlining Issue Areas relevant to a CSFE as well as related underlying objectives of CSFE safeguards assessments and implementation.

CSFE Social and Environmental Safeguards

Measures taken to prevent harm by continually *assessing*, *monitoring*, and, where possible, *improving* the social and environmental.

This report lays a foundation for CSFE social and environmental standards with fundamental principles to guide more efficient, equitable, and impactful safeguard assessment and implementation, and explore approaches and tools for actors to implement, including existing guidance and available data sources for more efficient safeguards assessment.



Parts I and II of this report explore definitions, challenges, and principles for CSFE safeguards as well as tools and existing resources to facilitate their efficient and

impactful application. Part II additionally introduces two proposed templates to operationalize efficient Issue Area assessments to be applied at the intervention level in line with Global Guiding Principles (GGPs) presented in Part I.

Part I: Needs and Principles for CSFE Safeguards

Issue Areas

- Safeguard concerns for a CSFE

Enabling Conditions

- Indicators serving as signals for safeguards assurances.

Safeguard Challenges

- Challenges for CSFE assessment and implementation

Global Guiding Principles

- Principles to guide efficient, equitable, and impactful S&E safeguards assessment and implementation for a CSFE

Part II: CSFE Safeguards Assessment and Implementation

Risk-Based Approach

- Assessing risk levels of CSFE Issue Areas to inform prioritization and next steps

Proxy Data

- Indirect indicators
- May facilitate efficient Issue Area prioritization

Assessment and Monitoring Guidance

- Navigate and apply existing guidance

Tools for Ambitious CSFE Assurances

- Practical examples and framing
- Templates for application of CSFE safeguards framework

Our collaborative research demonstrates that safeguards, sustainability, and forestry experts generally agree on two key points: safeguards assessment and implementation should be *stepwise*, *long-term*, and *transparent*. Actors should strive for continuous improvement (in terms of data, monitoring, and impact) for all CSFE interventions, where possible, as well as transparency in data used, tradeoffs identified, prioritization and decisions made, and their intervention's social and environmental assessment results. While necessary to apply and interpret at different scales, the fundamental components of the principles are the same. Safeguards should not be an afterthought to avoid harm out of a sense of kindness or obligation. Failure to minimize negative externalities will have implications for equity, project longevity, and climate benefits. If safeguards are not adequately developed and implemented, interventions risk failure in terms of climate (e.g., net emissions), environment (e.g., harm that erodes climate adaptability), and society (e.g., conflict that results in project collapse).

Through development of shared definitions and principles associated with CSFE safeguards, key Issue Areas, supportive Enabling Conditions for safeguards implementation and assessment, and tools for Issue Area prioritization, this report lays the foundation on which to make social and environmental safeguards claims.

PART I: Needs and Principles for CSFE Safeguards

Kylie Clay and Lauren Cooper (Michigan State University, Forest Carbon and Climate Program, MSU FCCP), in collaboration with The Nature Conservancy.

Produced for the Climate Smart Forest Economy Program and generously supported by Good Energies Foundation.

Table of Contents

INTRODUCTION	5
LAYING THE FOUNDATION FOR CSFE SAFEGUARDS	7
KEY PILLARS AND ISSUE AREAS	9
<i>Safeguards Gaps Integral to a CSFE</i>	11
ENABLING CONDITIONS	12
ASSESSMENT AND IMPLEMENTATION CHALLENGES	12
CHALLENGE 1: CLARITY ABOUT ACTOR RESPONSIBILITIES	13
CHALLENGE 2: DATA AVAILABILITY AND RELIABILITY	14
CHALLENGE 3: NAVIGATING EXISTING GUIDANCE	14
CHALLENGE 4: EFFICIENT IMPLEMENTATION	15
CHALLENGE 5: ACHIEVING INCLUSIVE ENGAGEMENT	16
CHALLENGE 6: VARYING ACTOR MOTIVATIONS	16
CSFE SAFEGUARD GLOBAL GUIDING PRINCIPLES (GGPS)	17
<i>GGP1: Ensure GHG benefits (via mitigation and/or adaptation) in ‘climate-smart’ interventions are adequately measured and monitored.</i>	19
<i>GGP2: Protect and promote natural forest ecosystems, including native species, to avoid loss of forest ecosystems, ecosystem complexity, and degradation.</i>	20
<i>GGP3: Ensure environmental and social safeguards are met to support long-term intervention and climate objectives.</i>	20
<i>GGP4: Seek positive synergies between Issue Areas and intervention objectives (e.g., identifying co-benefits).</i>	21
<i>GGP5: All scales and types of actors have a role, responsibility, and capability to pursue climate benefits and safeguard against harm.</i>	21
<i>GGP6: Commit to responsible activity, being aware of capacity and information limitations.</i>	22
<i>GGP7: Aim for inclusive engagement across scales and types of actors, including those in low-capacity settings.</i>	23
<i>GGP8: Institute processes for continuous, stepwise improvements when appropriate.</i>	23
<i>GGP9: Explicitly recognize tradeoffs and prioritization across Issue Areas.</i>	24
<i>GGP10: Apply best practices (including best available data and inclusive engagement) in assessment and monitoring (aligned with actor capacity, responsibility, and resources).</i>	24
<i>GGP11: Establish mechanisms for information updating, assessment, reassessment, dispute resolution, and results sharing at intervention onset.</i>	25

GGP12: Be transparent about safeguards assessment and implementation (including data sources, decision-making, and participation processes), making information broadly available. 25

PART I CONCLUSIONS26

APPENDIX I: FULL ISSUE AREA OVERVIEW.....27



Introduction

Sustainably managed forests and forest products have well-documented potential to deliver significant climate change mitigation benefits via sequestration (carbon absorption), storage (the biocarbon stored in wood-based products), and substitution (the fossil carbon emissions avoided) (the 3Ss)¹ when sourced sustainably and substituting for traditional resource-intensive materials (Bergman et al. 2014, Smyth et al. 2017, Sathre and O'Connor 2010, Nepal et al. 2016). A climate-smart forest economy aims to bolster the 3Ss by leveraging forests and long-lived wood products to catalyze broader systemic change. A climate-smart forest economy (CSFE) can be defined as: forest management, production, and consumption activity that restores, not depletes, natural resources; reduces, not increases, emissions from value chains; and safeguards, not exploits, interests of smallholder and forest-dwelling communities.

Interventions that contribute to CSFEs² may include private initiatives, development or conservation projects, larger-scale systems change at a national or regional level, and a variety of other interventions. These interventions aim to support a CSFE at various scales and configurations of forest management, development, planning, and construction, among other points of leverage.

In their most successful cases, forest value chain interventions that lend to CSFEs link secondary and tertiary sectors for greater waste reduction, end-of-life benefits (like wood re-use), substitution, and innovation, which can contribute to cascading climate benefits. In this way, a CSFE can catalyze larger systems change. However, because of a risk of unintended negative outcomes for societies, environments, and climate, there is a need to *safeguard* against harm. With this objective, this research endeavor and resulting publication aim to lay the foundation on which a CSFE social and environmental safeguards assessment framework can be built and assessed.

Both forest protection and forest product use have been dominant themes in international climate negotiations. Recently, an ambitious new commitment emerged at the 26th Conference of the Parties (COP26): the COP26 Glasgow Leaders' Declaration on Forests and Land Use. The agreement, pledging to end and reverse deforestation by 2030, was signed by more than 125 countries representing over 90% of global forested land and 85% of global tropical forests. (COP26a 2021). Sustainably meeting global demand for development needs is also central to international climate negotiations like the annual Conference of the Parties (COP)³ (Nielsen 2016). At COP26, a group of 27 countries and the European Union committed to supporting the

CSFE Social and Environmental Safeguards

Measures taken to prevent harm by continually *assessing*, *monitoring*, and, where possible, *improving* the social and environmental impacts of interventions relative to the baseline scenario.

¹ Churkina et al., 3S Framework. Article forthcoming in 2022.

² Referred to hereinafter as 'CSFE Interventions' for efficiency

³ <https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop>

Forest, Agriculture, and Commodity Trade (FACT) Roadmap⁴, which aims to protect forests while simultaneously promoting development and trade (COP26b 2021). Climate ambitions have also aimed to align with development concerns of least developed countries (LDCs) and awareness of regional development challenges.

Sustainably managed forest products, including those used in building and construction, can help meet global climate objectives alongside development needs, with a unique role in international efforts like the Sustainable Development Goals (SDGs) (UN SDG 2015). The building sector currently accounts for approximately 38% of global greenhouse gas (GHG) emissions (UNEP 2020), 26% of which (or around 10% of total GHG emissions) stem from building construction and material manufacturing (Churkina et al. 2020).⁵ To meet rising population and development demands, estimates show global building stock is expected to increase substantially this century. For example, about 230 billion square meters of floor space is expected to be constructed worldwide within the next 40 years (Nepal et al. forthcoming, UNEP IEA 2018). Maintaining 'business as usual' construction practices (e.g., material use, architecture and design, and per capita square footage) will dangerously compromise global ambitions to limit global warming to 1.5°C, as set out by the Paris Climate Accord (Cooper et al. 2021).

While forest protection and restoration has been a dominant theme in international climate negotiations, the impact of a transformational bioeconomy to replace fossil fuels and emissions-intensive materials is not fully understood or articulated. Activities, policies, programs, and investments that contribute to a CSFE (referred to here as CSFE interventions), from small to large scale, will impact forest ecosystems and societies directly and indirectly. A key concern with increased demand for forest products is subsequent forest ecosystem degradation with negative ecological and social impacts.

Well-intentioned interventions are unsustainable in the long-term when communities and resources are negatively impacted⁶. Further, Indigenous peoples and smallholder agriculturalists depend directly on forest materials, ecosystem function, and biodiversity for their livelihoods and wellbeing. Areas managed by Indigenous peoples (approximately 28 percent of global land surface) include some of the most ecologically intact forests and important biodiversity hotspots (FAO and UNEP 2020). The relationships between Indigenous and rural forest-proximate communities and forests remains an important one, and one that is in flux as linkages between local, national, and global markets grow. Safeguarding against negative externalities will be essential for sustainable and impactful interventions. Achieving positive impacts, or co-benefits, will further bolster the ability of a CSFE to serve as a catalyst for scalable, long-lived systems change.

There are three key reasons why CSFE-specific safeguards initiatives are needed and timely:

⁴ <https://ukcop26.org/forests-agriculture-and-commodity-trade-a-roadmap-for-action/>

⁵ The remaining emissions from the building sector are from building operations (e.g., HVAC, energy use).

⁶ See Thompson et al. 2009 for limitations of top-down initiatives in terms of long-term community buy-in

1. **Relevance.** While existing safeguard guidance documents and programs are informative (e.g., key indicators and suggested data sources), no single standard comprehensively addresses all issues integral to a CFSE. Further, safeguarding CSFE activities necessitates additional indicators, data, tools, and resources not specified in existing safeguards guidelines.
2. **Inclusion.** Safeguards guidelines need to apply to a spectrum of actor types and capacities. Most existing safeguards guidelines apply the same rules to all projects—equally, rather than equitably, which systematically excludes or penalizes some actors and regions and reduces potential positive CSFE impact from engaging marginal actors.
3. **Ambition.** Due to increased data availability (e.g., spatial maps of protected species), it is feasible to also increase ambitions in terms of data reliability and transparency as well as impact, alongside increased ambition for better societal and environmental outcomes.

This paper presents perspectives of forestry and safeguards professionals on CSFE safeguard definitions, and offers fundamental principles to guide more efficient, equitable, and impactful safeguards assessments and implementation. The paper was developed in a collaborative process using data collected from expert scoping interviews (n=10), a survey targeting multi-sector professionals (e.g., safeguards, certification, and forestry) (n=33), two workshops with diverse CSFEP member organizations, a review of scientific literature and reports (e.g., industry, governmental, and non-governmental entities), and qualitative coding of existing safeguards standards, including development, forest management and forest product use, and private sector guidance. Interviews were completed between June and September 2021, focusing on the contributing organizations of the Climate-Smart Forest Economy Program initiative, and additional professionals engaged in sustainable forestry, certification, safeguards assessment, and climate change mitigation.

In this report, we first lay a foundation for CSFE safeguards, discuss dominant challenges to widespread safeguards implementation, then introduce twelve Global Guiding Principles (GGPs) to guide CSFE safeguards assessment and implementation.

Laying the Foundation for CSFE Safeguards

Equitable and impactful global application of social and environmental standards for a CSFE requires diverse actors coming to a shared understanding of CSFE social and environmental safeguard definitions. This includes outlining Issue Areas relevant to a CSFE as well as identifying underlying objectives of safeguards assessments and implementation are or should be.

To mitigate harm from forestry and development activities, safeguard guidance has been developed for a wide range of actors and organization types. Myriad schemes (e.g., safeguard frameworks, certification, responsible investments) already exist but have not yet been applied or acknowledged for CSFEs directly, necessitating thoughtful consideration of how to build on existing guidance as well as overcome important hurdles to efficient and impactful safeguards assessment and

implementation. This includes taking stock of the main challenges associated with applying existing safeguards guidance in general and apply this to interventions leading to an effective CSFE.

Complicating assessment and implementation of CSFE social and environmental (S&E) safeguards is a lack of clear definition and shared understanding of CSFE safeguard purpose. Existing guidelines for S&E safeguards range from theoretical framing (e.g., high-level principles and considerations) to concrete metrics (e.g., including criteria, indicators, and tools) and are diverse in terms of audience and objectives. Further, regarding safeguards for a CSFE, there is seemingly a divergence between what experts think safeguards *should* do and what they, for the most part, currently do. For example, 75% of survey respondents believe that safeguards should ensure *positive* environmental and social impacts, edging into the notion of 'co-benefits' instead of safeguarding from harm.

Thus, this paper first aims to lay a foundation for safeguards in a CSFE by defining CSFE S&E safeguards, introducing thematic Key Pillars and Issue Areas, and exploring the notion of Enabling Conditions, which may bolster safeguards' implementation and assessment as well as serve as signals for safeguards assurances.

CSFE Social and Environmental Safeguards

Measures taken to prevent harm by continually *assessing, monitoring*, and, where possible, *improving* the social and environmental impacts of interventions relative to the baseline scenario.

In this paper, we share a collaboratively developed definition of CSFE safeguards as measures taken to prevent harm by assessing, planning, implementing, monitoring, and improving the social and environmental impacts of CFSE interventions.

While positive impacts can be considered *co-benefits* and should be encouraged, unfavorable impacts are considered negative externalities and should be avoided or minimized. This definition additionally includes *continuous* assessment and monitoring as part of safeguards application; safeguards assessment and implementation are not one-off activities, but something to be applied continuously throughout the intervention's lifetime.

Key Pillars and Issue Areas

This section introduces safeguards considerations to shape responsible CSFEs by defining *Key Pillars* (defined here as central themes), as well as *Issue Areas* (defined here as detailed sub-topics that bin specific criteria within the Key Pillars).

The process of identifying Key Pillars and *Issue Areas* involved qualitative coding of existing safeguard metrics and systems relevant to a CSFE (e.g., development, forest management and forest product use, and private sector guidance), interviews, and expert survey.

This analysis assessed a wide range of guiding documents for social and environmental safeguards, including those from international development, conservation, and finance organizations (see Appendix for complete table). These guiding

Terms and definitions used in this report

<i>CSFE</i>	A climate-smart forest economy is one that restores, not depletes, natural resources; reduces, not increases, emissions from value chains; and safeguards, not exploits, interest of smallholders and forest-dwelling communities.
<i>Safeguards</i>	Measures taken to prevent harm by assessing, planning, implementing, monitoring, and improving the social and environmental impacts of CFSE interventions.
<i>Principles</i>	Fundamental goals towards broad sustainability outcomes that incorporate scientific understanding as well as social ethics and values (Verra 2019).
<i>Key Pillars</i>	Central thematic categories for CSFE S&E safeguards that hold all further detailed sub-topics, referred to as Issue Areas.
<i>Issue Area</i>	Detailed sub-topics of the CSFE S&E safeguards Key Pillars which move towards measurement and assessment.
<i>Proxy data</i>	Indirect indicators that inform Issue Area assessments and risk analyses for a CSFE.
<i>Enabling Conditions</i>	Conditions facilitating and serving as signals for CSFE safeguards assurances.
<i>Interventions</i>	CSFE projects, programs, and investments that aim to pursue climate benefits with forests and/or wood products.
<i>Criteria</i>	Dimensions along which the identified Issue Areas can be measured.
<i>Indicator</i>	A measurable variable that can be assessed tracked over time.
<i>Initiative</i>	Refers specifically to the Breakthrough Initiatives of the CSFEP.
<i>Baseline Scenario</i>	A counterfactual scenario against which intervention impacts should be assessed.
<i>Negative Externalities</i>	Negative social and environmental impacts that interventions should strive to safeguard against.

documents were identified by existing researcher knowledge, exploratory research, and suggestions from interview, workshop, and questionnaire participants.

While development and conservation interventions differ in scope, sector, and objective, there is substantial overlap in underlying social and environmental *Issue Areas* that underpin safeguards. For a CSFE, such *Issue Areas* can be categorized under three Key Pillars: Ecosystem Health and Function; Society and Economy; and Climate (Table 1). Note that while climate is less commonly and explicitly detailed in existing safeguards guidelines, this Key Pillar is essential to ensure net climate benefits are inherent in a CSFE.

Table 1. CSFE Safeguard Key Pillars

Key Pillars	Description
Ecosystem Health and Function	Conserving biodiversity, maintaining, and restoring ecosystems, and sustainably managing natural resources are foundations of sustainable development. While nature has inherent value that cannot be fully measured, protecting key attributes of ecosystems can ensure their ability to function and provide ecosystem services for society as well as myriad other species that depend on them.
Society and Economy	Social: A range of societal indicators on individual and communal impacts of the intervention. Topics include labor rights and working conditions, gender equity, participation, security and avoiding accidents, Indigenous peoples, and cultural heritage.
	Economic: General resource access and related well-being, poverty reduction, work opportunities, and economic assessment to consider potential risks to the local economy, with a particular focus on vulnerable and marginalized social groups.
Climate	Indicators reflect the project's net impact on climate, including greenhouse emissions and carbon sequestration as well as adaptation/resiliency benefits, and potential for reversal or leakage of emissions to areas outside of the focus intervention.

Within the Key Pillars are specific *Issue Areas* – detailed sub-topics moving towards identifying metrics, determining risk, and ultimately making decisions. CSFE *Issue Areas* were identified through the research process identified above (including exploratory coding) and then re-applied to the sampled guidance documents using systematic coding. See the Appendix for a table with complete definitions for each *Issue Area*.

While safeguards explicitly aim to reduce negative impacts, most *Issue Areas* can be considered on a spectrum– with potential to both mitigate harm and promote co-benefits. Importantly, not all *Issue Areas* will be of equal priority and assumed risk for

all project types and geographies. Efficient application of CSFE safeguards may include a risk-based approach to identify high risk and high uncertainty Issue Areas. Further, no existing standard or guideline currently addresses Issue Areas and actor types that may be involved in CSFE interventions. As such, a greater understanding of how to navigate existing guidance is key for efficient safeguards implementation.

Key Pillars	Issue Areas
Ecosystem Health and Function	Biodiversity
	Endangered species
	Habitat protection
	Ecological resilience/ climate change adaptation
	Conversion/ loss in areas of high conservation value (e.g., conservation of natural forests/primary forests)
	Ecosystem function and service provisioning
	Resource efficiency and pollution prevention
Society and Economy	Tenure security
	Risks and accidents
	Economic livelihood impacts
	Well-being (non-economic)
	Labor and working conditions
	Food security
	Illicit activities
	Equity and inclusion
	Community involvement/ participation/ leadership
	Cultural heritage alignment
	Indirect impacts (other stakeholders)
Climate	Net GHG emissions
	Net forest loss

Safeguards Gaps Integral to a CSFE

Certain considerations important for a CSFE are not typically included in existing standards and guidelines. These safeguard gaps will require additional research and analysis of potential indicators. Such CSFE safeguard gaps may include:

- Ensuring no economic exploitation of developing countries for natural resources and adequate benefit sharing

- Ensuring local leadership, community engagement, and long-term economic sustainability
- Avoiding exports in the case of local needs
- Avoiding overall losses in landscape-level carbon
- Avoidance of double-counting carbon credits
- Avoiding leakage at not only parcel and sub-national levels but also international levels and regarding global markets.

Enabling Conditions

Enabling Conditions are indicators that facilitate and serve as signals for CSFE safeguards Issue Area implementation and analysis. They do so by providing a foundation for Issue Area analysis with data and information that may indicate reduced risk of harm by a CSFE intervention. While certain Enabling Conditions may signal that some Issue Areas may not be high risk (see Part II on proxy data), the absence of certain Enabling Conditions may suggest higher risk and a need for more project-specific information. In this way, taking advantage of enabling conditions can facilitate more efficient, effective, and reliable CSFE safeguard implementation.

Enabling Conditions
Avoidance (or effective enforcement) of corruption and illicit activities
Recognized, secure land tenure
Adequate capacity and finance (for duration of intervention)
Human rights and resource rights established and acknowledged
Forest governance mechanisms in place
Monitoring and verification capacity
Grievance mechanisms
Mechanism for transparency
Land use / forest management planning
National climate policy (specifically, Safeguard Information Systems)
Effective and enforced sub-national laws

While some Enabling Conditions require national policies and enforcement, others can be implemented and bolstered by conservation and development organizations as well as project implementers.

Assessment and Implementation Challenges

CSFE safeguarding confidently and adequately faces several profound challenges, including criticisms about effectiveness. For example, conservation NGOs have criticized certification bodies for serving as vehicles for corporate greenwashing, citing a lack of consistency, traceability, and transparency, particularly in countries with weak governance (“Open Letter” 2021; Greenpeace 2021). Development banks

have been accused of promoting a utilitarian rather than holistic approach, where overall economic development trumps environmental and social safeguards (Bugalski et al. 2016).

Certification is important as it represents the current, best effort at transparently protecting against harm and tracking information across multiple actors and decision-making points. A common theme in interviews was that, while forest certifications may be imperfect, they play an important role in “maintaining global standards and creating a safe space for interaction [Interview, 2021]” among diverse stakeholders, ideally leading to continuous improvements. However, survey respondents showed mixed and often little confidence in the perceived effectiveness of existing certification standards to uphold S&E safeguards. For example, 78% of respondents believe that the Forest Stewardship Council (FSC)⁷ certification standard is either somewhat or very effective at safeguarding against environmental harm, as compared to 52% who believe it is somewhat or very effective at safeguarding against community economic and social harm. Notably, both interviewees and survey respondents expressed greater skepticism about chain-of-custody certifications (for both FSC and Programme for the Endorsement of Forest Certification (PEFC)⁸) than forest certifications on both environmental and social dimensions due to concerns about product traceability and illegal logging.

In this section, we unpack key challenges in applying CSFE safeguards. These include the following deficiencies: 1) clarity about actor responsibilities, 2) data availability and reliability, 3) navigating existing guidance, 4) efficient implementation, 5) achieving inclusive engagement, and 6) varying actor motivations.

Challenge 1: Clarity about Actor Responsibilities

While core principles of safeguards (e.g., avoiding social and environmental harm) are broadly agreed upon (interview results, July 2021), actors across the supply chain have differing: 1) points of influence and intervention, 2) access to information and data, and 3) levels of awareness of linkages to CSFE safeguards. This results in a lack of clarity about actor roles and responsibilities.

Points of influence and intervention. Actors make direct decisions across different points of the supply chain – from forest management strategies to procurement. As a result, *how* they contribute to safeguard assurances varies widely. For example, a small producer may not be able to communicate sustainable practices to a distant consumer (outside of certification labels) but is directly responsible for in-forest decision making. On the other hand, a procurement team can decide which materials to purchase but cannot dictate which areas of the forest should be identified as critical habitat.

Access to differing information and data. Different actors have varying types and levels of information, access, and assurances. Detailed forest inventories, satellite data, biodiversity assessments, habitat maps, socioeconomic information, and international

⁷ <https://fsc.org/en>

⁸ <https://www.pefc.org>

trade data all provide inputs and information, but the quality and value of those data and their application to decision-making will be very different.⁹

Levels of awareness of linkages to CSFE safeguards. An effective CSFE may engage any combination of forest managers, urban planners, regional development organizations, policy makers, builders, procurement officers for large entities, and consumers. Many of these actors are not familiar with the interdisciplinary discussion and the importance of their role in a safeguarded CSFE¹⁰. While some of these actors will have experience with safeguards, the multiple scale planning and tracking necessary for an effective CSFE requires innovative assessment and consistent communication to minimize harm.

Challenge 2: Data Availability and Reliability

Data scarcity or unreliability is a serious challenge undermining effective implementation of social and environmental safeguards. Some data may have very high levels of uncertainty, meaning it is not possible to know the exact value because of deviations, noise (or spread of data points), or incorrect or unavailable metrics. Without accurate data (e.g., on sourcing, management, labor), establishing baseline safeguards and assessing impacts over time presents a profound difficulty.

The ability to adequately assess impacts aids in decision-making, including prioritization of various Issue Areas. Further, most interventions will include tradeoffs among social, economic, ecological, and climate benefits. Those tradeoffs will present themselves differently and at different scales according to the intervention location, scale, type, and priorities. In some cases, data exist but are not readily available to those who need it (e.g., in the case of proprietary information, or costs may be prohibitive for lower-capacity actors). Local-level social and environmental impact assessments are more reliable indicators of project impact, but they can be costly in time and financial resources to undertake. Finally, when projected impacts are dire, sufficient data is necessary to alert implementors when risks rise to a level that they should consider abandoning an intervention.¹¹

To some degree, missing and imperfect data should be expected (Alonso et al. 2009); how one should approach these gaps and develop a structured strategy to navigate them is a challenge to overcome.

Challenge 3. Navigating Existing Guidance

The disciplines of sustainable forest management (Wang 2004), land use planning (Albert et al. 2014), ecosystem service metrics, third-party assurances (Moore et al.

⁹ For example, a local producer will have intimate knowledge about harvest practices and internal work conditions but may have no information on regional economic trends. A regional urban economic development coalition will use socioeconomic data to make recommendations but will need to rely on third-party assurances to know that wood used in construction is sustainable.

¹⁰ For example, local planning and development organizations that could source and use sustainable wood products are currently unlikely to have a clear understanding of their material use and climate implications.

¹¹ While 67% of survey respondents say that interventions should be abandoned should the intervention's impact on either social or environmental safeguards issue areas be uncertain, this conviction is not likely shared among all project implementers, many of whom may not be motivated by safeguards as a primary objective.

2012), and sustainable development are, while ever-changing and critiqued, well documented. As discussed, there are disagreements on whether various assurances are effective, including in both required and voluntary (Blackman et al. 2017) contexts. Some promote no undue harm, while others strive to increase the likelihood of positive impacts on local communities and environments (e.g., Community, Climate, and Biodiversity Standards¹²). Depending on the goal of the implementor, these differences inform which metrics are selected for a specific intervention. The challenge then is identifying *which* guidance is relevant, efficient, transparent, or sufficient for diverse actor types and in various types of interventions¹³. This spurs questions such as:

1. What guidance is relevant for different scales? Different actors?
2. How should CFSE interventions be categorized to point to existing guidance as a starting point?
3. What *additional* Safeguards are particular to CSFE projects/programs and, as such, are not included in existing guidance?

With ample data and information available from satellite maps (Coops et al. 2020, Slough et al. 2021), corruption trackers (e.g., the Corruption Perception Index¹⁴), governance indicators (Graham et al. 2021, Molinario et al. 2020), commitments to climate objectives¹⁵, and tree cover loss and deforestation data¹⁶ (Amaral and Lloyd 2019)- stocktaking and effectively leveraging these resources requires clear guidance and establishment of best practices.

Challenge 4: Efficient Implementation

Undertaking a complete checklist of safeguards may not be efficient or feasible due to knowledge, cost, time, and data constraints. There is a mix of potential assurances available: internal (self-regulatory), regulatory, and third-party. Further, some CSFE interventions may be more aligned with economic development metrics or with third-party assurances like certifications, while many others require a blend of these metrics. How safeguards can be assessed and deployed in diverse CSFE initiatives in a way that is both comparable and realistic is not yet well understood. Clear platforms and opportunities to communicate assessed safeguards are limited beyond certification labels, which themselves do not encompass all CSFE safeguard Issue Areas.

Capacity limitations and expertise gaps exist in nearly all contexts but are more acute in some regions and countries.¹⁷ As an example, lower income countries are less likely

¹² <https://verra.org/project/ccb-program/>

¹³ Unless funding or governance dictates (e.g., development bank funding or NDCs, respectively).

¹⁴ <https://www.transparency.org/en/cpi/2020/index/nzl>

¹⁵ <https://climateactiontracker.org>

¹⁶ <https://www.globalforestwatch.org>

¹⁷ To date, many producer countries face high, though largely un-certain rates of illegal logging, compromising jurisdictional approaches to sustainable timber sourcing as well as assessments of social and environmental impact. Even where sophisticated tracing systems exist (e.g., Brazil), there may be inconsistency in enforcement or ineffective auditing systems for monitoring discrepancies between revenues due and received, compromising both claims of sustainable harvest as well as the ability to track country-level progress over time

to have in-country third-party verification actors for forest carbon projects, jurisdictional approaches, or certification (Dunlop and Corbera 2016). This can exacerbate power dynamics related to who is authorized to provide assurances and can greatly increase costs for potential CSFE contributors from these lower income geographies.

Without reliable proxies to identify high-risk groups of safeguards Issue Areas, effectively or efficiently considering safeguards will be unduly onerous for some actors and thus less likely to be implemented at any level. CSFE actors need adequate capacity to plan for efficient use of resources and to identify appropriate guidance and datasets to undertake effective safeguarding.

Challenge 5: Achieving Inclusive Engagement

Ensuring sustainable sourcing of wood materials requires both forest management and trade information. Further, some regions and countries present higher risks for deforestation, illegal harvest, and/or corruption, making engagement in these areas risky. Accordingly, many companies have moved toward sourcing from countries seen as posing lower timber legality risks (Sit 2017). While this may reduce likelihood of risk, it also reduces potential positive impacts of increased transparency, avoiding forest loss, promoting good forest management, and creating co-benefits. In such cases, working with “good” actors in high-risk areas could promote equity and increase global CFSE benefits.

Studies have found benefits in promoting sustainable management via engagement, training, and the reward of high value material. For example, various studies on certification have found benefits in developing country contexts including in working conditions (Chan and Pound 2009), land tenure (Simula et al. 2004), and in incorporating High Conservation Value (HCV) indices (Merger et al. 2011). However, there are many producers for whom the certification system is not available due to structure¹⁸ or cost constraints.

In a CSFE, companies might continue to source from good actors with track records of sustainable management but also proactively explore how to work with additional actors¹⁹ to achieve potentially even greater climate, societal, and environmental benefits. Cerutti et al. (2014 pg. 51) found that, for actors not yet able to meet all certification requirements, “positive changes may be induced by the pursuit of certification even before it is achieved” by actors that publicly declared an intention to become certified.

Challenge 6: Varying Actor Motivations

A wide range of organization types and scales may contribute to a CSFE, each with differing motivations for safeguards assessment and implementation. Some organizations (e.g., development institutions or carbon registries) have internal mechanisms that require safeguards assessment and implementation following an approved framework. Other organizations (e.g., multinational corporations) have

¹⁸ For example, commodity production cooperatives that cross multiple or many landowners.

¹⁹ “Certification moves from 9/10 to 10/10, what about moving an actor that’s 2/10 to 6/10?” (Interview, 2021)

shareholders to report to and may face increasing economic and CSR incentives to safeguard against social and environmental harm. Still others are government actors looking to uphold legal minimum safeguards considerations while operating with limited budgets. This range of motivations presents challenges for determining realistic safeguards expectations for stepwise improvements against which to compare one's own efforts and abilities, a hurdle in achieving more widespread safeguards buy-in.

Related, there is some evidence that strictly voluntary actors demonstrate eroding self-motivation over time. Mechanisms for transparency and assurances that others are following environmental commitments (e.g., as may be achieved via external audits), can encourage more widespread commitment to and motivation for safeguards adoption; actors are less likely to shirk obligations when they trust that others are cooperating as well [40]. As Potoski and Prakash (2005) find, voluntary environmental programs and commitments, particularly those with third-party verification can "spur a virtuous cycle" whereby trust begets more trust [40, pg. 246]. While such an aim is desirable, the ability to achieve it is compromised by the variation in actor types, capacities, and motivations across a CSFE.

CSFE Safeguard Global Guiding Principles (GPs)

For a CSFE to be a catalyst for larger systems change, actors from production to procurement must have a shared understanding of, and come to a shared sense of principles about, the necessity and objectives of social and environmental safeguards. Foundational principles appropriate for all actor and project types will guide CSFE safeguards assessment and implementation and are a necessary precursor to developing frameworks that might allow actors to make appropriate safeguards claims.

The Global Guiding Principles (GPs) laid out here do not prescribe criteria (e.g., prioritization of certain Issue Areas or specific tools). Rather, GPs seek to encourage and guide strategic (efficient, equitable, and impactful) application of CSFE S&E safeguards such that they might support best possible outcomes, with minimized risks, and promote long-term sustainability. More broadly, they aim to enable a CSFE to operate as a mechanism to reduce emissions and serve as a catalyst for larger systems change with benefits for society and environment.

Guiding Principles intention: Principles to encourage and facilitate strategic (efficient and impactful) application of social and environmental safeguards associated with CSFE interventions.

Guiding Principles are not: Formal or verified certification schemes. CSFE Safeguards Guiding Principles are meant to guide and inform rather than enforce or monitor behavior.

Larger objective of Guiding Principles: Facilitate CSFE serving as catalyst for larger systems change.

These guiding principles are classified into three larger umbrella categories: Issue Areas²⁰; Stakeholders and Project Development; and Assessment and Implementation. The following sections will explore and provide rationale for each GGP listed below.

Category	Guiding Principle
Issue Areas	1. Ensure GHG benefits (via mitigation and/or adaptation) in 'climate-smart' interventions are adequately measured and monitored.
	2. Protect and promote natural forest ecosystems, including native species, to avoid loss of forest ecosystems, ecosystem complexity, and degradation.
	3. Ensure environmental and social safeguards are met to support long-term intervention and climate objectives.
	4. Seek positive synergies between issue areas and intervention objectives (e.g., identifying co-benefits).
Stakeholders & Project Development	5. All scales and types of actors have a role, responsibility, and capability to pursue climate benefits and safeguard against harm.
	6. Commit to responsible activity, being aware of capacity and information limitations.
	7. Aim for inclusive engagement across multiple scales of actors, including those in low-capacity settings.
Assessment and Implementation	8. Institute processes for continuous, stepwise improvements when appropriate.
	9. Explicitly recognize tradeoffs and prioritizations across issue areas.
	10. Apply best practices (including best available data) in assessment and monitoring (aligned with actor capacity, responsibility, and resources).
	11. Establish mechanisms for information updating, assessment, reassessment, dispute resolution, and results sharing at initiative onset.

²⁰ Note that the term Issue Areas refers to the same CSFE Safeguards Issue Areas identified earlier.

12. Be transparent about safeguards assessments and implementation (including data sources, decision-making, and participation processes), making information broadly available.

GGP1: Ensure GHG benefits (via mitigation and/or adaptation) in ‘climate-smart’ interventions are adequately measured and monitored.

A fundamental element of CFSE interventions is that they are measurably ‘climate-smart’; that is, they have current or projected potential to reduce overall GHG emissions. Interview and survey results revealed a fundamental concern over potential negative impact on overall global emissions associated with forest and forest product interventions. While certain Issue Areas (e.g., biodiversity, human rights, land tenure) may have varying degrees of relevance, risk, or priority depending on the project type and socio-political realities of the intervention’s geography, there is near consensus that CFSE interventions must primarily safeguard against landscape scale carbon losses, as well as consider activity emissions (both biogenic and fossil fuel sourced) to be deemed ‘climate smart’.

Assessments should consider complete emissions profile for management and processing activities. For example, total transport-related forestry emissions are estimated to be over 50 million metric tons of CO₂e annually, with nearly 60 percent of total emissions associated with international trade (Miner 2010). There are further emissions associated with transport of materials to the final consumer, estimated to be an additional 50 percent in emissions (Miner 2010). Such emissions stand to undermine the potential climate benefits of wood. There is a need to consider timber supply and demand dynamics in terms of carbon and the highest and best use of forests at a global scale (Cooper et al. 2021).

While wood products have the potential to provide net climate benefits through carbon sequestration, carbon storage, and displaced carbon emissions associated with product substitution, it cannot be assumed they will do so. In fact, wood products harvested unsustainably at a landscape-scale lead to net carbon emissions in addition to environmental degradation. CFSE interventions must therefore safeguard against climate harm with supporting evidence from reliable measurement and monitoring of net GHG emissions reductions²¹. Carbon assessments and projections should be regularly monitored and reassessed and are best undertaken in terms of net climate impact over a given time and scale and against an appropriate baseline.

²¹ Sequestration rates and carbon pools are related but distinct concepts in considering climate benefits of forests. Various tools are currently being developed to fully assess the impacts and benefits of the 3S’s but there is currently no consensus on the most impactful at articulating 3S benefits and/or impacts.

GGP2: Protect and promote natural forest ecosystems, including native species, to avoid loss of forest ecosystems, ecosystem complexity, and degradation.

A key concern associated with interventions that may increase demand for forest products is that they may perpetuate and exacerbate loss of global forest ecosystems. These are not always simple to measure, as static or even increasing forest area does not guarantee loss of complex forest ecosystems. Different tree cover and forest types maintain and sequester carbon at different rates. For example, plantation monoculture forests generally hold less carbon than more species-complex forests (Lewis et al. 2019).²² Further, degradation from forest use and pressures also diminishes carbon storage, habitat quality, and provisioning of ecosystem services.

No net loss of forest ecosystems is important for ecological as well as social and economic reasons; forest-proximate indigenous peoples and smallholder agriculturalists depend on forest biodiversity and ecosystem services for livelihoods and wellbeing. CSFE interventions can follow the ‘mitigation hierarchy’ of avoid, minimize, mitigate for forest use, which strive for no net loss of biodiversity and even net gain.²³

Deforestation and degradation are driven by diverse drivers in different regions (Curtis et al. 2018), spanning from commodity demand to tenure insecurity; a CSFE should strive to avoid contributing to additional forest clearing and provide greater incentives to keep forests as forests.

Forest product demand must be considered at a landscape scale, which is beyond the scope of many traditional forest decision-maker parcels. Timber supply and demand shifts in one location influence forest use and management practices in another. For a CSFE intervention to be ‘climate-smart,’ it must not cause a reduction in forest ecosystems within or outside of the intervention area (e.g., leakage).

GGP3: Ensure environmental and social safeguards are met to support long-term intervention and climate objectives.

Social and environmental safeguards are the central principles and topics covered in most safeguard guidance. However, CSFE such safeguards must be understood not only within the safeguards themselves but as the central tool to ensure climate benefits and long-term intervention viability. If safeguards are not adequately implemented, interventions risk failure in terms of climate (e.g., net emissions), environment (e.g., harm that erodes climate adaptability), and society (e.g., conflict that results in project collapse). Safeguarding against negative externalities will be essential for sustainable and impactful implementation; achieving positive impacts, or co-benefits, will further bolster the ability of a CSFE to serve as a catalyst for larger

²² In much of the world, plantation forests are often fast-growing trees (e.g., Eucalyptus and Acacia), which have rapid carbon sequestration relative to other species (tied to rapid growth) but emit most stored carbon when harvested (typically at 8-15 years) and, with the majority going toward paper and woodchip production, store little in long-lived wood products (Lewis et al. 2019).

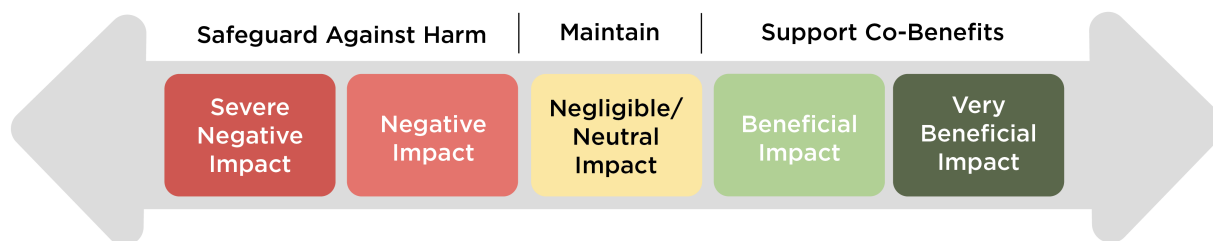
²³ <https://www.forest-trends.org/bbop/bbop-key-concepts/mitigation-hierarchy/>

systems change. As such, safeguards should be viewed as integral for success of the CSFE intervention and long-term climate benefits.

GGP4: Seek positive synergies between Issue Areas and intervention objectives (e.g., identifying co-benefits).

CSFE interventions, programs, and projects should, at a minimum, strive for no undue harm, but many are able to go further and have a positive effect for some Issue Areas. To maximize the likelihood of an intervention having a positive social or environmental footprint, actors should systematically look for positive synergies between safeguards Issue Areas and intervention objectives. Small (or large) adjustments in program or project design may provide environmental and social co-benefits at little to no additional cost to intervention objectives. Identifying and strategically implementing such adjustments can result in greater societal benefits and result in greater long-term climate and intervention success.

Figure 1. Spectrum of potential Issue Area outcomes



GGP5: All scales and types of actors have a role, responsibility, and capability to pursue climate benefits and safeguard against harm.

Jumpstarting a sustainable CSFE will require activity from across the spectrum of actor types and capacities, with indirect as well as direct roles in safeguards assessment and implementation. This means that 1) both low- and high-capacity actors can and should strive for incremental improvements (and co-benefits, where possible), and 2) different actor types can and should contribute in different ways. Actors range from local producers to international suppliers and from entrepreneurs to NGOs or government agencies; all have a responsibility to improve social and environmental impacts, where possible, but what that looks like in practice will differ greatly. For some examples:

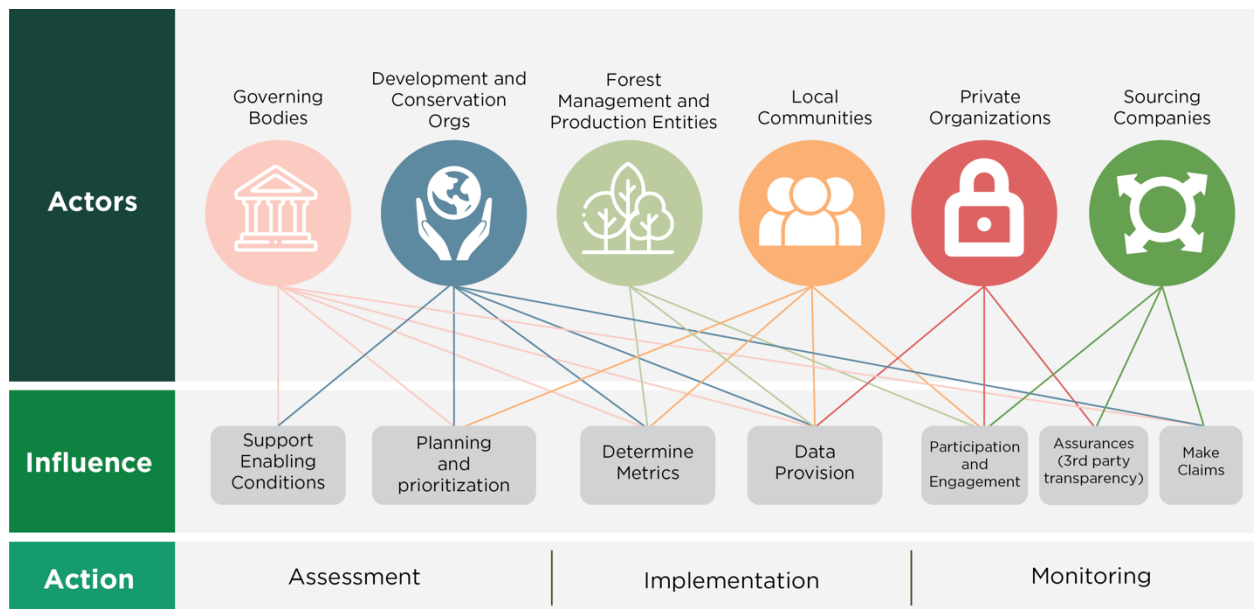
- Governments as well as development and conservation organizations can play a dominant role bolstering safeguards enabling conditions, which will help promote efficiency, improved prioritization, and linking actors to better and additional data.
- Importing countries can influence independent monitoring and other best practices in exporting countries via trade negotiations and agreements (e.g.,

EU Voluntary Partnership Agreement, which supports control systems in partner countries to provide assurances against illegal timber procurement).

- Industry associations in importing countries can promote legal and sustainable timber production via binding environment-related timber codes (e.g., as introduced in several EU countries) (Lawson and MacFual, 2010).

There is an additional need to clarify and make explicit differing responsibilities across different actors within an organizational structure (e.g., among subsidiaries and under sourcing agreements). Without explicit safeguards requirements, the responsibility of different actors is less clear, compromising effective monitoring and accountability (Bugalski, N., 2016).

Figure 2. Actor roles in CSFE safeguards assessment and implementation



GGP6: Commit to responsible activity, being aware of capacity and information limitations.

A reality of CSFE interventions is that not all actors can ensure that they are not worsening social and environment conditions. In absence of a regulatory or legal framework to ensure safeguards are properly implemented, responsibility is on the project or program implementers to be aware of their own capacities and limitations to properly engage in a CSFE.

For example, data gaps stemming from a lack of project specifics or on-the-ground presence and be prepared to end ongoing projects if they cannot improve their confidence, either by obtaining more reliable data or by ameliorating practices on the ground, that they are not causing social or environmental harm. In cases where projects fall short of safeguards goals or where tradeoffs between Issue Areas result

in negative impacts along lower-priority dimensions, actors should establish mechanisms to mitigate losses (e.g., compensation).

Further, considering known challenges in assessing and tracking global timber sales, longer transportation distances make determining local social and environmental impacts and whether local needs are met more difficult; greater distances generally mean limited communication channels for stakeholder engagement and transparency, compromising confidence in information that might ensure safeguard implementation. Producing for distant markets can result in fewer benefits reaching the landowners and local workers (Tiba and Prakash 2011). Further, increasing local community capacity to undertake value-added processing can have significant economic co-benefits (Cooper and Huff 2018).

GGP7: Aim for inclusive engagement across scales and types of actors, including those in low-capacity settings.

Successful CSFEs will involve a wide range of decision-makers and professionals, many of whom may be new to forest-based thinking and planning and not traditionally engaged in such dialogue (e.g., designers, architects). For these actors, there are opportunities to raise awareness of their role in CSFEs as well as their responsibilities and leverage points in assuring safeguards are being met. This can be achieved by clarifying and facilitating the use of existing standards and criteria, development of case studies, and peer learning and training opportunities.

For reasons of both equity and climate impact, CSFE interventions can also include actors and initiatives in lower-capacity geographies (e.g., settings with higher potential risks to social and environmental harm)²⁴. Such engagement should use caution and with capacity to ensure safeguards are met. Not all actors will have sufficient resources to undertake the necessary additional monitoring, which may include direct engagement with local partners and more frequent and comprehensive safeguards assessments. Where possible, CSFE actors should strive to build or bolster technical capacity on the ground to allow local partners and stakeholders to play a more direct role in and benefit from safeguards implementation.

GGP8: Institute processes for continuous, stepwise improvements when appropriate.

Both low- and high-capacity actors can and should strive for incremental improvements relative to a baseline scenario regarding social and environmental impacts (see Figure 1). Safeguards assessment and implementation are not one-off activities, but something that should be applied and improved upon. An aim of continuous improvement can move more actors toward Issue Areas co-benefits over time.

²⁴ See for example, the Strong Voices, Active Choices framework by TNC: <https://www.nature.org/en-us/what-we-do/our-insights/perspectives/strong-voices-active-choices/>

Actors should assess existing conditions and operations and implement improvements, where possible. Some actors may already be certified sustainable and engaging directly with landowners, and thus would have the potential to influence decision-making on the ground. Others, (e.g., those in procurement) may instead issue minimum company criteria that exceed certification guidelines. If all safeguards and harm mitigation efforts are met, the actor can then pursue co-benefits.

Addressing broad CSFE safeguards can be overwhelming for newly engaged actors, those in high-risk areas, and because of capacity and resource gaps. A stepwise approach aims for inclusivity and may be a realistic approach to broadening the CSFE community, as it meets actors at their starting point in terms of data, management, and ambition.

GGP9: Explicitly recognize tradeoffs and prioritization across Issue Areas.

There will generally be tradeoffs among social, economic, ecological, and climate benefits. Those tradeoffs will present themselves differently according to the intervention location, scale, and type. Such CSFE interventions should 1) recognize that tradeoffs will exist; 2) systematically identify them; and 3) prioritize Issue Areas in light of identified tradeoffs.

Elements of safeguards assessment and implementation are inherently subjective; determining which issue areas are of greatest priority when tradeoffs exist, for instance, will be based on science as well as stakeholder preferences. CSFE interventions must incorporate broader social and economic impacts as well as cultural values and alignment.

GGP10: Apply best practices (including best available data and inclusive engagement) in assessment and monitoring (aligned with actor capacity, responsibility, and resources).

Data challenges can be addressed by identifying, communicating, and applying best practices in terms of data availability and acceptable levels of uncertainty. Aligned with actor capacity, responsibility, and resources, identifying best practices can support shared confidence in data and information as well as increase understanding of actor responsibility and appropriateness of proxy data as needed.

Adopting participatory engagement processes is paramount to ensuring CSFE safeguards are met. In addition to Issue Areas that directly call for inclusive community participation, there are several that will be incomplete and unreliable without participation of key stakeholders. Engaging many local actors, not just primary land use decision-makers, will be important for CSFE Interventions.

Inclusion and participatory processes include developing transparent ways to communicate as well as continued and consistent points of engagement (including grievance mechanisms, annual meetings, etc.). Actors that work with land use decision-makers directly should communicate their engagement and participatory processes and policies to other actors in the supply chain (e.g., those in procurement).

GGP11: Establish mechanisms for information updating, assessment, reassessment, dispute resolution, and results sharing at intervention onset.

Assessment and monitoring require capacity, including knowledge, access, and resources. Initiatives should plan at the outset to continually and appropriately assess and reassess activities, regardless of whether a third-party verification process is required. This will ensure that safeguards are continually met and, if possible, improving throughout the life of the intervention (GGP8).

All CSFE intervention impacts may not be fully understood at the onset of a project, and it's highly likely there will be negative impacts and disagreements among stakeholders. Further, as dynamics shift (either caused by or independent from the intervention), stakeholder preferences identified Issue Area tradeoffs (GGP9) may change and new positive synergies may emerge. Establishing mechanisms for information updating, reassessment, and dispute resolution at the onset will ensure adequate stakeholder participation (GGP7) as well help to maximize climate, environmental, and social benefit.

GGP12: Be transparent about safeguards assessment and implementation (including data sources, decision-making, and participation processes), making information broadly available.

CSFE confidence requires trust and transparency in data sources, definitions, methodologies, and assumptions (de Sy et al. 2016). While there are many opportunities to boost transparency, a few specific tactics include: 1) where and to the degree appropriate, making data created by the private sector available for broader use (e.g., informing proxy values); 2) leveraging web-based platforms to share assessments, data, and information about decision-making in tradeoffs; and 3) publicly posting private sector safeguard reports and monitoring. Overall, increased transparency will inform reliability, which increases marketability, boosts confidence, and forms the foundation for CSFE motivation, ambition, and safeguards claims.

In the absence of enforced regulations or comprehensive third-party verification of safeguards implementation (including sanctioning and enforcement against malperformance), actors will have little accountability to stakeholders or the CSFE community. Transparency renders actors and organizations vulnerable to critique and informal sanctioning, a necessary foundation for establishing trust and making claims.²⁵ Importantly, a lack of transparency compromises the integrity of a CSFE more broadly, as well its ability to serve as a catalyst for larger systems change.

²⁵ For example, a perceived lack of transparency in forest and chain of custody certification schemes has led to regular critique among environmental organizations (Open Letter, 2021; Greenpeace International, 2018).

Part I Conclusions

Part I showed that the need for climate benefits in a CSFE is incontrovertible, and that social and environmental safeguards are a key tool to ensure long-term climate benefits and intervention viability. This section identified Key Pillars of CSFE safeguards and expanded those into Issue Areas for identification of criteria and indicators appropriate to interventions and actors. After exploring challenges to CSFE safeguards, the Global Guiding Principles (GGPs) presented here then provide solutions that apply to all CSFE actors and interventions to guide near and long-term actions and improvements. While necessary to apply and interpret at different scales, the fundamental components of the principles are the same.



Appendix I: Full Issue Area Overview

PILLARS	ISSUE AREAS	CFSE DEFINITION
Ecosystem Health and Function	Biodiversity	Biodiversity encompasses a variety of organisms including living animals, plants, fungi, and microorganisms in a specific location, those that frequent or use a location periodically, or the ecosystem services that the location supports.
	Endangered species	Endangered species are those considered to be at high-risk or highly likely to become extinct in all or a large portion of their range. (adapted from ESA 1973)
	Habitat protection	"The locality in which a plant or animal naturally grows or lives. It can be either the geographical area over which it extends, or the particular location in which a specimen is found." (UNEP & LEAP, unknown)
	Ecological resilience/ climate change adaptation	Avoiding degradation and promoting ecological resilience, which refers to the "amount of disturbance an ecosystem could withstand without changing self-organized processes" (Gunderson 2000) and adaptation refers to "adjustments in ecological systems in response to actual or expected climatic effects or impacts." (UNFCCC)
	Conversion/ loss in areas of high conservation value	Conversion that is often irreversible and bring about "profound change in a natural ecosystem's species composition, structure, or function" (AFi, 2020) and "involves removing natural forests to meet other land needs, such as plantations, agriculture, pasture for cattle settlements and mining." (QQF, unknown from the AFI framework definitions) Includes protecting late succession/old growth forests, protecting against loss of forest complexity (following the mitigation hierarchy of avoid, minimize, and mitigate).
	Ecosystem function and service provisioning	Includes ' <i>provisioning</i> ' (e.g., food, medicine, wood), ' <i>cultural</i> ' (e.g., recreation, tourism, aesthetic values), and ' <i>regulating</i> ' (e.g., air & water quality, erosion control) services provided by forests. Ecosystem services, such as clean water, food, wood, medicine, and other tangible goods are examples of

		materials benefits people obtain from forests. Some can be marketed while others are needed for direct consumption.
	Resource efficiency and pollution prevention	Using limited resources (e.g., wood) in a sustainable, non-wasteful manner while minimizing environment impacts (including pollution) and striving for greater output value with the same or reduced inputs.
Social and Economic Impacts	Tenure security	Tenure security provides all persons with a degree of security through protected legitimate tenure rights and ensuring that people are not arbitrarily evicted and that their legitimate tenure rights are not otherwise extinguished or infringed." (UN Habitat, 2018)
	Risks and accidents	Potential negative impacts on human health and/or the environment by an action or activity, including accidents that cause harm (including bodily harm) to those directly or indirectly involved in those activities.
	Economic livelihood impacts	Includes any relevant combination of 1) local employment/ income/ poverty reduction; 2) household level income/ poverty reduction; 3) ensuring no economic exploitation of developing countries for their natural resources; 4) minimizing risks of economic dependence, especially where a project may lack longevity.
	Well-being (non-economic)	Wellbeing is reflected in a state of overall physical, mental, and social security, optimism, and positive outlook (not merely the absence of disease or infirmity) and is not adequately encompassed in economic indicators alone. (adapted from WHO 2012)
	Labor and working conditions	"Working conditions cover a broad range of topics and issues, from working time (hours of work, rest periods, and work schedules) to remuneration, as well as the physical conditions and mental demands that exist in the workplace." (ILO, unknown)
	Food security	"All people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life." (United Nations' Committee on World Food Security)
	Illicit activities	A range of illegal, unlawful, fraudulent, or improper and unethical activities.
	Equity and inclusion	Fair and inclusive responsibilities, access to opportunities, and benefits, independent of gender, societal status, physical ability, or other distinguishing characteristics.

	Community involvement/participation/leadership	Ample and sufficient participation opportunity through rural and Indigenous representatives are self-chosen and with their own procedures and activities continually affirm their right to maintain their own decision-making. (adapted from UN, 2014)
	Cultural heritage alignment	Cultural heritage is both a product and a process that provides societies with a wealth of resources that are inherited from the past, created in the present and bestowed for the benefit of future generations. Most importantly, it includes not only tangible but also natural and intangible heritage." (UNESCO, unknown)
	Indirect impacts (other stakeholders)	Not a direct result of the intervention but instead materialize away from or because of the intervention, via an adjacent or complex linkage (can be referred to as secondary impacts).
Climate	Net GHG emissions	Maximize net greenhouse gas emission reductions, including through lowering GHG emissions (transfer of gases to the atmosphere) and increasing carbon sinks (stored carbon in various pools).
	Net forest loss	Minimizing net forest loss includes minimizing reversals and leakage. Calculating reversals depends on allowable/expected disturbance levels, agreed timelines, and geographic scale of assessment. Leakage is displaced activities that occur outside of the intervention area but are a result of intervention activities (i.e., reducing harvests in one jurisdiction can lead to increased harvesting in an adjacent jurisdiction to compensate for the reduced supply).

ENABLING CONDITIONS	DEFINITION
Abiding by/congruous with national/international law	National and international laws can be assessed to determine if there is general alignment or misalignment with such laws; misalignment would trigger high risk assessment.
Limited, no known, or not well-understood illicit activities	Illicit activities undermine the ability to track materials, activities, and impacts. While not intended to exclude actors in higher risk for illicit activity areas, higher levels of illicit activities will trigger

	additional planning and assurances to ensure effective safeguarding.
Recognized and undisputed land tenure (tenure security)	Land tenure may include both 1) formal tenure security (guaranteed by the state/ land titles); 2) customary or de facto property rights. Tenure insecurity can result in unintended social and economic consequences for local communities (including displacement and elite capture).
Human rights established and acknowledged	Known human rights violations at the country level will trigger a need for deeper and greater assessment and assurance that human rights are recognized. (see UN definition of Human Rights)
Forest governance mechanisms in place	"Forest governance is defined as the way in which public and private actors, including formal and informal institutions, smallholder and Indigenous organizations, small, medium-sized and large enterprises, civil-society organizations and other stakeholders negotiate, make and enforce binding decisions about the management, use and conservation of forest resources." (FAO, unknown) Having established governance systems implies that actors are more likely to know the laws and policies, where to access guidance, and how to share information about forest, conservation, labor, and processing practices.
Monitoring and verification capacity	Adequate capacity (financial, human, technological) to measure forest health, create management plans, assess carbon pools, and engage in third-party assurances reduces risk of climate benefit uncertainty as well as social and environmental harm.
Grievance mechanism	A grievance mechanism, or a "set of arrangements that enable local communities, employees, out growers, and other affected stakeholders to raise grievances with the investor and seek redress when they perceive a negative impact arising from the activities." (World Bank, 2018) reduces risk by improving transparency, communication, trust, and long-term viability of a project.
Mechanism for transparency	Planned and purposeful transparency strategies for both production (e.g., sustainable forest management) and procurement (e.g., supply chain traceability) as well as decision-making process (e.g., including processes for stakeholder inclusion and approaches for Issue Area prioritization and handling tradeoffs) to bolster the reliability and credibility of safeguards assessments.

Land use planning/ forest management/ silvicultural management	Established land use planning at multiple scales (e.g., parcel, local, region) can minimize leakage, ensure overall ecosystem health and function, ensure provision of ecosystem services, and ensure no net loss of forests or landscape carbon storage.
National climate policy (specifically, Safeguard Information Systems)	Aligning with national climate policy (specifically, Safeguard Information Systems) will minimize risk of undermining climate mitigation plans while also supporting established (or developing) national systems to provide information on how safeguards are being addressed and respected throughout the implementation of multiple activities.

