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The Potential of Voluntary Sustainability Initiatives to Reduce Emissions from Deforestation and Forest Degradation

**The Potential of Voluntary Sustainability
Initiatives to Reduce Emissions from
Deforestation and Forest Degradation**

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Executive Summary

Background

Rising global demand for food, fuel and fiber has led to a rapid increase in deforestation and forest degradation in developing countries. A recent study estimates that the conversion of forests to agriculture alone accounts for approximately 80% of tropical deforestation.¹ To address these concerns, Voluntary Sustainability Initiatives (VSIs) have emerged as one tool among many to ensure that the production of agricultural and timber commodities for global markets does not result in forest loss.

VSIs are voluntary standards that specify requirements for producers, traders, manufacturers, retailers or service providers to demonstrate sustainability in terms of human rights, worker health and safety, the environmental impacts of production, community relations, land use planning and others.² Many companies, platforms of companies and members of commodity roundtables rely on VSIs as a framework to implement sustainable production and sourcing policies and attain market recognition.

VSIs are a common component of public and private sector commitments to reduce deforestation and forest degradation, with many companies aiming to achieve *zero deforestation by 2020*. However, the potential effectiveness of VSIs in achieving forest-related goals remains uncertain.

The overall objective of this study is to assess the potential of VSIs to contribute to reductions in emissions from deforestation and forest degradation in developing countries based on their substantive and procedural requirements.

VSI Assessment

The 26 VSIs assessed in this analysis were selected on the basis of connection with products associated with deforestation and forest degradation. They cover a wide variety of commodities, countries and production practices, and vary by scope of application, environmental targets and implementation methodology.

¹ Boucher, D., Elias, P., Lininger, K., May-Tobin, C., Roquemore, S., and Saxon, E. (2011). *The Root of the Problem: What's driving deforestation*. Union of Concerned Scientists. Washington, D.C.

² United Nations Forum on Sustainability Standards (2013) *voluntary Sustainability Standards: Today's landscape of issues & initiatives to achieve public policy objectives*.

There are two main types of VSIs assessed: **commodity VSIs** include standards, certification systems and roundtables aimed at producers of specific agriculture and forestry commodities (e.g., the Roundtable for Sustainable Palm Oil); **company VSIs** include independent and joint commitments by large multinational companies to implement sustainable practices throughout supply chains and/or commodity production within a specific company (e.g., Unilever’s Sustainable Living Plan).

The scope of VSIs assessed varies by land use. **Forestry VSIs** seek to institutionalize sustainable forest practices while **agricultural VSIs** are primarily focused on improving farming practices and resulting forest impacts. All but two VSIs included in the assessment address agricultural products, primarily palm oil, soy, coffee, sugar, cocoa, dairy and tea.

The VSIs have varying environmental targets and not all explicitly address deforestation, forest degradation or conservation of forest carbon stocks. The table below indicates each VSI’s forest related targets and the variation between individual VSIs in terms of detail and ambition. Due to this variation, it is important to assess not only the nature of the forest-related targets, but also the supporting systems and procedures.

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR	
DEFORESTATION	+				+		+		+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+
DEGRADATION					+		+		+	+					+												
SFM					+		+		+	+				+		+	+				+			+			
CONSERVATION	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
ENHANCEMENT		+		+	+	+	+		+	+	+			+	+	+	+	+		+		+		+	+	+	+
GHG EMISSIONS		+	+	+				+			+	+	+	+		+	+			+		+		+	+	+	+
SUSTAINABLE SOURCING																		+	+	+	+	+	+		+	+	

To assess VSI design and gauge the ability of VSIs to achieve REDD+ outcomes,³ we use eight criteria developed through a bottom-up analysis of the core components of environmental VSIs and international REDD+ standards – outlined below.

³ The phrase “REDD+ outcomes” is used throughout this report as shorthand to refer to outcomes related to one of the five REDD+ activities. We use this instead of longer phrases such as “slowing, halting and reversing forest loss”, or “reductions in deforestation and forest degradation, conservation, sustainable management of forests and enhancement of forest carbon stocks”, or “decreased reversals and increased removals”: all of which are valid alternatives.

ASSESSMENT CRITERIA

- 1) **Definitions**
 - A) Forest
 - B) High Conservation Value
- 2) **Timelines**
 - A) Cut-off Dates
 - B) Implementation Periods
- 3) **Geographic Area**
- 4) **Baselines**
 - A) Land Use Change
 - B) GHG Emissions
- 5) **Monitoring, Measurement, Reporting and Verification (MMRV) Tools**
 - A) Monitoring
 - B) Measurement
 - C) Reporting
 - D) Verification
- 6) **Chain of Custody**
- 7) **Subsidiary Relationships**
- 8) **Noncompliance**

Findings and Recommendations

All of the VSIs assessed promote broad practices aimed at avoiding or reducing deforestation and/or forest degradation. In addition, all VSI targets prohibit conversion of High Conservation Value (HCV) or primary forests for plantation or crop production. Many also require the conservation and/or rehabilitation of HCV and High Carbon Stock (HCS) areas, and a few contain provisions for secondary and continuous forests. The main assessment findings are summarized below, according to the eight criteria and based on information from the VSI requirements and the systems and procedures for their implementation. Gaps and recommendations are provided in a summary table at the end of the section.

Definitions

Forest-related definitions are important for identifying areas under certification where clearing is prohibited, or delineating areas for restoration or expansion. As such, definitions apply in setting baselines and reference levels, establishing geographic boundaries, and in Monitoring, Measurement and Verification (MMRV).

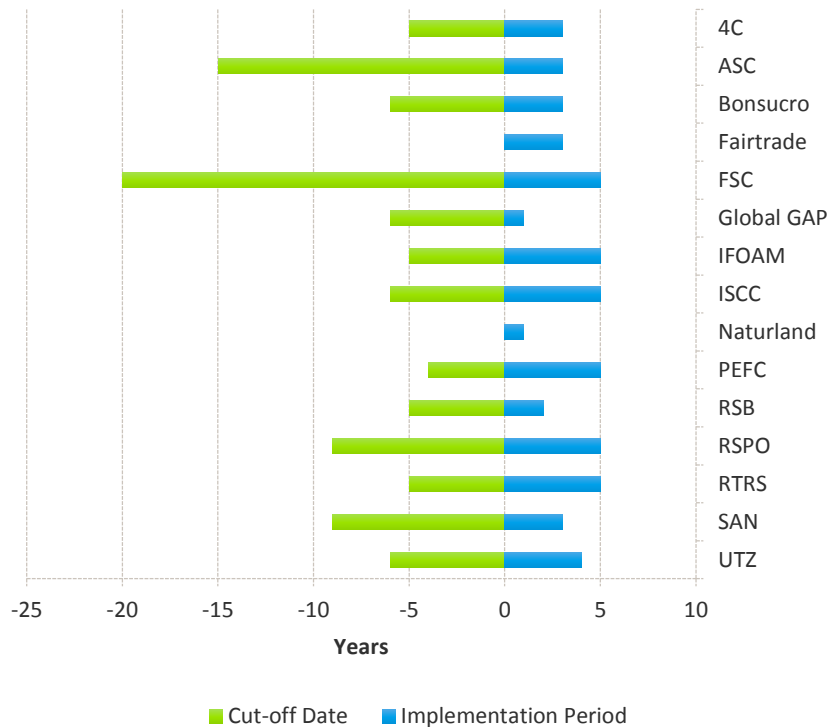
Only 11 of the 26 VSIs provide forest definitions or guidelines for determination of primary, secondary, continuous or standing forest – and most do not use internationally or nationally established definitions and land cover classifications. Lack of definitions and/or inconsistencies can lead to substantially different results, impede assessment against national and international norms and standards and prevent comparisons between VSIs.

Timelines

Although all commodity VSIs provide cut-off dates after which forest conversion is prohibited, dates vary from 0-21 years prior to certification. The majority of commodity VSIs set cut-off dates 5-8 years prior to certification, which under one extreme means that all land now covered by forest could be producing VSI certified products by 2020-2023. In this sense, static cut-off dates set deep in the past are the only real guarantee that forests have not been encroached. However, such strict rules would exclude producers who have made more recent commitments to forest conservation that potentially contribute to a reduction in overall deforestation rates. Therefore, ambition and participation must be weighed

when setting cut-off dates. There is also a risk that more ambitious cut-off dates will mean that only producers working far from the forest frontier are certified while those most likely to cause deforestation are left without incentives for reform.

Implementation periods establish the amount of time allotted to monitor, measure, report and verify results against the baseline. VSI implementation periods vary from 3 months to 5 years. Longer implementation periods are more likely to allow adequate time for VSIs to track a participant's progress throughout an entire production cycle. Shorter implementation periods provide organizations less time to achieve forest impacts and may lead to inadequate representations.



Geographic Area

Geographic boundaries are important in identifying certified production areas and monitoring forest impacts. Most VSIs do not require sufficient geographic information (e.g., geospatially explicit maps of certified and HCV/HCS areas) to establish credible baselines and monitoring plans. Maps provided in audit summaries by VSI participants and certification bodies vary substantially according to VSI requirements. Some only illustrate where a certified entity is located within a country or region, while others provide detailed information on vegetation, geographic coordinates, property boundaries, size, and the date the information collection.

Baselines

Baselines provide benchmarks against which participant's performance can be measured. VSI baselines vary according to the targets set. For example, VSIs with conservation targets will likely set land cover and/or biodiversity baselines, while those requiring reductions in greenhouse gas (GHG) emissions will require the establishment of reference levels. Most VSIs include baselines for their forest-related targets, however, the detail required varies. For example, some require both satellite imagery and ground-truthed data to establish land cover baselines for deforestation, while others require just one of these.

Monitoring / Measurement

Forest monitoring systems are essential for tracking participant performance. Depending on their targets, VSIs may monitor land-use change, GHG emissions, biodiversity levels, forest management or the certification of suppliers. This information is subsequently analyzed and measured against baseline information to determine the progress of VSI participants. Although most VSIs explicitly require participants to monitor or measure performance, many do not provide detailed requirements for the development of monitoring plans nor performance indicators guiding regular data collection. Comprehensive monitoring systems are critical for ensuring compliance with forest-related targets and accurate measurement of forest-related impacts.

Reporting

Publicly reporting a participant's status, progress and performance is an important step in promoting credibility and maintaining transparency throughout the VSI certification process. While 23 of the 26 VSIs assessed provide general information on participant or company progress in meeting VSI targets, only 13 provide detailed results of forest-related targets (e.g., MMRV methodology and disputes/noncompliance). Forest-related objectives and achievements are not reported in a way that strengths, weaknesses and progress with implementation are easily identifiable. Furthermore, variations in the level of detail reported by similar VSIs do not allow for comparability among standards.

Verification

Verification ensures that data collection and measurement is consistent and transparent, and that forest-related activities meet the requirements laid out by VSIs. All commodity-based VSIs require third-party verification, however, the frequency and depth of verification audits varies. Company-based VSIs mostly rely on commodity-based VSI certifications or internal standards to verify compliance with company policies. Holding certification bodies to external standards and ensuring results are verified by independent experts, along with requirements that all participants undergo on-site assessments at least annually, increases transparency and credibility of results.

Chain of Custody

Most commodity VSIs include chain of custody standards that require the identification of accountable actors and the percentage of the final product that is composed of certified materials. Few, however, trace supply back to the farm level where deforestation may have occurred, even when requiring the strictest "identity preserved" calculation methods. This means that there is still a risk that producers with deforestation infractions may enter the supply chain. If no traceability requirements are in place, it becomes extremely difficult to ensure that a "deforestation-free" product has truly avoided deforestation or other negative forest impacts.

Subsidiary Relationships

Many VSI participants have subsidiaries and/or suppliers providing inputs into the supply chain. It is therefore important to define subsidiary relationships and establish whether forest and environment related commitments are binding on all subsidiaries and related companies. Despite subsidiaries and suppliers utilizing large areas of land, very few VSIs delineate accountability by clarifying subsidiary relationships. This gap can significantly undermine the environmental integrity and credibility of VSIs.

Noncompliance

Noncompliance measures or consequences for breaching VSI standards are important components of VSI accountability and credibility. Most commodity VSIs have provisions for corrective action, suspension and termination based on the severity and number of violations. However, most enforcement is subjective rather than based on guidelines. Many VSIs have been pressured by NGOs and civil society to strengthen enforcement, both in relation to participants and subsidiaries and this has shed light on the frequency of violations. Various studies have found enforcement to be a critical gap in tracking compliance. The table below summarizes the main gaps identified and recommendations for each of the VSI criteria.

	MAIN GAPS	RECOMMENDATIONS
DEFINITIONS	Many VSIs lack definitions of key terms such as 'forest,' 'HCV'/'HCS' and 'forest degradation'	<ul style="list-style-type: none"> • Rely on established international and national definitions of forest and HCV/HCS where possible to clarify no-deforestation, restoration and expansion areas • Include sufficiently robust definitions to account for the various types of forests, potentially by using more than one type of forest definition
TIMELINES	Cut-off dates vary from 0-21 years leading to either low levels of environmental integrity or overly restrictive practices	<ul style="list-style-type: none"> • Establish cut-off dates far enough in the past (i.e., >5 yrs) • Establish relative cut-off dates (i.e., >8 yrs before certification) or revise fixed cut-off dates (i.e., 2005) at regular intervals • Set implementation periods to allow for MMRV of full production cycle (i.e., >5 yrs) • Aim for continuous improvement through a stepwise approach, increasing mandatory requirements at regular intervals
GEOGRAPHIC AREA	Few VSIs have requirements for delineating geographic boundaries, and where requirements exist many have gaps in scope and detail	<ul style="list-style-type: none"> • Require geospatially explicit information of production area, including farm location maps with GPS coordinates, location of HCV/protected areas, and legal ownership
BASELINES	Not all VSIs establish baselines for their forest-related targets	<ul style="list-style-type: none"> • Establish land-use and GHG baselines to adequately measure performance of participants according to the targets set • Adjust/establish baselines as forest-related targets increase in scope and ambition
MONITORING / MEASUREMENT	Few VSIs have requirements or guidelines for the development of monitoring plans or the procedures for measuring progress against baselines	<ul style="list-style-type: none"> • Develop a monitoring plan and robust monitoring processes that incorporate monitoring methodologies (i.e., remotely sensed and/or ground-truthed data), detailed performance indicators and routine data collection schedules. • Establish consistent measurement procedures and methodologies and use national and international maps and methodologies where possible • Use open-access deforestation mapping tools (e.g., WRI's Forest Watch) to efficiently monitor land-use change
REPORTING	Not all VSIs provide public, comprehensive reports on the progress of VSI participants	<ul style="list-style-type: none"> • Publicly report information on a routine basis to reflect the results of monitoring and verification audits, any disputes or noncompliance and the overall status of VSIs and their participants in meeting forest-related goals • Post information, including maps of participants, on an easily accessible website to strengthen transparency
VERIFICATION	Not all VSIs require annual on-site assessments, random field checks, and/or independent third-party verification	<ul style="list-style-type: none"> • Carry out periodic verification audits by independent third-parties to ensure that participants adequately monitor forest impacts • Ensure that all participants are audited at least once during a certification cycle • Require compliance according to set performance indicators outlined in the monitoring plan
CHAIN OF CUSTODY	Few VSIs have detailed traceability or chain of custody standards that can trace forest impacts	<ul style="list-style-type: none"> • Formalize and strengthen requirements to achieve traceability back to the farm or mill, including ambitious chain of custody methods • Mixed commodities like palm oil can aim for higher standards, like mass balance plus (MB+) while company VSIs can map their supply chains and engage mills and farmers directly to set and enforce forest-related standards.
SUBSIDIARY RELATIONSHIPS	Few VSIs define the role of subsidiaries and/or related companies in forest-related commitments, and even fewer outline the consequences for subsidiary noncompliance	<ul style="list-style-type: none"> • Clarify roles of subsidiaries in meeting targets, monitoring plans, audits and reports – particularly important for large multinationals with many suppliers • Share the status of certification for each subsidiary or related company • Define the consequences and procedures for participants if subsidiaries/related companies are noncompliant
NON-COMPLIANCE	Only half of the VSIs assessed provide detailed consequences for noncompliance	<ul style="list-style-type: none"> • Establish measures to address noncompliance and clear guidelines for the behavior that will lead to suspension or termination of certification • Provide detailed, publicly available, information on terminations and suspensions • Define the necessary steps and the amount of time to address nonconformities and to undergo re-certification after termination – as well as the procedures for handling products harvested prior to termination

Discussion and Conclusions

VSI commitments and standards are supportive of some REDD+ outcomes, particularly through avoidance of forest conversion and rehabilitation and conservation of HCV and HCS areas. However, **while there are overlaps between current REDD+ standards and VSI elements, VSI designs and their implementation systems are generally not sufficient to ensure significant contribution to REDD+ outcomes.**

The main weakness in both commodity and company VSIs relate to geographic area and MMRV requirements. Few VSIs provided sufficient detail on the location of farms or plantations, or monitoring, measurement and reporting requirements and guidelines. The main strengths are the provision of timelines and non-compliance requirements.

Overall, commodity VSIs showed more comprehensive coverage of the assessment criteria and sub-criteria used in the study than company VSIs. The best addressed criteria within company VSIs concerned subsidiary relationships, indicating the central role that sustainable sourcing policies have in meeting companies' forest-related targets.

The following overarching conclusions apply across the various VSIs and beyond.

There is insufficient detail on program requirements and insufficient guidance from VSIs to communicate expectations concerning both participant behavior and measurement of forest impacts. For example, ambiguity about thresholds for deforestation and how they are monitored permits possible non-compliance while maintaining certification. Disseminating robust and consistent guidance on VSI criteria helps participants meet requirements and gauge non-compliance while also promoting consistency across the standard.

Monitoring, traceability and the transparency of VSI targets - the main components in ensuring that deforestation and forest degradation are reduced - need to be enhanced. All of the VSIs assessed could make improvements to their standards and processes to more explicitly address deforestation and forest degradation and better incorporate these elements.

Lack of harmonization across VSIs in defining, monitoring and measuring forest-related targets hinders evaluation and comparison of results. While harmonization is impeded by the myriad actors and differing agendas among VSIs, the main forest-related definitions and methodologies (GHG accounting in particular) should be in accord with established international and/or national standards where possible.

Unambitious targets and procedures and lack of transparency reduce the credibility of VSIs. Environmental integrity is at the heart of buyer's motivation to purchase VSI certified and/or VSI branded products, and although ambition needs to be balanced with inclusiveness (e.g., in relation to cut-off dates for deforestation), demonstration of environmental integrity backed up by transparency and accountability is essential. Consequences for noncompliance are also crucial.

While commodity VSIs may prove useful for companies, they may also set and meet their own targets if standards are adequately robust and transparency is sufficiently maintained. The eight assessment criteria are generally more comprehensively addressed by commodity VSIs through certification schemes, and company VSIs therefore tend to rely on these to meet forest-related and other environmental targets. However, some companies are choosing to go beyond certification targets and/or reduce their reliance on certification by transparently tracking their products and impact on their own. For example, some companies publicly map the source of all of their materials back to the farm and then require changes of production standards where needed. Patagonia provides a good example of this with their Footprint Chronicles, where all materials are traced to individual farms and published online, production standards are set (e.g., for wool, cotton), and impact is monitored and publicly reported on a periodic basis.⁴

There are areas beyond the eight criteria assessed in this report that VSIs can employ to address forest loss and promote positive impacts on forests. Some agriculture VSIs, for example, increase their direct impact by restoring degraded and deforested areas, or by establishing minimum forest cover limits in certified areas. Similarly, some forest VSIs enhance their forest-related impacts by working with governments in locating plantations adjacent to HCV or primary forests, so as to provide a buffer for these areas. Having VSI certified forests next to forest frontiers, especially in tropical countries, would likely have a positive impact compared to VSI certified agriculture as they can maintain similar microclimates and vegetation for biodiversity conservation, and also limit development and subsistence farming expansion.⁵ Such practices could be more widely adopted and incorporated within VSI targets and requirements.

In addition to addressing gaps and taking steps to increase impact, adequate capacity to implement VSI targets and processes is essential. Various studies have shown that VSI participants have limited capacity for monitoring and enforcing sustainability and forest-related targets.⁶ While overcoming the challenges highlighted above is important, equally important is the capacity to implement the standards.

Engagement of non-VSI actors may help improve forest-related impacts. VSIs may benefit from collaboration with outside constituencies where potential synergies exist. For example, conservation stakeholders may support agricultural VSIs in improving the traceability and transparency of their supply chains and with forest VSIs in tropical forest frontiers to establish primary forest buffer zones. Additional studies that generate field-level empirical results could also help indicate VSI performance on the ground, and verify VSIs' forest impact.

⁴ Patagonia Footprint Chronicles website – accessed June 2015: <http://www.patagonia.com/us/footprint>

⁵ Lindenmayer D., and Franklin, J. (2003) *Towards Forest Sustainability*. CSIRO Publishing, Australia. ISBN 0 643 06832 5.

⁶ Smit, H., McNally, R., Gijzenbergh, A. (2015) *Implementing Deforestation-Free Supply Chains – Certification and Beyond*. SNV REAP.

Lastly, additional **efforts by companies, governments and other actors will be needed for improved forest-related impacts *outside of certified production areas***. In this context, a range of measures could be adopted, including:

- **Companies can work with communities and governments outside certified areas to promote sustainable practices.** Nestlé, for example, has worked with communities on rural development and on improving livestock management in Colombia, which helps to reduce pressure on forests outside of company-controlled areas.⁷
- **Governments can promote landscape level planning** in collaboration with companies implementing VSIs to protect forest frontiers and areas outside companies' jurisdiction. Governments and VSIs may also strive for landscape-wide and/or jurisdictional certification for the main commodities produced to promote REDD+ outcomes at scale.
- **Governments can ensure that national legal frameworks and programs are consistent with and supportive of VSIs.** For example, governments can provide incentives to encourage adoption of VSIs or impose levies on companies that do not adopt sustainable practices. Governments can also work with VSI companies to extend practices to SMEs and engage smallholders and other actors in implementing VSI standards, providing financial support to cover initial certification costs where necessary.
- **Industry and government can work together to increase the demand and market share of sustainable commodities.** To have real impact on global deforestation rates, VSIs need to be implemented on a large scale. Even very effective VSIs' impact on deforestation will be minimal if they only account for a small percentage of the market. VSIs can exert greater influence over production when a large proportion of the commodities produced are consumed in environmentally sensitive markets, as in the case of premium certified coffee exported to the US and EU for example.⁸ To increase demand for certified commodities, governments in consumer countries may implement public procurement policies or trade measures that exclude deforestation from the supply chain, particularly in relation to forest-risk commodities.

⁷ Nelson, N. and Durschinger, L. (2015). "Supporting Zero-Deforestation Cattle in Colombia". USAID-supported Forest Carbon, Markets and Communities Program. Washington, DC, USA.

⁸ Smit, H., McNally, R., Gijsenbergh, A. (2015) Implementing Deforestation-Free Supply Chains – Certification and Beyond. SNV REAP.

1.

Introduction

1.1 Background

Global demand for food, fuel and fiber has led to a rapid increase in deforestation and forest degradation for the production of agricultural and forest commodities. Tropical deforestation accounts for approximately 9-11% of global greenhouse gas (GHG) emissions, with nearly 80% stemming from the conversion of forests to agriculture.^{9,10} With the world population set to increase to 9.6 billion by 2050 and an expected rise in global incomes, consumption is predicted to double, putting increased pressure on forest resources.¹¹ Deforestation in the tropics is a critical environmental and social challenge as it adversely affects the global climate system, biodiversity, hydrological and geological functioning as well as the livelihoods of millions of forest inhabitants.

Both public and private sector efforts have emerged to address the global challenge of deforestation. At the international level, “Reducing Emissions from Deforestation and Forest Degradation” (REDD+) was launched in 2010 by the parties of the UNFCCC to tackle forest loss by providing economic incentives for forest conservation and restoration. Numerous countries, regions and project-led initiatives are now implementing REDD+ based on UNFCCC rules and other standards.

In the private sector, voluntary sustainability initiatives (VSIs) – otherwise known as sustainability policies, voluntary commitments, or voluntary standards – are commonly used by individual companies, platforms of companies and members of commodity roundtables to meet their commitments to sustainable practices and attain market recognition.¹² Originally developed to address social and environmental challenges such as human rights and worker health and safety standards, VSIs have

VSIs can be defined as voluntary standards specifying requirements that producers, traders, manufacturers, retailers or service providers may be asked to meet relating to a wide range of sustainability metrics.

⁹ Smith P., et al (2014) Agriculture, Forestry and Other Land Use (AFOLU). In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change

¹⁰ Hosonuma, N. et al. (2012) An assessment of deforestation and forest degradation drivers in developing countries. *Environmental Research Letters* (7)044009: 12pp, p.5.

¹¹ United Nations Department of Economic and Social Affairs/Population Division (2013) World Population Prospects: The 2012 Revision, Volume I: Comprehensive Tables, p. 1.

¹² Id.

become increasingly popular as mechanisms to meet targets related to deforestation-free supply chains,¹³ with many companies aiming to achieve *zero deforestation by 2020*.¹⁴

VSIs for agricultural commodities such as cocoa, coffee, palm oil, soybeans, sugar and tea have seen rapid growth, aiming to limit forest conversion for commercial production and increase environmental sustainability. VSIs govern an increasing portion of global production of coffee (40%), cocoa (22%), oil palm (15%), tea (12%), industrial roundwood (30%), sugar (3%), and soybeans (2%).¹⁵

1.2 Defining and Contextualizing VSIs

VSIs can be defined as voluntary standards specifying requirements that producers, traders, manufacturers, retailers or service providers may be asked to meet relating to a wide range of sustainability metrics, including respect for basic human rights, worker health and safety, the environmental impacts of production, community relations, land use planning and others.¹⁶ In contrast to internationally agreed norms, such initiatives create uniformity of principles and criteria without challenging host countries' national sovereignty, as their application is strictly voluntary.¹⁷

In the environmental context, VSIs are commonly used to demonstrate commitments and publicize use of sustainable production and sourcing practices by individual companies, platforms of companies and members of commodity roundtables.

VSIs have existed for decades, yet there is little empirical evidence regarding their large-scale and long-term impacts on forests.¹⁸ The Steering Committee of the State-of-Knowledge Assessment of Standards and Certification published a report in 2012 that acknowledges that in the near term, VSIs have resulted in short-term positive ecological impacts, however, they are on a case by case basis and not universal across and within VSIs.¹⁹ A comprehensive *State of Sustainability Initiatives Review* published in 2014 concluded that the significant growth of VSIs in number and market share indicate the potential for such initiatives to create transformational change in the production of commodities.²⁰

¹³ Milder, J. et al. (2014) An agenda for assessing and improving conservation impacts of sustainability standards in tropical agriculture. *Conservation Biology* (00)0: 1-12.

¹⁴ Supply Change (2015) *Corporations, Commodities, and Commitments that Counts*, a project of Forest Trends. www.supply-change.org

¹⁵ Id; see also United Nations Economic Commission for Europe (2014) *Forest Products Annual Market Review 2013-2014*. Food and Agriculture Organization of the United Nations.

¹⁶ United Nations Forum on Sustainability Standards (2013) *Voluntary Sustainability Standards: Today's landscape of issues & initiatives to achieve public policy objectives*.

¹⁷ Id.

¹⁸ Steering Committee of the State-of-Knowledge Assessment of Standards and Certification. (2012). *Toward sustainability: The roles and limitations of certification*. Washington, DC: RESOLVE, Inc.

¹⁹ Id.

²⁰ Potts, J. et al. 2014. *The State of Sustainability Initiatives Review 2014: Standards and the Green Economy*. A joint initiative of ENTWINED, IDH, IIED, FAST, and IISD.

1.3 Objective

The overall objective of this study is to assess the potential of VSIs to contribute to reductions in deforestation and forest degradation in developing countries based on their substantive and procedural requirements.

VSIs are a central component of public and private sector commitments to reduce deforestation and forest degradation, yet the extent of data on their impacts is often fragmented or anecdotal.²¹ There are few studies, especially evidence-based, of the land cover and land use change impacts VSIs have on commodity production. Therefore, despite increasing market penetration, the effectiveness of VSIs in achieving forest-related goals remains uncertain.²²

In undertaking this analysis, consideration is given to previous studies that have explored the effectiveness of VSIs.²³ This paper complements these previous efforts by presenting a comprehensive and comparative assessment of the design of VSIs and their potential role in slowing, halting and reversing forest degradation and loss.

This review aims to inform national and international policy makers, companies using VSIs to meet sustainability goals that include deforestation and forest degradation, consumers seeking to purchase low deforestation or deforestation-free products and the various VSIs themselves.

This review *is not* an assessment of the implementation of VSIs, and is limited to a review of VSI standards and certification systems.

1.4 Approach and Methodology

To undertake this analysis, 26 VSIs were assessed drawing on VSI principles and criteria, VSI annual reports, published literature and interviews with VSIs and their participants. The commodity- and company-based VSIs included in this study were selected due to their environmental standards relevant to REDD+ outcomes (production and sourcing policies),

²¹ The Committee on Sustainability Assessment (COSA) (2014) The COSA Measuring Sustainability Report: Coffee and Cocoa in 12 Countries.

²² Milder, J. et al. (2014), *supra*.

²³ Brandi, C. et al. (2013) Sustainability certification in the Indonesian Palm Oil Sector: Benefits and challenges for smallholders. German Development Institute (DIE)

Gibbon, A., Baroody, J., McNally, R. (2014) The Role of Voluntary Agricultural Certification Standards in Quantifying and Reducing Greenhouse Gas Emissions: Exploring the Cocoa, Coffee, Palm Oil and Shrimp Aquaculture Sectors. SNV REAP.

Merger, E., Dutschke, M., Verchot, L. (2011) Options for REDD+ Voluntary Certification to Ensure Net GHG Benefits, Poverty Alleviation, Sustainable Management of Forests and Biodiversity Conservation. *Forests* 2011, 2, 550-577;

Milder, J. et al. (2014) An agenda for assessing and improving conservation impacts of sustainability standards in tropical agriculture. *Conservation Biology* (00)0: 1-12.;

Potts, J. et al. 2014. The State of Sustainability Initiatives Review 2014: Standards and the Green Economy. A joint initiative of ENTWINED, IDH, IIED, FAST, and IISD.

Ruysschaert, D., and Salles, D. (2014) Towards global voluntary standards: Questioning the effectiveness in attaining conservation goals, The case of the RSPO. *Ecological Economics*, 107; 438-446

Smit, H., McNally, R., Gijsenbergh, A. (2015) Implementing Deforestation-Free Supply Chains – Certification and Beyond. SNV REAP.

Steering Committee of the State-of-Knowledge Assessment of Standards and Certification. (2012). Toward sustainability: The roles and limitations of certification. Washington, DC: RESOLVE, Inc. Id.

Walker, N., Patel, S., Davies, F., Milledge, S., Hulse, J. (2013) Demand-side interventions to reduce deforestation and forest degradation. IIED

association with a prominent driver of deforestation and forest degradation (palm oil, soy, timber, livestock, cocoa, etc.), and/or their scale and potential to achieve REDD+ outcomes (size of area, location in tropical forests and deforestation hotspots). Only company policies and standards with sufficiently available information from online sources were included in this study. For example, we did not include the Global Roundtable on Sustainable Beef²⁴ or McDonald's Deforestation Free policy²⁵ given the former does not set standards or offer certification similar to the other standards assessed in this study, and the latter did not have sufficient public information available for assessment.

While the VSIs assessed are not explicitly related to REDD+, they establish targets directly or indirectly relevant to the five activities and outcomes associated with REDD+:

- Reducing emissions from deforestation;
- Reducing emissions from forest degradation;
- Conservation of forest carbon stocks;
- Sustainable management of forests; and
- Enhancement of forest carbon stocks.

To assess VSI design and help understand their potential impact on REDD+ outcomes,²⁶ we use eight criteria that have been developed based on a bottom-up analysis of the core components of VSIs as well as the key elements of REDD+. The review of the VSIs and related recommendations are organized according to these eight criteria:

1. Definitions;
2. Timelines;
3. Geographic Area;
4. Baselines;
5. Monitoring, Measurement, Reporting, Verification;
6. Chain of Custody;
7. Subsidiary Relationships; and
8. Noncompliance.

1.5 Structure of the report

The remainder of this report is structured into three sections and detailed Annexes. Section 2 outlines the 26 VSIs assessed. Section 3 presents an analysis of the VSIs and their contribution to REDD+ outcomes, structured according to the eight criteria highlighted above. Section 4 outlines the main findings and discusses general conclusions and implications for key stakeholders. The Annexes to this report present a full review of all 26 VSIs.

²⁴ Global Roundtable on Sustainable Beef (GRSB) website – accessed June 2015: <http://grsbeef.org/>

²⁵ McDonald's Commitment on Deforestation website – accessed June 2015: <http://www.aboutmcdonalds.com/content/mcd/sustainability/sourcing/priority-products/commitment-on-deforestation.html>

²⁶ The phrase "REDD+ outcomes" is used throughout this report as shorthand to refer to outcomes related to one of the five REDD+ activities. We use this instead of longer phrases such as "slowing, halting and reversing forest loss", or "reductions in deforestation and forest degradation, conservation, sustainable management of forests and enhancement of forest carbon stocks", or "decreased reversals and increased removals": all of which are valid alternatives.

2.

Summary of VSIs Assessed

This study and its annexes assess 26 VSIs, covering various commodities, production practices and targets. Commodity- and company-based VSIs vary widely in their scope and scale, and in how they set environmental targets

The 26 VSIs included in this analysis (see [Table 1](#)) cover a wide variety of commodities, regions and production practices, and vary in their make-up, scope of application and targets. This section provides an overview of the main types of VSIs assessed, their scope and scale and how they establish targets. The following section goes into more detailed analysis of individual VSIs.

2.1 Type

There are two main types of VSI: commodity-based and company-based.

Commodity VSIs include standards, certification systems and roundtables aimed at producers of specific agriculture and forest commodities (e.g., the Roundtable for Sustainable Palm Oil). These VSIs typically offer certification or a set of sustainability standards for farmers, mills, producers and suppliers, which are together referred to throughout this study as “certified organizations” or “participants.”

Company VSIs include independent and joint commitments by large multinational companies to implement sustainable practices throughout supply chains and/or commodity production within a specific company (e.g., Unilever’s Sustainable Living Plan). To help achieve their objectives, company VSIs often apply standards of commodity VSIs in addition to setting their own goals and processes. For example, the Consumer Goods Forum (CGF) offers guidance to its members on achieving zero deforestation in relevant sectors (paper and pulp, palm oil and soy) by applying standards of the Forest Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification (PEFC), the Roundtable for Sustainable Palm Oil (RSPO), and the Round Table for Responsible Soy (RTRS).

Summary of VSIs Assessed

Table 1. Included Commodity and Company VSIs

	COCOA	COFFEE	LIVESTOCK	PALM OIL	SOY	SUGAR	TEA	TIMBER & FIBER	OTHER
COMMODITY VSIS									
The Common Code for the Coffee Community (4C) Association		+							
Aquaculture Stewardship Council (ASC)									+
Bonsucro						+			
Fairtrade International	+	+					+		+
Forest Stewardship Council (FSC)								+	
Global Good Agricultural Practice (Global GAP)		+	+				+		+
International Federation of Organic Agriculture Movements (IFOAM)	+	+	+	+	+	+	+	+	+
International Sustainability and Carbon Certification (ISCC)					+	+			+
Naturland	+	+	+		+	+	+	+	+
Programme for the Endorsement of Forest Certification (PEFC)								+	
Roundtable on Sustainable Biomaterials (RSB) ²⁷				+	+	+		+	+
Roundtable on Sustainable Palm Oil (RSPO)				+					
Roundtable for Responsible Soy (RTRS)					+				
Sustainable Agriculture Network (SAN)	+	+	+	+	+	+	+	+	+
Utz Kapeh (UTZ)	+	+					+		
COMPANY VSIS									
ASIA Pacific Resources International Holdings Ltd. (APRIL)								+	
Asia Pulp and Paper (APP)								+	
Cargill	+		+	+	+				+
Consumer Goods Forum (CGF)			+	+	+			+	
Danone				+	+	+		+	+
Golden-Agri Resources (GAR)				+	+				
Nestlé	+	+	+	+	+	+		+	+
Proctor & Gamble (P&G)				+				+	
Sustainable Agriculture Initiative (SAI)		+	+						+
Unilever	+		+	+	+	+	+	+	+
Wilmar				+					

²⁷ "Other" in this case refers to multiple feed stocks

Company VSIs differ from commodity VSIs in that they mostly consist of commitments and internal practices to sustainably source materials or make other business-related decisions rather than restructuring the production procedures themselves. However, there are some companies that have also moved to the production side to a limited extent, meeting or even going beyond some certification requirements (e.g. Nestlé). Commodity VSIs represent long-term, landowner-level commitments by producers to improve the sustainability of their practices by continuously avoiding deforestation and other forest-related impacts. Given that company VSIs are primarily internal sustainability processes, they commonly provide less publicly available information on requirements and processes for meeting targets. While there are some exceptions, commodity VSIs provide more detail to participants and generally have higher levels of transparency. The majority of the analysis in this paper therefore focuses on commodity VSIs.

2.2 Scope and Scale

Apart from the commodity or company basis of VSIs, another important classification concerns land use and, specifically, whether the VSI is agriculture or forestry focused. **Forestry VSIs** seek to institutionalize sustainable forest management practices. Managing forests sustainably means maintaining and enhancing economic, social and environmental values for the benefit of present and future generations.²⁸ Forestry VSIs can therefore help maintain forests and reduce emissions from deforestation and forest degradation, directly contributing to REDD+ outcomes. **Agricultural VSIs** have more tangential forest-related impacts as their primary focus is to improve farming practices. Although agricultural VSI targets may involve limiting the conversion of primary forests and rehabilitating remaining areas of forest, the lack of on-farm standing forests is likely to limit the potential contribution to REDD+ outcomes. The potential impacts of VSIs on deforestation, degradation, conservation, sustainable forest management and enhancement of carbon stocks therefore vary significantly.

Of the 26 VSIs assessed, all but two – FSC and PEFC – address agriculture. The agricultural VSIs apply to various commodities, primarily palm oil, soy, coffee, sugar, cocoa, livestock (including dairy) and tea. Some VSIs, like SAN, RSB, Naturland, IFOAM and ISCC include multi-commodity certifications.

VSIs vary in terms of scale, or extent of global market share, area and geographic concentration (see [Table 2](#)). For example, 4C Association certifies approximately 29% of global coffee production²⁹ with UTZ and SAN making up 7% and 5.2% respectively.³⁰ In contrast only a small proportion of aquaculture products and soy are certified. Studies have found that single-commodity VSIs tend to have higher market share for certified commodities.³¹ In 2012, 4C Association (single-commodity) produced more than double the amount of coffee than that of UTZ (multi-commodity).³² Similarly, RSPO (single-commodity) certified 8.2 million metric tons of

²⁸ FAO 2015. Sustainable Forest Management website

²⁹ 4C Annual Report 2014.

³⁰ Potts, J. et al. 2014. The State of Sustainability Initiatives Review 2014: Standards and the Green Economy. A joint initiative of ENTWINED, IDH, IIED, FAST, and IISD.

³¹ Id. at 41.

³² Id.

Summary of VSIs Assessed

certified palm oil representing nearly 18% of the global market, while IFOAM (multi-commodity) certified just 38,000 metric tons.³³

Table 2. Scale of Commodity-based VSIs (information on Company-based VSIs was not applicable and/or available). **Red indicates > 10%** market share, **green indicates > 5%** market share, **grey indicates < 5%** market share.³⁴

COMMODITY VSIS	SHARE OF GLOBAL PRODUCTION (%)								MILLION HECTARES	CERTIFIED REGIONS						
	Banana	Cocoa	Coffee	Palm Oil	Soy	Sugar/ Sugarcane	Timber	Tea		S. America	Asia	Africa	Australia/ Oceania	N. America	Europe	C. America & Caribbean
4C Association ³⁵			29%						1.6	+	+	+	+	+	+	
ASC ³⁶									-	+	+		+	+	+	
Bonsucro ³⁷						2.5%/ 3.4%			0.9	+	+		+		+	
Fairtrade	1%	3%	5%			0.3%		4%	1.3	+	+	+	+	+	+	
FSC ³⁸							5%		185	+	+	+	+	+	+	
Global GAP ³⁹								1%	3.0	+	+	+	+	+	+	
IFOAM ⁴⁰	1%	3%	3%	0.1%	0.2%	0.2%		1%	70	+	+	+	+	+	+	
ISCC ⁴¹				4%					-	+	+	+	+	+	+	
Naturland ⁴²	0.7%	2%	6%		4%	2%		11%	0.2	+	+	+	+	+	+	
PEFC ⁴³							6%		263	+	+	+	+	+	+	
RSB									-	+	+	+	+	+	+	
RSPO ⁴⁴				20%					3.4	+	+	+	+	+	+	
RTRS ⁴⁵					0.4%				0.3	+	+			+	+	
SAN ⁴⁶	15%	13%	5.2%			0.1%		14%	3.0	+	+	+	+	+	+	
UTZ		11%	7%						1.4	+	+	+	+	+	+	

³³ Id.

³⁴ Information taken from Potts et al. 2014 unless otherwise noted.

³⁵ Market share and hectares taken from 4C Annual Report 2014.

³⁶ Certified regions taken from ASC Website: Certified Farms. Updated 6 May 2015. Available at <http://www.asc-aqua.org/index.cfm?act=tekst.item&iid=4&iids=204&lng=1>.

³⁷ Market share and hectares taken from Bonsucro Progress Report 2013/2014.

³⁸ Market share calculated using hectares under certification and total production forest area - from FSC Website: Facts and Figures. Updated 12 June 2015. Available at <https://ic.fsc.org/facts-figures.839.htm>

³⁹ Hectares taken from Global G.A.P. Annual Report 2013-2014 (fruits, veg, flower and ornamental crops).

⁴⁰ Hectares (2012) taken from FiBL and IFOAM 2014.

⁴¹ Certified regions taken from Standards Map: International Sustainability and Carbon Certification – Geographic Scope. Accessed 16 June 2015. Available at <http://search.standardsmap.org/quick-scan?standards=243&shortlist=243&product=Any&origin=Any&market=Any&cbi=->.

⁴² Market share provided by Naturland; Hectares (2011) taken from Standards Map: Naturland. Available at http://search.standardsmap.org/assets/media/Naturland/English/AtAGlance_EN.pdf. Certified regions taken from Standards Map: Naturland – Geographic Scope.

⁴³ Hectares taken from PEFC: Facts and Figures. Accessed 19 June 2015. Available at <http://www.pefc.org/about-pefc/who-we-are/facts-a-figures>.

⁴⁴ Market share and hectares taken from RSPO: Impacts. Accessed 19 June 2015. Available at <http://www.rspo.org/about/impacts>.

⁴⁵ Market share calculated using production numbers from Potts et al 2014 and FAOSTAT 2012.

⁴⁶ Market share and hectares taken from SAN: The SAN in Figures. Accessed 19 June 2015. Available at <http://san.ag/web/our-impact/the-san-in-figures/>.

In terms of total hectares under certification, forestry VSIs by far cover the greatest area, with over 185 million hectares under FSC certification and over 263 million hectares under PEFC certification. The geographic distribution of VSI participation largely reflects the location of global centers of commodity production, with certified palm oil largely focused in Asia, certified coffee mainly in South America and certified cocoa primarily in Africa.⁴⁷

While the number and market share of VSIs are rapidly increasing, only a small percentage of the total commodity market is accounted for. Given that uncertified actors can continue to cause large-scale deforestation, the issue of uptake is a major challenge. The extent to which VSIs are adopted depends on a variety of factors including costs and benefits, as well as broader enabling factors including national policies and importing country standards. Most strategies to increase VSI demand include better consumer and farmer outreach, harmonized messaging, and procurement policies requiring commodity certification (e.g. FLEGT in Europe). **While scale is important to effect change in global deforestation rates, the standards and requirements of VSIs are critical to producing REDD+ outcomes in relation to the actual commodity being purchased** (assessed in section 3). As such, even if a VSI has a large market share and covers expansive areas but lacks the necessary provisions to protect forests, it still would not produce significant impact.

2.3 Targets

The 26 VSIs included in this analysis were selected for their association with commodities posing deforestation and/or forest degradation risks and impacts. However, not all VSIs explicitly address deforestation, forest degradation or conservation of forest carbon stocks in their targets. VSI environmental targets can be expressed as quantitative commitments measuring performance against an established baseline and/or a set of best practices to be followed. For certification,⁴⁸ VSIs generally require an organization’s compliance with these targets or standards, known as “Principles and Criteria” or “Control Points.” **Table 3** below presents the most common targets related to forest impacts in the VSIs assessed, including:

Table 3. VSI Targets Related to REDD+ Activities

VSI TARGETS	RELATED REDD+ ACTIVITIES
Reduce deforestation, avoid conversion of primary forests	Reducing emissions from deforestation
No degradation of primary forests, minimize forest damage and erosion, sustainable forest management	Reducing emissions from forest degradation
Conservation of High Conservation Value (HCV) and High Carbon Stock (HCS) areas, protected areas, wetlands, peatlands and mangroves, and biodiversity	Conservation of forest carbon stocks
Sustainable management of forests	Sustainable management of forests
Rehabilitation of HCV / HCS areas, and degraded areas, reforestation, re-vegetation	Enhancement of forest carbon stocks
Reduce GHG emissions	
Sustainable sourcing	

⁴⁷ Id.

⁴⁸ Throughout this paper the term “certification” is used to describe verified compliance with any VSI.

Summary of VSIs Assessed

Because VSI targets are not explicitly aligned with REDD+ activities, some targets address more than one activity resulting in overlaps (Table 4). For example, a VSI target to conserve HCV areas may reduce deforestation, forest degradation and conserve forest carbon stocks. For the purposes of this report, we extracted all text relevant to the above targets from VSI standards, certifications and policies. Relevancy was determined based on wording such as “conserve,” “protect,” “set-aside,” “biodiversity,” “forest,” “HCV” and “reduce,” among others. Environmental targets that were not related to forests were not included.

In addition to the five REDD+ activities, VSIs may also provide forest-related targets for reducing GHG emissions and sustainable sourcing. The targets and related REDD+ activities covered by VSIs vary according to VSI type. For example, only company VSIs provide targets for sustainable sourcing, as commodity VSIs address farmers and growers rather than purchasers.

Furthermore, targets vary among forest and agricultural VSIs. Forestry VSIs, as well as some agricultural VSIs covering shade-grown coffee or cocoa, can directly address all five REDD+ activities because the certified production areas contain standing forests. In contrast, the targets of most agricultural VSIs covering other crops such as soy, palm oil and livestock can only address the manner in which land is initially cleared for production. These VSIs typically require assessments of newly acquired land designated for expansion, the delineation of HCV and protected areas for conservation, and proposed activities to enhance biodiversity on the farm. As such, most agricultural VSIs may only address three of the five REDD+ activities: deforestation, conservation and enhancement of carbon stocks.

Table 4. Specific VSI targets related to REDD+ Activities⁴⁹

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR
DEFORESTATION	+				+		+		+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+
DEGRADATION					+		+		+	+					+											
SFM					+		+		+	+				+		+	+			+			+			
CONSERVATION	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
ENHANCEMENT		+		+	+	+	+		+	+	+			+	+	+	+			+		+		+	+	+
GHG EMISSIONS		+	+	+				+			+	+	+	+		+	+			+		+		+	+	+
SUSTAINABLE SOURCING																		+	+	+	+	+	+		+	+

As illustrated in Table 4, the most common environmental targets include reducing deforestation, conservation and/or rehabilitation of High Conservation Value (HCV) areas, and maintaining or enhancing biodiversity. All VSIs refer to conservation of HCV/HCS areas, and most include avoiding deforestation or conversion of forests prior to certification in

⁴⁹ Targets are noted only when explicitly set and outlined by the VSI

their targets. While many VSIs commit to similar environmental targets, they vary greatly in terms of detail and ambition.

For example, many VSIs with deforestation targets fail to distinguish between “net” and “gross” deforestation. Net deforestation accounts for the overall change in forest area taking into account both forest losses and forest gains (e.g. afforestation and reforestation). Gross deforestation only accounts for loss in forest area (e.g., conversion from forest to non-forest) and not regrowth. Therefore, a commitment to zero *net* deforestation includes consideration of reforestation, afforestation and conversion of secondary or degraded natural forests into plantation, whereas a commitment to zero *gross* deforestation prohibits all forest conversion.

Box 1 provides examples of forest-related VSI environmental targets. **Due to this variation in substance, it is important to assess not only the strength of the forest-related targets themselves but also the systems and procedures upon which they are based** (Section 3 review).

Box 1: Examples of VSI REDD+ Related Targets

Deforestation

RSPO: Replacement of primary forest or any area required to maintain or enhance HCV areas is prohibited for plantings after November 2005. Comprehensive HCV assessments are required before any conversion or new planting, along with a land use change analysis to determine changes to vegetation since November 2005.

ISCC: Production is prohibited from areas with the following designations on or after January 2008: (1) primary forest and other natural areas covered with native tree species and no sign of human activity, (2) any other continuously forested area, (3) areas designated by law, its equivalent or international agreement for the purpose of nature protection, and (4) grasslands with high biodiversity.

Naturland: Clearing primary forest and cultivation of primary organic systems is prohibited.

Fair Trade: From the date of application for certification, farmers must avoid negative impacts on protected areas or areas with high conservation value.

IFOAM: Clearing primary forest and cultivation of primary organic systems is prohibited.

CGF: The Forum pledges to achieve zero net deforestation by prohibiting production on land with HCV and HCS with a conversion cut-off date not later than 2009.

Nestlé: No sourcing from areas converted from natural forests after 1 February 2013. Products must be sourced from land that has not been converted from natural forest to other land use.

Forest Degradation

FSC:⁵⁰ Written guidelines must be prepared to minimize forest damage and erosion.

UTZ: No deforestation or degradation of primary forest or of natural forest.

Sustainable Forest Management

PEFC: Forest management planning shall aim to maintain the capability of forests to produce a range of wood and non-wood forest products and services on a sustainable basis.

FSC: The rate of harvest of forest products shall not exceed levels which can be permanently sustained and ecological functions and values must maintain intact, including forest regeneration and succession.

Conservation

SAN: Farms are required to have a written conservation program identifying patches of primary and secondary forests, bush lands, grass lands or secondary growth without significant human disturbance for a minimum of 10 years. These areas must be demarcated and signaled for workers and community members and are designated for protection, natural regeneration or planting of natural vegetation.

SAI: Protect areas of high ecological value located on and around the farm, such as streams, wetlands and forests, via the minimization of human intervention and the implementation of measures for conservation.

GHG Emissions

Bonsucro: Mills must monitor emissions and minimize climate change impacts by measuring net GHG emissions per tonne of cane, per tonne of sugar, and per MJ of ethanol with maximums not exceeding:

- 40 kg CO₂ eq/t cane
- 0.4 t CO₂e/t sugar
- 24 g CO₂e/MJ fuel

RSB: Bioenergy must contribute to climate change mitigation by significantly reducing lifecycle GHG emissions as compared to the fossil reference.

Unilever: Reduce lifecycle GHG emissions of all products by 50% by 2020.

⁵⁰ The FSC is in the process of developing and publishing a set of International Generic Indicators (IGIs) which expand further upon the FSC certification requirements and MMRV processes, including on forest degradation and sustainable forest management. At the time of this report the IGIs were not publicly available, therefore, they were not included in the assessment. The IGIs are expected to be published later in 2015.

3.

Analysis of VSIs

The potential of VSIs to achieve REDD+ outcomes depends on both the nature of their targets and the procedures and systems in place to operationalize those targets. This section reviews and assesses the key design and operational elements of 26 commodity- and company-based VSIs as they relate to environmental targets and the achievement of REDD+ outcomes.

The environmental targets of VSIs are only as strong as the systems and procedures through which they are operationalized. **To transform targets into results, VSIs must transparently track who the producers are, where they are located, and how the targets are implemented and met.** This section assesses the key operational elements of VSIs, and illustrates that variances and gaps in the systems and procedures used to implement similar forest-related targets are likely to lead to drastically different results in practice.

To gauge the ability of VSIs to attain forest-related targets and achieve REDD+ outcomes,⁵¹ we consider them in light of internationally accepted standards for REDD+. Such standards have been set by the United Nations Framework Convention on Climate Change (UNFCCC), the Intergovernmental Panel on Climate Change (IPCC), and voluntary market standards such as the Voluntary Carbon Standard (VCS) for the purposes of generating REDD+ results. The decisions, guidelines and methodologies provided by these organizations therefore inform our assessment of the key operational elements of VSIs.

This section first describes the assessment criteria used to review and assess the 26 VSIs. The remainder of the section is organized according to the eight assessment criteria. Within each subsection we describe the criteria's relevance to forests, assess how VSIs compare to REDD+ standards, give examples of VSI application, analyze inconsistencies and

⁵¹ The phrase "REDD+ outcomes" is used throughout this report as shorthand to refer to outcomes related to one of the five REDD+ activities. We use this instead of longer phrases such as "slowing, halting and reversing forest loss", or "reductions in deforestation and forest degradation, conservation, sustainable management of forests and enhancement of forest carbon stocks", or "decreased reversals and increased removals": all of which are valid alternatives.

gaps, and provide recommendations. We summarize each subsection with a table illustrating how each VSI addresses the various criteria. The information in these tables is extracted from the standards, certifications and policies that are fully reviewed per VSI in Annex I and II, and inclusion is based on whether there is explicit mention of such criteria.

3.1 Assessment Criteria

As outlined in the introduction, the criteria used to assess VSI systems and procedures were developed using a bottom-up analysis of the core components of forest-related VSI standards and procedures, as well as those of international REDD+ standards. This study refers to UNFCCC requirements where they align with VSI system requirements, IPCC Good Practice Guidance for Land Use, Land-Use Change and Forestry (IPCC GPG for LULUCF) where the UNFCCC refers to those rules, and the VCS REDD+ Project Methodology where the UNFCCC does not cover a certain design element in part or in full. Table 5 details the eight assessment criteria and how they are treated in REDD+ standards.

Table 5. Assessment criteria and sub-criteria used in review

ASSESSMENT CRITERIA	REDD+ STANDARD
1) Definitions a) Forest b) High Conservation Value	UNFCCC (IPCC Good Practice Guidance (GPG) for Land Use, Land-Use Change and Forestry (LULUCF)): terminology used for estimating biomass stocks and changes must be consistent with the definitions used by FAO
2) Timelines a) Cut-off Dates b) Implementation Periods	VCS REDD Methodology (for projects): land within project areas must qualify as forest for a minimum of 10 years before the project start date; project crediting periods must be from 20 to 100 years UNFCCC: forest monitoring systems must measure changes throughout the entire forested area
3) Geographic Area	VCS (for projects): information on project boundaries should include: name of project area and unique ID, maps of the area, GPS coordinates, total land area and details of land holder and user rights UNFCCC: fundamental requirements for baselines include: <ul style="list-style-type: none"> • Assessed baseline expressed in tonnes of CO₂ eq • List of activity or activities included • Territorial forest area covered (ha) • Date of baseline and date of assessment • Period of the assessed baseline (years)
4) Baselines a) Land use change b) GHG Emissions	(Content merged into the previous row)
5) Monitoring, Measurement, Reporting and Verification (MMRV) Tools a) Monitoring b) Measurement c) Reporting d) Verification	IPCC GPG for LULUCF: promote transparency, accuracy, consistency, completeness and comparability for effective review of performance
6) Chain of Custody	N/A
7) Subsidiary Relationships	N/A
8) Noncompliance	VCS: all material errors, omissions and misrepresentations (clarification requests and corrective action requests) must be addressed for a project to receive a positive validation or verification opinion, and if non-material errors are found, verifiers should ensure that such errors are addressed where practicable

Credible achievement of forest and REDD+ related targets requires traceability, forest monitoring and accountability.⁵² To address these needs, the assessment criteria take into consideration the requirements of international REDD+ standards, as well as VSI elements specific to supply chains. Six of the eight assessment criteria are directly addressed in REDD+ standards, including forest-related **definitions**, delineation of the **geographic area** under observation, **timelines** set for eligibility and the implementation of activities, the establishment of **baselines**, **MMRV systems** used to ensure real and accurate results and consequences or remediation measures for **noncompliance**.

In addition, VSIs require additional systems and procedures relevant to forest impacts in the supply chain, but not for REDD+ activities. These include **chain of custody** systems to track commodities in the value chain and guidelines on **subsidiary relationships** to verify that all subsidiary producers and manufacturers of the parent company are abiding by the relevant standard.

3.2 Definitions

Definitions are important for achieving REDD+ outcomes as they provide participants with common parameters that allow for accurate interpretation and application of targets and guidelines. Common VSI targets to achieve forest impacts and REDD+ outcomes include conserving and sustainably managing **forests**, protecting and enhancing **High Conservation Value (HCV) and High Carbon Stock (HCS)** areas, and preventing **forest degradation** or targeting degraded areas for expansion. Therefore, various forest definitions are used to delineate prohibited areas for deforestation, or areas for restoration or further expansion. As such, these definitions also apply in setting baselines and/or reference levels, establishing geographic boundaries, and monitoring, measuring, reporting and verifying results.

Forest definitions are particularly important for identifying areas under certification that can and cannot be converted for production – as illustrated in [Table 6](#). A VSI may specify no clearing in “native forests” for example, yet if there is no definition or ambiguity in the definition provided for “native forests,” a participant may use it as a loophole to deforest while maintaining certification. Additionally, it is important to consider that many VSIs include exceptions to their deforestation restrictions, even in protected areas (see [Table 6](#) footnote).

Various studies highlight a pressing need to streamline the definitions of key terms related to VSI forest conservation targets to increase their efficiency, effectiveness and sustainability.⁵³

This section assesses the existence and robustness of definitions provided for the key terms included in forest-related targets. [Table 7](#) outlines which of the terms highlighted above are defined by individual VSIs. The subsections below then provide REDD+ guidance, analysis of the VSIs and recommendations related to the two main definitions: Forests and HCV/HCS.

⁵² Smit, H., McNally, R., Gijsenbergh, A. (2015) Implementing Deforestation-Free Supply Chains – Certification and Beyond. SNV REAP.

⁵³ See Brown and Zarin 2013, Thompson et al. 2013, Moss 2013, Lund 1999.

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Table 6. Prohibited Forest Conversion by Forest Type (green = strictly protected, lined = protected with exceptions, grey = not explicitly protected, VSIs with * have provisions stating national legislation supersedes preservation requirements).⁵⁴

FOREST TYPE	4C	ASC	BONSUCRO*	FAIRTRADE*	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN*	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR
NATURAL/NATIVE/PRIMARY	Green	Grey	Grey	Green	Green	Grey	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
SECONDARY	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
WETLANDS	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
PEATLANDS	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
MANGROVES	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
HCV	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
HSC	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
CONSERVATION/PROTECTED AREAS	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

As illustrated in [Table 7](#), the terms for which most VSIs provide definitions are “HCV” and/or “HCS.” Only 11 VSIs define “forest” or forest type despite 19 VSIs having targets that directly address forests, and just 1 of 9 VSIs referring to forest degradation in their targets defines forest degradation.

While deforestation is an obvious ecosystem change, forest degradation is more difficult to detect and quantify.⁵⁵ Forest degradation involves a decrease in forest condition rather than a reduction in total forest area, and can be defined according to characteristics such as growing stock, ecosystem state, fragmentation, invasive species, fire, soil erosion and stored carbon.⁵⁶ VSI targets addressing forest degradation include both the re-vegetation of degraded areas, reducing degradation through sustainable

⁵⁴ Example exceptions to forest conversion restrictions:

ASC: Salmon farms cannot be established on HCV areas unless the farm can demonstrate environmental impacts are compatible with the conservation objectives of the HCV area. The burden of proof is on the farm to prove that its existence is not negatively impacting the HCV area.

FSC: Forest conversion to plantations or non-forest land uses is prohibited, unless conversion: 1. Entails a very limited portion of the forest management unit; and 2. Does not occur on HCV areas; and 3. Will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit.

PEFC: Conversion of forests to other types of land use, including conversion of primary forests to forest plantations, shall not occur unless in justified circumstances where the conversion: 1. Is in compliance with national and regional policy and legislation relevant for land use and forest management and is a result of national or regional land-use planning governed by a governmental or other official authority including consultation with materially and directly interested persons and organizations; and 2. Entails a small proportion of forest type; and 3. Does not have negative impacts on threatened (including vulnerable, rare or endangered) forest ecosystems, culturally and socially significant areas, important habitats of threatened species or other protected areas; and 4. Makes a contribution to long-term conservation, economic and social benefits

UTZ: No deforestation or degradation of primary forest, and no deforestation or degradation of natural forest (not including primary forests) unless: 1. A legal land title and/or landowner permission is available 2. Government permits are available (if required), and 3. There is a report produced by an environmental expert confirming that the appropriate clearing techniques are used, and that there is compensation with reforestation activities of at least equal ecological value.

⁵⁵ Thompson, I. et al. (2013) An Operational Framework for Defining and Monitoring Forest Degradation. *Ecology and Society*, 18(2): 20.

⁵⁶ Id.

forest management as well as prioritizing degraded areas for plantation expansion. Various studies have explored criteria and methods for harmonizing definitions of degraded forest, including threshold information on forest cover, carbon stocks, biodiversity and suitability for potential rehabilitation or plantation activities.⁵⁷

Table 7. Terms defined by VSIs

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR	
FOREST / FOREST TYPE	+				+			+		+	+	+	+		+							+	+				+
HCV / HCS		+	+	+	+	+	+			+	+	+	+			+	+	+	+	+	+	+	+	+			+
FOREST DEGRADATION															+												

3.2.2 Forest

Forest definitions fall into two main groups: land cover and land use.⁵⁸ **Land cover** definitions describe forests in terms of both land and crown cover and include minimum thresholds for area, crown cover, and tree height. **Land use** definitions describe forests according to current, potential, or desirable land use, such as legally designated protected areas or areas managed for the production of timber or maintained as forest for, e.g., recreation or watershed protection.

For REDD+ outcomes, the UNFCCC requires that parties provide the definition of forest used when constructing baselines, and where that definition differs from that used for a national GHG inventory or that reported to other international organizations, why and how the definition was chosen.⁵⁹ The UNFCCC also refers to the IPCC Good Practice Guidance for Land Use Land-Use Change and Forestry (IPCC GPG for LULUCF) as the recommended standard for establishing baselines and MMRV systems, and requires terminology used for REDD+ programs and projects be consistent with the definitions set by the Food and Agriculture Organization (FAO).⁶⁰

According to the IPCC GPG for LULUCF, to quantify deforestation forests must first be defined in terms of **land cover**, or potential height, crown cover and minimum area.⁶¹ Internationally accepted standards including FAO, IPCC GPG for LULUCF, Convention on Biological Diversity (CBD) and the EU Renewable Energy Directive (EU RED)⁶² generally use the same land

⁵⁷ (REDD-Task-Force, 2013)

⁵⁸ This study had identified over 130 different definitions of “forest” and “forest land” from over 30 countries (Lund, 1999)

⁵⁹ UNFCCC Decision 13/CP.19.

⁶⁰ IPCC (2003) Good Practices Guidance LULUCF.

⁶¹ IPCC GPG for LULUCF (2003).

⁶² Five commodity-based VSIs offer optional certifications demonstrating compliance with the EU RED.

cover definitions of forest or forest type of greater than 0.5 hectares, 10% crown cover and 5m tree height.⁶³

Table 8. Defining forests and forest types according to land cover

	LAND COVER		
	Min area (ha)	Min crown cover (%)	Min tree height (m)
IPCC GPG for LULUCF (REDD+ standard), FAO, CBD	>0.5	>10	>5
PEFC (use IPCC/FAO)	>0.5	>10	>5
RTRS	>1	>35	10
ISCC	>1	>30	>5
UTZ (use IPCC/FAO)	>0.5	>10	>5

As shown in **Table 8**, only four of the 11 VSIs provide a definition using land cover parameters. PEFC and UTZ provide definitions in line with that of the IPCC GPG, while the ISCC and RTRS refer to their own definitions. Striking a balance between land cover thresholds is a challenge and can result in tradeoffs. For example, a high crown cover threshold can better safeguard primary forests but the overall area of forest protected will be lower. A lower threshold (e.g., FAO >10%) will preserve more forest area but significant crown cover loss can occur with no change in the recorded forest area.⁶⁴

In addition to land cover, FAO also defines forests according to **land use**, excluding “land that is predominantly under agricultural or urban land use.”⁶⁵ The IPCC also defines forest according to land use, designating as forest any lands falling within the jurisdiction of certain government departments.⁶⁶ More VSIs define forest or forest characteristics according to land use rather than land cover, but the terms used are inconsistent and many VSIs fail to provide a simple definition of “forest” (see **Table 9**).

Table 9. Defining forests and forest types according to land use

LAND USE	
FAO	<p>Forest: does not include land that is predominantly under agricultural or urban land use.</p> <p>Naturally regenerated forest: forest predominantly composed of trees established through natural regeneration.</p> <p>Primary forest: naturally regenerated forest of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.</p> <p>Planted Forest: Forest predominantly composed of trees established through planting and/or deliberate seeding.</p>
IPCC	<p>Forest: any lands falling within the jurisdiction of the Department of XYZ (example of administrative forest definition that has “no relationship to the vegetation characteristics and associated carbon on that land”)⁶⁷</p>
4C Association	<p>Primary forest: designated by national and/or international legislation.⁶⁸</p>
ISCC	<p>Forest land: primary forests and other natural areas that are covered with native tree species and do not show clearly visible indications of human activity and the ecological processes are not significantly disturbed.⁶⁹</p> <p>Native trees: trees which grow within their natural geographical range on sites under climatic conditions to which they have adapted naturally and without human interference. The following do not count as native: species introduced by humans that would not occur otherwise; species and breeds that would not occur on the site or under climatic conditions.</p> <p>Forested Area / Continuously Forested Area: forest according to the respective national legal definition.</p>
PEFC	<p>Primary forest: Forest of native species where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.⁷⁰</p>

⁶³ Johnson, F.X., Pacini, H., and Smeets, E. (2012) Transformations in EU biofuels markets under the Renewable Energy Directive and the implications for land use, trade and forests. CIFOR Occasional Paper no. 78

⁶⁴ Lund, H. Gyde. 1999. A 'forest' by any other name.... Environmental Science and Policy 2(2):125-133. [http://home.comcast.net/~gyde/1999forest by any other name.doc](http://home.comcast.net/~gyde/1999forest%20by%20any%20other%20name.doc).

⁶⁵ FAO Definitions in FRA 2010 Working Paper. Available at <http://www.fao.org/docrep/013/i1757e/i1757e13.pdf>.

⁶⁶ IPCC (2000) Land Use, Land-Use Change and Forestry, 2.2.2.1 Types of Forest Definitions.

⁶⁷ IPCC (2000) Land Use, Land-Use Change and Forestry, 2.2.2.1 Types of Forest Definitions.

⁶⁸ 4C Code of Conduct.

⁶⁹ ISCC 202 Sustainability Requirements for the Production of Biomass (DE), Control Point 4.1.1. 2011.

⁷⁰ PEFC ST 1003:2010 Sustainable Forest Management, Requirement 3.4.

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RSB	Native Forest (non-degraded): native or long-term, non-degraded and sustainably managed forest. ⁷¹ Forest Land: all land with woody vegetation consistent with the thresholds used to define Forest Land in the national GHG inventory.
RSPO	Primary forest: forest that has never been logged and has developed following natural disturbances and under natural processes, regardless of its age; forests that are used inconsequently by indigenous and local communities living traditional lifestyles relevant for the conservation and sustainable use of biological diversity. The present cover is normally relatively close to the natural composition and has arisen (predominantly) through natural regeneration. ⁷²
UTZ	Natural Forest: forest that has not been planted, and is primarily composed of indigenous trees. ⁷³ Primary Forest: forest that has never been logged or cut and has developed following natural disturbances and under natural processes, regardless of its age.
GAR	High Density Forest: Remnant forest or advanced secondary forest close to primary condition. Medium Density Forest: Remnant forest but more disturbed than High Density Forest. Low Density Forest: Appears to be remnant forest but highly disturbed and recovering (may contain plantation/mixed garden).
Nestlé	Forest: National definitions, or those agreed through stakeholder processes.
Wilmar	High Density Forest: Remnant forest of advanced secondary forest close to primary condition. Medium Density Forest: Remnant forest but more disturbed than High Density Forest. Low Density Forest: Appears to be remnant forest but is highly disturbed and recovering with composition of older forest.

Most of the VSIs refer to their own definitions rather than internationally accepted definitions, leading to significant differences in how forests are defined and potential inconsistencies when determining the impacts of forest-related commitments. Inconsistency in thresholds for defining forests can lead to significant differences in estimates of forest cover, forest cover change and forest degradation as well as associated discrepancies in assessment of ecological values, reference levels and results achieved. For example, a study on deforestation rates in Indonesia between 2000 and 2009 found differences depending on the definition used: 4.9 million hectares with the FAO definition, 6.8 million hectares with Indonesia's Ministry of Forestry (MoF) definition and 5.8 million hectares when using a definition that, unlike the FAO and MoF definitions, includes only natural forests.⁷⁴

Clear and comprehensive forest definitions are also important for VSIs with requirements to maintain or restore minimum thresholds of natural vegetative cover, including primary forests and mangroves. For example, Naturland requires farms established in former mangrove areas to restore at least 50% of the original forest cover within 5 years of certification.⁷⁵ ASC also requires farms in mangroves to restore at least 50% of the original mangrove area, as well as an area equal in size and vegetation to any wetlands affected by trout farms.⁷⁶ SAN requires farms with agroforestry crops located in forest areas to establish a permanent agroforestry system consisting of at least 40% overall canopy density, a minimum average of 12 native species per hectare, and tree canopy comprised of two or more stories.⁷⁷ Such requirements increase the potential for positive forest impacts, but are only impactful if the vegetation to be restored or preserved is in fact the intended type of forest.

⁷¹ RSB GHG Tool Manual, 2013.

⁷² RSPO Principles and Criteria for the Production of Sustainable Palm Oil, Definitions. 2013, Annex 2.

⁷³ UTZ Core Code of Conduct for Individual and Multi-site Certification, 2014.

⁷⁴ Moss, Catriona. 2013. Defining "forest" could improve REDD+ monitoring in Indonesia. CIFOR article http://blog.cifor.org/20055/defining-forest-could-improve-redd-monitoring-in-indonesia#.VKF4_Bo4aA

⁷⁵ Naturland Standards for Organic Aquaculture, Supplementary regulations for the pond culture of shrimps, principle 1.2. 2014.

⁷⁶ ASC Salmon Standard, Indicator 2.4.2. 2012; see also ASC Freshwater Trout Standard, Indicator 2.1.2.

⁷⁷ SAN Sustainable Agriculture Standard, Principle 2.8. 2010.

3.2.3 High Conservation Value (HCV) or High Carbon Stock (HCS)

Most VSIs only use the terms high conservation value (HCV) or high carbon stock (HCS) to define no-go areas. Establishing HCV or HCS areas aims to protect land critical for ecosystem services from conversion to plantations or agriculture.

There are currently two competing definitions for HCS – one by the HCS Approach Steering Group (referenced below) and the other by the HCS Study. Because the HCS Study is not yet complete, this report refers only to the HCS Steering Group definition of HCS areas. **Table 10** provides example HCV and HCS definitions from various VSIs.

Table 10. HCV and HCS Definitions of Selected VSIs

HIGH CONSERVATION VALUE AREA/FOREST	
HCV Resource Network ⁷⁸	<p>High Conservation Values (HCVs) are biological, ecological, social or cultural values which are considered outstandingly significant or critically important at the national, regional or global level. Six categories of HCVs:</p> <ul style="list-style-type: none"> HCV1 - Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional and national levels HCV2 - Large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance HCV3 - Rare, threatened, or endangered ecosystems, habitats or refugees HCV4 - Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes HCV5 - Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples HCV6 - Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or importance for the traditional cultures of local communities or indigenous peoples. <p>*ASC, Bonsucro, Fairtrade, RSPO, APRIL, APP, Cargill, CGF, Danone, Nestlé, P&G, Wilmar refer to HCV Network definition</p>
FSC	<p>Includes areas: (1) with globally, regionally or nationally significant concentrations of biodiversity values; (2) in or containing rare, threatened or endangered ecosystems; (3) providing basic services of nature in critical situations; (4) fundamental to meeting basic needs of local communities or critical to their cultural identity. *RTRS refers to FSC definition</p>
Global GAP	<p>Includes areas which: (1) support endemic, rare, declining habitats; (2) support genotypes and species whose presence is a prerequisite for persistence of other species; (3) act as a buffer, linking habitat or ecological corridor; (4) have important season uses or critical for migration; (5) support large continuous areas of undisturbed habitat; (6) act as a refuge for biodiversity during climate change, enabling persistence and continuation of evolutionary processes; (7) support biodiversity for which mitigation is difficult; (8) are poor in biodiversity but have the potential to develop high biodiversity with appropriate intervention</p>
IFOAM	<p>Areas that have been recognized as having outstanding and critical importance due to their environmental, socioeconomic, biodiversity or landscape values</p>
ISCC	<p>Forest land, areas designated by law or relevant authority for nature protection, and IUCN areas for the protection of rare, threatened and endangered ecosystems or species⁷⁹</p>
RSB	<p>Biological, ecological, social or cultural features of a delineated area which justify the implementation of conservation measures, e.g., biodiversity, including wetlands, natural and semi-natural ecosystems such as forests or woodlands, lands with an important stock of carbon such as peatlands and primary forests, and landscape-scale forests or ecosystems⁸⁰</p>
GAR	<p>Environmental, social or cultural attribute considered to be of exceptional importance at the local, regional or global level. An HCV area is an area that possesses one or more HCVs. The revised HCV Toolkit for Indonesia defines six HCVs comprising 13 sub-values. These 13 sub-values can be classified into three categories: (i) Biodiversity, (ii) Ecosystem Services and (iii) Social and Cultural.⁸¹</p>
PEFC	<p>Forest areas containing significant concentrations of: 1) protected, rare, sensitive or representative forest ecosystems such as riparian areas and wetland biotopes; 2) areas containing endemic species and habitats of threatened species, as defined in recognized reference lists; 3) endangered or protected genetic in situ resources; and 4) taking into account globally, regionally and nationally significant large landscape areas with natural distribution and abundance of naturally occurring species. Protective functions of forests for society, such as protection of infrastructure, protection from soil erosion, protection of water resources and from adverse impacts of water such as floods or avalanches. Sites with recognized specific historical, cultural or spiritual significance and areas fundamental to meeting the basic needs of local communities (e.g. health, subsistence)⁸²</p>

⁷⁸ HCV Network, 2005. Referred to by ASC, Bonsucro, Fairtrade, RSPO, RTRS, APRIL, APP, Cargill, Danone, GAR, Nestle, P&G.

⁷⁹ Id.

⁸⁰ Id.; RSB Conservation Impact Assessment Guidelines, 2011.

⁸¹ For details, please refer to the Toolkit for the Identification of HCVs in Indonesia available at http://www.hcvnetwork.org/resources/national-hcv-interpretations/Toolkit%20HCVF%20English%20version_final-26Jan10.pdf.

⁸² PEFC ST 1003:2010 Requirements for certification schemes. 2010.

HIGH CARBON STOCK AREA	
HCS Approach Steering Group	HCS forests are those identified through the HCS Approach as forested areas to be prioritized for protection from conversion, including young regenerating forest (mostly young regrowth forest, but with occasional patches of older forest), low density forest (appears to be remnant forest but highly disturbed and recovering), medium density forest (remnant forest but more disturbed than high density forest) and high density forest (remnant forest or advanced secondary forest close to primary condition) ⁸³ *APP, CGF, Danone, GAR and P&G refer to HCS Approach Steering Group definition
ISCC	Wetlands and continuously forested areas ⁸⁴
RSPO	Those with (above and below ground) carbon stores, where the losses as a result of conversion are equal or smaller to the gains in carbon stock within the new development area including set aside areas (non-planted areas) over the period of one rotation ⁸⁵
APRIL	Forests with exceptionally high levels of stored carbon ⁸⁶
Cargill	Old scrub (mostly young re-growth forest with occasional patches of older forest within the stratum), high density forest, medium density forest, and low density forest ⁸⁷
Wilmar	Includes vegetation classes of old scrub, low density forest, medium density forest and high density forest ⁸⁸

All 20 VSIs with HCV/HCS targets provide a definition of HCV/HCS (see [Table 7](#)). Those addressing HCV mostly refer to the internationally-accepted HCV Resource Network definition. Of the ten VSIs defining HCS, five refer to the definition set by the HCS Approach Steering Group while five provide their own definitions.

Some VSIs point out that limiting no-go zones to HCV/HCS areas have some potential limitations, such as a risk of misidentification of critical forest area due to variability in the quality of HCV assessments.⁸⁹ Definitions of HCVs are also general and apply across ecosystems, countries and sectors which can lead to misinterpretations by assessors.⁹⁰ There are also no sector-specific guidance, nor are there many scientific studies investigating the effectiveness of HCV/HCS classification on forest conservation.⁹¹

Recommendation: To facilitate harmonization and ensure greater consistency in accounting and reporting REDD+ results, VSIs should rely on established international and national forest and HCV/HCS definitions where possible. It is also recommended that VSIs coordinate and collaborate forest definitions with other VSIs certifying the same commodity or working in the same country.

In addition to consistency, definitions should also be sufficiently robust to account for the various types of forests, and therefore should use more than one type of forest definition. A definition incorporating aspects relating both to land cover (crown cover, height and area thresholds) and legal designation according to national circumstances) components is likely to be the most effective in clarifying parameters.

⁸³ HCS Approach Steering Group (2015) 'The HCS Approach Toolkit.' Version 1.0. Available at <http://www.tft-earth.org/wp-content/uploads/2015/04/HCS-Approach-Toolkit-Ch1-Introduction.pdf>

⁸⁴ Id.

⁸⁵ RSPO Principles and Criteria for the Production of Sustainable Palm Oil, Definitions. 2013, Annex 2.

⁸⁶ See <http://aprildialog.com/2014/07/17/april-sustainable-forest-management-policy-sfmp-six-months-after/>

⁸⁷ See <http://www.cargill.com/corporate-responsibility/responsible-supply-chains/index.jsp>

⁸⁸ See http://media.corporate-ir.net/media_files/IROL/16/164878/Wilmar_Sustainability_Report_2013_Final_high-res.pdf

⁸⁹ Edwards, D. et al. (2012) High Conservation Value or high confusion value? Sustainable agriculture and biodiversity conservation in the tropics. *Conservation Letters*, 5: 20-27.

⁹⁰ Senior, M. et al. (2014) Increasing the Scientific Evidence Base in the "High Conservation Value" (HCV) Approach for Biodiversity Conservation in Managed Tropical Landscapes. *Conservation Letters*

⁹¹ Id.

3.3 Timelines

Timelines are important to ensure that VSIs achieve positive forest impacts. VSIs commonly establish two types of timeline: **cut-off dates** define the point in time after which organizations cannot have engaged in unsustainable practices (e.g., clearance of primary forest); and **implementation periods** define the length of time for which an organization will be certified or during which it will endeavor to meet a company-wide goal. Timelines for VSIs can prompt action and encourage urgency to cease destructive forest practices while also preventing attempts to attain sustainability certification immediately following environmentally destructive activities such as forest clearance.

3.3.1 Cut-off Dates

Appropriately set cut-off dates reward actors who have made substantial commitments to sustainability by refraining from detrimental practices for a noteworthy period of time. They reduce the environmental impact associated with commodity production and enhance VSI credibility with consumers.

Cut-off dates for REDD+ activities have been established within the VCS REDD+ Methodology Framework and by the CDM for afforestation projects. However they differ from VSI cut-off dates as REDD+ requires conservation of long-standing forests while the CDM requires that afforestation is not taking place in recently deforested areas. Specifically, the VCS requires land within project areas to qualify as forest for a minimum of 10 years before the project start date,⁹² and the CDM qualifies areas for afforestation projects where conversion from forest to non-forest has not occurred for 50 or more years.⁹³ While agricultural VSIs also use cut-off dates as prerequisites for participation, they aim to avoid conversion by requiring proof that no standing forests were present for a certain period before land utilization.

As illustrated in [Table 11](#), most commodity VSIs establish cut-off dates for forest, HCV, and protected area conversion, but cover a broad range of periods from 3 - 20 years. Most VSIs apply a fixed cut-off year (e.g., 1994 for FSC and 2005 for RSPO), and just two (4C and IFOAM) apply relative cut-off dates, each prohibiting conversion in the 5 years prior to certification. Fairtrade and Naturland are the only VSIs that do not establish cut-off dates or only prohibit forest or HCV conversion after the date of the initial audit.

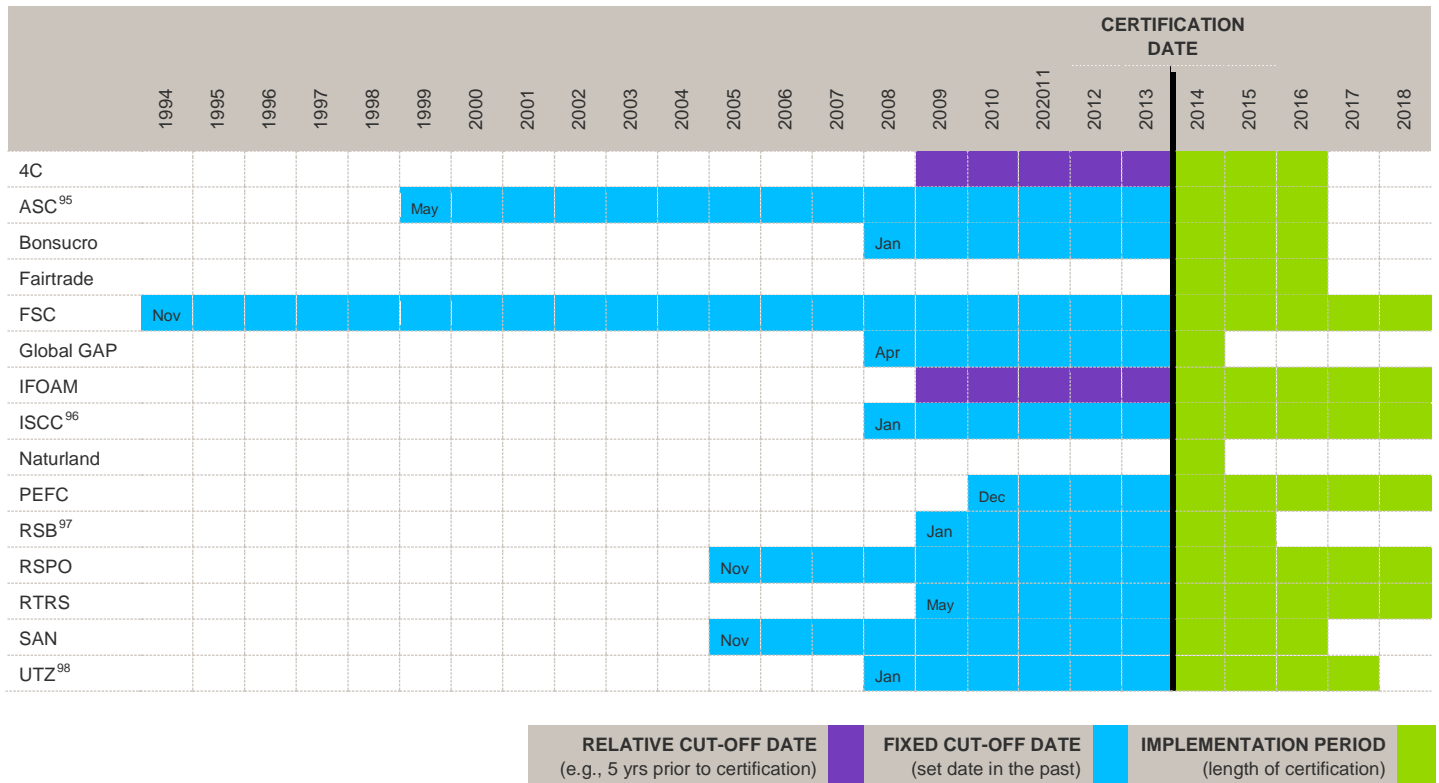
Company VSIs are not included in [Table 11](#) as they generally do not specify cut-off dates, although some include requirements for suppliers to obtain certification through commodity-based VSIs. Some company VSIs including APRIL, APP, the CGF, Nestlé and Wilmar also apply cut-off dates for sourcing products harvested in an unsustainable manner. In contrast to commodity VSIs where cut-off dates act as a pre-requisite to forest commitments, company VSI cut-off dates often act as forest targets themselves. The most common example of sourcing cut-off dates are zero deforestation targets set in the future (e.g., no deforestation in global supply chains of palm and fiber by 2020). These cut-off dates do not require that

⁹² VCS REDD+ Methodology Framework for projects.

⁹³ Decision 11/CP.7.

deforestation be stopped the day of the company’s announcement, but rather allow deforestation to continue until 2020. Setting such goals without clear milestones for implementation can potentially lead to a ‘race to deforest’ in which organizations who are required to comply with zero deforestation commitments in the future increase detrimental forest practices today. Experts have observed some companies with 2020 goals carry on business-as-usual practices while waiting until much closer to the 2020 deadline to actually implement their zero deforestation commitments.⁹⁴

Table 11. Commodity VSI timelines according to 2014 certification date.



Providing no cut-off dates or very recent cut-off dates may risk rewarding organizations with certification without requiring a serious commitment to sustainability. For example, given that Fairtrade and Naturland do not require a cut-off date, a participant may clear HCV forest or primary forest up to the date of application and still be eligible for certification. VSIs with more recent cut-off dates have also faced criticism, given that they would allow actors with long histories of poor forest practices to still be certified.

A cut-off date that is too ambitious can also pose a challenge as it may exclude a large number of potential participants that have made substantial commitments to forest preservation in more recent years. For example,

⁹⁴ Deprez, A. et al. 2014. Food without Destruction: Eight Strategies to Overcome the Environmental Impacts of Global Agricultural Commodity Production. Environmental Defense Fund.

⁹⁵ The ASC cutoff date shown applies to trout and shrimp farms.

⁹⁶ ISCC implementation periods can last for 1 year, 3 years (small entities) or 5 years (very small entities). The implementation period shown is the maximum 5 year period for very small entities.

⁹⁷ RSB implementation periods can last from 3 months (class 6 risk) to 2 years (class 1 risk). The implementation period shown is the maximum 2 year period for class 1 risk entities.

⁹⁸ UTZ implementation periods can be 1 year or 4 years for continuous improvement. The implementation period shown is the maximum 4 year period for continuous improvement.

FSC's cut-off date of 1994 has faced criticism for being too restrictive.⁹⁹ While fixed dates set further in the past offer the highest level of environmental integrity, they may also reduce the scope of participation and other accompanying benefits where producers cannot meet cut-off date requirements. In response to pressure to make certification more inclusive, the 2011 FSC General Assembly (GA) passed Motion 18 for The Potential Certification of Post 1994 Converted Plantations.¹⁰⁰ This motion, as well as a second motion to fast-track Motion 18, asks FSC to address the certification of organizations with post-1994 conversion and allow for possible amendment of the FSC Principles and Criteria outside of the defined 5 year revision schedule.¹⁰¹ These changes may open the door to a wider range of participants and help prevent future deforestation closer to the forest frontier.

Box 2: VSI Timelines Facing Criticism

The Basel Criteria for Responsible Soy Production was established in 2004 to "provide input into the development of internationally applicable and accepted criteria for sustainable soy production."¹⁰² The Basel Criteria set a cut-off date of 2004 and stated that land cleared of forest after 1994 could be used for soy production only after implementing compensatory measures to restore or protect other areas of environmental value.

In 2006, the Roundtable for Responsible Soy (RTRS) was established as a voluntary certification system for responsible soy production in furtherance of the Basel Criteria.¹⁰³ Despite the Basel Criteria establishing a cut-off date of 2004, and the fact that RTRS was not established until 2006, RTRS set a cut-off date of 2009 and has since faced criticism for inconsistency with the Basel Criteria.¹⁰⁴

Most commodity VSI cut-off dates fall in the range of 5-8 years, reducing the risk of creating perverse incentives but still less ambitious than FSC's 21 years. Additionally, most VSI cut-off dates are fixed in the past, which provides less flexibility and may necessitate periodic revisions.

Some VSIs with fixed cut-off dates permit a degree of flexibility to incoming participants by allowing offsetting of past unsustainable practices. ASC's Freshwater Trout Standard, for instance, requires farms responsible for wetland conversion after 1999 to protect an equivalent area of functional wetlands with the same characteristics. Global GAP, RSPO, RTRS, SAN, and UTZ include similar offsetting and restoration measures. SAN requires farms to conduct impact analyses of past contraventions and implement

⁹⁹ See FSC Principles and Criteria for Forest Stewardship, Principle 10.9. 1996; see also Forest Trends (2013) Forest Trends Report Series: Forest Trade and Finance, p. 9.

¹⁰⁰ FSC (2011) Potential Certification of Post 1994 Converted Plantations. Available at <http://motions.fsc.org/groups/policy-motion-18/>.

¹⁰¹ FSC (2014) Motions for the 2014 FSC General Assembly: Fast Tracking the Implementation of Motion 18 from General Assembly (GA) 2011. Available at <http://ga2014.fsc.org/motion-updates-168.motion-12-fast-tracking-the-implementation-of-motion-18-from-ga-2011>.

¹⁰² ProForest (2004). Basel Criteria for Responsible Soy Production. Available at: <http://www.fao.org/bioenergy/28174-0162386c6873e9e54876bec101b20dabf.pdf>.

¹⁰³ RTRS: History. Available at: <http://www.responsiblesoy.org/quienes-somos/historia/?lang=en>.

¹⁰⁴ Briefing Roundtable on Responsible Soy: Can Monoculture Soy be Responsible? 15 April 2009. Available at <https://www.rainforest-rescue.org/news/1199/briefing-roundtable-on-responsible-soy-can-monoculture-soy-be-responsible>.

mitigating actions (e.g., setting aside a certain area for conservation) for natural ecosystem destruction between November 1999 and November 2005, before the SAN cut-off date.¹⁰⁵ RSPO's Remediation and Compensation Procedures require RSPO members to compensate for land clearance after November 2005 (RSPO cut-off date) even if the land was not under the control of the RSPO member at the time of clearance.¹⁰⁶

Offsetting prior unsustainable behavior can diffuse accusations of 'greenwashing' and as such, some company-based VSIs have implemented restoration and conservation programs. For example, APRIL committed to establishing conservation areas equal in size to its plantation areas.¹⁰⁷ Danone also established the Danone for Nature Fund in partnership with International Union for Conservation of Nature (IUCN) and the Ramsar Convention to support ecosystem restoration programs which leverage carbon economy by supporting pilot projects to reforest, restore biodiversity, capture carbon and combat poverty.¹⁰⁸

Recommendation: Cut-off dates for deforestation should be established far enough in the past (i.e., >5 years) to effectively avoid conversion of forests associated with commodity production, reward participants who have made significant environmental commitments, and enhance VSI credibility with consumers.

Flexibility and adaptive management should also be incorporated in setting cut-off date requirements. VSIs should establish relative cut-off dates or assess fixed cut-off requirements at regular intervals to account for changes and new findings. For example, if a VSI maintains a fixed cut-off date of 2005, it should be re-assessed at a later stage to determine whether it is excluding important actors from certification, and if so, how it might be adjusted to account for those participants. In high deforestation areas, such a system may contribute by attracting those actors that have made substantial commitments to sustainability in more recent years.

3.3.2 Implementation Periods

Implementation periods for commodity VSIs define the minimum period of certification, while those for company. Implementation periods for forest conservation efforts such as REDD+ must be long enough to accurately monitor, measure, report and verify results against a baseline scenario. The VCS REDD+ Methodology Framework requires project implementation and crediting periods to be between 20 and 100 years.¹⁰⁹ While VSI implementation periods do not necessarily need to be aligned with the 20 to 100 year REDD+ implementation periods (set to ensure permanence), they must leave adequate time to monitor, measure, report and verify through an entire production cycle.

¹⁰⁵ SAN Climate Module Criteria for Mitigation and Adaptation to Climate Change, 2011.

¹⁰⁶ For clearance on land that was not under control of RSPO members at the time of clearance, RSPO members are responsible for compensation for social HCVs (HCV 4, 5, and 6) for land cleared between November 2005 – December 31, 2009, for all areas cleared commercially between January 1, 2010 – May 9, 2014, and for all areas cleared after May 9, 2014. See RSPO Remediation and Compensation Procedures, 2014.

¹⁰⁷ APRIL (2015). <http://aprildialog.com/category/sustainable-forest-management-policy-sfmp/>

¹⁰⁸ Danone Forest Footprint Policy (2012).

¹⁰⁹ VCS REDD Methodology.

As illustrated in [Table 11](#) above, implementation periods vary across commodity VSIs from 3 months to 5 years. RSB provides the shortest implementation periods, ranging from 3 months to 2 years. Both Global GAP and Naturland have implementation periods of 1 year. FSC, IFOAM, ISCC, PEFC and RTRS have the longest implementation periods of 5 years. Information available on company VSIs is insufficient to allow assessment.

Five-year implementation periods are more likely than one-year periods to allow tracking of a VSI participant's progress throughout an entire production cycle. Longer certification periods also allow for continuous monitoring and the adjustment of implementation plans as needed. For example, FSC requires annual assessments which are used to inform and update participant's forest management plans throughout the five-year implementation period.

Shorter implementation periods require lower levels of commitment from companies and provide organizations less time to achieve forest impacts. Furthermore, monitoring and measurement during a shorter implementation period may lead to inadequate representations of VSI results. For example, high-risk operators with a three-month RSB certification period will in most cases undergo just one audit.¹¹⁰

Recommendation: VSIs should set implementation periods that adequately enable monitoring, measurement, reporting and verification throughout the production cycle. This would be highly dependent on the commodity, but could center on a period of approximately 5 years. VSIs may also aim for continuous improvement through a stepwise approach, such as increasing mandatory requirements at regular intervals or raising requirements as the VSI becomes more established.

According to the analysis of VSI cut-off dates and implementation periods, many timelines set by VSIs do not appear sufficiently robust to (1) establish long-term commitments to forest preservation, (2) allow time to monitor impacts throughout an entire production cycle, or (3) act as preconditions to encourage organizations to make substantial commitments to forest preservation prior to certification. Furthermore, varied timelines translate to drastically different results across VSIs with similar forest-related targets.

Such variation is particularly important in instances where companies and their producers are certified by more than one VSI for the same product. For example, The Hershey Company has made a commitment to source 100% of its cocoa from sustainable cocoa farms by 2020.¹¹¹ Hershey recently announced that 30% of its cocoa is currently sourced from sustainable cocoa farms; however, this cocoa is certified by three different VSIs—UTZ, Fairtrade and SAN (Rainforest Alliance). The definitions, systems and procedures used by these VSIs differ substantially, as seen throughout this report. Particularly with regard to timelines, Fairtrade certification (no cut-off date, 3 year implementation period) translates to substantially different forest impacts than UTZ (6 year cut-off date, 4 year implementation period)

¹¹⁰ RSB General Requirements for Certification Bodies (2013) p. 14-15.

and SAN (8 year cut-off date, 3 year implementation period). With such inconsistencies across standards, the meaning of commitments to source 100% sustainable products in terms of forest-related and other environmental impacts is unclear.

3.4 Geographic Area

The identification of accurate and consistent geographic boundaries is a fundamental requirement to monitor forest impacts. For VSIs, the delineation of geographic boundaries illustrates the extent of the total production area that is under certification and allows for more accurate monitoring and measurement of results.

For REDD+ activities, the UNFCCC and the IPCC GPG for LULUCF require forest monitoring systems to measure changes throughout the entire forested area, which can only be done by identifying and estimating areas at risk of deforestation and/or subject to REDD+ activities.¹¹² Similarly, the VCS REDD+ Methodology requires project proponents to delineate the project area by providing location maps, details of land holder and user rights, geographic coordinates and total land area either by field survey (e.g., using GPS) or by georeferenced spatial data (e.g., maps, GIS datasets, aerial photography or remote sensing images).

As illustrated in **Table 12**, just 17 of the 28 VSIs require delineation of the geographic area under certification, and the level of detail and accuracy required varies. The majority of VSIs require location maps and GPS coordinates. RSPO, RSB and UTZ require the most comprehensive information for establishing geographic area, while SAN and most company VSIs only require farms to identify the boundaries of HCV/protected areas.

Table 12. VSI Geographic Boundary Requirements.

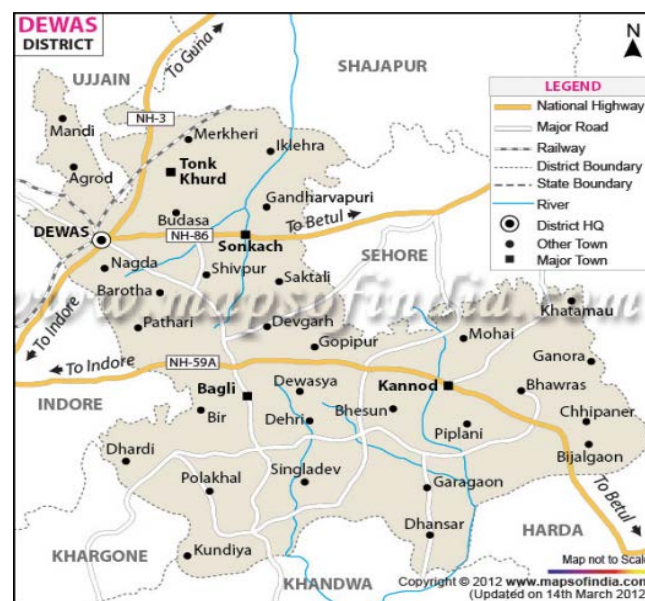
	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR	
LOCATION MAP	+	+			+		+		+	+	+	+			+		+									+	
HCV / PROTECTED AREA MAP					+			+				+		+	+		+	+			+					+	+
SIZE IN HECTARES		+					+				+	+	+				+										
GPS COORDINATES		+					+	+			+	+	+		+												
LAND TITLE					+					+	+				+		+										

¹¹² UNFCCC (2009) Sourcebook Reducing Greenhouse Gas Emissions from Deforestation and Degradation in Developing Countries: A Sourcebook of Methods and Procedures for Monitoring, Measuring and Reporting.

The implications from such different requirements can be seen in two audit summary reports for RSPO and RTRS both carried out by the same auditing company, Control Union. RSPO requires participants to identify certified areas with location maps, HCV maps, total size in hectares and GPS coordinates. In contrast, RTRS only requires participants to provide total size in hectares and GPS coordinates. **Figure 1** and **Figure 2** illustrate how different requirements for establishing geographic area can cause the quality and type of information reported to vary significantly.

The RTRS audit summary (See **Figure 1**) depicts the project location as “in Dewas district of Madhya Pradesh State of India.”¹¹³ There is no indication of the specific project location within Dewas district or information on conservation areas – in fact it seems to have simply been taken from a website. The audit summary provides a separate table with the GPS coordinates and total hectares of the certified area.

Figure 1. RTRS Project Location.
Source: Control Union Certifications (2012) Summary audit report for RTRS Certification Scheme.¹¹⁴



In contrast, **Figure 2** shows the various project location maps provided by a RSPO audit summary, including delineation of project boundaries and conservation areas.¹¹⁵ The report also provides the GPS coordinates. RSPO requires that maps of HCV management areas be appropriately scaled, clear and legible, and include a number, title, date, GPS coordinates and legend.¹¹⁶ To prevent misinterpretation or misuse, all maps must also be labeled with “Draft” or “Version no.” This information can be seen in the bottom right corner of the maps in **Figure 2**.

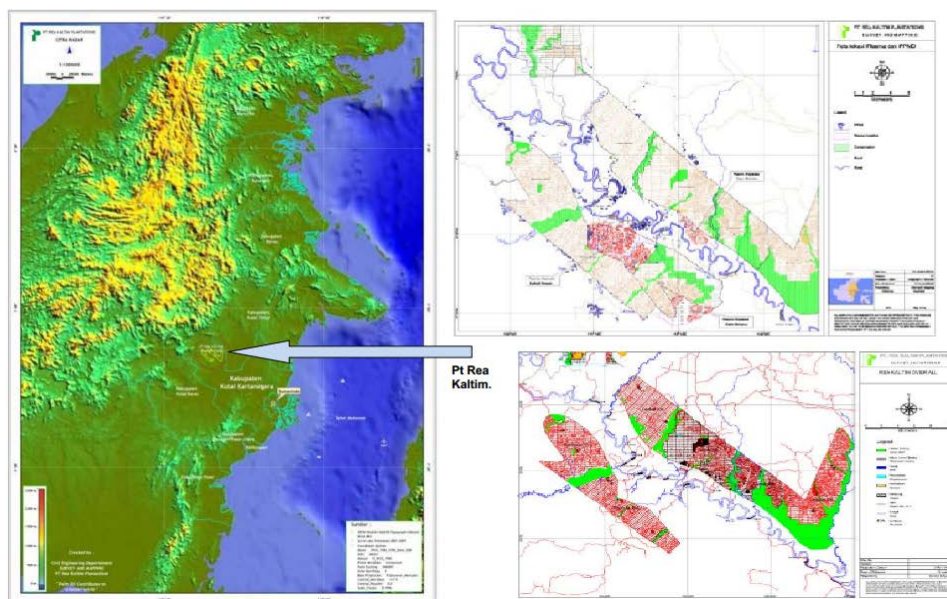
¹¹³ Control Union Certifications (2012) Summary audit report for RTRS Certification Scheme. <http://www.responsiblesoy.org/?wpdmdl=2537&ind=0>.

¹¹⁴ RTRS website. Available at <http://www.responsiblesoy.org/?wpdmdl=2537&ind=0>.

¹¹⁵ Control Union Certifications (2009) RSPO Assessment Report Public Summary. Available at http://rspo.org/sites/default/files/Public%20summary%20report%20of%20PT_Rea_Kaitim_2011.pdf.

¹¹⁶ HCV Assessments for RSPO Certification: Reporting Requirements, 2012.

Figure 2. RSPO Project Location. Source: Control Union Certifications (2009) RSPO Assessment Report Public Summary.¹¹⁷



Monitoring a certified area is problematic where insufficient location information is available. Furthermore, a lack of explicit boundaries for areas at risk of deforestation makes it difficult to establish clear baselines against which the results of monitoring can be consistently measured.

Recommendation: Similar to the VCS REDD+ requirements, VSI geographic information should include spatially explicit farm location maps with GPS coordinates, the location of HCV/protected areas, the plantation size in hectares, and legal ownership. Without detailed information on certified areas, VSIs cannot properly monitor and account for the area of land under certification or neighboring areas, which can lead to inaccurate representation of results.

3.5 Baselines

The establishment of baselines is important to provide a benchmark against which the performance of participants can be tracked relative to what would have occurred in their absence.¹¹⁸ Consequently, baselines are directly linked to targets, and measurement, monitoring, reporting and verification (MMRV) processes.

For REDD+ activities, forest GHG emissions reference levels (RLs/REs) are required by the UNFCCC and all the various multilateral and project-level standards. The UNFCCC defines reference levels as historical emissions and removals to act as benchmarks for assessing each country's performance in implementing REDD+ activities.¹¹⁹ The UNFCCC has

¹¹⁷ RSPO website. Available at http://rspo.org/sites/default/files/Public%20summary%20report%20of%20PT_Rea_Kaltim_2011.pdf.

¹¹⁸ Chagas, T. et. al. Reference Levels: Concepts, Functions, and Application in REDD+ and Forest Carbon Standards. Climate Focus, 2013.

¹¹⁹ UNFCCC Decision 12/CP.17.

identified five critical elements for the establishment of REDD+ baselines: (1) expressed in tons of CO₂e; (2) lists activity or activities included; (3) territorial forest area cover (ha); (4) date of baseline and date of assessment; and (5) period of the assessed baseline (years).¹²⁰ The VCS REDD+ Methodology Framework requires that baseline information on deforestation be extracted from a historical reference period starting 9 to 12 years in the past and ending within two years of the project start date. The VCS also requires baseline GHG emission data to be calculated based on recognized and credible public sources, such as the IPCC 2006 Guidelines for National GHG Inventories or the IPCC GPG for LULUCF.

For VSIs, a variety of baselines can be defined, according to the targets set. To measure the performance of targets to reduce deforestation, reduce forest degradation, and conserve HCV and HCS areas, baselines for **land cover** will be necessary. This applies to both areas that have standing forests and those that have already been previously converted into crops. A land cover baseline can be established by analyzing geospatial, satellite and aerial imagery as well as ground-truthed and surveyed data. Land cover indicates how much of a region is covered by a certain physical land type such as primary forest, peatland, HCV/HCS area, agriculture and water bodies. A baseline map can therefore identify no-go zones and provide a scenario of land cover prior to certification.

Targets for **biodiversity conservation** will require separate biodiversity baselines, established through flora and fauna surveys. Baselines for targets to increase **sustainable sourcing** include mapping all suppliers and commodity sources to ensure that products are traceable and the percentage of certified suppliers can be identified. For **GHG emissions** targets related to forests, forest emissions reference levels similar to those required by REDD+ standards will be needed to quantify emissions reductions and removals. To track and measure GHG emissions targets, the most common approach is to calculate a business as usual scenario using activity data (extent of deforestation/degradation measured by historical land cover maps) and emissions factors (average emission rate of activity).

The reference periods used to establish the various baselines may or may not be related to the cut-off dates set by a VSI standard. Usually, the reference period is taken from the previous year or an average of multiple years prior to certification (e.g., what the land cover, biodiversity, and sustainable sourcing baseline looked like immediately before certification). GHG emissions baselines or reference levels may be calculated to the cut-off date or beyond.

As shown in [Table 13](#), the majority of VSIs require baselines for forest-related targets. The plus signs indicate the target, and the shading indicates the baseline requirement. Notably, many VSIs do not establish baselines for two of the most common company VSI targets: reducing deforestation and increasing sustainable sourcing.

¹²⁰ UNFCCC Decision 14/CP.19 Annex I.

Analysis of VSIs

Table 13. VSI targets with required baselines (shaded).¹²¹

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR
DEFORESTATION	+				+		+		+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+
DEGRADATION					+		+		+	+					+											
SFM					+		+		+	+				+		+	+				+		+			
CONSERVATION	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
ENHANCEMENT		+		+	+	+	+		+	+				+	+	+	+	+		+		+		+	+	+
GHG EMISSIONS		+	+	+				+			+	+	+	+		+	+			+		+		+	+	+
SUSTAINABLE SOURCING																		+	+	+	+	+	+		+	+

The detail required for land cover baselines varies across VSIs. For example, some require both satellite imagery and ground-truthed data to establish land cover baselines for deforestation, forest degradation and sustainable forest management. Most land cover baselines are based on information gathered during environmental impact assessments or initial certification audits, and therefore the reference date is often the date of the initial assessment. Where VSIs require collection of historical data, such as ASC, Global GAP and RSPO, specific time periods from which that data should be collected are not provided.

Almost all VSIs with targets to conserve or enhance HCV, HCS and other high biodiversity areas establish baselines through HCV, HCS or biodiversity impact assessments. Many VSIs refer to the HCV and HCS toolkits provided by HCV Resource Network and Greenpeace. Reference periods for biodiversity baselines are also typically the date of the assessment, which can occur at the time of certification as well as any instances where a participant expands its production area.

Six VSIs provide methodologies for establishing baselines for GHG emissions, or RLs (two refer to EU RED and four provide their own methodologies). The methodologies provided vary among VSIs, with most referring to independent methodologies for default carbon stock data such as the IPCC 2006 guidelines¹²² and the EU Renewable Energy Directive (see [Table 14](#)).¹²³ RSPO is the only VSI that provides its own default carbon stock data.¹²⁴

¹²¹ While spatial extent and land use/land cover baselines require explicit reporting procedures such as maps, imagery, gps coordinates and hectares, detailed information on the calculation of baselines through GHG methodologies is not provided. Rather, where GHG baselines are included (or baselines on activities to reduce GHG emissions) the methodology used is referenced.

¹²² Bonsucro, RSB and SAI

¹²³ RTRS

¹²⁴ RSPO PalmGHG A Greenhouse Gas Accounting Tool for Palm Products Accompanying Documentation, 2012.

A failure to establish baselines makes measurement of forest-related commitments impossible and the impacts of company commitments unclear. Furthermore, variation in the detail and methodologies for establishing land cover and GHG emissions baselines results in inconsistent measurement and reporting and incomparable results.

Recommendation: Baselines must be established for each target to adequately measure performance of participants. As VSI targets related to REDD+ outcomes increase in scope and ambition, baselines will need to be established and or adjusted as needed. Without baselines, participants have nothing to compare future performance against VSI standards, and commitments are no longer traceable.

Table 14. GHG measurement methods

	RSPO PALM GHG	EU RED	BONSUCRO	RSB GHG CALCULATOR	SAI CARBON FOOTPRINT
CARBON POOLS	<ul style="list-style-type: none"> Above ground biomass Below ground biomass Soil carbon 	<ul style="list-style-type: none"> Above ground biomass Below ground biomass Soil carbon 	<ul style="list-style-type: none"> Biomass (unspecified) Soil carbon 	<ul style="list-style-type: none"> Above ground biomass Dead organic matter Soil organic carbon Peat land decomposition 	<ul style="list-style-type: none"> Biomass (unspecified)
DATA SOURCES	Own data	EU RED	IPCC 2006	IPCC 2006 PAS 2050	IPCC 2006
BASELINE YEAR	Historical Land Use (2000)	Historical Land Use (2008)	Historical Land Use (January 2009 or earlier)	Historical Land Use (1 January 2008)	Historical Land Use
NON CO2 GASES	CH ₄ and N ₂ O	CH ₄ and N ₂ O	CH ₂ and N ₂ O	CH ₄ and N ₂ O	CH ₄ and N ₂ O
PERIOD	20-25 years	20 years	20 years	20 years	20 years
MINIMUM REDUCTION	N/A	35%	Net emissions under: <ul style="list-style-type: none"> 0.4 t CO₂eq/t sugar²⁴ gCO₂eq/MJ ethanol 	N/A	N/A

3.6 Monitoring, Measurement, Reporting and Verification (MMRV)

Forest Monitoring, and Measurement, Reporting and Verification (MMRV) systems are essential for tracking participant progress and ensuring that all forest-related targets being met. The MMRV processes in VSIs generally establish periodic forest monitoring to examine the state of the certified land and identify any changes. The information gathered during monitoring is then analyzed and measurements against the baselines taken. This analyzed information is then reported, and third-party auditors verify the claims of the reports.

According to REDD+ standards, MMRV systems must be able to assess the rate of change of forest area and forest type (activity data) as well as the emissions related to that change (emissions factors) to estimate CO₂

emissions or sequestration as a result of REDD+ activities.¹²⁵ MMRV systems must be flexible, simple to use, easily available and appropriate for the context. While not applicable at a national level, VSI systems for MMRV can at a minimum follow the basic developing country requirements for REDD+.

3.6.1 Monitoring

VSI participants must undergo regular monitoring to ensure compliance with forest-related targets. Depending on their targets, VSIs may monitor land-use change, GHG emissions, biodiversity levels, forest management or the certification of suppliers. For accurate monitoring of forest impacts, a robust monitoring plan must be in place that gathers adequate information to enable comparison against the target's established baseline. [Box 4](#) highlights the key components of a comprehensive VSI monitoring plan.

For REDD+ activities, the UNFCCC requires REDD+ forest monitoring systems to be guided by IPCC guidance and guidelines, and must provide data and information that are transparent, consistent over time, suitable for MRV, and build upon existing systems while being flexible and allowing for improvement.¹²⁶ Monitoring cycles should generally not exceed 10 years.¹²⁷

Box 3: Key Components of VSI Monitoring

1. Methodologies: methods by which data will be collected and frequency of data collection. A wide variety of methodologies may be used to monitor VSI performance including collection of secondary data from existing systems (e.g., biodiversity assessments), and collection of primary information from ground-based surveys, remote sensing, spot checks, community-based monitoring systems, etc.

2. Performance indicators: measureable indicators that specify performance level. These might be process or policy indicators relating to actions that have been taken or impact indicators linked to environmental outcomes. Choosing the right indicators is a crucial step as it defines the information that will be collected and analyzed, the baselines that will be set, and whether forest-related goals are ultimately achieved.

As illustrated in [Table 15](#), while many VSIs explicitly require participants to monitor their performance, most do not provide detailed monitoring plans/methodologies or performance indicators with data collection at regular intervals. Some VSIs, such as Fairtrade and Global GAP, make clear that participants are responsible for monitoring actions taken to preserve HCV areas and biodiversity but provide little or no information on what data the monitoring plans should include, frequency of monitoring, or the performance indicators to be assessed.

Many commodity VSIs rely on participants to develop their own monitoring plans without guidance on what indicators should be assessed or the

¹²⁵ WWF Guide to Building REDD+ Strategies: Tracking REDD+ Monitoring, Measurement, Reporting and Verification.

¹²⁶ UNFCCC Decision 11/CP.19.

¹²⁷ VCS REDD Methodology; see also IPCC GPG for LULUCF (2003).

frequency of data collection. Similarly, company VSIs often refer to the monitoring plans of certifications by suppliers to track progress. For example, Nestlé holds its suppliers to the standards of endorsed certifications.

For VSIs that provide monitoring methodologies and indicators, the level of detail varies as well as the frequency of monitoring. For example, SAN requires tree inventories every five years while UTZ suggests tree counting take place every three to four years. Aside from UTZ and SAN, just seven other VSIs require monitoring at pre-determined intervals, such as RSPO which requires updated monitoring plans at least every two years, 4C which requires annual self-assessments and FSC which requires different monitoring periods for different indicators (e.g., complete surveys of the area every five years, annual monitoring of conservation activities, and monitoring of conservation zones every 10 years).¹²⁸ In addition to functioning as a monitoring tool, FSC, PEFC and RSPO require participants to feed the results of assessments and audits of HCV areas back into their management and monitoring plans to ensure responsiveness.¹²⁹

Table 15: VSI monitoring plans.

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR
MONITORING PLAN				+	+	+				+	+	+		+	+		+			+			+	+	+	+
FOREST-RELATED INDICATORS			+	+	+					+	+	+		+	+		+	+		+				+	+	+
REQUIRED FREQUENCY	+		+		+					+	+	+		+	+					+						

Comprehensive monitoring systems are the most important elements for ensuring that participants are complying with forest-related targets and that the impacts of forest commitments are accurately measured. The REDD+ principles of transparency, consistency over time, suitability for MRV, and building upon existing systems while being flexible and allowing for improvement may be useful guidance in developing monitoring plans.

Recommendation: To adequately monitor forest impacts, VSIs should develop a monitoring plan and robust monitoring processes that incorporate monitoring methodologies (i.e., remotely sensed and/or ground-truthed data), detailed performance indicators and routine schedules (annual) for data collection. These measures aid the measurement of results, and ensure consistency across participants.

VSI monitoring plans will differ according to the type of forest-related target as well as the type of VSI. Agricultural VSIs with less standing forest area should monitor protected and HCV/HCS areas as well as forests surrounding the certified to ensure that forest areas are not cleared for plantations. Forestry VSIs, in addition to the latter, should

¹²⁸ See FSC Principles and Criteria for Forest Stewardship. 1996.

¹²⁹ RSPO Principles and Criteria for the Production of Sustainable Palm Oil, Indicator 5.2.4. 2013.2013; see also FSC Principles and Criteria; see also PEFC ST 1003:2010 Requirements for certification schemes.

also establish monitoring plans that ensure sustainable forest management practices. This will likely require more field surveys.

Open-access deforestation mapping tools like WRI's Forest Watch can be used to effectively and efficiently monitor land-use change and deforestation within production areas.

3.6.2 Measurement

The data gathered from the monitoring processes will need to be analyzed and the results measured to determine any changes in relation to the baseline and whether targets were met. Under the UNFCCC, parties are asked to use the most recent IPCC guidance and guidelines, as appropriate, as a basis for estimating anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes.¹³⁰

As mentioned in the monitoring section, most VSIs quantify deforestation, conversion of HCV areas, degradation and other forest-related impacts using changes in forest cover compared to a baseline scenario. However, few provide guidance on how to correctly estimate changes. Some VSIs additionally measure GHG emissions and provide measurement methodologies (see [Table 14](#) above).

Recommendation: Establish consistent measurement procedures and methodologies that use the results of forest monitoring to measure changes (e.g., in forest cover and the status of HCV/HCS areas) against the established baselines. Measurement systems rely entirely on the robustness of information collected during monitoring and the comprehensiveness and accuracy of baselines. Therefore, VSIs should ensure that the MMRV system as a whole is consistent, thorough and harmonized.

3.6.3 Reporting

To transparently communicate the progress of individual VSI participants and VSIs as a whole, the results of forest monitoring and measurement must be reported. Reporting a participant's status, progress and performance is an important step in promoting credibility and maintaining transparency throughout the VSI certification process.

Under the UNFCCC, the reports submitted by parties should follow the principles of transparency, accuracy, consistency, completeness and comparability for effective review of performance.¹³¹ The UNFCCC has given clear guidance on the reporting systems for developing countries by requiring Biennial Update Reports (BURs). Under BURs, countries submit detailed accounts every two years showing changes in forest carbon stocks, including an explanation of remote sensing, field data, and sources of emission factors.¹³²

¹³⁰ UNFCCC Decision 4/CP.15

¹³¹ UNFCCC Decision 12/CP.17

¹³² UNFCCC National Communications (Non-Annex I). Available at http://unfccc.int/national_reports/non-annex_i_natcom/items/2716.php.

VSIs with the most in-depth public reporting requirements publish summaries or update information on online databases, including company and or participant progress in meeting VSI goals, the MRV methodology used including audit results and monitoring indicators, the required frequency of reporting, and any issues or challenges identified in the implementation of VSI targets such as disputes and resolutions (see [Table 16](#)).

While 23 of the 26 VSIs assessed provide information on participant or company progress in meeting VSI targets, only 13 provide information on the detailed results of forest-related targets (e.g., MRV methodology and disputes/noncompliance). Most company VSIs provide general information on the company’s overall progress in meeting its forest commitments rather than detailed information on monitoring and measurement. Just 11 of 23 VSIs include information on the required frequency of reporting in their policies (ranging from three months to two years), and 7 of 23 include the issues and challenges associated with VSI target implementation.

Table 16. Results of forest monitoring and measurement: VSI Reporting Requirements

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR
PROGRESS	+	+	+	+	+	+		+	+	+	+	+	+	+		+	+	+	+	+	+		+		+	+
MRV METHODOLOGY	+	+	+	+	+					+	+	+	+	+					+				+			+
FREQUENCY	+		+								+	+		+		+		+		+			+		+	+
ISSUES / CHALLENGES	+	+	+								+	+					+								+	

REDD+ reporting requirements highlight the need to present comprehensive and comparable information on: progress with implementation of mitigation actions; sustainability objectives, institutional arrangements and activities; and constraints, gaps and support needed.¹³³ Only five VSIs currently have reporting requirements that could meet these standards. Sustainability objectives and achievements of VSIs are not reported in such a way that strengths, weaknesses and progress with implementation are easily identifiable. Furthermore, varied reporting requirements across similar VSIs do not allow for comparability among standards. This variability also exists within individual VSIs and impedes the comparison of VSI participants.

More detailed information on the status of forest-related commitments and the monitoring, measurement and verification methodologies used allows for public scrutiny and can serve to strengthen the credibility of a VSI. For example, RSB publishes detailed summaries of certifications on its website.¹³⁴ These summaries include information such as certification

¹³³ UNFCCC (2014) Handbook on Measurement, Reporting and Verification for Developing Country Parties.
¹³⁴ RSB Requirements for Evaluation of and Reporting on Participating Operators, 2011.

scope, details of the information collected during evaluations and any noncompliance, suspensions or withdrawals.¹³⁵

RSPO manages a public database with pages for each of its members along with their Annual Communications of Progress (ACOPs), which illustrate details such as the total land managed as conservation set-asides, whether participants are assessing operational GHG emissions, the tools used, plans for starting GHG assessments, and environmental challenges involved with RSPO implementation.¹³⁶ However, not all members submit reports. In 2013, just 61% of growers, 51% of processors, 57% of the food industry, and 82% of retailers submitted ACOPs.¹³⁷ RSPO recently announced the termination of over a dozen members, and suspension of more than 60 others, that failed to submit ACOPs for at least two years.¹³⁸

While company confidentiality is important in maintaining competitiveness, reporting on the status of VSI forest-related targets is unlikely to cause problems and many commodity VSIs include provisions that protect confidential company information. For example, RSPO has a provision not to publicly disclose summary report information when commercially confidential or where disclosure would result in negative environmental or social outcomes.¹³⁹

Recommendation: Information should be publicly reported by VSIs to identify participants, reflect the results of monitoring and verification audits, any disputes or noncompliance and the overall status of VSIs and their participants in meeting forest-related goals. Frequency of reporting should be established to keep information up to date. VSIs should also post information on an easily accessible website to strengthen transparency and feedback.

3.6.4 Verification

Verification is an essential step to ensure that data collection and measurement is consistent and transparent, and that forest-related activities meet the requirements laid out by VSIs or international standards.

Under the UNFCCC, countries are required to verify emission reductions using a process called International Consultation and Analysis (ICA). The ICA process consists of a technical analysis which assesses the extent to which (1) there is consistency in methodologies, definitions, comprehensiveness and information provided on baselines and results of activities; (2) the data and information is transparent, complete and accurate; and (3) the information is consistent with guidelines.¹⁴⁰

¹³⁵ Id.

¹³⁶ IIIIACOP I ACOP Digest 2012/2013 A Snapshot of RSPO Members' Annual Communications of Progress (Updated 29th Nov 2013).

¹³⁷ Id.

¹³⁸ See RSPO Terminated and Suspended Members. Available at <http://www.rspo.org/members/terminated-and-suspended-members>; see also Smith, E. (2015) "Why this palm oil sustainability group ditched its own members." Associations Now.

¹³⁹ HCV Assessments for RSPO Certification: Reporting Requirements, 2012.

¹⁴⁰ UNFCCC Decision 14/CP.19

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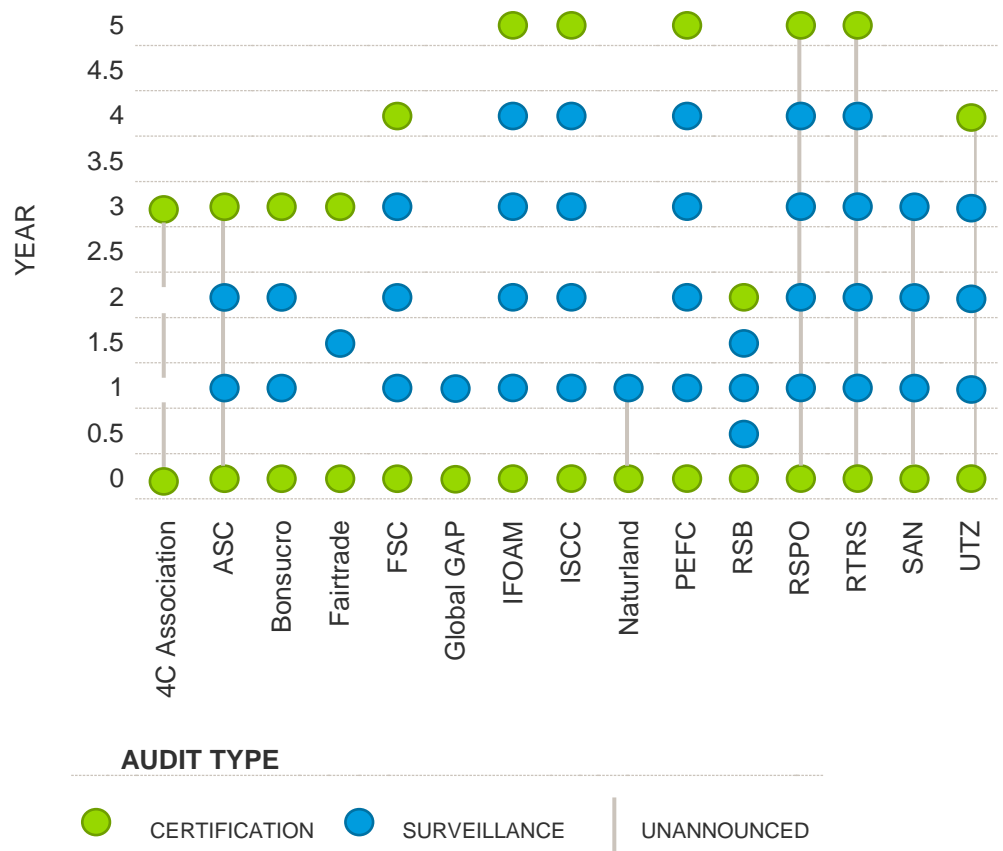
VSI verification is typically done by certification bodies through annual assessments, verification and surveillance audits, and unannounced field checks. Common audits include:

1. **Certification audit:** the certification body confirms the company's performance against a set of criteria and compliance is confirmed by a certificate;
2. **Surveillance audit:** an auditor visits the production site, often annually, to verify and monitor ongoing management and identify corrective actions necessary;
3. **Unannounced field checks:** the auditor visits the production site at any time during the validity period of the certificate.

These assessments confirm that the information provided by VSI participants is accurate, and often result in audit summary reports, which include information on the status of performance indicators and action plans to address any performance indicators that need improvement.

As illustrated in **Figure 3**, all commodity VSIs require third-party verification, however the frequency and depth of verification audits varies. All but one of the commodity-based VSIs require on-site surveillance audits to verify compliance. Seven commodity-based VSIs also conduct random, unannounced audits that can take place any time during the implementation period.

Figure 3. Required audit types and frequency¹⁴¹



¹⁴¹ Table adopted from Potts, J. et al. (2014) The State of Sustainability Initiatives Review 2014: Standards and the Green Economy, p. 55.

RTRS does not require annual assessments of all participants, but instead samples certified sites to be audited. While RTRS is the only VSI using sampling for overall participant verification, FSC, Bonsucro and 4C Association use sampling methods to determine which subsidiaries of a certified parent entity will be assessed.

The methods used to verify forest-related impacts also differ. For example, ASC and Bonsucro certification bodies verify that farms are not located in HCV areas by consulting land use maps and satellite imagery, reviewing participant environmental impact assessments and environmental management plans, conducting local community interviews, and direct observation.¹⁴² RSB confirms participant compliance through stakeholder consultations; observations from which are then investigated, evaluated and verified by certification bodies.¹⁴³ However, not all VSIs provide specific methods for data collection. Global GAP provides certification bodies with audit checklists, which include a copy of the VSI's control points and boxes for "Yes," "No," and "N/A" responses.

Establishing robust verification methods is critical to ensure that forest-related targets have their intended impacts. Even with verification requirements in their standards, studies have highlighted the limited capacity of commodity VSIs to properly monitor and enforce participant compliance.¹⁴⁴ For example, a study of UTZ Certified found that up to 30% of certified coffee farms in Vietnam were not fully compliant with the standard.¹⁴⁵ A similar review of RSPO found that out of 36 companies just two had established in-house capacity to fully implement the RSPO principles and criteria.¹⁴⁶

Verification by company VSIs can include internal audits, third party verification or reliance on the verification processes of endorsed certifications (Table 17).

Table 17. Company VSI Verification Requirements.

	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR
INTERNAL	+		+			+		+			+
THIRD PARTY	+	+			+			+		+	
CERTIFICATION	+			+			+				+

Five of the ten company VSIs with verification requirements rely on internal standards to verify compliance. Five company VSIs explicitly require third-

¹⁴² ASC Salmon Audit Manual; see also ASC Shrimp Audit Manual; see also Guidance for the Bonsucro Production Standard. 2013.

¹⁴³ RSB General Requirements for Certification Bodies. 2011.

¹⁴⁴ Smit, H. et al. 2015. Implementing Deforestation-Free Supply Chains – Certification and Beyond. SNV.

¹⁴⁵ Kuit, M. et al. 2013. The Sustainable Coffee Conundrum: A Study into the effects, cost and benefits of implementation modalities of sustainable coffee production in Vietnam.

¹⁴⁶ Traeholt, C. and Schriver, C. 2011. RSPO principles and criteria: the challenge of making the principles and criteria operational. Oil Palm Industry Economic Journal.

party verification while four refer to the verification requirements set by the company's endorsed commodity VSI standards. Of those relying on internal standards, the level of scrutiny varies. For example, APRIL relies on an internal audit schedule for plantations and mills to assess its own concessions to ensure conservation areas correspond with those identified in land management plans. In contrast, Cargill simply states that it will establish assessment procedures to determine its compliance with forest policies but provides no information on what will be audited or the frequency of those audits.

Certification bodies utilized by commodity VSIs are usually accountable to third-party verification agencies; however, 4C Association, Bonsucro and IFOAM hold certification bodies to internal standards rather than requiring third-party verification, much like many company VSIs. Holding certification bodies to internal standards rather than third-party accreditation entities presents a risk that verifiers will have a shared interest in representing positive outcomes. Holding certification bodies to external standards and ensuring results are verified by independent experts, similar to the ICA process, increases transparency and credibility of results.

Recommendation: Verification audits should be carried out periodically to ensure that participants adequately monitor forest impacts. Verification should be done by independent third-party accreditation bodies accountable to entities other than the VSI itself. Implementing third-party verification can avoid conflicts of interest and potential misrepresentation of program results.

Verification systems should allow for all participants to be audited at least once during a certification cycle. Annual audits with visits to each certified organization can encourage compliance and increase accountability and credibility.

To ensure consistency in the verification of results, auditing of participant performance should be in line with the established monitoring and measurement indicators. Additionally, the auditing process should not be left entirely to the interpretation of the auditor but require a minimum set of performance thresholds to be met for a participant to be found in compliance with VSI standards.

3.7 Chain of Custody

VSIs incorporate chain of custody standards (CoC) to ensure that a certified product, and its deforestation impacts, can be traced back to its origin. Agricultural and forest commodities often change hands a number of times before reaching consumers, making it difficult to trace deforestation-free products and ensure their accurate labeling. Chain of custody (CoC) standards often apply where there is a transfer of legal ownership¹⁴⁷ or responsibility for handling or processing products,¹⁴⁸ and can involve farmers, mills, storage and processing units, packers, brokers, wholesalers, transport companies and retailers. The credibility of a product's claim of

¹⁴⁷ FSC, Global GAP, RSPO, and UTZ.

¹⁴⁸ Global GAP, and UTZ.

sustainability relies heavily on the strength of its CoC system in excluding products that are associated with deforestation or other prohibited activities in the VSI standard.

There are several CoC methods, each specifying differing percentages of certified materials to be included in end products. Common methods include “identity preserved,” “segregated,” “mass-balance” or “mix,” and “book and claim.” “Identity preserved” requires that sustainable materials are from a single identifiable certified source and are kept separately from ordinary materials throughout the supply chain. Certified products can thereby be traced back to the certified farm or mill. The “segregated” method keeps materials from certified sources separate from non-certified materials along the entire processing chain, however mixing of certified materials from different farms or mills is allowed. “Mass-balance” allows mixing of certified and non-certified materials, and measures overall volumes of certified product. This is the least expensive and most commonly used CoC method. Lastly, “book and claim” is not a traceability method, but a certificate trading system that allows manufacturers and retailers to buy “green” certificates while continuing their existing sourcing policies.

Traceability of certified products is referenced by each of the commodity-based VSIs assessed; however, as shown in **Table 18**, not all have a specific CoC standard or traceability requirements. Some VSIs refer to traceability requirements such as mapping out suppliers or ensuring that all entities handling certified products are also certified.

Table 18. VSI Chain of Custody Standards.

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR	
IDENTITY PRESERVED						+	+					+	+		+	+											
SEGREGATED			+				+			+	+	+	+	+	+	+											
MASS BALANCE				+		+	+			+	+	+	+	+	+												
BOOK AND CLAIM												+	+														
TRACEABILITY REQUIREMENTS					+			+		+							+	+	+		+		+	+		+	

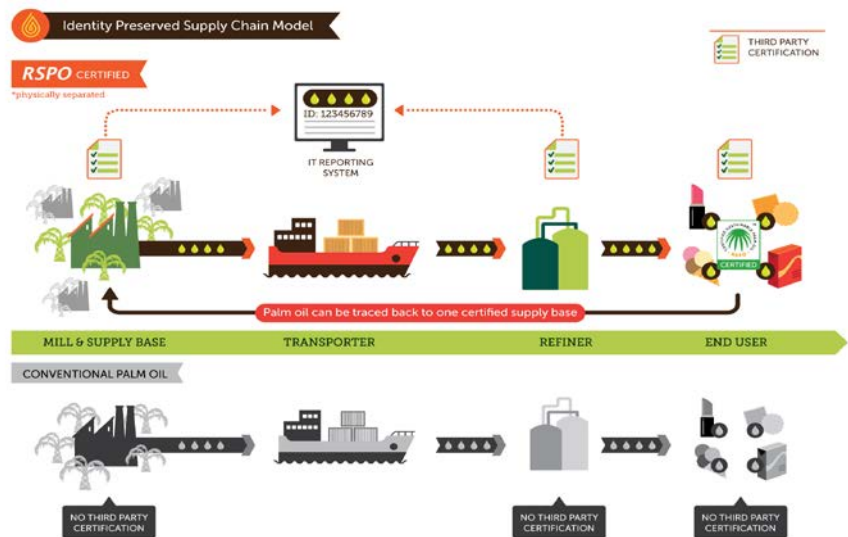
For VSIs with CoC standards, the level of detail and stringency of requirements differ for actors at various stages of product ownership. For example, ISCC has detailed requirements for each element of the supply chain, including the farm, first gathering point, conversion unit, warehouse, trader, storage unit and transporter of sustainable products.¹⁴⁹ ISCC also requires annual internal audits and conformity surveillance by participants to ensure traceability.¹⁵⁰ FSC requires an unbroken chain of certified organizations handling FSC products but exempts organizations providing services to certified organizations without taking legal ownership, such as

¹⁴⁹ ISCC 203 Requirements for Traceability. 2011.
¹⁵⁰ Id.

logistics companies storing products, agents and auction houses and contractors operating under outsourcing agreements.¹⁵¹

In contrast, some VSIs such as Global GAP, Naturland and SAN have less stringent requirements for entities to develop supply chain management plans and or have the ability to trace products through documentation. RSPO offers various chain of custody methods, but even the strictest requirements for identity preserved certified sustainable palm oil only allow palm oil to be traced back to the mill, not to the farm (Figure 4). This means that there is a risk that palm oil from producers with deforestation infractions may still enter the supply chain.

Figure 4. RSPO Identity Preserved Supply Chain Model.¹⁵²



Box 4: Chain of Custody Example: Forest Certification

FSC:

Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as “chain of custody.” There shall be a system in place allowing all products harvested within the unit to be readily identified as such, from the time of harvesting through to the point of sale.

An identification system shall allow the physical products to be linked to paper records including all of the following information:

- Type of product
- Volume (or quantity) of product
- Logging/production site
- Logging/production date

The enterprise must also keep sales invoices for all products sold, identifying at least:

¹⁵¹ FSC Chain of Custody. Accessed February 2015. Available at <https://ic.fsc.org/chain-of-custody.80.htm>.

¹⁵² RSPO: RSPO Supply Chains – Identity Preserved. Accessed April 2015. http://www.rspo.org/certification/supply-chains?utm_content=buffer51a8e&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer.

- Name and address of purchaser
- Date of sale
- Type of product
- Volume or quantity sold.

PEFC:

For each delivery of material entering the chain of custody product group the organization shall obtain from the supplier the information that is necessary to identify and verify the material category of the procured material.

A document associated with each delivery of material/products shall include at least the following information:

- The organization's name as the customer of the delivery
- Supplier identification
- Product(s) identification
- Quantity of delivery for each product covered by the documentation
- Date of delivery / delivery period / accounting period

Additionally the document shall include for each product with PEFC claim:

- The formal claim on the material category (percentage of certified material) specifically for each claimed product covered by the documentation, as applicable
- The identifier of the supplier's chain of custody for forest management certificate or other document confirming the supplier's certified status¹⁵³

While Fairtrade does not have a specific chain of custody standard, it requires all labeled products to be produced by Fairtrade certified organizations and requires certified and non-certified products to be physically separated in storage and sales.¹⁵⁴ Fairtrade also requires composite products to contain at least 20% Fairtrade content and for the package to be labeled with the minimum percentage of Fairtrade ingredients used.¹⁵⁵ IFOAM has similar requirements for minimum percentages of organic ingredients. Products must be composed of at least 95% organic ingredients to be labeled "organic."¹⁵⁶ Products with between 70% and 95% organic ingredients are limited to use of phrases such as "made with organic ingredients," and products with less than 70% organic ingredients cannot use any label, phrase or seal indicating the product is organic but may label individual ingredients as "organic" in the ingredients list.¹⁵⁷

Some products that are mixed with many materials down the processing chain, like palm oil, will be more difficult and costly to trace than products made up mostly or entirely of a single ingredient, like coffee. However, regardless of the method, VSIs need to have the ability to trace their certified products back to the farm or mill. If no traceability requirements are

¹⁵³ PEFC ST 2002:2013 Chain of Custody of Forest Based Products – Requirements.

¹⁵⁴ FLOCERT Public Compliance Criteria List – Small Producers' Organisations. 2015.

¹⁵⁵ Id.

¹⁵⁶ IFOAM Norms for Organic Production and Processing, Requirement 8.1.3. 2014.

¹⁵⁷ Id.

in place it becomes extremely difficult to ensure that a “deforestation-free” product has truly avoided deforestation or other negative forest impacts.

Recommendation: To ensure deforestation-free supply chains, VSIs should formalize and strengthen their requirements to be able to trace their products back to the farm or mill - including more ambitious chains of custody methods. Mixed commodities like palm oil can aim for higher standards, like mass balance plus (MB+) while maintaining low costs. Company VSIs can map their supply chains and engage mills and farmers directly to set and enforce deforestation standards.

3.8 Subsidiary Relationships

Many commodity and company VSI participants, particularly large multinational companies, have subsidiary companies and/or suppliers and producers from whom they receive inputs to the supply chain. In all cases, it is important to define subsidiary relationships and establish whether forest- and environment-related commitments are binding for all subsidiaries and other related companies or only the parent organization. If the VSI is also binding for subsidiaries, appropriate monitoring should be defined in the participant’s management plan. Clarifying these relationships shows consumers and other interested stakeholders the extent of VSI forest-related commitments and indicates a level of transparency.

Commodity VSIs include both members and certified entities. Members are oftentimes large organizations or NGOs establishing and influencing VSI policies and key decisions. Certified entities are the individual farms, producers and suppliers held to VSI standards and undergoing assessments to verify compliance with forest-related targets. Companies are not required to have 100% of their farmers and other actors throughout the supply chain certified. Rather, a company may be a member of a commodity VSI and have just one of many farms or mills certified. This categorization of members and certified entities can be misleading, especially in cases where organizations do not make subsidiary relationships explicit and or publicize VSI membership without having a significant number of subsidiaries or contracted suppliers certified.

Subsidiary companies and suppliers utilize large areas of land that should be monitored and reported on to facilitate broader implementation of sustainability targets, yet few VSIs have strict requirements for subsidiaries or suppliers and fewer still specify consequences for subsidiary noncompliance. This is a major gap in VSI standards. Without such provisions, the achievements of VSI participants are almost impossible to interpret. As shown in [Table 19](#), just 3 of the 15 commodity VSIs assessed in this report require subsidiaries to comply with their forest-related targets. Company VSIs more often address subsidiaries, with 7 of 11 VSIs requiring subsidiaries to comply with forest commitments. Seven commodity VSIs offer multi-site certification for subsidiaries but do not require all subsidiaries to be certified. Business partners are also sometimes held to VSI standards, with three commodity VSIs and four company VSIs extending requirements to suppliers and other third-party actors.

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Table 19. VSI Subsidiary Relationship Requirements.

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR	
SUBSIDIARIES - REQUIRED				+							+	+				+	+		+	+	+				+	+	
SUBSIDIARIES - OPTIONAL			+		+	+				+			+	+	+												
BUSINESS PARTNERS								+	+		+						+	+		+						+	

Even if a company's commitment does not at first include subsidiaries and suppliers, it is important to specify how the certification applies to the entire structure and any plans for implementation by subsidiaries. For example, a "Policy for Association" was adopted by FSC in 2009 to require any company, including the parent entity, sister entity and subsidiaries with a minimum of 50% ownership, to be committed to the basic fundamentals of responsible forest management.¹⁵⁸ FSC also details potential consequences if related companies do not comply with FSC Principles and Criteria.

4C Association requires participants to map out all business partners at the beginning of the licensing process and update the map throughout certification.¹⁵⁹ These business partner maps are included in annual self-assessments and verifications, however they do not define the relationship between business partners and the participant and whether the certificate also applies to those business partners.¹⁶⁰ In relation, and despite a list of all related companies being included in certification and verification summaries, their obligations and whether sanctions for noncompliance with the 4C Principles and Criteria apply are unclear.

Some VSIs require audits of a representative sample of a participant's related companies. RSB samples according to risk class¹⁶¹ of the participant and assesses subsidiaries, branch offices, affiliated entities, external third parties, operational structures, sites, facilities, processing and production units, and supply chain structures identified in the participant's scope of certification.¹⁶² The percentage of entities audited ranges from 5% for class 1 risk participants to 25% for class 6 risk participants.

Many VSIs have been under scrutiny by NGOs and civil society due to the noncompliance of participants and subsidiaries as well as a lack of transparency and accountability. Consequences for subsidiary or other related-company noncompliance are mostly determined on a case-by-case basis and only brought to the certification body's attention if a complaint is

¹⁵⁸ FSC (2011) Policy for the Association of Organizations with FSC. Available at <https://ic.fsc.org/policy-for-association-revision.751.htm>.

¹⁵⁹ 4C Code of Implementation Process.

¹⁶⁰ Id.

¹⁶¹ A risk assessment classifies the risk that a farm or business could become noncompliant on a scale of 1 to 6.

¹⁶² See, e.g., RSB Requirements for evaluation of and reporting on participation operators (2013) p. 9.

filed.¹⁶³ In such instances, as long as no complaint is filed, a parent entity may continue selling a product as certified despite its subsidiaries engaging in noncompliant practices. For example, in 2010, all of APRIL's FSC certifications in Indonesian mills were revoked due to violations observed by its certifiers.¹⁶⁴ Since no complaints were raised about APRIL's mills outside Indonesia, the company was able to continue selling FSC certified timber produced elsewhere from 2010 to 2013. In 2013, APRIL voluntarily terminated its FSC certifications in all countries following a formal complaint from WWF, Greenpeace and the Rainforest Action Network.¹⁶⁵

For company VSIs where the organization effectively certifies itself, consequences for subsidiary noncompliance are unlikely, especially if there is no time-bound commitment for their compliance.

Recommendation: To ensure VSI participants are achieving forest-related targets across their entire organizations, it is critical that information on subsidiaries and related companies is included. VSIs should clarify the roles of subsidiaries in commitments, monitoring plans, audits and reports. It is also important to share the status of certification for each subsidiary or related company, even if their compliance is not required. Furthermore, VSI standards should define the consequences and procedures for participants if subsidiaries or related companies engage in noncompliant practices.

3.9 Noncompliance

Measures to address noncompliance are important to maintain the integrity and credibility of VSI commitments and determine which participants, if any, are in breach of their forest-related targets. Mechanisms to deal with non-compliance may include suspensions of certification, revocation of the right to use a VSI logo or withdrawal of certification. Commodity-based VSI consequences may elevate gradually in instances of repeated noncompliance, or suspension or withdrawal of certification may be triggered by a single nonconformity.

For REDD+ activities, the VCS REDD+ Methodology addresses noncompliance by requiring project proponents to address all clarification requests (CLs) and corrective action requests (CARs) documented by validation/verification bodies (VVBs) before a project is approved.¹⁶⁶ CLs note that project reporting lacks transparency and further information is needed to determine if a material discrepancy is present, while CARs signify that a VVB has identified a material discrepancy or non-conformity that a project proponent must address. All CLs and CARs must be documented and summarized in validation and verification reports, and must include the process used to resolve them.

¹⁶³ Id.

¹⁶⁴ Maitar, B. (2013) APRIL walks away from the FSC. Greenpeace. Available at: <http://www.greenpeace.org/international/en/news/Blogs/makingwaves/april-walks-away-from-the-fsc/blog/45634/>.

¹⁶⁵ Id.

¹⁶⁶ Verified Carbon Standard (2013) VCS Guidance: Validation and Verification Manual.

Many VSIs distinguish between “major” and “minor” nonconformities. Minor nonconformities typically result in Corrective Action Requests (requests to resolve or close-out a specific nonconformity to the relevant standard issued by an internal or external assessor) but if left unresolved may be elevated to major nonconformities, which can result in suspension or withdrawal of VSI certification (see Table 20). Just 17 of the 26 VSIs assessed explain the measures to be taken if a participant, subsidiary or business partner is found to be in violation of the relevant standard. Eleven of the 12 commodity VSIs outlining consequences for noncompliance first issue a corrective action request or suspend certification, allowing certified entities time to resolve the violation before certification is revoked. Company VSI consequences (termination of supplier contracts) relate only to business partners and not subsidiaries. While subsidiaries can be given corrective action requests by Cargill, Unilever and Wilmar, it is unclear what occurs when subsidiaries continuously fail to comply with company policies.

Table 20. VSI consequences for noncompliance¹⁶⁷

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND ¹⁶⁸	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR	
CORRECTIVE ACTION REQUEST	+		+		+	+							+		+			+								+	+
SUSPENSION			+	+	+	+	+	+			+	+	+		+												
WITHDRAWAL	+		+	+	+	+	+	+			+	+	+	+	+												
RECERTIFICATION				+		+							+	+	+												
TERMINATE CONTRACT																	+	+		+					+	+	

Most VSIs with measures for remediation leave the decision to suspend or withdraw to the certification body responsible for verifying compliance. Certification bodies can make subjective determinations if a major noncompliance, such as clearing primary forest or HCV areas, should result in the termination of certification. For example, FSC certification bodies may suspend or withdraw certifications if they believe an organization does not comply with FSC standards. ISCC suspends certifications until nonconformities are addressed, and in the case of “serious violations” certification bodies may withdraw certifications. As mentioned previously, RSPO recently expelled 15 of its members, and suspended 62 others for failing to submit the required annual communications of progress (ACOPs).¹⁶⁹

¹⁶⁷ 4C Essentials; ASC Farm Certification and Accreditation Requirements; Bonsucro Certification Protocol; FLOCERT Certification Standard Operating Procedure; FSC General Requirements for FSC Accredited Certification Bodies; ISCC 201 System Basics for the Certification of Sustainable Biomass and Bioenergy; PEFC National Standards for Complaints and Appeals; RSB General Requirement for Certification Bodies; RSPO Certification Systems; RTRS Accreditation and Certification Standard for Responsible Soy Production; SAN Farm and Administrator Certification Policy; UTZ Certified Certification Protocol.

¹⁶⁸ Violations of the Naturland standards are prosecuted according to the sanction catalogue (producer contract appendix IV). However, this catalogue is not publicly available.

¹⁶⁹ Butler, R. “Palm oil certification body purges membership.” Mongabay. 5 March 2015; see also Hii, R. “Seventh Generation Suspended by Certification Body.” Huffington Post. 23 March 2015.

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VSI participants are generally given an opportunity to address major nonconformities before certification is withdrawn. While many VSI targets related to the preservation of primary forests and HCV areas are considered “major” musts, according to the procedures for addressing noncompliance it may be possible for an organization to maintain certification despite having cleared primary forest or HCV area. Furthermore, most suspensions and withdrawals are determined on a case-by-case basis, leading to inconsistent procedures for noncompliance and variation in what constitutes a major or minor violation of a VSI standard.

The subjective determination of whether to suspend or terminate certifications based on the severity of observed violations differs from VCS standards, where all identified material nonconformities must be resolved before a project is verified or validated. Loose VSI standards for addressing nonconformities through suspension and/or termination can lead to a misrepresentation of VSI forest impacts.

Table 21. Time given to resolve nonconformities (major nonconformities in red, minor nonconformities in orange)¹⁷⁰

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR		
30 DAYS						+						+	+															
60 DAYS												+			+													
90 DAYS		+				+					+																	
1 YEAR		+	+				+					+																

The amount of time given to resolve VSI noncompliance issues ranges from one month to one year. Eight of the fifteen commodity VSIs allow organizations time to resolve major and or minor nonconformities before sanctions are imposed (see [Table 21](#)). 4C Association, FSC and Global GAP refer to Corrective Action Requests or Corrective Action Plans agreed by certificate holders and certification bodies for deadlines to address noncompliance, without giving maximum time periods. The remaining VSIs either do not hold organizations to compliance timelines or allow certification bodies to determine deadlines on a case-by-case basis. Without established sanctions for noncompliance or rules regarding periods for resolution, it is unclear what consequences, if any, participants will be held to if found to be in violation of forest-related targets.

After certification has been terminated, it is important to clarify the terms according to which an organization can once again be certified. Several VSIs provide information on the process of re-certification, which can include a waiting period ranging from four months to one year. Re-certification typically requires a new application and/or compliance audit.¹⁷¹ One VSI, SAN, allows participants to continue to sell SAN-certified products

¹⁷⁰ RSPO major nonconformities found prior to certification must be addressed within 60 days, while those found during certification must be addressed within 30 days.

¹⁷¹ Fairtrade, Global GAP, RTRS, SAN and UTZ provide terms for re-certification following termination of certification.

for up to 12 months after termination so long as the product was harvested while the certificate was valid.

Recommendation: VSIs should establish measures to address noncompliance and clear guidelines for the behavior that will lead to suspension or termination of certification. Having consequences for noncompliance ensures accountability and integrity of the standard. Where VSI participants are under investigation for major or minor nonconformities or face suspension and/or termination, detailed information on the behavior leading to these remedial measures should be made publicly available. The necessary steps to obtain certification after termination should also be defined, including the procedures to handle products that were harvested prior to termination.

4.

Results and Discussion

In this section, we summarize the results of the assessment, provide overarching conclusions and discuss issues and potential opportunities beyond the VSIs themselves.

4.1 Summary of Results, Main Gaps and Recommendations

This study analyzes 26 agriculture and forestry VSIs to better understand their strengths and weaknesses in relation to potential impacts on forests, using REDD+ requirements for guidance. All of the VSIs assessed promote broad practices aimed at avoiding or reducing deforestation and/or forest degradation. There are, however, important differences in the stringency of requirements and the systems and procedures in place to implement them.

Table 22 shows the authors' evaluation of the extent to which the various VSIs address the eight assessment criteria. As illustrated in the right-hand column, the main weakness in both commodity and company VSIs relate to the level of detail on the geographic location of farms or plantations, and monitoring, measurement and reporting requirements and guidelines. The main strengths were the provision of timelines and non-compliance requirements.

Overall, commodity VSIs showed more comprehensive coverage of the assessment criteria and sub-criteria than company VSIs, with RSPO, RSB and UTZ having the largest number of fully-addressed criteria. Of the company VSIs, APP and Wilmar had the highest number of criteria addressed and Unilever had the most robust geographic area and MMRV requirements. The most addressed criteria within company VSIs were subsidiary relationships, indicating the central role that sustainable sourcing policies for companies have in meeting forest-related targets.

Despite their relevance to REDD+ in maintaining forest cover and condition, the forest VSIs did not exhibit the most comprehensive systems compared to other agricultural VSIs. However, the differences are relatively marginal. In addition, certification by a forest VSI itself constitutes a significant guarantee that forests will be maintained in the certified area, and therefore may raise their potential in delivering REDD+ related outcomes.

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Table 22. Summary of VSI assessment according to the eight criteria: not addressed (blank), partially addressed (plus) and fully addressed (plus and shaded).¹⁷²

Grey, light green and dark green in the total column indicates least, medium, and most addressed respectively.

	4C	ASC	BONSUCRO	FAIRTRADE	FSC	GLOBAL GAP	IFOAM	ISCC	NATURLAND	PEFC	RSB	RSPO	RTRS	SAN	UTZ	APRIL	APP	CARGILL	CGF	DANONE	GAR	NESTLE	P&G	SAI	UNILEVER	WILMAR	TOTAL
DEFINITIONS	+	+	+	+	+	+	+	+		+	+	+	+		+	+	+	+	+	+	+	+				+	
TIMELINES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	
GEOGRAPHIC AREA	+	+			+		+	+	+	+	+	+	+	+	+		+	+			+				+	+	
BASELINES	+	+	+	+	+	+		+		+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	
MONITORING / MEASUREMENT	+		+	+	+	+				+	+	+		+	+		+	+		+			+	+	+	+	
REPORTING	+	+	+	+	+	+		+	+	+	+	+	+	+		+	+	+	+	+	+	+	+		+	+	
VERIFICATION	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	
CHAIN OF CUSTODY			+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+		+		+	+		+	
SUBSIDIARY RELATIONSHIPS			+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+				+	+	
NON-COMPLIANCE	+		+	+	+	+	+	+			+	+	+	+	+		+	+		+					+	+	

Based on the gaps highlighted in [Table 22](#), it is easy to see where insufficient systems and procedures within VSIs can impede implementation of forest-related commitments. While VSIs may have ambitious forest targets, it is difficult to ensure accuracy of results when key operational elements are inadequately addressed.

The gaps and differences highlighted in this study substantially alter the potential bearing of VSIs on forests, and therefore limit the extent to which VSIs can be relied upon as a tool to reduce forest loss. That being said, some gaps are larger than others, and may need a more concerted effort to overcome. Furthermore, addressing certain criteria may be more important for company-based or commodity-based VSIs, as well as forestry or agriculture VSIs. These implications are discussed further in the following section. [Table 23](#) highlights the main gaps and summarizes the recommendations from Chapter 4.

¹⁷² **Definitions:** (0) no definitions, (1) definitions addressing some targets, (2) definitions addressing all targets; **Timelines:** (0) no timeline, (1) no cut-off date, (2) cut-off date and implementation period; **Geographic area:** (0) no requirements; (1) 1-3 requirements out of 5; (2) 4 requirements out of 5; **Baselines:** (0) no baselines; (1) baselines for some targets; (2) baselines for all targets; **Monitoring/Measurement:** (0) no requirements; (1) 1-2 requirements; (2) 3 requirements; **Reporting:** (0) no requirements; (1) 1-3 requirements; (2) 4 requirements; **Verification commodity:** (0) no audits; (1) third-party audits; (2) announced and unannounced third-party audits; **Verification company:** (0) no audits; (1) internal audits; (2) third-party audits; **Chain of Custody:** (0) no CoC; (1) traceability requirements; (2) CoC requirements; **Subsidiary Relationships:** (0) not mentioned; (1) optional/business partners; (2) required; **Noncompliance:** (0) not mentioned; (1) possible termination; (2) steps to termination.

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Table 23. Assessment Criteria Main Gaps and Recommendations

	MAIN GAPS	RECOMMENDATIONS
DEFINITIONS	Many VSIs lack definitions of key terms such as 'forest,' 'HCV'/ 'HCS' and 'forest degradation'	<ul style="list-style-type: none"> Rely on established international and national definitions of forest and HCV/HCS where possible to clarify no-deforestation, restoration and expansion areas Include sufficiently robust definitions to account for the various types of forests, potentially by using more than one type of forest definition
TIMELINES	Cut-off dates vary from 0-21 years leading to either low levels of environmental integrity or overly restrictive practices	<ul style="list-style-type: none"> Establish cut-off dates far enough in the past (i.e., >5 yrs) Establish relative cut-off dates (i.e., >8 yrs before certification) or revise fixed cut-off dates (i.e., 2005) at regular intervals Set implementation periods to allow for MMRV of full production cycle (i.e., >5 yrs) Aim for continuous improvement through a stepwise approach, increasing mandatory requirements at regular intervals
GEOGRAPHIC AREA	Few VSIs have requirements for delineating geographic boundaries, and where requirements exist many have gaps in scope and detail	<ul style="list-style-type: none"> Require geospatially explicit information of production area, including farm location maps with GPS coordinates, location of HCV/protected areas, and legal ownership
BASELINES	Not all VSIs establish baselines for their forest-related targets	<ul style="list-style-type: none"> Establish land-use and GHG baselines to adequately measure performance of participants according to the targets set Adjust/establish baselines as forest-related targets increase in scope and ambition
MONITORING / MEASUREMENT	Few VSIs have requirements or guidelines for the development of monitoring plans or the procedures for measuring progress against baselines	<ul style="list-style-type: none"> Develop a monitoring plan and robust monitoring processes that incorporate monitoring methodologies (i.e., remotely sensed and/or ground-truthed data), detailed performance indicators and routine data collection schedules. Establish consistent measurement procedures and methodologies and use national and international maps and methodologies where possible Use open-access deforestation mapping tools (e.g., WRI's Forest Watch) to efficiently monitor land-use change
REPORTING	Not all VSIs provide public, comprehensive reports on the progress of VSI participants	<ul style="list-style-type: none"> Publicly report information on a routine basis to reflect the results of monitoring and verification audits, any disputes or noncompliance and the overall status of VSIs and their participants in meeting forest-related goals Post information, including maps of participants, on an easily accessible website to strengthen transparency
VERIFICATION	Not all VSIs require annual on-site assessments, random field checks, and/or independent third-party verification	<ul style="list-style-type: none"> Carry out periodic verification audits by independent third-parties to ensure that participants adequately monitor forest impacts Ensure that all participants are audited at least once during a certification cycle Require compliance according to set performance indicators outlined in the monitoring plan
CHAIN OF CUSTODY	Few VSIs have detailed traceability or chain of custody standards that can trace forest impacts	<ul style="list-style-type: none"> Formalize and strengthen requirements to achieve traceability back to the farm or mill, including ambitious chain of custody methods Mixed commodities like palm oil can aim for higher standards, like mass balance plus (MB+) while company VSIs can map their supply chains and engage mills and farmers directly to set and enforce forest-related standards.
SUBSIDIARY RELATIONSHIPS	Few VSIs define the role of subsidiaries and/or related companies in forest-related commitments, and even fewer outline the consequences for subsidiary noncompliance	<ul style="list-style-type: none"> Clarify roles of subsidiaries in meeting targets, monitoring plans, audits and reports – particularly important for large multinationals with many suppliers Share the status of certification for each subsidiary or related company Define the consequences and procedures for participants if subsidiaries/related companies are noncompliant
NON-COMPLIANCE	Only half of the VSIs assessed provide detailed consequences for noncompliance	<ul style="list-style-type: none"> Establish measures to address noncompliance and clear guidelines for the behavior that will lead to suspension or termination of certification Provide detailed, publicly available, information on terminations and suspensions Define the necessary steps and the amount of time to address nonconformities and to undergo re-certification after termination – as well as the procedures for handling products harvested prior to termination

4.2 Overarching Conclusions

VSI commitments and standards show that supply chains are supportive of some REDD+ outcomes, particularly through avoidance of forest conversion and rehabilitation and conservation of HCV and HCS areas. It is important to note, however, that the 26 VSIs assessed are very different, and most were not designed with reducing deforestation and forest degradation in mind. While there are overlaps between current REDD+ standards and VSI

elements, VSI designs and their implementation systems are generally not sufficient to *ensure* a significant contribution to REDD+ outcomes. The following section outlines overarching conclusions based on our analysis in the previous sections.

There is insufficient detail on program requirements and guidance from VSIs to communicate expectations concerning both participant behavior and measurement of forest impacts. This is particularly true for definitions, geographic areas, monitoring and measurement methodologies, chain of custody, and subsidiary relationships. For example, ambiguity about thresholds for deforestation and how they are monitored permits possible non-compliance while maintaining certification. RSPO is currently working on a set of additional guidelines, called RSPO+, in an effort to clarify and enhance its requirements on deforestation, peatland development and indigenous people's rights that participants can voluntarily apply to their plantations. Disseminating robust and consistent guidance on these criteria helps participants meet requirements, gauge non-compliance and provide consistency across the VSI standard.

Emphasis should be put on enhancing the monitoring, traceability and transparency of VSI targets - the main components in ensuring that deforestation and forest degradation impacts are reduced. All of the VSIs assessed could make improvements to their standards and processes to better incorporate these elements. This includes identifying spatially explicit production areas where forest-related impacts are measured, and results are monitored, reported and verified, as well as ensuring that VSI targets apply to subsidiaries and partners (producers, suppliers, processors, retailers, brands) and are fully reflected in the chain of custody system.

Lack of harmonization across VSIs in defining, monitoring and measuring forest-related targets hinders evaluation and comparison of results. Additionally, there is little consistency with national definitions and methodologies, which makes measurement of performance across a landscape problematic. While harmonization is difficult given the myriad actors and differing agendas among VSIs, establishing the main definitions (forests) and methodologies (GHG accounting) according to established international and/or national standards should be pursued where possible. If available, national maps on forests, land uses and concessions should also be used.

Unambitious targets and procedures and lack of transparency reduce the credibility of VSIs. Environmental integrity is at the heart of buyer' motivation to purchase VSI certified and/or VSI branded products, and although ambition needs to be balanced with inclusiveness (e.g., in relation to cut-off dates for deforestation), demonstration of environmental integrity backed up by transparency and accountability is essential for forest conservation. This is particularly relevant for establishing targets, public reporting of results, and consequences for noncompliance. VSIs may incorporate more ambitious targets through a stepwise approach, such as increasing mandatory requirements at various stages. Furthermore, having an easily accessible website with information on how all producers are or are not meeting targets is not commonplace among VSIs, but can be an important tool for increasing transparency and credibility.

While commodity VSIs may prove useful for companies, they may also set and meet their own targets if standards are adequately robust and transparency is sufficiently maintained. The eight assessment criteria are generally more comprehensively addressed by commodity VSIs through

certification schemes, and therefore company VSIs tend to rely on certifications to meet forest-related and other environmental targets. However, some companies are choosing to go beyond certification targets and/or reduce their reliance on certification by transparently tracking their products and impact on their own. For example, some companies publicly map the source of all of their materials back to the farm (geographic delineation, subsidiary relationships and chain of custody) and then require changes of production standards where needed. Patagonia provides a good example of this with their Footprint Chronicles, where all materials are traced to individual farms (published online), production standards are set (e.g., for wool, cotton), and impact is monitored and publicly reported on a periodic basis.¹⁷³

There are factors beyond the eight criteria assessed in this report that VSIs can employ to address forest loss. Depending on the scope and scale of a VSI, there may be larger gaps to fill, or additional steps to take for positive impact on forests to result. Agriculture VSIs, for example, have limited potential influence on direct REDD+ outcomes within their production areas once a plantation has been established due to the limited areas of forest generally managed or controlled by agricultural commodity producers. Therefore, agriculture VSIs can only ensure direct impact by setting cut-off dates for deforestation sufficiently far in the past, and by accurately identifying primary, HCV and other important ecosystems to prevent conversion during plantation establishment. In lieu of having static cut-off dates set deep in the past, some VSIs like Global GAP, RSPO, RTRS, SAN, and UTZ allow offsetting of past unsustainable practices (by protecting or restoring an equivalent area of land originally deforested). Other agricultural VSIs, like Naturland and ASC, increase their direct impact by restoring degraded and deforested areas, or by establishing minimum forest cover on certified areas. Similarly, some forest VSIs enhance their forest-related impacts by working with governments in locating their plantations next to HCV or primary forests, so as to provide a buffer for these areas. For example, many FSC certified forestry companies in New Zealand incorporate landscape level conservation and planning by buffering indigenous forest remnants with plantation forests and providing habitat connectivity and transition zones.¹⁷⁴ Having forest VSIs next to forest frontiers, especially in tropical countries would likely have a positive impact compared to agriculture VSIs as they can maintain similar microclimates and vegetation for biodiversity conservation, and also limit development and subsistence farming expansion in these areas.¹⁷⁵ These practices could be more widely adopted and incorporated within VSI targets and requirements.

In addition to addressing gaps and taking steps to increase impact, adequate capacity to implement VSI targets and processes is essential. Various studies have shown that VSIs have limited capacity for monitoring and enforcement of sustainability and forest-related targets.¹⁷⁶ This is exemplified by the fact that just 5% of the 36 RSPO companies assessed had sufficient in-house capacity to implement the standard's principles and criteria, and 30% of UTZ certified coffee farms in Vietnam

¹⁷³ Patagonia Footprint Chronicles website – accessed June 2015: <http://www.patagonia.com/us/footprint>

¹⁷⁴ Lindenmayer D., and Franklin, J. (2003) *Towards Forest Sustainability*. CSIRO Publishing, Australia. ISBN 0 643 06832 5.

¹⁷⁵ *Id.*

¹⁷⁶ Smit, H., McNally, R., Gijzenbergh, A. (2015) *Implementing Deforestation-Free Supply Chains – Certification and Beyond*. SNV REAP.

were not in full compliance with the standard.¹⁷⁷ While overcoming the main challenges highlighted above is important, equally important is the capacity to implement the standards. This barrier may be addressed through capacity building initiatives by industry, and by working with existing monitoring processes in the region.

Lastly, engagement of non-VSI actors may help improve forest-related impacts. VSIs may benefit from collaboration with outside constituencies where potential synergies exist. For example, conservation stakeholders may work with forest VSIs in tropical forest frontiers to build primary forest buffers and build a formal timber sector where illegal timber extraction is a major cause of deforestation. Similarly, company VSIs producing forest risk commodities may be engaged to improve the traceability and transparency of their supply chains. WWF and TFT, for example, are currently working with McDonald's and Nestlé respectively on mapping supply chains and meeting no-deforestation commitments.

Additional studies that generate field level empirical results would help indicate VSI performance on the ground, and verify whether forest related provisions assessed in this study promote REDD+ outcomes. For example, in this study RSPO was found to fully address seven of the eight assessment criteria, standing out among VSIs for its robust requirements related to forest conversion and associated emissions. However, Ruyschaert and Salles 2014¹⁷⁸ found evidence that RSPO has not been effective in achieving conservation-related goals in Sumatra, Indonesia based on a multi-year field study. This was due to a variety of reasons including ambiguity in its biodiversity and deforestation guidelines (preventing primary forest conversion after November 2005 yet allowing deforestation of other land) and lack of accountability and enforcement, which allowed certain actors to side-step requirements while maintaining certification.¹⁷⁹ To ensure overall effectiveness of forest-related targets, more independent field-level VSI evaluations should therefore be conducted.

4.3 Beyond VSIs

At the beginning of this report we recognize the targeted role that VSIs can play in combating deforestation and forest degradation. In this section we discuss how factors beyond the characteristics of VSIs themselves can influence the effectiveness of VSIs in promoting REDD+ outcomes. While these conditions are outside the purview of this assessment, it is important to put VSIs into a broader perspective and highlight some of the main limitations and enabling conditions outside of certified or production areas.

In general, the potential for VSIs to reduce deforestation and forest degradation at the national level is limited by companies' lack of influence in areas outside their authority and a lack of influence over the "bottom of the market."¹⁸⁰ In situations without an overarching forest protection framework,

¹⁷⁷ Id.

¹⁷⁸ Ruyschaert, D., and Salles, D. (2014) Towards global voluntary standards: Questioning the effectiveness in attaining conservation goals, The case of the RSPO. *Ecological Economics*, 107; 438-446

¹⁷⁹ Id.

¹⁸⁰ Steering Committee of the State-of-Knowledge Assessment of Standards and Certification. (2012). *Toward sustainability: The roles and limitations of certification*. Washington, DC: RESOLVE, Inc.

other actors may continue to clear and degrade forests in these areas. To address these limitations, companies, governments and other actors may adopt one or more of a range of measures as follows.

Companies can work with communities and governments *outside* of certified areas to promote sustainable practices. Nestlé, for example, has worked with communities on rural development and on improving livestock management in Colombia, which helps to reduce pressure on the forest outside of company-controlled areas.¹⁸¹

Governments can promote landscape-level planning in collaboration with companies implementing VSIs to protect forest frontiers and areas outside VSI jurisdiction. Governments and VSIs can also strive for landscape-wide and/or jurisdictional certification for the main commodities produced to promote REDD+ outcomes at greater scale. Country-wide certification of cacao is already being explored by the government in Ghana. Even in landscape-wide and/or jurisdictional schemes, there will usually need to be methods of verification and monitoring that VSI systems are designed to provide. Additionally, government capacity to implement and enforce such a policy would be an important consideration.

Governments can ensure that national legal frameworks and programs are consistent with and support VSI efforts. VSIs can have greater reach, impact and acceptance if they are supported by domestic legislation and initiatives. For example, governments can provide incentives to encourage adoption of VSIs or impose levies on companies that do not adopt sustainable practices. Governments can also work with VSI companies to extend practices to small and medium-sized enterprises (SMEs) and engage smallholders and other actors in implementing VSI standards, providing financial support to cover certification start-up costs where necessary.

Conversely, VSIs could face substantial barriers if targets and processes are in conflict with government plans. For example, Indonesian law allows other users, like mining companies, to exploit awarded concession lands that are not planned for use (for conservation purposes, or others).¹⁸² This underscores that standards are not a replacement for national legislation.

Industry and government can work together to increase the demand and market share of sustainable commodities. To have real impact on global deforestation rates, VSIs need to be implemented at a large scale, and while we can develop very effective VSIs, their impact on deforestation will still be minimal if they only cover a small percentage of the market. Although the current market share of VSIs is rapidly increasing, it still only accounts for a small percentage of commodity production. Given large-scale deforestation can be caused by only a few actors, the issue of uptake is a major challenge.

VSIs can exert greater influence over production when a large proportion is consumed in environmentally sensitive markets, as in the case of premium

¹⁸¹ Nelson, N. and Durschinger, L. (2015). "Supporting Zero-Deforestation Cattle in Colombia". USAID-supported Forest Carbon, Markets and Communities Program. Washington, DC, USA.

¹⁸² Smit, H., McNally, R., Gijsenbergh, A. (2015) Implementing Deforestation-Free Supply Chains – Certification and Beyond. SNV REAP.

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certified coffee exported to the US and EU for example.¹⁸³ To increase demand for certified commodities, governments in consumer countries may implement public procurement policies or trade measures that exclude deforestation from the supply chain, particularly in relation to forest-risk commodities. Although environmentally insensitive markets – both domestic and international – are likely to prioritize price over environmental considerations in purchasing commodities, thereby continuing to exert considerable influence, overall reductions in demand for deforestation related commodities in combination with forest protection efforts in producer countries should together reduce rates of forest loss.

Ultimately, the impact of VSIs is only as good as the standards they set, implement and enforce; the scale at which they are adopted; and the level of demand of sustainable versus unsustainable product. Given the limitations of VSIs, they should not be regarded as a silver bullet, but as one tool among others that can help to address forest loss.

¹⁸³ Id.