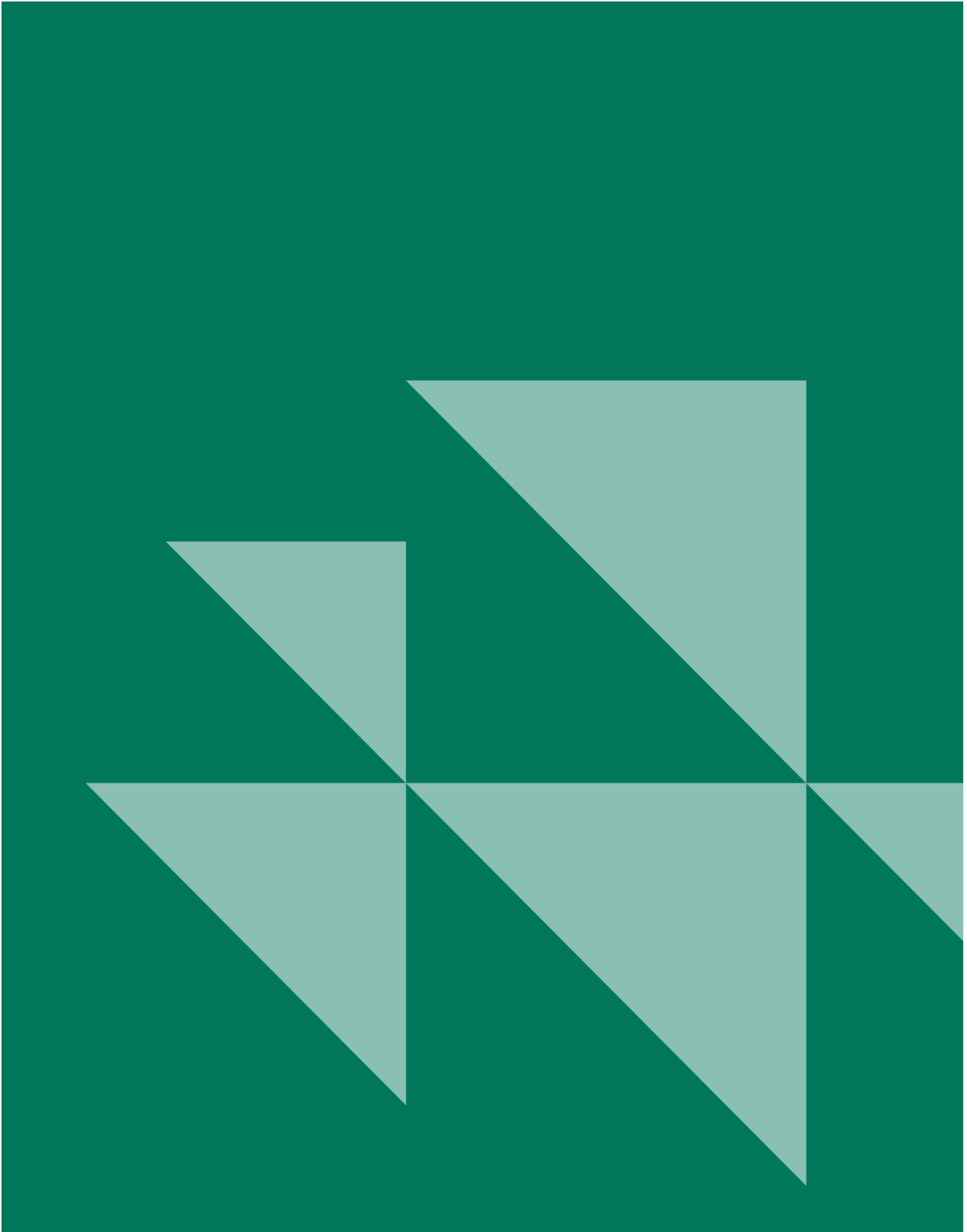

CDP Technical Note: Implementing commitments on deforestation and ecosystem conversion

CDP Forests Questionnaire



Contents

Contents	2
1. Introduction	4
1.1. About this technical note.....	4
2. Deforestation/conversion free supply chains and sourcing area risk	5
2.1. What is DCF/non-DCF status?	5
2.2. Assessing DCF status of sourcing areas	5
2.3. Risk related to sourcing areas.....	6
2.4. Good practice for determining the risk of sourcing areas	6
3. Supply Chain (SC) Due Diligence	7
3.1. What is SC due diligence?	7
3.2. The role of monitoring in SC due diligence	7
3.3. The role of sourcing area risk assessment in SC due diligence.....	7
4. Supply chain mapping	8
4.1. What is supply chain mapping?	8
4.2. How are supply chains mapped?	8
4.3. How does this differ from traceability?.....	8
4.4. Good practice for supply chain mapping	8
5. Traceability	9
5.1. What is traceability?.....	9
5.2. Why is traceability important?	9
5.3. How can I trace the origin of a commodity?.....	9
5.4. Which commodities are considered traceable?	9
5.5. Can certification be used to confirm traceability?	9
6. Verification	10
6.1. What is verification?.....	10
6.2. Is this different from monitoring?	10
6.3. Differences between first, second and third-party verification	10
7. Certification	12
7.1. What is certification?	12
7.2. What is 'chain of custody'?	13
7.3. Good practice for certification	14
7.4. Does certification differ for different commodities?.....	15
8. Useful Links	16

Version

Version number	Release / Revision date	Revision summary
1.0	Released: February 2023	Publication of the Forests - Technical Note 'Implementing commitments on deforestation and ecosystem conversion'

Copyright © CDP Worldwide 2023

The copyright in this document is owned by CDP Worldwide, a registered charity number 1122330 and a company limited by guarantee, registered in England number 05013650.

Any use of any part of this document must be licensed by CDP. Any unauthorized use is prohibited, and CDP reserves the right to protect its copyright by all legal means necessary.

1. Introduction

1.1. About this technical note

To support disclosure through the CDP forests questionnaire, this technical note provides an overview of concepts related to deforestation free and natural ecosystem conversion free (DCF) supply chains.

Setting ambitious targets to eliminate deforestation and conversion in supply chains, and implementing measures to achieve them, is fundamental to companies fulfilling their social and environmental commitments and increasingly legal obligations. Implementing DCF commitments involves overlapping stages and activities, such as supply chain mapping, traceability, monitoring, verification, and certification. This technical note will provide definitions, distinguish the interventions and activities from each other, and suggest how they might complement each other.

CDP works closely with the [Accountability Framework Initiative](#) (AFi) to inform our understanding of good practice for addressing deforestation and ecosystem protection. The Accountability Framework is a practical, consensus-based guide that brings together accepted international norms, best practices, and the expectations of commodity buyers, investors, and civil society. It is a single integrated resource for action to address the deforestation, conversion, and human rights impacts of supply chains.

2. Deforestation/conversion free supply chains and sourcing area risk

2.1. What is DCF/non-DCF status?

To consider commodity production, sourcing, or financial investments as deforestation and/or conversion free (DCF), they must not cause or contribute to any deforestation/conversion of natural ecosystems ([based on the AFI definition](#)).

DCF commodity volumes are quantities companies can trace to a sourcing area where no or negligible deforestation/conversion has occurred, since an appropriate cutoff date (see [AFi guidance on setting cut-off dates](#)). Companies should only claim the DCF status of materials or products after carrying out the necessary due diligence and seeking credible, independent assurance.

2.2. Assessing DCF status of sourcing areas

To eliminate deforestation and conversion of natural ecosystems, companies must ensure the materials in their supply chains are from deforestation and conversion free sourcing areas. Achieving this necessitates companies determine, monitor, and verify sourcing areas' DCF status to assess and address supplier non-compliance with their DCF commitments. Proforest, in collaboration with AFI, CDP and Trase, has identified the following [four steps to confirm that a material or product is DCF](#):

1) Trace product volumes to sourcing area at a scale needed to confirm status

Knowing and controlling the origin of materials is the first step in confirming that materials are DCF. Companies may employ a combination of supply chain mapping and traceability activities to establish where and from who materials are sourced.

2) Confirm production area was not converted after the cut-off date

Monitoring systems involving geospatial and ground-based tools, or in-person site visits may be used to confirm that no conversion has occurred before a designated cut-off date. Business-to-business disclosure of reliable monitoring data, acquired through supply chain mapping and traceability activities, can also be used to this end.

3) Monitor remaining natural vegetation and respond to new conversion

Similar monitoring systems to those used to confirm no-conversion may be used to identify any remaining natural vegetation within the production area. Regular monitoring systems can then confirm that no further conversion is taking place.

4) Independently verify the methodology, data, and claims as credible and accurate

Accredited certification bodies can provide independent, third-party verification of the accuracy and credibility of companies' DCF claims. Certification must confirm that an appropriate method was adopted and followed in assessing the sourcing area, and that monitoring data is complete and accurate (More detail on sustainable commodity certification is provided in Section 7). Many other organisations offer independent verification of DCF claims. Note, there is active ongoing discussion to clarify how to determine whether a third party can provide credible verification.

2.3. Risk related to sourcing areas

The CDP risk assessment and identification modules collect data on risks related to financial or strategic impacts to businesses caused directly or indirectly by deforestation/conversion.

In the context of DCF supply chains, risks related to sourcing areas refers to the likelihood that material produced in or sourced from an area is non-compliant with a company's DCF commitments or obligations. Different sourcing areas will be associated with varying levels of deforestation and conversion risk, based on several factors, including the severity of the deforestation/conversion that is occurring and whether mitigating activities are in place.

2.4. Good practice for determining the risk of sourcing areas

Companies should have processes to identify the risk of deforestation or conversion of other natural ecosystems in areas they are sourcing from. Good practice involves assessing their DCF status.

Supply chain mapping, traceability and monitoring activities may be used to gather information needed to assess risk of deforestation and/or conversion. Business-to-business disclosure of suppliers' certifications and independent audits can be used to determine areas of low or negligible deforestation and/or conversion risk.

A sourcing area may be considered to have no or negligible risk of deforestation/conversion when a company defines 'no/negligible risk' and uses an [independently verified methodology](#) to regularly review risk in line with this definition to provide evidence of no or negligible risk of deforestation/conversion at a national, sub-national or more granular level.

There is no universal threshold for no or negligible risk, as it varies depending on the specific commodity and sourcing area. Companies may use the current definition of "minimal level" provided by joint [AFi, GHG protocol and SBTi FLAG guidance](#) to aid them in determining whether their areas are of no or negligible risk of deforestation/conversion:

"The Accountability Framework defines 'minimal level' as a small amount of deforestation or conversion that is negligible in the context of a given site because of its small area and because it does not significantly affect conservation values of natural ecosystems or the services and values they provide to people. In determining whether land use change is minimal, deforestation and conversion should be assessed cumulatively over space and time".

The risk assessment should consider all relevant risk attributes (i.e., the known social and environmental risks related to sourcing that commodity in that region, supplier size and reputation). Companies should not assume similarities between sourcing the same commodity from different regions, or different commodities from the same region.

Sources such as the [Accountability Framework 'Deforestation Risk Toolset'](#) comprising three publicly available resources (Global Forest Watch, Trase and the Accountability Framework) provide detailed guidance on assessing risk, mapping supply chains and monitoring results.

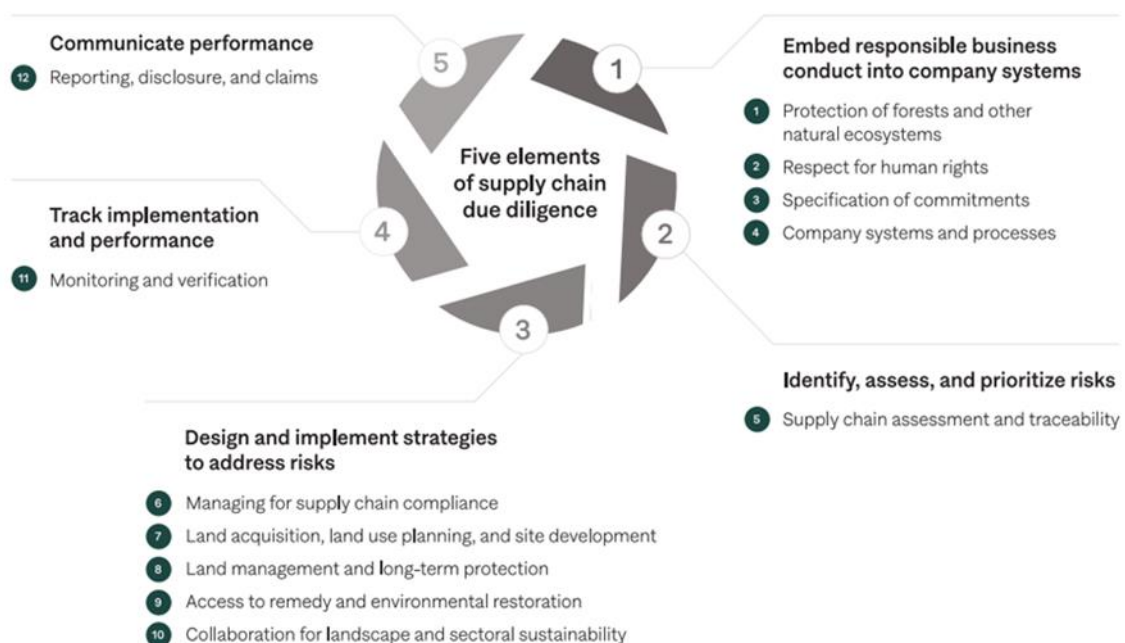
3. Supply Chain (SC) Due Diligence

3.1. What is SC due diligence?

SC due diligence is a routine and ongoing risk management process that companies conduct to identify, prevent, and mitigate environmental and social risks in their supply chains. Procedures should enable companies to proactively address their environmental and human rights impacts.

Interventions and activities to address the risks associated with commodity sourcing may be one among many aspects of a company's broader SC due diligence process. Figure 1 illustrates how the activities covered in this technical note fit into the SC due diligence process, i.e., 'supply chain mapping' and 'traceability' occur at **step 2: Identity, assess and prioritize risk**, and 'monitoring', 'verification' and 'certification' fall under **step 4: track implementation and performance**.

Figure 1. AFi Framework core principles: SC due diligence process (AFi, 2019).



3.2. The role of monitoring in SC due diligence

Monitoring is an essential element of the SC due diligence process, as it allows companies to track the implementation of and progress towards fulfilling human rights and environmental protection obligations.

However, SC due diligence systems involve more than just this step, and for data to be meaningful, **monitoring should be paired with robust DCF policies, targets, and commitments to measure progress.**

3.3. The role of sourcing area risk assessment in SC due diligence

As part of a comprehensive SC due diligence system, companies may use supply chain assessment, traceability, and monitoring activities to determine risk by sourcing area i.e., identify, assess and prioritise risks in their supply chain. As Figure 1 demonstrates, risk assessment must be accompanied by policies and control mechanisms to mitigate and prevent issues, and strategies to address non-compliance.

4. Supply chain mapping

4.1. What is supply chain mapping?

Supply chain mapping is a process where companies identify the actors at each stage of their supply chain and the relationships between them to gather information needed to assess risk and ensure compliance.

4.2. How are supply chains mapped?

Mapping can be conducted in-house or by commercial supply chain mapping services. First-tier (direct) suppliers may be identified initially, followed by second and third-tier suppliers, to establish a more granular, comprehensive understanding of the supplier network. Mapping may involve collecting information such as supplier's location, workforce characteristics, certifications held, dates and results of audits and status of improvement plans.

[Blockchain technology is an emergent tool](#) that allows companies to overcome existing challenges of mapping highly complex supply chains by increasing the visibility of real-time product transactions between up, mid, and downstream suppliers.

4.3. How does this differ from traceability?

Supply chain mapping and traceability are parallel concepts often used interchangeably, leading to confusion. The critical difference between the two concepts, is that supply chain mapping focuses on the supply chain **actors**, while traceability pertains to batches (i.e., a specific volumes) of **materials**. Establishing if a product or material is DCF necessitates companies conduct both activities to link suppliers in particular locations to batches of materials.

4.4. Good practice for supply chain mapping

- ▼ Acquire direct and indirect supplier information needed for risk assessment by engaging direct suppliers (engage beyond first-tier suppliers if further details are needed to assess risk).
- ▼ Create supply chain maps for each material/product containing forest-risk commodities.
- ▼ Where there is a higher known risk of illegality in the country of harvest, mapping should be more detailed. For instance, if risks of illegal harvesting and trade differ between forest concessions or sub-national regions, it is good practice to go beyond the country level to identify all links in your supply chain back to the point of origin (i.e., manufacturers, traders, distributors, mills, processors, logging companies, and forest management units).
- ▼ Reassess supply chain maps annually or whenever changes to your supply chain occur and implement requirements that suppliers report relevant changes.

5. Traceability

5.1. What is traceability?

Traceability refers to the ability to follow a product or its material components from one stage of the supply chain to another, i.e. from production through processing, manufacturing, and distribution ([See AFi guidance on supply chain management](#)).

5.2. Why is traceability important?

Traceability to origin is a vital tool for determining how and where forest-risk commodities are produced and, therefore, an essential step in confirming whether an area is DCF. With this information, companies can determine whether the production and processing units of origin comply with their DCF sourcing commitments and identify issues needing resolution.

Depending on the risk of deforestation, companies may institute more or less granular traceability. Tracing a product to the country or province level may be sufficient for areas where there is negligible risk of conversion. However, where there is a risk that the land was converted after a specified cut-off date or there is ongoing conversion, traceability down to a defined sourcing area (e.g., landscape, village, cooperative) or individual production units (e.g. farm, smallholding, concession) is required.

5.3. How can I trace the origin of a commodity?

There are several approaches to tracing the origin of a commodity; companies can establish internal systems, engage in business-to-business disclosure, and/or utilise open data platforms, such as [TRASE](#), to link purchases to production regions for different commodities. The combination of methods employed may vary depending on a company's position in the supply chain and its suppliers' existing control mechanisms. Note that some regulatory environments have specific traceability requirements, such as the [EU Deforestation Due Diligence Regulation](#).

AFi operational guidance states that buyers in any supply chain position must adopt one or more of the following methods to establish an adequate level of traceability:

- ▼ tracing materials back to the production or processing units of origin;
- ▼ tracing materials back to an intermediate supplier that has effective control mechanisms in place to guarantee traceability to origin and can provide sufficient evidence of this to the buyer;
- ▼ utilizing credible assurance systems (e.g., credible certification systems) that reliably tie raw material supplies to compliant production units; or
- ▼ tracing materials to landscapes or jurisdictions where performance on social or environmental issue(s) is demonstrably compliant with buyer's ethical sourcing commitments.

5.4. Which commodities are considered traceable?

All the forest-risk commodities that companies can report on through their CDP response (Timber, Soy, Cattle, Cocoa, Rubber, Coffee) are considered traceable. However, different challenges exist for each commodity, and good practice approaches may vary.

5.5. Can certification be used to confirm traceability?

Companies can use chain of custody (CoC) certification to confirm (i.e., demonstrate and verify) the traceability of materials/products. CoC certification standards have different models for the control of certified materials/products along the supply chain and can be used to confirm varying levels of traceability (See Section 7 for more details on CoC models and traceability).

6. Verification

6.1. What is verification?

Verification is used to assess compliance and performance of forest management units or supply chain controls against a defined set of requirements, to validate the fulfilment of stated commitments, standards, or targets. This process usually comprises audits of forest management units and processing facilities, including field inspections, and reviews of documentation and management systems.

6.2. Is this different from monitoring?

Verification and monitoring are related processes that together form a system through which companies can deliver credible and consistent information to buyers, investors, and civil society.

Monitoring in this context refers to continuous and systematic data collection on specific indicators to record and evaluate the status of policies, practices, systems, and other elements in a company's supply chain. **Verification** then utilizes monitoring data and other information sources to validate compliance and performance levels and provide independent assurance in the case of third-party verification.

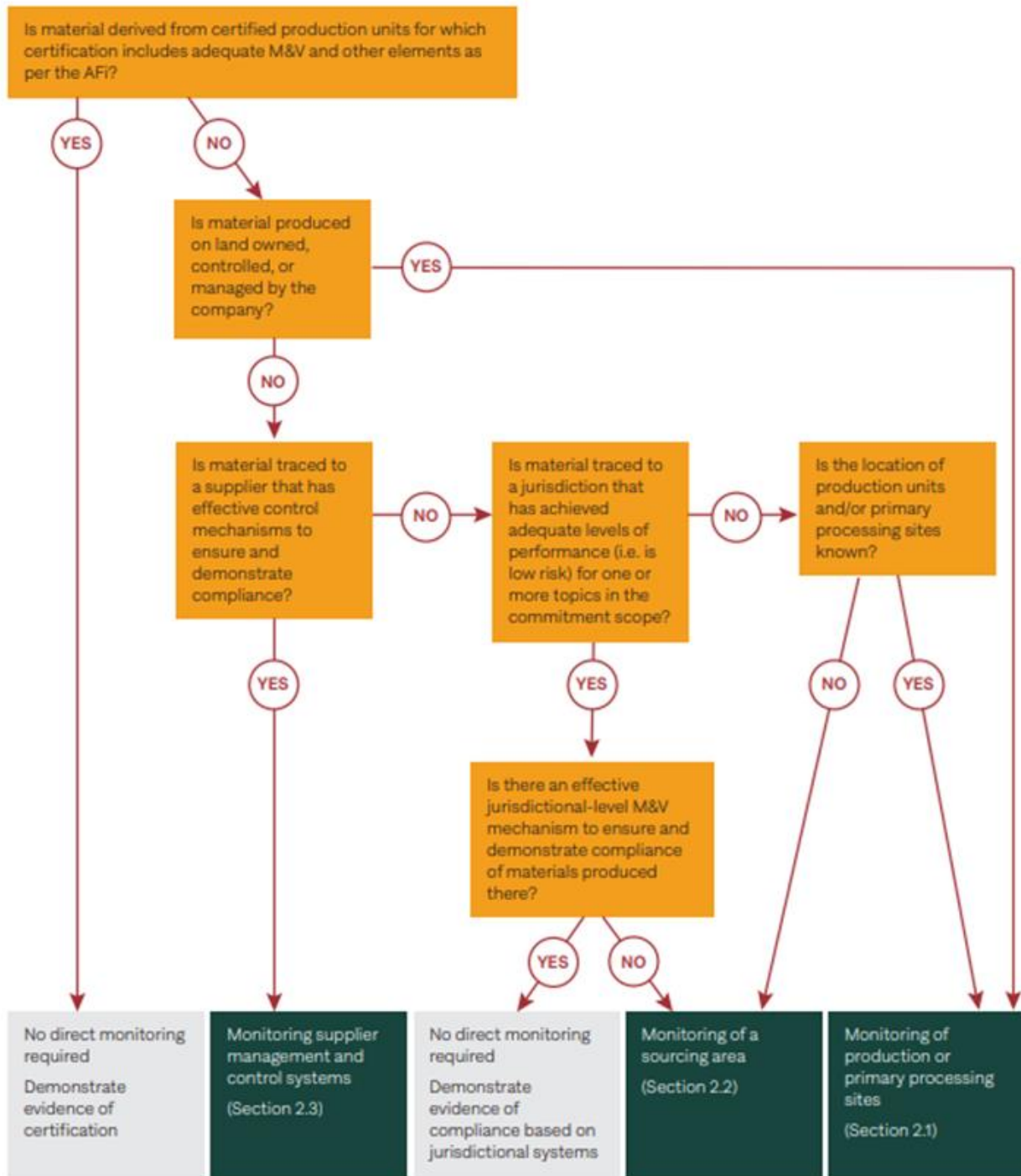
Refer to figure 2 for further guidance on the different levels of monitoring that may be required depending on whether companies have sourced materials from a certified production unit.

6.3. Differences between first, second and third-party verification

There are several levels of verification available to companies, each with potential value to company processes. While any combination of the three can be used to implement commitments on deforestation and ecosystem protection, third-party verification is the most credible and reliable.

First-party verification	Second-party verification	Third-party verification
Conducted by the company itself but carried out by personnel not involved in the design or implementation of the operations being verified.	Conducted by a related entity with interest in the company or operation being assessed, such as the business customer of a production/processing operation or a contractor that also provides services other than verification.	Conducted by an independent entity that does not provide other services to the company. Accredited certification bodies can provide third-party verification
Sometimes referred to as an internal audit.		Referred to as external assurance.
Results of such audits are often used internally by the company to guide its decision-making.		Output of third-party verification usually includes public disclosure of the verification methodology and results.

Figure 2. Determining monitoring approaches to assess progress towards fulfilment of commitments (AFi, 2019).



7. Certification

7.1. What is certification?

Commodity certification is a control system companies use to assess and manage raw materials or products at their origin and/or as they move through a supply chain. The relevant types of certifications for verifying compliance with DCF commitments are:

Forest management/sustainable production certification: verifies the sustainability of practices at the production unit where the forest risk commodities originate.

Chain-of-custody certification: verifies traceability claims that can link raw materials or products with their origin.

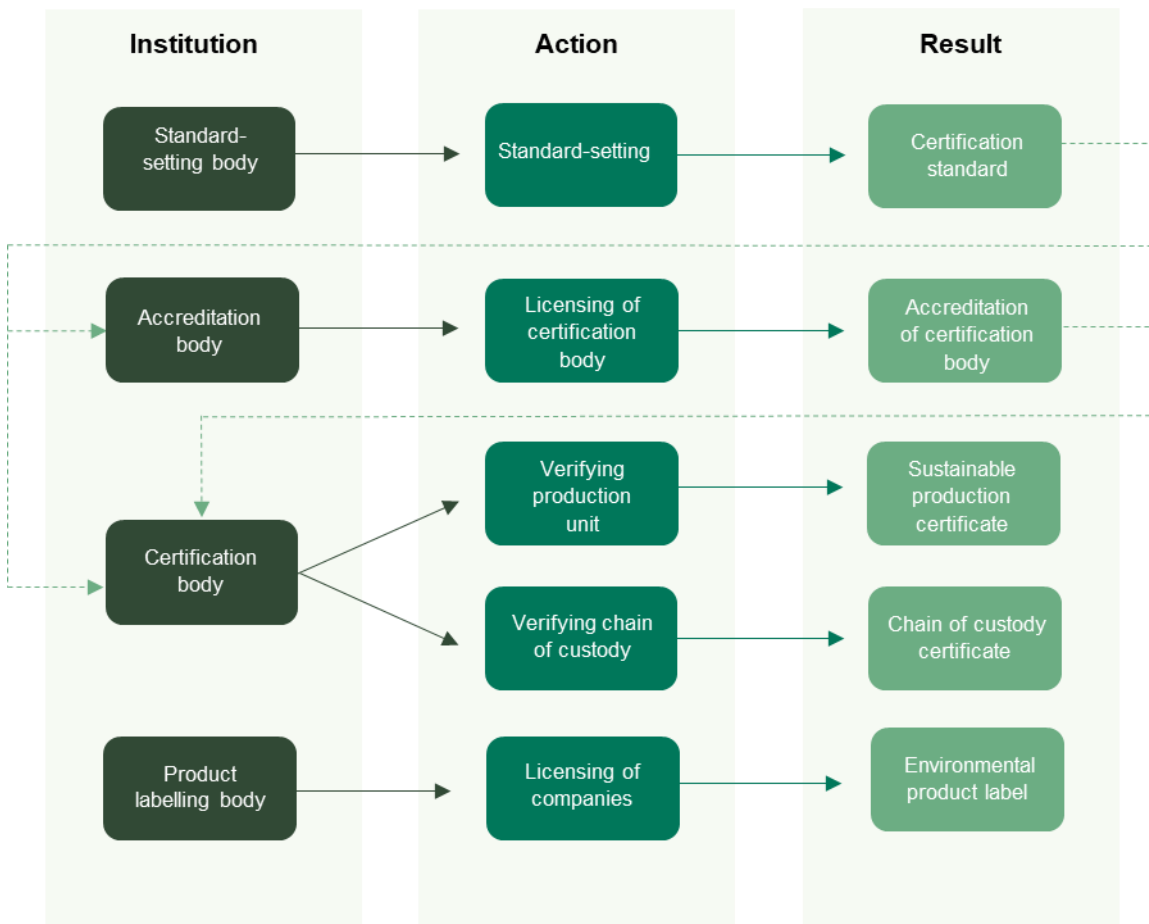
Certification is not one single operation, but a process. A **certification scheme** is the general term used to refer to the overall structure within which several institutions perform distinct functions.

As figure 3 demonstrates:

- ▶ An independent **standard setting body** develops the certification standard.
- ▶ A separate **accreditation body** evaluates the competence of the **certification body** and licenses it to operate.
- ▶ The independent, accredited **certification body** conducts audits of production units and/or the chain of custody of raw materials, to verify compliance with the certification standard.
- ▶ **Product labelling bodies** issue companies a license authorizing the use of environmental labels on their products to indicate compliance with standards.

Figure 3. Certification scheme structure (adapted from [iied](#), 2001).

Certification scheme



7.2. What is 'chain of custody'?

Chain of custody (CoC) is the sequence of ownership that occurs as a material/product travels through the supply chain from origin to end use. Often CoC and traceability are used interchangeably; however, they can be distinguished in that **traceability is the process or activity through which companies can demonstrate CoC.**

Types of 'chain-of-custody' models

CoC models are the different systems used to track the movement of products between organisations in the supply chain. As Figure 4 outlines, CoC models vary in approaches to establishing traceability and mixing certified and non-certified products.

Figure 4. Chain of custody models (adapted from [ISEAL, 2016](#))

	Identity of product/ component origin known	Accepts mixing of certified and non- certified content	Physical traceability of content	Traceability linked to volume reconciliation over a set period	Volumes of certified material sold equal to that bought
Identity preservation (‘hard IP’ or ‘track and trace’)	✓	✗	✓	✗	✓
Segregation (‘bulk commodity’ or ‘soft IP’)	✓ <i>Not as specific as IP</i>	✗	✓	✗	✓
Batch level mass balance (‘percentage blending’, ‘batch blending’)	<i>Depends (Lost with physical Blending)</i>	✓	✓	✗	✓
Site level mass balance (‘controlled blending’, ‘factory gate mass balance’)	<i>Depends (Lost with physical Blending)</i>	✓	✓ <i>Only to point of blending</i>	✓	✓
Group level mass balance (‘multi-site’)	<i>Depends (Lost with physical Blending)</i>	✓	<i>Depends</i>	✓	✓
Certificate Trading (‘Book-and-claim or ‘credit trading’)	✗	✓	✗	✓	✓

Segregated or identity-preserved models are more robust because they prohibit the mixing of certified and non-certified materials, enabling, to varying degrees, the tracing of certified material inside end products back to a certified forest.

Mass-balance and credit trading approaches demonstrate that a company has sold the same amount of certified material it bought within a specified period. These approaches allow for the mixing

of certified and non-certified materials, and proportions of each are not always controlled or recorded. Although companies use credit trading, like a CoC certification, to make sustainability claims and meet sourcing targets, it is technically not a CoC model as end products do not contain any known certified product, and there is no physical traceability to the origin.

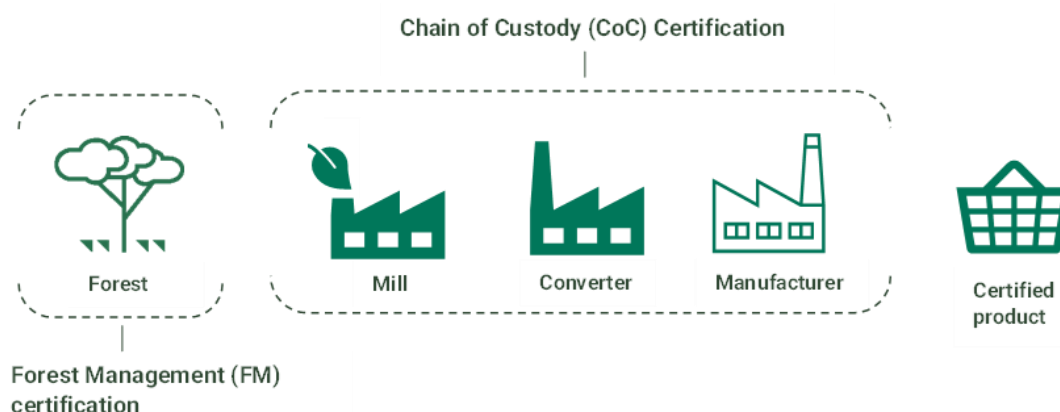
How do I determine which chain of custody model applies to my commodity?

The decision of which CoC model to adopt depends on several factors; companies should look to industry standards, relevant legislation, and operational guidance from initiatives such as AFI when choosing an appropriate model for their commodity.

7.3. Good practice for certification

Good practice for certification depends, to some extent, on companies' supply chain position (See figure 5), the commodities they produce/source, and their operating context. Actors at different supply chain stages may need to obtain specific certifications and/or engage with their suppliers to collect evidence of certificates held. Where legislation requires verification that standards have been met, companies should consider whether the certification scheme allows them to demonstrate legal compliance.

Figure 5. Certification in the supply chain (adapted from [GREENBLUE, 2023](#)).



Robust **certification schemes** use standards equivalent to [AFi's 12 core principles](#), that, for example, prohibit deforestation/conversion in supply chains and include AFI-aligned definitions, cut-off dates and human and labour rights protections. Companies should also consider if their chosen **certification body**:

- ▼ Is a legal entity, with a defined organizational structure
- ▼ Aligns with relevant standards for independent assurance, e.g., ISEAL, ISO/IEC 17021-1:2015, ISO/IEC 17065:2012, ISO 9001, and the Institute of Internal Auditors Global (IIA Global)
- ▼ Includes a quality assurance programme with a complaint procedure
- ▼ Has no conflicts of interest

For CoC certification, schemes requiring traceability systems that link product volumes to the performance of the production unit (i.e., segregated or identity-preserved) are considered good practice because they provide visibility of origin and assurance of whether deforestation/ conversion occurred during production.

Mass-balance or credit trading models contribute towards companies' fulfilment of ethical sourcing commitments. However, they do not demonstrate traceability to origin and require additional SC due diligence to confirm whether non-certified volumes in the supply chain are deforestation/conversion free.

CDP incentivizes using certification schemes that include a DCF requirement and additional measures to control uncertified volumes. Additionally, independent, third-party verification from an accredited certification body is deemed the most credible approach to confirm commodities meet the relevant sustainability standards.

7.4. Does certification differ for different commodities?

The topical scope of certification standards and criteria may vary between commodities, depending on the specific ecological and human rights concerns associated with its production. However, implementing commitments on deforestation and ecosystem protection, irrespective of commodity, involves following the good practice outlined in section 7.4.

The approach to controlling non-certified volumes varies for different commodities. For instance, timber certifications which allow the mixing of certified and non-certified materials, often require non-certified batches to comply with a form of 'controlled wood' standard, i.e., material must be from a known source, where risk has been evaluated and judged not to conflict with environmental and social commitments. In contrast, similar 'mass-balance' approaches used for other commodities do not always specify requirements for the non-certified volumes. Therefore, not all models that allow mixing are equivalent in the level of assurance they provide.

Different industries face varying challenges around demonstrating traceability to origin. Separating certified and non-certified materials can be highly costly and labour-intensive for commodities such as cocoa and palm oil. Some companies use a 'mass-balance' model in this context. Increasingly legislation and companies' DCF commitments demand full traceability to origin. As a result, industry leaders across all sectors strive to overcome these challenges and adopt segregated, and identity-preserved models for the commodities in their supply chains.

There remains a notable lack of certification schemes for cattle and associated products, with established standards failing to gain traction and achieve their desired impact. See Section 6, particularly Figure 2, for details on monitoring and verification approaches to assess progress towards fulfilment of commitments where materials are uncertified.

8. Useful Links

- ▼ [AFi, GHG Protocol, SBTi: Deforestation- and conversion-free supply chains and land use change emissions: A guide to aligning corporate targets, accounting, and disclosure, 2022.](#)
- ▼ [AFi: Deforestation and conversion, 2019.](#)
- ▼ [AFi: Operational Guidance on Monitoring and Verification, 2019.](#)
- ▼ [AFi: Operational Guidance on Supply Chain Due Diligence, 2019.](#)
- ▼ [AFi: Operational Guidance on Supply Chain Management, 2019.](#)
- ▼ [Client Earth: Getting to “deforestation-free” Clarifying the traceability requirements in the proposed EU deforestation regulation, 2022.](#)
- ▼ [Preferred by nature: ‘What is controlled wood?’, 2023..](#)
- ▼ [Proforest: Verified Deforestation and Conversion Free \(V-DCF\) Generic methodology and approach, 2022.](#)