OECD-FAO Public Consultation | 29 June – 29 July 2022

Draft OECD-FAO Handbook on Deforestation, Forest Degradation and Due Diligence in Agricultural Supply Chains

Background

PURPOSE OF THE PUBLIC CONSULTATION

As part of the development of the OECD-FAO Handbook on Deforestation, Forest Degradation and Due Diligence in Agricultural Supply Chains, the OECD and FAO are conducting a public consultation to ensure that the handbook benefits from the views and experiences of all stakeholders. The public consultation is open to all stakeholders from all countries, including businesses, industry groups, civil society organisations, trade unions, as well as academia, interested citizens, international organisations and governmental experts. This document contains the current draft text of the handbook. More information about existing work on due diligence in agricultural supply chains is available at https://mneguidelines.oecd.org/rbc-agriculture-supply-chains.htm.

HAVE YOUR SAY

Please submit your inputs no later than **29 July 2022 by responding to the** consultation survey.

The survey is in English but comments may be submitted in English, French or Spanish. Written submissions may be made publicly available. Data from the survey disaggregated as relevant by stakeholder group and geographic location may will also be made public. For the survey, you can opt for an anonymous or a public contribution (for more details see survey). Any questions can be addressed to RBC@oecd.org.

HOW YOUR INPUT WILL BE USED

The responses to this public consultation will contribute to the development of the handbook which is scheduled for release in Q1 2023. This handbook will build on the draft version available in this public consultation document.

YOUR DATA PROTECTION RIGHTS

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1 Introduction

The *OECD-FAO Guidance for Responsible Agricultural Supply Chains* (OECD-FAO Guidance) was published in 2016 with a view to helping enterprises observe existing standards for responsible business conduct in agricultural supply chains. By observing these standards, enterprises can mitigate their adverse impacts and contribute to sustainable development.

The OECD-FAO Guidance is an example of the growing recognition of the important role due diligence frameworks play in helping enterprises exercise responsible business conduct (RBC). Increasingly, businesses are incorporating due diligence processes in their sustainability and wider RBC strategies with a view to minimising the risk of negative social and environmental impacts in their operations and supply chains. Several governments have legislated, or are planning to introduce mandatory obligations of supply chain due diligence for businesses, with criteria including deforestation.

[Possible graphic illustrating relevant business strategies, with DD/deforestation tools highlighted]

The business decisions made by companies sourcing, processing and selling commodities often associated with deforestation or forest degradation, such as palm oil, soy, beef, cocoa, coffee, natural rubber or timber (among others) – including decisions over sourcing and relationships with suppliers – have a major impact on forests and the people who live in and depend upon them.

In practice, however, many businesses struggle to understand how the specific risks of deforestation and forest degradation can be manifested through their supply chains, and how they can address and mitigate these impacts through risk-based due diligence.

The *OECD-FAO Handbook on Deforestation, Forest Degradation and Due Diligence in Agricultural Supply Chains* aims to help companies to embed deforestation and forest degradation considerations in due diligence procedures. It builds on the risk-based due diligence framework described in the *OECD-FAO Guidance for Responsible Agricultural Supply Chains* and the *OECD Due Diligence Guidance for Responsible Business Conduct*. It provides background information, examples and practical actions that businesses can take when implementing each of the steps of the due diligence process. It draws on and provides links to current best practice, including existing tools, resources, data, and metrics that are available to support businesses when they consider how best to avoid deforestation and forest degradation.

This draft Handbook aims to apply the concept of risk-based due diligence to the challenge of combating deforestation – two activities that originally remained largely separate, but are now increasingly being considered together. We hope that enterprises, governments, civil society and other stakeholders will find it useful.

Box 1.1. Who this Handbook is for?

The Handbook has been designed for enterprises in the food, agricultural or forest sectors which source or use commodities and products whose production may be associated with deforestation or forest degradation. While the Handbook is primarily concerned with the impacts on forests in the upstream segment of the supply chain (land use, planting and harvesting), it can be used by businesses of any size along the entire value chain from production to retail.

We recognise that many larger companies will already have incorporated risk-based due diligence approaches in their policies and procedures, but many small and medium-sized enterprises (SMEs) may not. SMEs generally have fewer resources than their larger counterparts to devote to establishing, implementing and monitoring due diligence policies, though at the same time they generally possess simpler supply chains. Each of Chapters 4 to 8, which describe the due diligence approach as applied to deforestation, includes a separate box with suggestions for SMEs.

Box 1.2. Forests, natural ecosystems and conversion

The due diligence framework described in this Handbook applies both to deforestation and forest degradation. For ease of reading, the term ‘deforestation’ is generally used to apply to both.

Forests are, of course, not the only natural ecosystem that may be adversely affected by conversion to agricultural production. Savannah, grasslands and wetlands, among others, can also potentially be at risk. Many due diligence policies adopted by enterprises now cover the conversion of these ecosystems alongside forests, and incorporate references to, for example, the protection of high-conservation value and high carbon stock areas.

While this Handbook focuses only on forests, the due diligence steps it describes are mostly also applicable to the conversion of other natural ecosystems.

A full list of definitions used in this Handbook is included in Annex A.

2 Forests and deforestation

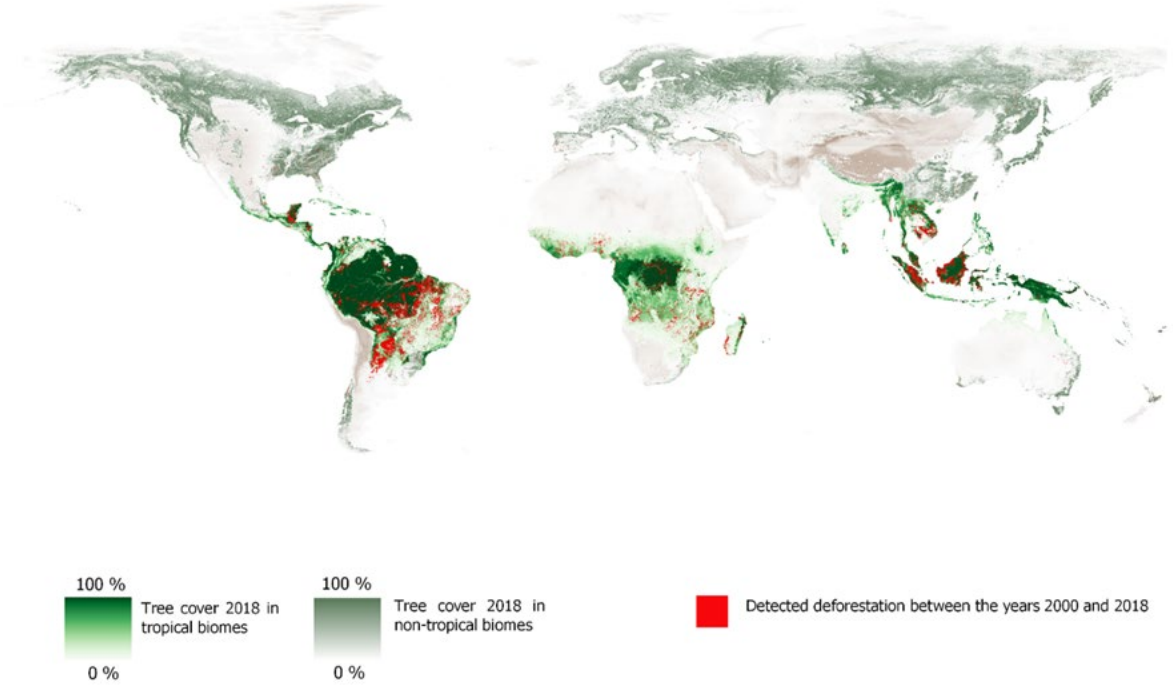
This chapter provides the background. Why do we care about deforestation and forest degradation? How big a problem is it? Why is it associated with agricultural production? And what is being done to tackle it?

Healthy forests are vital to sustainable growth and development. Forest ecosystems are the largest terrestrial carbon sink, critical to preventing and mitigating climate change; they also regulate rainfall and water cycles and help maintain stable local environments. Forests contain more than 60,000 different tree species and provide habitats for a large majority of animal species. Approximately 1.6 billion people depend on forests for their livelihood, including about 70 million indigenous people. (FAO, 2020a[1]) (FAO, 2020b[2]).

In 2020, 31% of the world's land area – 4 billion hectares – was covered by forest, and of this total, about 45% was located in the tropics. Since 1990, an estimated 420 million hectares of forest has been lost through deforestation. From 2015 to 2020, the rate of deforestation was estimated at 10 million hectares per year, though thanks to afforestation and reforestation in some regions, the net rate of deforestation was about half this. Loss of forests, particularly natural forest, was especially high in the tropics (see Fig. 2.1), a matter of particular concern given topical forests' role in supporting an estimated two-thirds of the world's biodiversity.

Forest degradation as a result of logging operations, wood fuel extraction, shifting agriculture, grazing or fires, impacts forest ecosystems in tropical, temperate and boreal biomes alike. While degradation is difficult to measure, studies suggest that it accounts for about a third of the overall impact, measured in terms of carbon emissions. (Federici, 2015[3]). In all of these cases the forest retains the capacity to regrow, but these activities typically reduce forest cover faster than it naturally recovers.

Figure 2.1. Deforestation, 2001-18



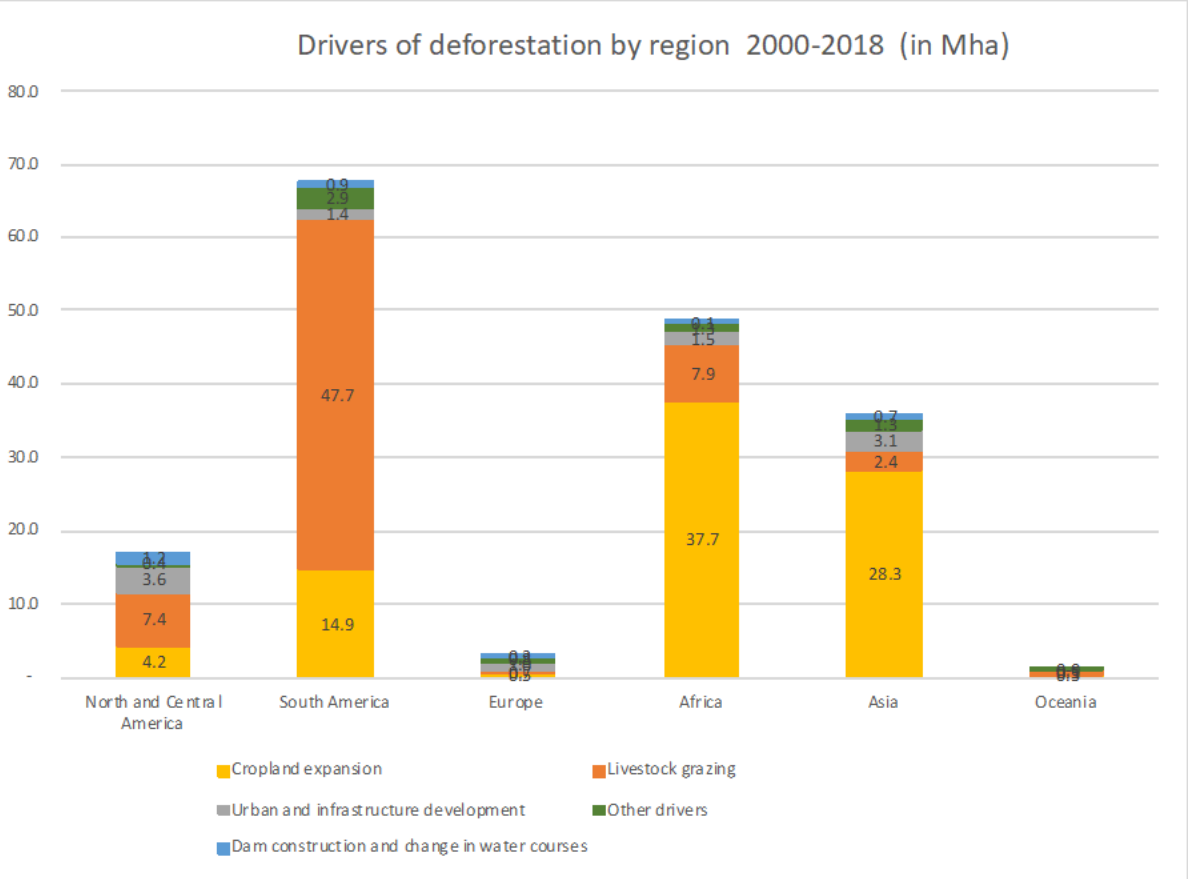
Source: (FAO, 2022[4])

Unless the targets set out in the Sustainable Development Goals ("promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally" – SDG15.2) are achieved, climate goals – both mitigation and adaptation – will not be met, food supply chains will be undermined, many livelihoods will be lost and habitats and biodiversity will be irreversibly damaged.

Impacts on forests of agricultural and timber production

Agricultural expansion is the main global driver of deforestation. FAO's global Remote Sensing Survey of forest resources – one of the latest of a growing number of studies – has estimated that over the period 2000–18 almost 90% of deforestation world-wide was due to agricultural expansion, including 52% from cropland expansion and 38% from livestock grazing (FAO, 2021[5]). Figure 2.2 shows the main drivers by region.

Figure 2.2. Main deforestation direct drivers across the world's regions



Source: FAO. 2022. FRA 2020 Remote Sensing Survey. FAO Forestry Paper, No. 186. Rome. https://doi.org/10.4060/cb9970en

A range of factors underlie the linkage between deforestation and agricultural production. Global population growth has increased demand for foodstuffs. Income growth and urbanisation have led to changes in lifestyles and diets, as people consume lower volumes of staple foods and more meat, dairy products, fruit and vegetables, and processed foodstuffs. The liberalisation of trade and falling transport costs have underpinned the growth of global supply and value chains; an estimated one-third of agri-food exports are now traded within global value chains. Accordingly, while the act of deforestation takes place at specific locations upstream, firms and suppliers in downstream businesses can play a critical role in ensuring that the risk of deforestation is minimised within the commodity supply chains on which they rely.

A significant proportion of the clearance of forests for agriculture has been illegal. A comprehensive survey published in 2021 estimated that 69% of the conversion of tropical forests for agriculture that had taken place between 2013 and 2019 had been conducted in violation of national laws and regulations (Forest Trends, 2021[6]). Illegal logging for timber also remains a serious concern in many countries; the value of illegally logged timber in international trade is estimated at $50–150 billion a year. (World Bank Group, 2019[7])

Key commodities

As a result of the indirect drivers discussed above, tropical deforestation for agriculture has been mainly linked to a small group of commodities (see Box 2.1), though these have changed over time. Neither supply nor demand is fixed, and growth in demand for new agricultural products can drive deforestation in other contexts, including in temperate climates.

Box 2.1. Key commodities associated with deforestation

[*For consideration: this section could be replaced by or accompanied with graphic*]

Beef, dairy products and leather from cattle is the single largest commodity group associated with deforestation, due to demand for pasture and feed. Less heavily internationally traded than other commodities listed here, overall global consumption is rising only slowly.

Soybeans are cultivated primarily for animal feed, but also for human consumption and industrial purposes, including for transport biofuels. Production has increased very rapidly, mainly as a result of rising levels of meat consumption (particularly pork) and demand for renewable energy, and a high proportion is internationally traded.

Like soy, the production and trade of palm oil has increased rapidly over recent decades. Used as a cooking oil and for biofuel production, palm oil is also present in a very wide range of processed foods, cosmetics and detergents.

Timber and wood products have a very wide range of uses, including for construction, furniture and paper and card, and also for energy, in residential heating and modern industrial facilities.

The main use of **cocoa** is in the manufacture of chocolate. Of all the commodities listed here, it is the crop most extensively produced by smallholder farmers. The production of coffee beans is also dominated by smallholder farmers, though less so than cocoa.

Natural rubber has tended to attract less attention than other commodities, but is increasingly recognised as a growing driver of deforestation in some countries.

Other commodities identified as linked to deforestation, though on a smaller scale than those listed above, include maize, sugar cane, coconut, tea, rice and avocados. In practice the production of almost any crop or form of pasture has the potential to contribute to deforestation.

In Latin America forest loss is mainly associated with conversion to cropland or grassland for the production of beef and soy. In Southeast Asia, palm oil and timber production are linked to most of the permanent forest loss, and palm oil is also growing in significance in Africa. Though less significant at the global scale, cocoa is an important driver of deforestation in West Africa. Alongside cocoa, the production of coffee and rubber is gaining in importance as drivers of deforestation, as global demand for both commodities grow.

Source: (Pendrill, 2019[8]), (Goldman, 2020)

Main global initiatives

At the same time, many efforts are being made to decouple commodity production from deforestation; it is the way in which they are produced rather than the commodities themselves that cause the

problems. Table 2.1 summarises the main voluntary global initiatives on deforestation associated with agricultural and timber supply chains made since 2010.

Table 2.1. Main voluntary international initiatives on deforestation

Date	Organisation / Initiative	Commitments
2010	**Consumer Goods Forum** (global industry network of retailers, manufacturers and service providers)	Zero net deforestation in membership's supply chains by 2020 in key commodities: soy, palm oil, timber / paper and pulp, beef.
2012	**Tropical Forest Alliance** (global partnership of governments, companies, civil society UN agencies)	Reduction in tropical deforestation associated with the sourcing of commodities such as palm oil, soy, cattle products and paper and pulp. Promotes and supports regional multi-stakeholder initiatives.
2014	**New York Declaration on Forests** (signatories now include over 200 national and local governments, companies, and civil society, community and indigenous peoples' organisations)	At least halve the rate of loss of natural forests globally by 2020, strive to end natural forest loss by 2030; support private-sector goal of eliminating deforestation from production of agricultural commodities by no later than 2020; significantly reduce deforestation derived from other economic sectors by 2020.
2015	UN Sustainable Development Goals	SDG 15.2: "By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally." (Also SDG 12.6: "Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.")
2020	Consumer Goods Forum Forest-Positive Coalition of Action	Coalition of major companies aiming to support deforestation- and conversion-free businesses through multi-stakeholder, integrated land use initiatives in key production landscapes. Commodity-specific roadmaps for action for soy, palm oil, cattle and pulp and paper.
2021	**Glasgow Leaders' Declaration on Forests and Land Use** (signed by 141 countries at the 26th UN Climate Change Conference (COP26))	"Work collectively to halt and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation". Specific commitments include to: "facilitate trade and development policies, internationally and domestically, that promote sustainable development, and sustainable commodity production and consumption, that work to countries' mutual benefit, and that do not drive deforestation and land degradation".
2021	**Forest, Agriculture and Commodity Trade (FACT) Dialogue Roadmap for Action** (statement by 27 governments and EU, (representing largest producers and consumers of internationally traded agricultural commodities) at COP26)	Aims to promote sustainable development and trade of agricultural commodities while protecting and managing sustainably forests and other critical ecosystems; Includes indicative actions on trade and market development; smallholder support; traceability and transparency; and research, development and innovation.

It is notable that all the targets adopted before 2020 have been missed. However, they have helped to stimulate action by a wide range of individual companies producing, trading and using commodities associated with deforestation. Commitments to eliminate or reduce deforestation in corporate supply chains have become common in companies trading in and using timber, palm oil and cocoa; they are less common for other commodities. An analysis of 675 companies in 2021 (those disclosing forest risk in their supply chains to CDP) found that 66% possessed a policy related to deforestation, while 38% had a general or commodity-specific company-wide no-deforestation/conversion policy. (CDP/AFI, 2022[9])

A number of consumer countries have seen the emergence of industry alliances aimed at ensuring the entire national market is supplied by certified sustainable commodities – particularly palm oil and cocoa – by a target date; sometimes these include governments too. Industry alliances, sometimes including governments, have also developed in several producer countries; examples include the Amazon Soy Moratorium in Brazil, and the Zero-Deforestation Agreement on Palm Oil in Colombia. Several financial institutions have adopted commitments not to provide finance for activities associated with deforestation. The evidence of the linkage of agricultural production with deforestation has also stimulated the development and uptake of commodity-focused multi-stakeholder roundtables and engagement platforms for collective action, and voluntary sustainability standards and associated certification schemes. A number of producer countries have also developed their own national standards and certification schemes for specific commodities.

Legislation on deforestation and supply chain due diligence

Building on the general rise in interest in means of promoting responsible business conduct, governments are increasingly legislating to introduce obligations on enterprises to conduct due diligence to address a range of risks in supply chains. In response to rising concern over climate change and global deforestation, and the failures, or slow progress, of many of the initiatives mentioned above, some of this legislation directly affects, or is intended to affect, enterprises involved in supply chains for commodities often associated with deforestation.

To date, legislation that may require enterprises to establish due diligence systems in order to identify, prevent and mitigate their impact on deforestation and forest degradation has taken one of two forms:

- A general corporate obligation of due diligence, applying to an enterprise's entire operations and supply chains, not specific to any sector or product, and not linked to placing products on the market.
- A requirement for due diligence to be undertaken before specified products can be placed on the market, imported or exported.

Annex B summarises the legislative instruments in place or in preparation at the time of publication that include obligations on enterprises to conduct due diligence (or similar approaches) with regard to deforestation, or wider criteria that could include deforestation. The implementation of the due diligence steps described in this Handbook should help enterprises to meet many of these legislative obligations.

3 Due diligence in agricultural supply chains

This chapter introduces the concept of due diligence. Building on the *OECD-FAO Guidance for Responsible Agricultural Supply Chains*, it outlines the essential characteristics of due diligence as applied to the specific case of deforestation.

"Due diligence" is understood as the process through which enterprises can identify, assess, mitigate, prevent and account for how they address the actual and potential adverse impacts of their activities as an integral part of business decision-making and risk management systems. In recent years due diligence approaches have been increasingly adopted by enterprises to identify, prevent, mitigate and account for the risks of adverse impacts on the environment, human rights and social and labour standards associated with their operations and supply chains.

The ***OECD-FAO Guidance for Responsible Agricultural Supply Chains***, on which this Handbook is based, is a globally recognised framework developed by business, policy-makers, worker representatives and civil society to operationalise risk-based due diligence and promote development in the agricultural sector (OECD-FAO, 2016[10]).[1] It helps companies, governments and other stakeholders to prevent and mitigate risks through managing adverse impacts related to sourcing, and directing business-related impacts into better development outcomes (OECD-FAO, 2021[11]).

The OECD-FAO Guidance can be applied to all enterprises operating along agricultural supply chains, including domestic and foreign, private and public, small, medium and large-scale enterprises. It covers upstream and downstream agricultural business from production and trade to retail. Several areas of risk arising along agricultural supply chains are addressed, including human rights, labour rights, public health and safety, food security and nutrition, tenure rights over and access to natural resources, environmental protection and sustainable use of natural resources, animal welfare, governance, and the transfer of technology and innovation.

Its key features include:

- A model enterprise policy, outlining the cross-cutting standards that enterprises should observe to build responsible agricultural supply chains.

[1] The OECD-FAO Guidance built upon existing standards for responsible business conduct, including the *OECD Guidelines for Multinational Enterprises* (OECD, 2011[21]), the UN *Guiding Principles on Business and Human Rights* (UNGPs) (UN, 2011[22]), *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* (VGGT) (FAO, 2012[24]) and the UN Committee on World Food Security's *Principles for Responsible Investment in Agriculture and Food Systems* (CFS, 2014[23]).

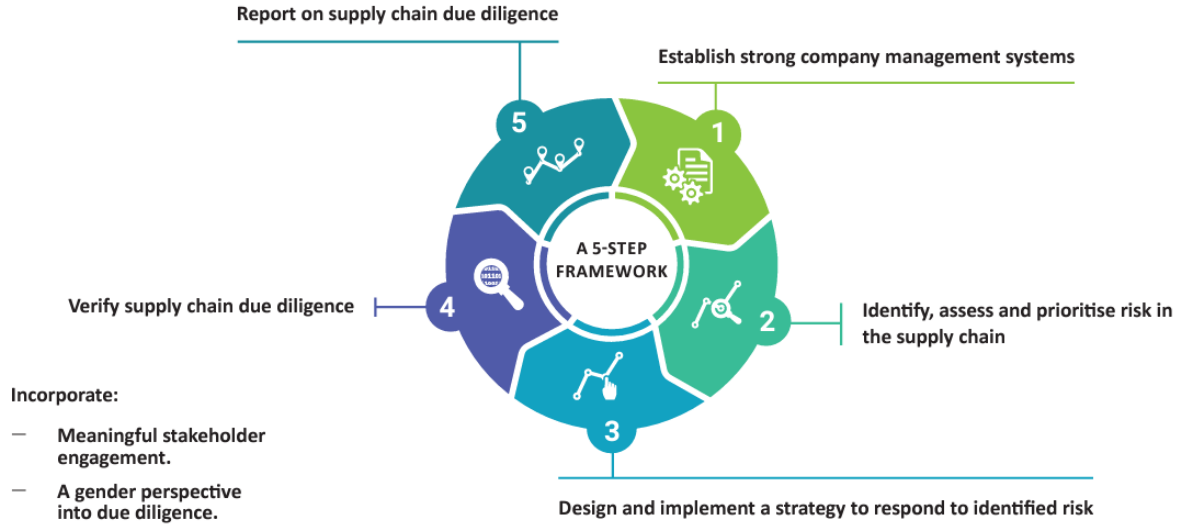
- A framework for risk-based due diligence, describing the five practical steps that enterprises should follow to identify, assess, mitigate and report on work to address the adverse impacts of their activities.
- An outline and description of the major risks faced by enterprises in the agricultural sector, highlighting measures for mitigating these risks.
- Examples of engaging with and addressing development vis-à-vis vulnerable groups, such as indigenous peoples, outlining how companies can support Free, Prior and Informed Consent (FPIC).

The protection of forests and the avoidance of deforestation are mentioned on several occasions in the OECD-FAO Guidance, but are not discussed in detail. As such, this Handbook fills a gap in knowledge by using the due diligence framework and approach in the OECD-FAO Guidance to drill down on deforestation risks.

The OECD-FAO Guidance due diligence framework

The risk-based due diligence framework in the OECD-FAO Guidance describes the five steps an enterprise can take to avoid and address any risks of deforestation in their operations, supply chains and business relationships.

Figure 3.1. The OECD-FAO Guidance due diligence framework



Source: (OECD-FAO, 2021), OECD-FAO Guidance for Responsible Agricultural Supply Chains - Helping achieve the SDGs, OECD Publishing, Paris http://mneguidelines.oecd.org/How-the-OECD-FAO-Guidance-can-help-achieve-the-Sustainable-Development-Goals.pdf

Chapters 4 to 8 below explain these five steps and describe how companies can take measures to address deforestation. Each chapter includes suggested strategic questions enterprises could be asking themselves, and a number of real-world examples. Chapter 9 adds details on measures that enterprises can take on the issue of remediation.

The OECD-FAO due diligence approach possesses the following key characteristics with regard to identifying, preventing and mitigating risks, particularly those related to deforestation:[2]

External risks: what is meant by "risk" for due diligence

Historically, for many enterprises, the term "risk" meant primarily risks to the enterprise – financial risk, market risk, operational risk, reputational risk, etc. In the OECD-FAO Guidance, and increasingly in business practice, risk is framed according to how enterprises may affect people, the environment and society through business conduct in the agricultural sector, with a particular focus on low and middle-income country contexts. In other words, a material focus on social and environmental risk supersedes the financial risks to the business, even though social or environmental risks can often be (but are not always) material to a company.

It is important to note that there are many potential drivers of deforestation, and the associated risks may be similarly diverse. As well as the act of cutting down trees, factors such as poverty, human rights abuses, a lack of rights, resources and capacities of local communities and indigenous peoples, the uncertain status of land and forest tenure rights, and weaknesses in governance and law enforcement, may all act as sources of deforestation risk. For more details, see Step 2 (identifying risk, Chapter 5). Enterprises need to be aware of all these sources of risk.

Defining the responsibility of an enterprise with regard to adverse impacts

An enterprise can either cause adverse impacts, contribute to them, or be directly linked to them through its business operations (see Figure 3.2). This understanding of the responsibility of the enterprise vis-à-vis deforestation, or the risk of deforestation, is important, as it guides an enterprise on what it is expected to do in terms of its risk mitigation and forest protection plan.

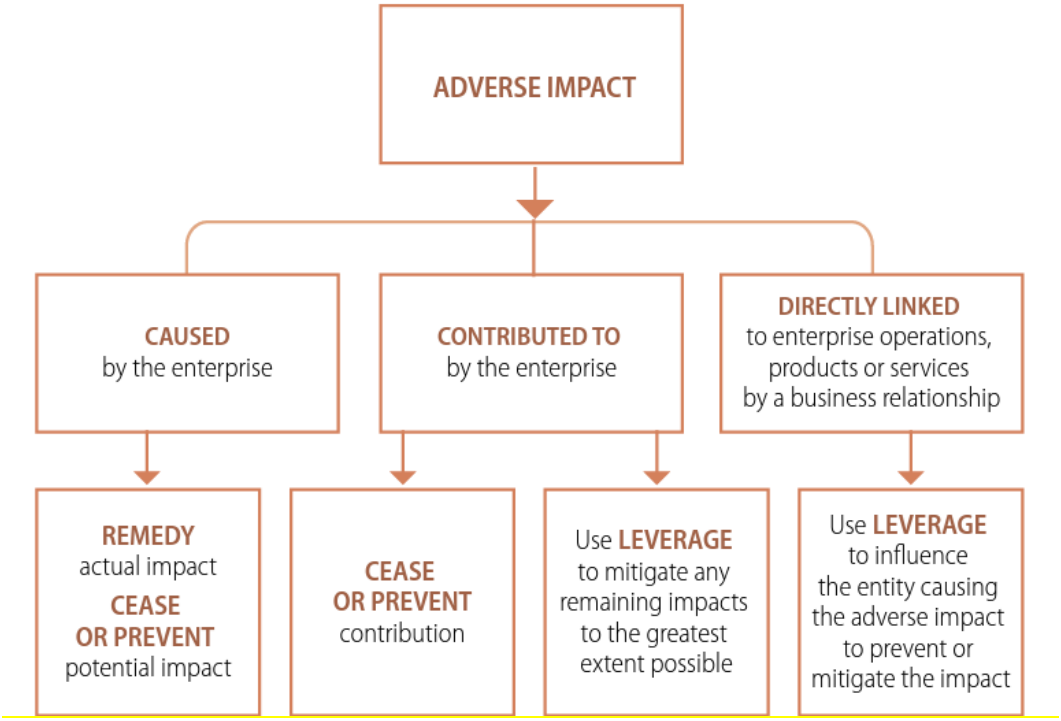
(Note that the concept of 'directly linked' as used here does *not* refer to the descriptions of supply chains as "direct" or "indirect". A "direct" supply chain is one where the enterprise in question sources directly from the producer (a Tier 1 supplier); an "indirect" supply chain is one where the enterprise sources from intermediaries, such as mills, local traders or aggregators, spot markets, etc. (Tier 2 or Tier 3 suppliers). This is *not* what is meant by the concept of "directly linked" in the context of due diligence as set out in this Handbook.)

- An enterprise *causes* an adverse impact if there is causality between the operations, products or services of the enterprise and the impact. For example, if an agricultural enterprise produces crops on land that it has cleared of forest, it is understood to cause that impact. Impacts can also result from inaction, or a failure of a company to react to impacts that it is causing.
- An enterprise "*contributes to*" an impact if its activities (possibly in combination with the activities of other entities) cause the impact, or if the activities of the enterprise cause, facilitate or incentivise another entity to cause an adverse impact. Contribution must be substantial, meaning that this does not include minor or trivial contributions. For example, a trader that insists on sourcing cocoa beans from a local producer that it knows, or should know, is farming cocoa illegally from a protected area of forest contributes to deforestation.
- An enterprise is *directly linked* to an adverse impact when it is linked to that impact via a business relationship. The term "business relationship" includes an enterprise's relationships with business partners in the supply chain, including financial institutions, that are linked to its business operations, products or services (entities with which an enterprise has a business relationship are referred to as "business partners and suppliers" throughout this Handbook). For

[2] Adapted from *OECD Due Diligence Guidance for Responsible Business Conduct* (2018), Chapter 1.

example, if a private equity investor invests in a palm oil mill that sources palm oil from areas associated with deforestation, it is directly linked to deforestation.

Figure 3.2. Addressing adverse impacts



Source: OECD (2018), OECD Due Diligence Guidance for Responsible Business Conduct, https://mneguidelines.oecd.org/OECD-Due-Diligence-Guidance-for-Responsible-Business-Conduct.pdf

The enterprise is expected to act according to the level of its responsibility for an adverse impact (i.e. *causing*, *contributing* or *directly linked to*). This will be examined in more detail in Step 3 (responding to risks, Chapter 6), but briefly:

- If it *causes* an adverse impact, such as deforestation, the enterprise should cease or prevent the potential impact, and provide remediation.
- If it *contributes* to an adverse impact, the enterprise should cease or prevent the contribution and use its leverage to mitigate the impact.
- If it is *directly linked* to an adverse impact, the enterprise should use its leverage, through its business relationships, to influence whoever is causing the impact.

Due diligence is preventative

The purpose of due diligence is to avoid causing or contributing to adverse impacts on people, the environment and society – in this context, negative impacts on forests – and to seek to prevent adverse impacts directly linked to operations, products or services through business relationships. When involvement in adverse impacts cannot be avoided, due diligence should enable enterprises to mitigate or remediate it, and as a last resort where other options have failed, cease operations with suppliers – for example, any that actively engage in agricultural production on deforested land.

Due diligence involves multiple processes and objectives

The concept of due diligence involves a series of inter-related processes to identify adverse impacts, act upon this assessment by preventing or mitigating them, track implementation and results and communicate how these adverse impacts have been addressed with respect to the enterprise's own operations, and supplier and stakeholder relationships. Due diligence should be an integral part of enterprise decision-making and risk management. Embedding RBC, and in this context measures addressing deforestation, in policies and management systems helps enterprises to prevent adverse impacts and supports effective due diligence by clarifying strategy, building staff capacity, ensuring the provision of resources, and communicating a clear tone and accountability from the top.

Due diligence involves prioritising risks and adverse impacts in supply chains

Upon conducting a supply chain risk assessment, an enterprise should prioritise action associated with its activities or suppliers with the greatest likelihood and severity of impacting on deforestation in the supply chain. Once the most significant deforestation impacts are identified and begun to be dealt with, the enterprise should start to address the next most significant, and so on. This process of prioritisation is ongoing; new or emerging adverse impacts may arise and be prioritised before moving on to less significant impacts. This aspect of prioritisation is looked at in more detail in Step 2 (identifying risks, Chapter 5).

Due diligence procedures should be appropriate to an enterprise's circumstances

The nature and extent of the due diligence measures adopted by an enterprise can be affected by factors such as its size, its business model, the complexity of its supply chains and its position within them, the scale of its business relationships, and the nature of its products or services. Vertically integrated large enterprises with widespread operations and many products or services may need more formalised and extensive due diligence systems to effectively identify and manage risks than smaller enterprises with a more limited range of products or services. However, all enterprises, no matter how large or small, possess responsibility for conducting due diligence.

Due diligence can be adapted to deal with different business relationships

Enterprises may face practical and legal limitations to how they can influence or affect business relationships to prevent, cease, or mitigate adverse impacts, such as those on forests, or to remedy them. Enterprises can seek to overcome these challenges to influence business relationships through contractual arrangements, pre-qualification requirements, voting trusts, license or franchise agreements, and also through collaborative efforts to pool leverage in industry associations or cross-sectoral initiatives.

Due diligence is an ongoing process

Where an enterprise is directly responsible for deforestation (i.e. it caused deforestation) it can and should cease causing this adverse impact. But where the enterprise is contributing to or is directly linked to deforestation, it is not assumed that all negative impacts can be avoided completely and immediately. Rather, enterprises should work with their business partners and suppliers, farmers, NGOs, affected groups such as indigenous peoples and local communities, and other stakeholders, to tackle the impacts over time, through a continuous process of improvement. This evolutionary approach – which should be time-bound rather than open-ended – rewards engagement, encouraging enterprises to work with their suppliers rather than to disengage from a supplier, or an entire area or country, straight away.

Disengagement may ultimately be necessary, but it should be seen as a last resort after other approaches have failed.

Due diligence is dynamic

The due diligence process is not static, but ongoing, responsive and changing. It includes regular opportunities for feedback and learning so that enterprises can learn from what works and what does not. Enterprises should aim progressively to improve their systems and processes to avoid and address adverse impacts. Through the due diligence process, an enterprise should be able to both predict and respond adequately to potential changes in its risk profile as circumstances evolve (e.g. emerging deforestation risks from new commodities or new deforestation frontiers, or changes in a country's regulatory framework).

Stakeholder engagement informs due diligence

Stakeholders are persons or groups who have interests that could be affected by an enterprise's activities.[3] Stakeholder engagement includes consultation and information-sharing on real-time social, economic and environmental impacts, and ensuring that the information is captured in the enterprise's due diligence process. Regarding deforestation, stakeholder engagement could include participating in and sharing the results of on-site assessments, developing risk mitigation measures, and carrying out ongoing monitoring and designing of grievance mechanisms together with governments, businesses, farmers and other stakeholders. The OECD-FAO Guidance includes detailed guidance for companies on how to engage with indigenous peoples and local communities.

Due diligence involves ongoing communication

Communicating information on deforestation and due diligence processes, findings and plans is part of the due diligence process itself. It enables the enterprise to build trust in its actions and decision-making, and to demonstrate good faith. Information should be accessible to the intended audiences (e.g. stakeholders, investors, consumers, etc.) and be sufficient to demonstrate the adequacy of an enterprise's response to adverse impacts. Companies that issue annual sustainability reports should reference their deforestation-specific due diligence efforts, along with communicating their stakeholder engagement efforts. For more details, see Step 5 (reporting, Chapter 8).

[3] Examples of stakeholders include local communities, indigenous peoples, workers, workers' representatives, trade unions (including global unions), civil society organisations, investors and professional industry and trade associations.

Box 3.1. SMEs

Small and medium-sized enterprises (SMEs), particularly those downstream in the supply chain, may often find it challenging to implement the measures outlined in this and subsequent chapters. However, since the vast majority of companies – 98–99 per cent in OECD countries, by number – are SMEs, any failure to implement the due diligence framework described here will weaken the effectiveness of enterprises' collective action against deforestation.

The risk-based due diligence approach puts an emphasis on proportionality to help to ensure that due diligence processes can be tailored as appropriate to an enterprise's circumstances, including its size, but also the context of its operations, its business model, positions in supply chains, and the nature of its products or services.

As the *OECD Due Diligence Guidance for Responsible Business Conduct* recognised, "while resource constraints may be a challenge for all enterprises, small enterprises particularly may have fewer personnel and financial resources to carry out due diligence [...] [a]t the same time, they often have greater flexibility on policy-making and implementation and may have fewer impacts or suppliers to manage as compared to larger enterprises" (Annex, Q6). Furthermore, SMEs are also likely to possess simpler supply chains and deal with smaller numbers of business partners.

4 Step 1 – Embed policy on deforestation in company policies and management systems

Step 1 is about corporate management systems and policies. Enterprises need to put in place accountability systems and data collection processes that support all the steps of the OECD-FAO Guidance framework.

Within Step 1, there are six sub-steps which companies should consider. These measures should be tailored to the purpose, activity, products and size of the enterprise, taking into consideration its financial capacities.

Several of these sub-steps overlap with later actions identified under Steps 2 (analysing risk) and 3 (preventing and mitigating risk). In practice, establishing and implementing the due diligence procedure will be an iterative process, with the policy and its implementation needing regular reviews and revisions in the light of experience and changing circumstances.

Establish or update sustainability policies on deforestation

Some enterprises making use of this Handbook will already possess a sustainability and/or a responsible business conduct (RBC) policy which will already be relevant to identifying, preventing and mitigating the risk of deforestation in their supply chains. Other enterprises will need to develop such a policy, either on deforestation and/or on specific commodity supply chains linked to deforestation. Ideally this would be integrated into their broader sustainability or RBC policy, but it could be expressed in a stand-alone document.

The following key elements should be considered in developing a policy on deforestation:

- The policy applies across the company (including its subsidiaries), and ensures that all relevant departments work together to deliver a common commitment towards eliminating deforestation through business conduct.
- It sets science-based targets for reducing deforestation and the risk of deforestation in the enterprise's operations, supply chains and business relationships – for example to achieve zero deforestation, or zero illegal deforestation, or a reduction in deforestation levels, to be achieved by a specified date. These include clear time-bound targets and cut-off dates and definitions of terms such as "forest", "deforestation" and "forest degradation" (see Annex A).

- Targets and definitions can often be derived from collective commitments the enterprise has entered into (see Chapter 2), industry association guidelines, or voluntary sustainability standards in certification systems (see Annex C). Increasingly, national legislation is emerging which will set overall frameworks (see Annex B). Whatever the timelines and key dates are, key business personnel must be aware of and understand them.
- It sets out the due diligence procedure, as per the OECD-FAO Guidance. Often enterprises will publish their due diligence procedures as a separate document.
- It explains both direct and indirect risks associated with the commodities and products in the enterprise's operations, supply chains and business relationships which will be covered by the policy. This should cover all risks that may be associated with deforestation, but priorities for action should rest on a risk- and impact-based approach. For example, if an enterprise handles bulk commodities which are associated with deforestation and also some products which contain small volumes of commodities associated with deforestation (palm oil, for example, is a common ingredient in processed foodstuffs), it may decide to focus on the bulk commodity first and the products later.
- It sets out the enterprise's expectations in terms of employees, business partners and other parties directly linked to its operations, products or services.
- The policy should be informed by relevant internal and external expertise, and as appropriate, stakeholder consultations.
- It should be approved at the most senior level of the enterprise. Senior-level responsibility should be assigned for its implementation; for SMEs, this means the owner or CEO.

Make the policy publicly available; communicate it; establish updating procedure

The enterprise's policy on deforestation should:

- Be publicly available and communicated to all employees, business partners, affected stakeholders (such as local communities and indigenous peoples) and other relevant parties.
- Be reflected in operational policies and procedures necessary to embed it throughout the enterprise.
- Be reviewed and adapted on a regular basis in light of new sourcing areas, shifting patterns of deforestation and increasing knowledge about deforestation risks in the supply chain and evolving international standards and national legislation (national policy and legislation on these topics is evolving rapidly – see Annex B).

Embed forest policy in oversight bodies and management systems and different company functions

- Senior management should be visibly and actively involved in implementing and ensuring compliance with the enterprise policy on deforestation. One of them, with relevant technical and cultural skills, should be designated as responsible for the policy, working with the necessary support team.
- Employees should be trained and provided with key performance indicators or incentives to comply with the policy.
- An internal reporting structure should be established, maintained and communicated within the enterprise at key junctures.

- Practices should be consistent throughout the operations of the enterprise, including in all the departments or units which may take decisions affecting commodities and products potentially associated with deforestation, including in particular the purchasing and procurement functions. The deforestation-related procedures should be consistent with, and integrated within, any other due diligence policies the enterprise may have.
- Adequate financial and human resources should be made available to establish, implement, monitor and report on the policy.

Incorporate expectations and policies into engagement with suppliers and other business relationships

Since due diligence applies throughout an enterprise's supply chains and business relationships as well as its own operations, regular communication with suppliers and other business partners is critical. The enterprise should:

- Communicate key aspects of its policy on deforestation to suppliers and other relevant business relationships. Long-term relationships with business partners can increase leverage to encourage the adoption of such a policy and improve transparency.
- Include conditions and expectations on deforestation due diligence in supplier or business relationship contracts, supplier codes of conduct or other forms of written agreements, tailored to their capacities.
- Develop and implement pre-qualification processes on deforestation due diligence for suppliers and other business relationships, where feasible, adapting such processes to the specific risks and circumstances they face.
- Provide adequate resources and training to suppliers and other business relationships for them to understand and apply the policy and implement due diligence. This could include, for example, a standardised reporting framework for suppliers.
- Seek to understand and address barriers arising from the enterprise's way of doing business that may impede the ability of suppliers and other business relationships to implement the due diligence policy, such as the enterprise's purchasing practices and commercial incentives.

Enterprises may face practical and legal limitations to how they can influence or affect business relationships to prevent, cease, or mitigate adverse impacts on forests, or to remedy them. Enterprises can seek to overcome these challenges to influence business relationships through contractual arrangements, pre-qualification requirements, voting trusts, license or franchise agreements, and also through collaborative efforts to pool leverage in industry associations or cross-sectoral initiatives.

Implementation plans developed in coordination with business partners and involving, where appropriate, local and central governments, international organisations, and civil society, can also improve compliance, in particular by offering capacity-building and training. For further details, see Step 3 (responding to risks, Chapter 6).

Establish control systems

Establishing systems to enable the enterprise to monitor the implementation and impacts of its policy on deforestation is critical to the credibility and effectiveness of the policy and to good relationships with stakeholders, including governments. This entails:

- Creating verification procedures to undertake regular independent and transparent reviews of compliance with the policy; this may include both internal audits and independent third-party

audits (the latter is preferred where the risk of association with deforestation is higher), and cover both the enterprise and its suppliers.

- Establishing monitoring and control systems for the chains of custody of the commodities and products the enterprises identify as potentially associated with deforestation. This is described in more detail in Step 4 (verifying due diligence, Chapter 7).

Typically these steps will take place at the same time, or soon after the enterprise has started to conduct some supply-chain mapping in Step 2 (identifying risks, Chapter 5).

Establish an operational-level grievance mechanism, in consultation and collaboration with relevant stakeholders

Grievance mechanisms – which should include both early warning risk-awareness and complaints systems – can help alert enterprises to deviations from the policy on deforestation in their activities or those of their suppliers or other business relationships, help them to identify and mitigate risks, including by improved communication with stakeholders, and provide a mechanism to prevent and remediate conflicts. They can be established at the level of a project, an enterprise or an industry. Enterprises can both establish their own grievance mechanisms and participate in other grievance mechanisms. (See Box 4.1.)

Enterprises may find it necessary to establish more than one grievance mechanism. Systems could include, for example, a general corporate grievance channel and management structure open for all; a grievance and consequence management procedure for specific supply chain-related grievances, involving engagement with NGOs or other stakeholders that raise grievances; and more participatory grievance channels and systems implemented upstream in specific supply chain(s), often using innovative digital tools etc.

Grievance mechanisms should be easily accessible to all those actually or potentially affected by the adverse impacts deriving from the enterprise's failure to uphold its policy on deforestation, including farmers, traders, local communities and indigenous peoples. Special efforts are likely to be necessary to ensure that groups that are otherwise often marginalised, such as, for example, women, migrant workers or indigenous peoples, can use the mechanism. Enterprises should publicise the existence of their grievance mechanisms and means of access to them, actively encourage their use, provide assistance with using them, guarantee that their users remain anonymous and free from reprisal, and regularly verify their effectiveness. They should keep a public registry of complaints received (complainants' identities should be protected where requested), and lessons learnt through grievance mechanisms should be incorporated in the enterprise policy for RBC, relations with business partners and monitoring systems.

Grievance mechanisms should complement judicial and other non-judicial mechanisms, such as the National Contact Points established under the *OECD Guidelines on Multinational Enterprises*, with which enterprises should also engage. They should also adhere to the effectiveness criteria of the UN *Guiding Principles on Business and Human Rights*. Enterprises should aim to remediate grievances and document how they do so (see Chapter 9). They should elevate grievances to higher levels if they cannot be resolved closer to the level of grievance.

Box 4.1. Characteristics of effective grievance mechanisms

Legitimate: Enable trust from the stakeholder groups for whose use they are intended, and be accountable for the fair conduct of grievance processes.

Accessible: Be known to all stakeholder groups for whose use they are intended, and provide adequate assistance for those who may face particular barriers to access.

Timely and predictable: Provide a clear and known procedure with an indicative timeframe for each stage, and clarity on the types of process and outcome available and means of monitoring implementation.

Equitable: Seek to ensure that aggrieved parties have reasonable access to sources of information, advice and expertise necessary to engage in a grievance process on fair, informed and respectful terms.

Transparent: Keep parties to a grievance informed about its progress, and provide sufficient information about the mechanism's performance to build confidence in its effectiveness and meet any public interest at stake.

Rights-compatible: Ensure that outcomes and remedies accord with internationally recognised human rights.

A source of continuous learning: Draw on relevant measures to identify lessons for improving the mechanism and preventing future grievances and harms.

Based on engagement and dialogue: Consult the stakeholder groups for whose use they are intended on their design and performance, and focus on dialogue as the means to address and resolve grievances.

Source: OECD-FAO Guidance and the UN *Guiding Principle on Business and Human Rights*.

Box 4.2. Strategic questions for enterprises to ask

- What level of ambition do we as a company need to have on deforestation – zero deforestation, no illegal deforestation, no net deforestation or reduced deforestation? What are the target dates by which these commitments will be reached? Do we have a baseline assessment of our exposure to deforestation risk?
- Does our policy meet or exceed legislation in our home country or the country of production?
- Does this policy meet legal requirements, or expectations in key export markets?
- Which divisions, departments or company functions need to be involved in deciding and implementing the policy (e.g. legal department, compliance, procurement, purchasing, sustainability, marketing, C-Suite executives?) Is there adequate communication between them?
- Are external advisers required in helping to decide and draft the policy? (e.g. external legal advisers, industry associations)?
- Do senior executives in the company understand: (1) the various commitments on deforestation a company can have; (2) the ramifications of choosing a particular ambition; and (3) the systems required to implement such a policy (revising existing contracts and relationships, budget and personnel implications)?
- Has a lead focal point in the company been appointed to coordinate and manage the implementation of the due diligence approach to responsible sourcing, together with other company departments?
- Are current management systems aligned to enabling implementation steps of the *OECD-FAO Guidance for Responsible Agricultural Supply Chains*?
- Which suppliers and other stakeholders should we engage with in developing our commitments against deforestation? Do we have a plan to engage and bring them on board?
- Are company remuneration targets and KPIs linked to achieving specific due diligence objectives as part of our management systems?
- Which external due diligence systems or processes are we using to support our internal due diligence management (e.g. industry codes, certification systems, audit protocols)?
- What are the resource implications for the company?

Box 4.3. Tips for SMEs

All SMEs:

- Decide what level of policy commitment you are prepared to adopt given national and international laws, and company commitments to customers. Choose the definitions of "forest" and "deforestation" you want to use and the cut-off date(s). (Sectoral initiatives or other SMEs' policies and commitments may provide useful models.)
- Ensure that the company policy on deforestation is approved by the CEO, owner/s or Board.
- Decide on how to commit according to your financial and human resources.
- Make your commitments known; this can done be through a written commitment or a stand-alone statement or as part of your business vision, value statement, or responsible sourcing policy.
- You can also include or reference the commitment in your employee manual, procurement and sales contracts, codes of conduct for employees or for suppliers, and/or your quality control policies.
- Embed your efforts throughout your business and ensure that employees know what it means for their daily work, including meeting with employees to make sure that they understand deforestation concerns, company expectations.
- Let business partners and peers know what you expect regarding actions to limit deforestation.
- Consider featuring your policy on deforestation on your website and through social media.

In addition, upstream SMEs can:

- Reference national or regional commitments on deforestation and forest degradation in company policy.
- Consider ongoing national development policies and ways that your company policy on deforestation can also reflect development objectives
- Mention your limits, including actions you will take if you discover that any business partner is sourcing from deforested areas.
- Inform your customers and business partners, industry groups, introducing your policy on deforestation.

Box 4.4. Examples

[For consideration: this section welcomes examples from a wider range of sectors]

- Global Canopy's Forest 500 assessment tracks the policies and performance of 350 companies and 150 financial institutions whose operations and supply chains may be linked to deforestation. The assessment methodology offers a potential source of company policies on deforestation.
- Musim Mas's Sustainability Policy covers its global operations, including third-party suppliers. Based around no deforestation, no peat and no exploitation (NDPE) commitments, it also aims to improve the livelihoods of smallholders, workers and communities. Progress is tracked against the Supplier NDPE Roadmap, and reported publicly.
- The Retail Soy Group is an independent group of international retailers working collaboratively to find industry- wide solutions for soy for their animal feed and human food supply chains; this report sets out its aims, targets and achievements to date.
- In Colombia, Zero Deforestation Agreements for palm oil and cattle include a self-analysis protocol for companies to set baselines; these are conducted by a panel including enterprise staff and one or more NGOs as supporting partners. See this 2020 study of the agreements.
- Tetra Pak has a separate procedure for responsible sourcing for each of its main forest risk raw materials; here is the procedure for paperboard, which aims at achieving sustainable forest management and zero net deforestation and degradation.
- GAR dedicates specific section of its website to helping palm suppliers achieve and maintain compliance with the GAR Social and Environmental Policy (GSEP).

5 Step 2 – Identify, assess and prioritise deforestation risks in the supply chain

Step 2 is about examining your supply chain and mapping the risks of deforestation within it, to enable you to determine your priorities for action. It covers mapping the supply chain, analysing the risks of deforestation associated with it, and establishing the enterprise's degree or involvement and leverage.

All of the activities covered in this chapter require an expenditure of resources, both human and financial. In many cases, and particularly for smaller enterprises, it may make sense to collaborate with others in conducting, for example, risk assessments of common sourcing areas. Sometimes enterprises are inhibited from such collaboration by a perception that they may infringe competition law, but as long as commercial details are not shared (such as prices paid and volumes sourced from particular suppliers), this kind of cooperation should not cause concern.

Map the supply chain

This stage in the process involves establishing the sources of all the commodities and products covered by the enterprise's policy on forest, in order to establish the risks associated with their production.

Mapping the supply chain includes:

- Identifying the source of the commodities or products, including the country of production and source area. This should help to identify the countries or areas most at risk of deforestation and enable the enterprise to focus on high-risk areas or suppliers in more detail.
- Identifying the various actors involved in the supply chain, including suppliers and business partners. This is likely to be particularly challenging where the products are supplied indirectly, through local traders, for example, or on spot markets; this will require extensive dialogue with traders and suppliers.
- Repeating this process before marking any new investments or business activities that results in changes in the supply chain.

Establishing the traceability of products throughout the supply chain includes:

- Assessing the type and quality of supply-chain traceability offered by each of the enterprise's suppliers, and any complaints or grievances lodged against any of the actors in the supply chain, including suppliers and business partners.

- Options for approaches to traceability include tracing to origin; tracing to a supplier that has a robust traceability and due diligence system of its own (with the downstream company responsible for assessing this robustness); tracing to a jurisdiction that can demonstrate a negligible risk of commodity-linked deforestation across the entire jurisdiction; using a credible certification system.

The degree of information needed from the traceability system is likely to vary with the level of risk and the commodity. Some certification schemes and other traceability systems include information on the geographic coordinates of the plots of land, or farms, or cooperatives, on which the relevant commodities were harvested; others may provide traceability only back to the point of first processing, such as a palm oil mill. This level of fine detail might not be achievable in every case – but enterprises should at least identify all the potential broad sourcing areas to be able to assess and monitor the risk of deforestation at that scale. For high-risk areas a higher degree of traceability upstream to the farm level will need to be established; in some areas this will be challenging. The potential gap between the level of deforestation risk and the granularity of the information on the production area will be taken into account when defining the risk mitigation strategy.

Traceability systems, including those in certification schemes, generally provide a range of supply-chain traceability models (not all of these may be available for each commodity or in each certification scheme):

- Under the *identity preserved* model, products from a single identifiable certified source are kept separate from uncertified products, and from certified products from different sources, throughout the supply chain.
- Under the *segregated* model, certified products from different certified sources are mixed together but kept separate from uncertified products.
- Under the *mass balance* model, certified products are mixed with uncertified products but monitored administratively; users can advertise their product as partially certified, usually with a specific percentage figure.
- Under the *book-and-claim model*, certified products are not kept apart, but suppliers of certified products sell credits to users; while the user may not actually be using any certified products, they do contribute to the costs of responsible production.

For zero-deforestation targets, clearly, the mass balance and book-and-claim models will not be acceptable.

Box 5.1 lists the types and some potential sources of information needed by enterprises for these purposes.

Box 5.1. Types and potential sources of information on commodities and products

Types of information (some of these may be subject to data protection restrictions):

- Geolocation data (geographic coordinates) of the land on which the commodities were grown, by plot or polygon mapping of farm boundaries or larger area, such as village or landscape or jurisdiction.
- Farm mapping and registration databases.
- Processing facility information (e.g. palm oil mill, soybean crusher sourcing areas).
- Names and locations of farmers, local traders, processors and any other enterprises in the supply chain.
- Average production volumes of farms or jurisdictional area supplying the commodities, in order to detect possible leakages between production areas with different deforestation risks.
- National production and trade data for the commodity in question; this may help in detecting possible leakages such as hidden imports from a third country in supply areas close to the borders.
- Legal frameworks for the production of commodities and products purchased by the company and for forest conversion in the countries of production, levels of governance and law enforcement, legality compliance and corruption.
- Certification scheme data, including, for example, volumes of products fully certified, and certified to more limited criteria (e.g. FSC Controlled Wood; see Annex C).
- Visual, isotopic or DNA analyses of samples (these can help distinguish between species, e.g. for timber, and, for some commodities, between different geographic origins).

Potential sources (see Annex C for more detail):

- Voluntary certification and legality verification schemes.
- Company programmes, public summaries of audit reports and product claims/labels.
- Traceability systems, e.g. national traceability systems, Independent Forest Monitoring, Timber Legality Assurance Systems.
- Specific tools assessing deforestation risk (e.g. from WRI, now being piloted as part of the Cocoa and Forests Initiative).
- Supply chain mapping tools, e.g. TRASE, SPOTT, FLEGT IMM, Open Timber Portal, commercial providers, sectoral initiatives, cooperation projects.
- Private or public remote sensing providers.
- Supplier questionnaires, including their sub-suppliers.
- Purchase orders and invoices, batch numbers of commodities and products.
- Visits to production, transformation and storage areas.
- Agriculture and trade statistics from national or international databases, e.g. FAOSTAT, UN Comtrade.
- Land registries, and other sources of land data such as Land Matrix or Open Land Contracts.
- FAOLEX (a comprehensive legislative and policy database).

Not all of these sources will be as robust as others; efforts should always be made to verify their reliability.

Assess risks of deforestation associated with the sourcing areas

Once the sources of the commodities and products covered by the enterprise's deforestation policy are identified, and the sourcing area is known, it becomes possible to assess the risk that their production has been associated with deforestation. This assessment should combine information on :

- Extent and type of forest cover in the sourcing area.
- Trends of deforestation in this area (in general, not just associated with specific products).
- Information on direct drivers of deforestation.
- Information on indirect drivers of deforestation.

The higher the extent and risk of deforestation, the greater the level of detail that will be needed. Where the risk is very low, an assessment at the country or regional level may be adequate; where it is higher, the assessment will need to focus on smaller areas, and may require detailed geolocation information to the farm level. Addressing any information gaps for high-risk source areas should be a high priority.

Forest cover. This should include assessments of the proximity of suppliers to remaining forest land within the supply area (including within the farms themselves) and adjacent to it, which should help the enterprise to assess the risk of future deforestation. For example, a region with low rates of deforestation but with a significant amount of standing forest is a higher risk compared to a region with previously high rates of deforestation but no forest left.

Deforestation trends. An increasing range of sources of information on deforestation rates and incidences are now available (see Box 5.2). Deforestation fronts move over time and their dynamics are not linear. The risk of deforestation in supply areas (which may themselves often change) should therefore be updated on a regular basis, and the use of deforestation alert services should be considered.

Direct drivers. A direct driver of deforestation is the direct cause of the forest loss and associated land use change. Estimating the likelihood of the conversion of forests to cropland or grassland being caused by the extension of production of the commodity used by the enterprise is a key element of the risk assessment.

Indirect drivers. Indirect drivers, also called underlying drivers, are the policy, legal, economic, social or contextual causes that induced the land use change (see Chapter 2). For instance, if the evidence show that an increased demand and/or increased prices for a specific commodity have driven deforestation, and commercial forecasts indicate that this trend will remain, then the risk of deforestation will remain high. For another example, where standards of forest and land use governance and law enforcement are weak, the risk of deforestation will be higher than where they are stronger.

The legal and political context of the source area can be as important trends in deforestation or agricultural production. Enterprises should be particularly careful ("red flags" – warnings – should be raised) in areas which feature:

- High levels of poverty.
- Conflicts, or which are considered as at high risk of conflict.
- Weakly enforced indigenous rights or poorly defined or contested land tenure rights (see Box 5.3).
- Weak governance and implementation of the rule of law.
- A poor record of protecting forests by national or local governments.
- National or local governments' failure to observe internationally agreed RBC standards or provide support to enterprises to ensure the observance of these standards.

Box 5.2. Potential sources of information on deforestation and deforestation drivers

- Remote sensing (e.g. satellite or radar) data, e.g. Global Forest Watch, Terra-i, Earth Resources Observation and Science (EROS) Center, national systems (e.g. PRODES, Brazil; Mapbiomas; IDEAM, Colombia; Geobosques, Peru).
- Deforestation alerts, e.g. Global Forest Watch GLAD alerts, RADD Forest Disturbance Alert.
- FAO Forest Resources Assessment series.
- Independent or community forest monitors.
- Local communities, indigenous peoples and civil society organisations (empowering community members to act as forest monitors can be an effective way to collect data and raise the alarm on deforestation).
- Country or landscape risk assessments.
- Information collected through early warning and grievance mechanisms (see Box 4.1).
- Studies of deforestation drivers, MRV reports, e.g. in national REDD+ strategies.
- Assessments of the status of governance and law enforcement in the source country, e.g. World Bank Worldwide Governance Indicators, Transparency International Corruption Perceptions Index or Freedom House Index.
- Proposed EU Observatory (not yet in operation).

This risk assessment based on the sourcing area can be developed further. Knowledge about the forests present in the supply area and the developments that have led to deforestation over recent years should allow the enterprise to assess the severity of potential deforestation associated with its supply chain.

The significance of an adverse impact is a function of its likelihood and its severity. The severity of impacts can be analysed according to their gravity, scope and irremediable character:

- The *gravity* of the adverse impact characterises the extent of impact on forests as whole, or on types of forests (e.g. protected areas, high-conservation-value areas, high-carbon-stock areas) or the extent of changes in species composition.
- *Scope* concerns the reach of the impact, for example the extent of damage to the forest by total area or by impacts on specific areas or species.
- *Irremediable character* means any limits on the ability to restore the forest, or forest-dependent species, or the people living, working or depending on it, to a situation equivalent to their situation before the adverse impact.

Box 5.3. Land tenure issues

Issues of land ownership, tenure and access are central to the debates around stopping deforestation. Much of the world's remaining tropical forests are occupied by indigenous peoples and traditional communities and other customary rights-holders such as local communities. Enterprises seeking to access land for commodity production must respect the rights of those who already own, occupy or otherwise use it. They must acquire access to such land through a fair process that first recognises these rights and then obtains the agreement of these rights-holders and land users. Sometimes this may also include national or local public authorities.

The rights of those without formal ownership rights of the lands should also be recognised; this includes tenants, sharecroppers, farm-workers and other companies with leases on the land, or those with legal or informal permits to access and use lands and natural resources. The status of women is often critical in this respect.

This process frequently poses challenges. It may not always be clear who has legal title to the land, and customary rights may sometimes conflict with statutory rights. Many certification schemes and other tools (for example, the High Carbon Stock Approach), set out standards for respecting land tenure and processes for determining it, including, for example, participatory mapping carried out jointly by the enterprise and communities.

More detail is available in the *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security* officially endorsed by the Committee on World Food Security in 2012.

The principle of free, prior and informed consent (FPIC) is an important element in this process. This involves agreeing a consultation process with affected indigenous peoples and other customary rights-holders; consulting and agreeing on what constitutes appropriate consent; and engaging in the process of seeking consent before activities for which consent should be sought commence (if consent is given). This is an iterative and ongoing process rather than a one-off discussion; continuous dialogue will generate trust and a balanced agreement that will benefit the investment across all phases of the project. More detail is available in the *OECD-FAO Guidance for Responsible Agricultural Supply Chains*.

Assess risks of deforestation associated with the suppliers

The level of risk associated with each link in the supply chain before the commodities or products reach the enterprise must also be assessed. This includes identifying the various actors involved in the supply chain, including suppliers and business partners. This important: the greater the number of links in the chain, the higher is the risk, since every link potentially increases the chance of products associated with deforestation entering supplies. The type of links – e.g. intermediary traders – are also important, particularly where the commodity is sourced from a large number of sources such as smallholder farmers.

The general performance of the suppliers should be assessed, not just their activities with regard to the enterprise. "Red flag" business partners, to which special attention should be paid, include those, for example, who are known not to have observed the standards contained in this Handbook, or are known to have sourced products from a high-risk location (see above) in the last twelve months, or have shareholder or other interests in enterprises that do not observe the standards contained in this Handbook or that supply products from or operate in a high-risk location.

Risk assessments: who does what?

Several types and levels of risk assessments are possible. Context risk assessments categorise source countries, regions or areas as low, medium or high risk by assessing the regulatory framework, political context, civil liberties and socio-economic environments. Site-level risk assessments aim to understand the factual circumstances of the operations of business partners in order to assess the scope, severity and likelihood of risks at the site level. Assessments can include checking volumes of commodities produced in particular areas against allowable volumes, undertaking stakeholder consultations, monitoring by third parties, such as civil society organisations, and organising visits to the farms and/or processing facilities.

- On-farm enterprises may establish on-the-ground assessment teams for generating and sharing verifiable, reliable and up-to-date information on the extent of deforestation. These enterprises also need to ensure that they respect legitimate land tenure right holders (see Box 5.3). They should provide the results of their risk assessments to downstream enterprises.
- Downstream enterprises should not only identify risks in their own operations but also, to the best of their efforts, assess the risks faced by their suppliers and sub-suppliers, and their general performance. They can assess the latter by assessing the due diligence carried out by their suppliers or by directly assessing the operations of their suppliers, for instance by conducting visits to farms and local communities. Tools such as deforestation alerts can help to spot-check suppliers' operations for potential association with deforestation. Information should be sought both on the suppliers' systems and the volumes of products they are supplying. Participating in industry-wide schemes that assess the compliance of business partners with deforestation policies and provide relevant information can support these assessments.
- The nature and extent of the due diligence a financial enterprise should carry out with regard to its clients and investments will depend on the nature of the entity, the size and nature of its investment portfolio and its relationship to specific clients and investments (e.g. the ownership share in the company, tenure of investment, access to relevant information and the likelihood that meaningful influence may be exercised). Where financial enterprises have large numbers of clients and investee companies, they are encouraged to prioritise efforts based on risk assessments.
- Prioritisation dictates how actions may be sequenced and how due diligence resources are targeted and recognises that not all adverse impacts can be identified and responded to at once. Investors should seek to prioritise the most severe impacts for due diligence while continuing to monitor RBC risks, evaluate prioritisation decisions and build on their actions to the extent possible and necessary over time, to cover a broader range of clients and investee companies and actions.

Box 5.4. Strategic questions for enterprises to ask

The enterprise should be able to answer the following questions:

- Which departments within the company are responsible for supply chain mapping and prioritisation? Do they have the capacity and budget to carry out this step to meet company commitments on deforestation?
- What systems or processes do we currently have in place to map our operations and supply chains to identify deforestation risks (e.g. desk-based research, heat maps, supplier questionnaires, satellite data, field visits)?
  - How far upstream have we mapped the supply chain?
  - Do we have a plan to map to at least key control points within our prioritised supply chains? Do we use a risk-based approach to prioritise?
  - Are we ensuring that our identification efforts extend upstream to agricultural production?
  - Are there parts of the supply chain where mapping is impeded by a lack of transparency (e.g. purchases from the spot market)?
  - What can we do to increase transparency – engage with suppliers, stop buying from spot market, etc.?
- What level of traceability can we have in place for our products?
- Where does our information come from (e.g. internal systems/tracking, supplier feedback, external data; collaboration with industry groups, use open-source deforestation satellite data)?
  - Do we have up-to-date maps on forest cover in the areas from which we source our products and raw materials from?
  - Which departments/individuals have responsibility for mapping deforestation risks and maintaining quality information? Do we rely on external public information for this or on a contract with a specific provider?
  - How reliable is this information, and how can we verify it?
- What are our partners doing to identify deforestation risks? How can that information be strengthened, coordinated and streamlined in our approach?

The enterprise should be able to assess and prioritise the following issues:

- What steps do we take to verify our supply chain data and ensure that it is current? Do we triangulate data, conduct supplier or site visits, conduct audits, use real-time data/tech, collaborate or exchange information with industry groups, etc.?
- Against which benchmarks and standards do we assess risks?
- How do we assess and prioritise the risks of deforestation? Have we done everything we can to de-risk sourcing (including providing support to local farmer and enterprises) from, for example:
  - High biodiversity areas, high carbon stock areas (such as peat forests) or targeted regions in the world (Amazon, Congo Basin, Southeast Asia, other)
  - Areas with high social impact on local communities, indigenous peoples
  - Areas with low water levels or desertification risks
  - Suppliers known to have a history of being linked to deforestation that does not meet our company commitments
- What do we consider and define as the most salient or priority deforestation risks?

Box 5.5. Tips for SMEs

All SMEs:

- Identify your commodity focus and prioritise your mapping efforts accordingly.
- Create a list of your contracted and indirect suppliers and identify which ones may require greater scrutiny/due diligence actions in terms of deforestation (by geography/location, type of commodity, parts of supply chain, company size).
- Information on direct and indirect suppliers can be collected in a variety of different ways to minimise costs, including desk-based research using existing publicly disclosed information online, working with third-party initiatives or certification schemes, working collectively as part of industry associations. Some industry collaborations allow SMEs to share risk assessment, traceability and sometimes monitoring information.
- Ask your suppliers (contracted) to send you information on their due diligence practices, sourcing practices and deforestation policies; assess those approaches to better understand which suppliers may not have effective measures to consider deforestation risks.
- Consider having regular calls, or check-ins with upstream suppliers operating at control points of the supply chain to better understand how they are identifying, preventing and mitigating deforestation impacts in the commodities that you have prioritised.

In addition, upstream SMEs can:

- Know where your product comes from, and how it is grown and sourced; it may be more feasible to focus on particular source landscapes rather than wider areas.
- Hold meetings with cooperatives, farmers or other producers who are at the front lines of production and deforestation risks.
- Build your leverage: collaborate with other SMEs that source from the same producers to identify and prioritise deforestation risks in the sector.
- Seek advice and information from business associations, certification schemes, international organisations (OECD, FAO, UNEP), NGOs, trade unions, and relevant multi-stakeholder initiatives.

Box 5.6. Tips for SMEs

Know where your product comes from, and how it is grown and sourced; it may be more feasible to focus on particular source landscapes rather than wider areas.

Hold meetings with cooperatives, farmers or other producers who are at the front lines of production and deforestation risks.

Build your leverage: collaborate with other SMEs that source from the same producers to identify and prioritise deforestation risks in the sector.

Seek advice and information from business associations, certification schemes, international organisations (OECD, FAO, UNEP, UNFCCC), NGOs, trade unions, and relevant multi-stakeholder initiatives.

Box 5.7. Examples

[For consideration: this section welcomes examples from a wider range of sectors]

CDP Forests provides a framework of action for companies to measure and manage forest-related risks and opportunities, transparently report on progress, and commit to proactive action for the restoration of forests and ecosystems. This case study in the 2021 report shows how Mars assessed forest-related risks across its palm oil supply chain, including measuring the availability and quality of the commodities and the impact of its activities on ecosystems and habitats, social impacts and local communities.

The consultancy 3Keel worked with Tesco and its meat supply chain to map and quantify the amount of responsible soy present in their indirect animal feed supply chain. The analysis was used to target where the greatest gains could take place and it highlighted the opportunities available to the business to achieve its 100% responsible soy sourcing goals.

This video from Musim Mas explains how the company carries out a risk-based traceability approach and prioritises the most high-risk areas.

6 Step 3 – Design and implement a strategy to respond to deforestation and the risks of deforestation

Once deforestation and the risks of deforestation have been identified, Step 3 is about adopting risk management plans and mitigation measures to ensure that the risks are addressed, and taking steps to tackle any adverse impacts that have occurred.

Under the OECD-FAO Guidance, all enterprises are expected to identify general areas where the risk of adverse impacts is most significant and to prioritise due diligence accordingly; high-risk suppliers or suppliers operating in high-risk areas will warrant more detailed scrutiny. Some legislative due diligence requirements may require a somewhat broader approach, ensuring, for example, that all the designated products the enterprise places on the market are free of deforestation (see Annex B).

Define and adopt a risk management plan

Having assessed the risk of association of the enterprise's operations and supply chains with deforestation, the next stage is to mitigate the risk and prevent future risks. All the related measures and processes should be defined in a risk management plan; separate plans may be necessary for different commodities or different sourcing areas. Box 6.1 includes potential risk prevention measures which can help manage the risk of deforestation in the enterprise's operations and supply chains.

The risk management plan should also specify:

- Timelines for developing each of the measures and processes to be adopted.
- Resources to be mobilised, including budgetary and human resources.
- Roles and responsibilities within the enterprise for implementing the management measures.
- Procedures for consulting with affected stakeholders, including business partners and affected communities in the countries of origin, to clarify concerns and agree on the strategy for mitigating risks.
- Monitoring systems for assessing the implementation of the plan and its impacts, and reporting processes to high-level management.
- Procedures to follow in cases of non-compliance by suppliers.

(These overlap with many of the measures set out in Step 1.)

Box 6.1. Risk prevention measures

Risk prevention measures available to enterprises will depend on their position in the supply chain; some of the measures below are applicable mainly to producers and some to enterprises sourcing directly from producers.

- Measures to improve transparency and the level of information available include:
- Requiring more than one source of information on products (see Box 5.1 and Box 5.2).
- Undertaking independent surveys or audits of source areas and/or business partners.
- Commissioning an independent audit of the enterprise's due diligence system.
- Conducting audits of suppliers' due diligence systems.
- Reinforcing traceability systems.
- Empowering local community members to act as forest monitors.
- Using certification schemes (with careful evaluation of certification claims – see Annex C).

Measures to deal with suppliers include:

- Engaging with business partners, including improving awareness, and offering assistance and incentives, especially for smallholder farmers (financial support, capacity-building, training, etc.). Sometimes such support may be better delivered by local NGOs or other organisations.
- Simplifying supply chains, dealing with fewer suppliers but establishing long-term relationships with them.
- Temporary suspension of the relationship with business partners if engagement is unsuccessful.
- Disengagement from business partners if efforts at engagement fail; this should always be as a last resort where engagement has failed.

Broader measures include:

- Engaging in sectoral initiatives on sustainable supply chains, designed to improve transparency and data collection, establish regional or national traceability systems, and so on.
- Collaborating with other stakeholders, e.g. governments or NGOs, in pursuing concerns.
- Engaging in jurisdictional or landscape initiatives that address the drivers of deforestation, bringing together companies, governments and communities to protect and monitor remaining forest areas beyond enterprises' individual supply chains.

Many of the measures listed in Step 1 are also relevant here.

Respond to adverse impacts

The measures described above focus on preventing the risk that deforestation is present in an enterprise's operations and supply chains. Where deforestation is or has been present, there are many measures an enterprise can take to mitigate the adverse impacts.

The responsibility of the enterprise to mitigate adverse impacts depends on the extent to which it causes, contributes to or is directly linked to them. This is discussed above in general in Chapter 3 and Figure 3.2; in the specific case of deforestation, it means the following:

- If the enterprise has caused deforestation, it should cease the activities that cause deforestation, prevent further potential adverse impacts and provide remedy for actual adverse impacts it caused. This may entail suspending operations temporarily while undertaking measurable efforts to prevent any future adverse impacts, or suspending operations permanently if these impacts cannot be mitigated.
- Where assessment and mapping exercises find that the enterprise has not caused deforestation but has contributed to it, it should cease its contribution and use its leverage over its business partners to mitigate any remaining adverse impacts. This may entail suspending operations temporarily. The enterprise should also take preventive measures to ensure that these adverse impacts do not re-occur.
- If the enterprise has not contributed to deforestation, but an observed impact has nevertheless been directly linked to its operations, products or services through a business relationship, it should use its leverage to mitigate or prevent the adverse impact. This may lead to disengaging from a business partner after failed attempts at mitigating risks or when risk mitigation is deemed to be not feasible or unacceptable. Factors that are relevant to determining the appropriate response include: the severity of the adverse impact, the enterprise's ability to influence and/or build leverage over the business partner or other relevant actors (e.g. government), and how crucial the business partner is to the enterprise (if it is crucial, the enterprise should increase its efforts to change the partner's behaviour; where is it less crucial, disengagement may be a better option).

The implementation plan must include an effective grievance mechanism to define the enterprise's action depending on its level of responsibility (see Box 4.1 in Step 1, Chapter 4).

A wide range of measures are available to enterprises to mitigate the adverse impacts of deforestation, depending on the enterprise's position in the supply chain. Where feasible they should always go beyond simply remediating adverse impacts and encompass measures that achieve positive impacts on forests and the workers and communities who depend on them – what are sometimes termed "forest-positive" actions. Box 6.2 lists some potential measures that enterprises can take to respond to adverse impacts and promote forest-positive outcomes.

Box 6.2. Responding to adverse deforestation impacts and promoting forest-positive outcomes

Actions to protect and restore forests include:

- Identifying areas of future risk to forests in or near the enterprise's supply chains and engaging suppliers to take preventive action where needed.
- Investing in programmes that promote forest conservation and sustainable agricultural production practices, such as agroforestry and intercropping.
- Supporting forest ecosystem restoration in areas of degraded forest.
- Choosing to buy from suppliers who are implementing forest-positive practices themselves, including conserving and restoring forests while promoting sustainable livelihoods.
- Rewarding such suppliers by purchasing their goods at a premium, buying larger quantities or agreeing longer term contracts.

Working with farmers and local communities, who are central to managing forest conservation and restoration, could include:

- Making and communicating explicit commitments to respecting the rights of indigenous peoples and local communities (this is in any case implicit in the adoption of RBC approaches, as articulated in the OECD-FAO Guidance for Responsible Agricultural Supply Chains and elsewhere).
- Gathering information on land rights within the enterprise's operations and supply chains and those of its suppliers, and adopting measures to ensure they are not adversely affected by the enterprise's operations.
- Providing support to farmers, particularly smallholders, in adopting agricultural innovation and sustainable, forest-positive techniques, so that incomes are strengthened, farms are more productive and resilient and forests are kept standing.
- Paying farmers and farm organisations (such as cooperatives) fair prices for their products, with the aim of contributing to achieving living incomes – potentially linked to performance in reducing deforestation and forest degradation, adopting sustainable production techniques, and engaging in forest ecosystem restoration.
- Supporting innovation and capacity-building to improve agricultural productivity in order to help reduce poverty and meet community food needs without expansion into forests.
- Supporting smallholder livelihood initiatives that deliver forest conservation and farmer resilience and inclusion.
- Encouraging and supporting local initiatives, involving farmers, local communities, indigenous peoples, local industry and government, to develop and implement local solutions.
- Participating in or developing systems of payments for ecosystem services.

Supporting landscape and jurisdictional initiatives to help address the multitude of deforestation drivers in particular regions could include:

- Contributing to the development of forest-positive strategies across an entire landscape or jurisdiction – measures include improving land use planning, strengthening forest monitoring by public authorities and/or local communities, helping companies avoid deforestation and manage conservation areas.

- Helping to promote collaboration amongst the private sector within the landscape or jurisdiction, and with governments, communities, indigenous peoples and sources of financial support and investment.
- Supporting and lobbying for improvements in the wider enabling environment, including, for example, greater supply chain transparency, traceability and monitoring systems, improvements in governance and law enforcement, and the wider provision of agricultural support, infrastructure and public services, with appropriate support from donors and national and local public entities.
- Participating in the development of sustainable finance mechanisms for conservation and restoration initiatives that include social and environmental co-benefits, including improved biodiversity and more resilient livelihoods and respect for human rights.

Promoting and supporting international initiatives to reduce deforestation and scale up forest-positive action could include:

- Encouraging and participating in the development of commodity roundtables and certification schemes.
- Participating in appropriate business associations and coalitions.
- Supporting the development of good and accessible sources of data on deforestation rates and drivers, and examples of best forest-positive practice.

Box 6.3. Strategic questions for enterprises to ask

Designing the strategy:

- Do we have a strategy with clear key success factors/indicators/milestones to respond to the deforestation risks identified?
- How have we engaged with external stakeholders in developing our strategy? (Which stakeholders? How?)
- How do we ensure that our strategy is up to date and working – e.g. through an annual review process, or collaboration with industry players?
- What activities do we have the capacity to undertake in response to deforestation risks and impacts? To what extent can we work directly with producers? What assistance and support are their likely to need?
- Do we understand when we need to offer remedy (e.g. “cause” or “contribute” cases)? Have we considered the types of remedy that we could offer?
- What steps can we take to innovate in our risk mitigation plans? (Issues include the role of technology, cross-sector collaboration, engagement with producer-country governments, engagement with consumer-country governments.)

Implementing the strategy:

- Who within our company is responsible and accountable for the implementation of this strategy? Have we identified people in each department who are responsible for doing their part to reduce the identified risk?
- Do we have an in-country presence or will we have to bring in a third party to implement activities on our behalf? How often do they report back on progress?
- How is the progress and impacts of our risk mitigation strategy measured and rewarded?

Box 6.4. Tips for SMEs

All SMEs:

- Designate someone in your company to lead and decide who should be involved in designing and implementing your strategy; ensure they have the sufficient resources, knowledge and support.
- Tap into industry association networks to learn how peers and other companies are addressing problems and if they have similar approaches that can guide your efforts.
- Include deforestation targets and objectives as part of performance reviews and incentives for staff, to drive change.
- Ensure that your identified risks from Step 2 feature in sales terms, procurement and contracting practices and in clauses in your agreements.
- Identify what you can do to ensure traceability of the products associated to the risk of deforestation
- Identify the resources needed to implement your strategy
- Share your action plan with all your suppliers, and ask your suppliers also to share it with partners in the supply chain with who you may not have direct contact
- Explain to suppliers that may be identified in your prioritisation efforts that you will need to enhance cooperation in reducing deforestation risk

In addition, upstream SMEs can:

- Consider designing your strategy based on the questions asked by customers.
- Consider including in your strategy actions to develop cooperation with producers, smallholder farmers or other stakeholders in the supply chain, and communicate that strategy downstream.

Box 6.5. Examples

[For consideration: this section welcomes examples from a wider range of sectors]

- The Consumer Goods Forum Forest-Positive Coalition of Action has published its Strategy for Collective Action in Production Landscapes.
- Case study of GAR's efforts to help one of its suppliers strengthen forest conservation practices in Papua.
- KPN Plantation, a major palm oil grower, is aiming to rehabilitate 38,000 hectares in Borneo and New Guinea to make up for its past deforestation and peatland clearing; its recovery plan is available here.
- The Rimba Collective is an initiative led by buyers and processors of palm oil to collectively support long-term sustainable conservation and restoration of forests. It aims to provide US$1 billion to protect or restore 500,000 hectares of forest, supporting 32,000 individuals in forest communities in Southeast Asia over 25 years, starting in Indonesia.

7 Step 4 – Verify supply chain due diligence to ensure that efforts to avoid deforestation are generating results

Step 4 is about making sure that your due diligence actions are effective and working, by establishing systems to track and monitor their performance.

Track the implementation and effectiveness of due diligence activities

Enterprises should take steps to verify that their due diligence practices are effective, i.e. that risks have been adequately identified and prevented and adverse impacts have been mitigated. This involves both *monitoring* of impacts to assess and document the extent to which actions, progress, performance and compliance are being carried out or achieved; and *verification* of compliance, performance, and/or actions relative to a stated commitment, standard or target.

This process should be proportionate to the risk; take into account the capacities of various enterprises, as such processes can be costly; and where necessary generate recommendations to improve due diligence practices.

Monitoring of the impacts of the enterprise's due diligence process can use the elements listed in Box 5.1 (on types and potential sources of information on commodities and products) and Box 5.2 (on sources of information on deforestation) –

- Monitoring should focus initially on the highest risk areas, supply chains and suppliers, as described in Step 2 (identifying risks, Chapter 5); once these have started to be addressed, monitoring can be extended to lower-risk areas, supply chains and suppliers.
- Levels of deforestation, and levels of the risk of deforestation, in the areas from which the enterprise is sourcing commodities and products change over time and need to be continually monitored. The elements listed in Box 5.1 (on types and potential sources of information on commodities and products) will help to deliver information on the products and commodities in the enterprise's operations and supply chains.
- Continuous monitoring of changes in sourcing patterns and suppliers will be essential to determining impacts.

- The sources listed in Box 5.2 can help to identify deforestation in the supply area during the monitored period: this area constitutes an alert for which the level of the enterprise's responsibility must be assessed.

Means of *verification* of the effects of the enterprise's due diligence procedure include reviews of documents and internal control mechanisms, verification of satellite data, third-party audits, on-site investigations, and consultations with local communities, civil society and government authorities –

- The independence and quality of audits are critical to their effectiveness. Auditors should be independent, competent and accountable. Enterprises may consider using an independent institution responsible for accrediting auditors, verifying audits, publishing audit reports, implementing modules to build capabilities of suppliers to conduct due diligence, and helping to follow up on grievances of interested parties.
- A number of model systems exist for particular supply chains from which the enterprise's due diligence system can be drawn; see Annex C.

The results of monitoring and verification efforts should be fed back into the design and functioning of the system; as indicated in the diagram in Chapter 3 due diligence is a constant circular process, not a linear one. If the risk has been mitigated or prevented, the enterprise should conduct ongoing due diligence proportionate to the risk.

Box 7.1. Strategic questions for enterprises to ask

- How do we check that our due diligence actions are working and effective in identifying and addressing deforestation risks, in accordance with our company commitments?
- Do we conduct due diligence assessments at key points in the supply chain (control points)?
- Are our due diligence assessments internally led or carried out by external third party assessors? Have we used external audits for any gaps to ensure that the assessment is comprehensive and considers different ways that deforestation occurs (e.g. through outsourcing to different suppliers, etc.)?
- What role can technology play in our assessments?
- How have we responded to third parties' complaints?
- If we use third party commodity or product certification schemes, do we know if these schemes are aligned to the *OECD-FAO Guidance for Responsible Agricultural Supply Chains* and its framework on due diligence? If not, what steps can we take to make sure they are more aligned?
- How do we loop back to suppliers with whom we do not have a contract, in order to effect change?
- What steps can we take to increase overall leverage in the supply chain to change the business behaviour of suppliers (e.g. are we engaging with producer country governments, and do we have a sense of which industry groups and multi-stakeholder initiatives we should work with?)

Box 7.2. Tips for SMEs

All SMEs:

- Understand from your customers or existing regulations the type of data needed and frequency of data. Seek ways in which data can be pooled across customers, or how technology can be used to increase efficiency and get best value for effort.
- Organise regular meetings with your suppliers to check progress in reducing deforestation risks.
- Identify local NGOs or international organisations with knowledge of the agricultural sourcing communities in your focus commodity sectors; speak to them regularly to check that the information you receive from suppliers is accurate.
- Consult existing platforms that can help you to identify deforestation alerts in your supply areas.
- Consider working with partners and suppliers to introduce a complaints or whistleblowing system open to all employees and external persons. This can help you to identify problems early on and verify your efforts, before issues become a bigger problem.
- Consider using tools and indicators from certification schemes, or deforestation platforms that you may be part of, to support your verification of due diligence.
- Work together with peer companies and industry groups to magnify your leverage when deforestation risks persist within your business relationships.
- Team up with other suppliers or business associations, and NGOs, if your leverage over a business partner is insufficient to encourage change.
- As a last resort, consider ending your business relationship with suppliers that do not meet or support your expectations and commitments to addressing deforestation.

In addition, upstream SMEs can:

- Ensure that your customers know how you verify and collect information, including the type of data collected, frequency of collection and who you work with in obtaining that data.
- Be transparent in communicating what information you do not have, and why you do not have it.
- Discuss with upstream buyers how they may support your data collection activities and use their leverage and capacity which may be greater than your own.
- Identify and support existing forest monitoring systems for your areas of supply whether based on community monitoring or remote sensing surveys.

Box 7.3. Examples

[For consideration: this section welcomes examples from a wider range of sectors]

- Ferrero has committed to using the Starling satellite monitoring and verification service across all of its palm oil sourcing areas. Operated by Earthworm Foundation and Airbus, Starling uses a combination of satellite imagery and on-the-ground expertise to monitor land cover change and forest cover disturbance in near-real time, enabling Ferrero to identify challenges in its supply chain and take appropriate action.
- The Consumer Goods Forum's Forest Positive Coalition has developed a palm oil deforestation monitoring and response framework describing best practice for monitoring, that could also be a basis for verification.
- This case study in CDP Forests' 2021 report shows how Mars controls, monitors and verifies compliance with its no-deforestation policies in its palm oil supply chain. The company works with a consultant to conduct monthly satellite monitoring of its total palm oil supply chain at a supplier group level for deforestation or development on peat; any findings are verified and followed up. Mars engages in longer-term contracts with suppliers who commit to and deliver supply chains that meet its expectations.
- The Palm Oil Collaboration Group has developed a protocol for verification bodies for verifying the accuracy and completeness of self-reported data against the No Deforestation, No Peat, No Exploitation (NDPE) Implementation Reporting Framework.

8 Step 5 – Report on supply chain due diligence

Enterprises should publicly and regularly report on their forest-related due diligence policies and practices (where appropriate as part of a wider framework, such as deforestation- and conversion-free objectives), with due regard taken to business confidentiality and other competitive concerns. This includes both qualitative information on system design and quantitative reporting on performance. They should provide affected stakeholders and business partners with clear, accurate and timely information on actual and potential adverse impacts identified through ongoing impact assessments, and on the steps and measures taken to mitigate or prevent them.

Step 5 is about reporting your efforts to implement your due diligence policies and the impacts they are having in terms of fulfilling your commitments.

Enterprises should publicly and regularly report on their forest-related due diligence policies and practices (where appropriate as part of a wider framework, such as deforestation- and conversion-free objectives), with due regard taken to business confidentiality and other competitive concerns. This includes both qualitative information on system design and quantitative reporting on performance. They should provide affected stakeholders and business partners with clear, accurate and timely information on actual and potential adverse impacts identified through ongoing impact assessments, and on the steps and measures taken to mitigate or prevent them.

Information that could feature in such reports includes:

- The enterprise's management systems, including its due diligence policy, specifying the management structure responsible for the company's due diligence and who in the company is directly responsible.
- The enterprise's commitments with regard to tackling deforestation and forest degradation, including not only the objectives (no deforestation or reduction of risk by XX%, etc.) but also the enterprise's definition of forests, deforestation and forest degradation, cut-off dates, scope in terms of commodities and geographies, and so on.
- The risk analysis and mitigation systems put in place by the enterprise to address deforestation, including how they function and the traceability and control systems in place, including the uses of certification.
- Summaries of the data and information collected, outlining the enterprise's exposure to risks, progress made against its targets and commitments and any adverse impacts it may have caused or contributed to.
- How the information has been used to strengthen responsible sourcing and management, mitigate against risks, provide remediation and meet the enterprise's commitments,.

- Cooperation with stakeholders and methods for disclosing information to all clients and suppliers, upstream and downstream.
- Information on compliance with any national legislative requirements.

Reporting on the enterprise's due diligence systems and performance can take place in various contexts and formats, including the company's annual reports, sustainability reports or specific reports on the enterprise's impacts on forests. Reports can be made publicly available through the enterprise's website, social media and meetings with stakeholders, including upstream and downstream partners. Communication needs to be appropriate to the impacts and audience in terms of its form (including translation into appropriate languages), frequency, accessibility, and the adequacy of information provided. Information collected can also be communicated to reporting frameworks, such as CDP Forests' disclosure system, the supply-change.org website or national or international trade associations and groupings.

Reports should adopt clear and constant metrics, to facilitate multi-annual monitoring and analysis at supply chain or country level, for instance.

Many of the examples of legislation relevant for deforestation issues linked to agri-food commodities (see Annex B) include requirements for sustainability reporting. Sometimes reports on the enterprise's due diligence system and activities may be included in other reports on its RBC or sustainability policies.

Box 8.1. Strategic questions for enterprises to ask

- Do we provide an annual update on our deforestation commitments and how we are progressing (or not) against them?
- Should our reports be through one document or through several discrete issue reports linked to our company deforestation commitments, or the commodities we handle, or a chapter in our company report on sustainability?
- Have we incorporated the reporting recommendations according to the *OECD-FAO Guidance for Responsible Agricultural Supply Chains*?
- Do we share these reports with external stakeholders, and ask for candid feedback on what is good and what can be improved?
- How do our reports on due diligence contribute to improving our overall learning and improvement of due diligence to address deforestation?
- Do we publicly disclose our efforts on due diligence, including cooperation with suppliers to mitigate deforestation risks from taking place?

Box 8.2. Tips for SMEs

All SMEs:

- Do all you can to communicate what you do to reduce deforestation in your operations and supply chains, and consider meeting, including consultation, with upstream suppliers and outreach to actors in agricultural sourcing communities.
- Decide how and when you want to communicate with your customers and business partners; this can take place via email and supported by social media.
- Include relevant information on deforestation mitigation efforts in annual reports, or sustainability reports if you produce them.
- If your business participates in subnational, national or international certification or forest protection initiatives, communicate your efforts of mitigating deforestation risks according to the OECD-FAO Handbook and the *OECD-FAO Guidance for Responsible Agricultural Supply Chains*.

In addition, upstream SMEs can:

- Consider making use of shorter regular updates posted on your website or via social media.

Box 8.3. Examples

[For consideration: this section welcomes examples from a wider range of sectors]

- In 2020, 687 companies reported through CDP on the steps they are taking to eliminate deforestation from their operations and supply chains. This report looks at data disclosed by 553 companies using or producing seven commodities responsible for the majority of agriculture-related deforestation: palm oil, timber products, cattle products, soy, natural rubber, cocoa and coffee. For CDP's Forests Scoring Methodology, see here.
- Example of overall sustainability report from Musim Mas.
- Examples of traceability reports / dashboards for palm oil from Cargilland Neste.

9 Remediation for adverse impacts

While the prevention of deforestation and the risk of deforestation should always take priority, there may be cases where an enterprise, though its exercise of due diligence or other means, has identified actual deforestation but has failed to prevent or mitigate it entirely. In such a case the enterprise should identify why, and take remedial action in relation to any adverse impacts which have resulted. Box 9.1 includes example of measures that can be taken; for more detail on remediation strategies, also see the *OECD Due Diligence Guidance for Responsible Business Conduct*.

The enterprise should identify why its due diligence procedures failed to prevent or mitigate the adverse impacts, for example because of the lack of an effective risk mitigation strategy, or inadequate timing, resources or lack of will to mitigate risks, or other barriers. It should take corrective action to ensure that the problem does not recur; engagement with local stakeholders, including local communities and indigenous peoples, civil society and government, will be essential in establishing suitable mechanisms.

Box 9.1. Remediation

When an enterprise identifies that it has caused or contributed to actual adverse impacts, a number of measures can be taken:

- If possible, the enterprise can seek to restore the affected person or persons, to the situation they would be in had the adverse impact not occurred.
- If possible, the enterprise can seek to restore the affected environment to the state it would be in had the adverse impact not occurred, e.g. by restoring degraded forests or deforested land, and ensuring long-term support for the restored area.
- Where this is not possible (in many cases of deforestation it may not be), the enterprise can: (1) provide appropriate levels of compensation In a form mutually agreed by affected communities (this may not always be monetary; a community could identify support for education or health services as more appropriate, for example); and/or (2) provide appropriate compensation for environmental impacts, in particular greenhouse gas emissions and biodiversity loss.
- Where appropriate, the enterprise can provide for or cooperate with legitimate remediation mechanisms through which impacted stakeholders and rights-holders can raise complaints and seek to have them addressed with the enterprise (see also section on grievance mechanisms in Step 1).
- The enterprise should cooperate in good faith with judicial or non-judicial grievance mechanisms.

Box 9.2. Examples

[For consideration: this section welcomes examples from a wider range of sectors]

- KPN Plantation, a major palm oil grower, is aiming to rehabilitate 38,000 hectares in Borneo and New Guinea to make up for its past deforestation and peatland clearing; its recovery plan is available here.
- GAR has worked with the NGO Mighty Earth to implement a re-entry protocol for non-compliant suppliers. One case is PT ANJ, which cleared forest areas in Papua. To re-enter the GAR supply chain the company was required to adopt a no deforestation policy and remediate past clearances. See GAR grievance reports here.
- RSPO has defined a remediation and compensation procedure remediation for palm oil to address land clearance and plantation development undertaken since November 2005 without prior high conservation value.

Annex A. Glossary of terms used in this Handbook

Definitions marked with an asterisk (*) are the standard definitions established by the FAO (FAO, 2020d[12]). Although they also feature in many international and national frameworks and legislation, it is important to note that definitions of some of these terms, such as “forest”, are often different in national legislation and voluntary standards.

Conversion: Change of a forest or other natural ecosystem to another land use or profound change in a natural ecosystem’s species composition, structure, or function.

Cut-off date: The date in legislation or standard after which deforestation on the plots or properties of origin is not permitted if the commodities or products are to be considered compliant with the legislation or standard or policy.

Deforestation: The conversion of forest to other land use independently, whether human-induced or not.* (Some non-FAO definitions include under this term the conversion of natural forest to plantation forest.)

Deforestation-free: Commodities or products or supply chains that do not cause or contribute to deforestation in their country of origin.

Forest: Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10%, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.*

Forest degradation: There is no FAO or other standard definition for this term; the FAO encourages countries to define it themselves. The definition included in the Accountability Framework, which applies to other natural ecosystems as well as forests, is: “Changes within a natural ecosystem that significantly and negatively affect its species composition, structure, and/or function and reduce the ecosystem’s capacity to supply products, support biodiversity, and/or deliver ecosystem services.” (Accountability Framework, 2020[13])

Forest plantation: Planted forest that is intensively managed and meets *all* the following criteria at planting and stand maturity: one or two species, even age class, and regular spacing.*

Forest-positive: There is no single definition for this term, but it is generally taken to mean moving beyond simply managing deforestation risks in an enterprise’s supply chain to achieving positive impacts on forests and the workers and communities who depend on them.

Indigenous people: People regarded as indigenous on account of their descent from the population which inhabited the country, or a geographical region to which the country belongs, at a time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.*

Naturally regenerating forest: Forest predominantly composed of trees established through natural regeneration.*

Planted forest: Forest predominantly composed of trees established through planting and/or deliberate seeding.*

Primary forest: Naturally regenerated forest of native tree species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.*

Secondary forest: Forest which has regrown after a timber harvest, until a long enough period has passed so that the effects of the disturbance are no longer evident.

Zero-deforestation: *Zero gross deforestation* means an end to the conversion of all existing forestland within a geographic unit, and gives no weight to compensatory gains in forest cover made elsewhere. *Zero net deforestation* means no change in the total forested area of the area in question (possibly the entire country); it therefore allows new forests to be planted to compensate for any deforestation. (This can imply a false equivalence; newly regenerated forest typically lacks many of the ecological and cultural values of recently cleared forest.) The terms are sometimes used interchangeably, although clearly they are not the same.

Annex B. Deforestation and due diligence in legislation

This Handbook is designed to help enterprises tailor their risk-based due diligence tools to identify, prevent and mitigate the risk of deforestation and forest degradation in their operations and supply chains. It should help enterprises comply with legislation which places them under due diligence obligations, including many of the regulations reviewed in this chapter. However, frequently legislation will contain additional requirements to those outlined here – for example, an obligation to conduct due diligence with regard to the legality of production, or to submit an import declaration or due diligence statement before placing products on the market. Enterprises should always be fully aware of relevant legislation in the jurisdictions in which they operate.

Governments are increasingly legislating to introduce obligations on enterprises to conduct risk-based due diligence. To date, legislation that may require enterprises to establish due diligence systems in order to identify, prevent and mitigate their impact on deforestation and forest degradation has taken one of two forms:

- A general corporate obligation of due diligence, applying to an enterprise's entire operations and supply chains, not specific to any sector or product, and not a requirement of placing products on the market.
- A requirement for due diligence to be undertaken before specified products can be placed on the market, imported or exported.

At the time of writing, the following legislative instruments are in place or in preparation that include obligations on enterprises to conduct due diligence (or similar approaches) with regard to deforestation, or wider criteria that could include deforestation. (There is of course a much wider range of national legislation dealing with forest protection; this annex considers only legislation that includes obligations of due diligence.)

Box A B.1. Legality and deforestation in due diligence legislation

Many of the items of legislation reviewed in this annex base their due diligence criteria on the legality of production of the products they cover: they seek to minimise the risk of enterprises handling timber or agrocultural commodities produced with illegal deforestation rather than with deforestation (legal or illegal).

"Legality" is defined in reference to the national laws and regulations in force in the country of origin of the products, though most of the regulations listed here further define the categories of legislation that should be taken into account. The EU Timber Regulation, for example, lists legislation covering the right to harvest timber; payments for harvest rights and timber harvesting; environmental and forest legislation, including forest management and biodiversity conservation; third parties' legal rights to land use and tenure; and relevant trade and customs legislation. The UK Environment Act refers to laws relating to the ownership or use of the land on which the commodity was grown, raised or cultivated.

This Handbook will help enterprises to establish due diligence procedures that will minimise the risks of deforestation, whether legal or illegal.

General corporate obligation of due diligence

This approach to due diligence in legislation covers a range of social and sometimes environmental criteria.[4] It follows closely the concept of due diligence articulated in the *UN Guiding Principles on Business and Human Rights*, the *OECD-FAO Guidance for Responsible Agricultural Supply Chains* and related documents. It is applied across an enterprise's entire operations and supply chains.[5]

France

In February 2017 France adopted the corporate *Devoir de vigilance des sociétés mères et des entreprises donneuses d'ordre* (Due diligence of corporations and main contractors) law applying to companies incorporated under French law with more than 5,000 employees in France or 10,000 world-wide (DdV, 2017[14]). Companies subject to the legislation (an estimated 150–250) must implement and publish a "vigilance plan" explaining how they are exercising due diligence in seeking to identify and avoid human rights violations, breaches of fundamental freedoms, violations of health and safety rights and environmental damage. This includes the identification of risks, procedures for regular assessments of subsidiaries, sub-contractors and suppliers, actions to mitigate risks or prevent serious harm, and mechanisms for alerts and monitoring. The companies must also publish annual reports on progress. The state plays no role in verifying compliance, but civil liability mechanisms can be pursued by third parties in case of an enterprise's failure to implement the plan or if there are weaknesses in it.

Germany

The Supply Chain Due Diligence Act was approved in 2021 and will enter into force in 2023 (SCDD, 2021[15]), though implementation may be affected by the proposed EU directive on Corporate Sustainability Due Diligence (see below). The obligation will apply to companies with more than 3,000

[4] It is often referred to by the terms "human rights due diligence" or "human rights and environmental due diligence".

[5] Examples of due diligence legislation that does not extend to deforestation, or environmental issues – for example, in Norway, where the underlying criteria are human rights, or the Netherlands, where the criterion is child labour – are not included here.

employees, falling to 1,000 from 2024; this will ultimately cover about 4,800 companies. The law obliges these companies to fulfil their due diligence obligations in their supply chains – including their direct suppliers – with regard to respecting internationally recognised human rights and environmental harm which affects human rights. “Environmental harm” is defined as including: “the prohibition of unlawful eviction and the prohibition of unlawful taking of land, forests and waters in the acquisition, development or other use of land, forests and waters, the use of which secures the livelihood of a person” (Section 2(2)10). Avoiding deforestation which is illegal and harms livelihoods should therefore be included in the due diligence obligations.

The law specifies a series of steps which the due diligence obligation requires, including establishing a risk management system, performing regular risk analyses, establishing a complaints procedure, taking remedial action and documenting and reporting. Failure to implement such procedures or act on violations may result in fines up to 2% of the company’s international revenue, and any company found to be in violation of the law may be excluded from public procurement for up to three years. Affected parties have the right to assert to the authorities that their rights are being violated or directly threatened by a company’s failure to comply with its due diligence obligations; in this case, the authorities must take action to investigate whether a breach has occurred and work towards its elimination by the company.

European Union

In February 2022, the European Commission published a proposal for a directive on Corporate Sustainability Due Diligence. This is intended to place an obligation of due diligence on large companies registered or operating in the EU with regard to human rights abuses and environmental harms in their operations, subsidiaries and entities with which the company has an “established business relationship”. The company size threshold is lower for enterprises operating in “high-impact” sectors, which include agriculture / forestry / fishing / food, textiles and minerals. SMEs are exempted from direct obligations, but many will fall into the category of entities with established business relationships with larger companies. The criteria on which the due diligence obligations are proposed to be based are defined with reference to a wide range of UN human rights instruments, ILO conventions and multilateral environmental agreements; deforestation is included explicitly in the annex on human rights obligations.

The proposed due diligence procedure is defined in six steps. Companies are to: integrate due diligence into their corporate policies and have a due diligence system in place; identify actual or potential adverse impacts; prevent potential adverse impacts where possible, and mitigate actual impacts where not; bring actual adverse impacts to an end where possible and minimise their extent where not; establish and maintain complaints procedures; monitor the effectiveness of their due diligence policies and measures; and publicly report on their due diligence efforts. As a directive, once the legislation has been agreed through the EU’s legislative procedures (which may result in changes in the elements outlined above), it will be need to implemented through national legislation in the 27 EU member states.

Market-related obligation of due diligence

This approach to due diligence is somewhat different to the examples above, requiring enterprises that place particular products on the market, or import or export them, to have conducted due diligence before doing so. Often the legislation also includes a prohibition on placing products that do not meet the criteria on the market. Several examples now exist covering timber and wood products, where the underlying criteria are the legality of production under relevant legislation in force in the country of origin. Other examples are beginning to appear covering a wider range of commodities, and, in the EU, with criteria including the avoidance of deforestation as well as legality.

European Union

The **EU Timber Regulation** (EUTR) was agreed in 2010 and entered fully into operation in 2013 (EUTR, 2010[16]). Designed to exclude illegally sourced timber from the EU market, it has three main obligations:

- It prohibits the placing on the EU market for the first time of illegally harvested timber, and products derived from such timber, whether imported or domestically produced.
- It requires operators who place timber products on the EU market for the first time to have a due diligence system in place. This must provide means of ensuring access to full information on the products, including their legal status and the countries, regions and sometimes forests of origin, and a process of analysing and mitigating against the risk of placing illegally harvested products on the market. The higher the risk of illegal behaviour in the place of origin, the greater the degree of knowledge the operator must have of the product and its chain of custody.
- It requires companies selling timber products after they have been first placed on the market ("traders") to keep records of their suppliers and customers.

In November 2021, the European Commission published a proposal for a **Regulation on Deforestation**. Building on the EUTR, the proposed regulation contains a prohibition on first placing or making available specified commodities and products on the EU market unless they are free of deforestation and forest degradation after 2020 and have been produced in accordance with the relevant legislation of the country of production, and an obligation on companies placing products on the market or exporting them to exercise due diligence to ensure their compliance with these criteria. The commodities and products to be covered are beef, cocoa, coffee, palm oil, soy and wood; this includes several semi-processed and processed derivatives, such as chocolate and leather. The regulation is intended to supersede the EUTR, so includes all the timber products listed there.

The due diligence procedure described in the proposed regulation includes three steps: a process for collecting information about the products, and evidence that the products are free of deforestation and forest degradation and have been produced legally; a risk assessment step, to determine the level of risk associated with the products; and a risk mitigation step if the company cannot be sure that there is no risk, or a negligible risk, that the products are not compliant. The proposed regulation also contains a "benchmarking system" to assess the level of risk that products from particular producer countries, or parts of them, may not be in compliance with those criteria.

The timber legality assurance systems established by several countries that have agreed Voluntary Partnership Agreements with the EU under its Forest Law Enforcement, Governance and Trade (FLEGT) initiative – including **Ghana**, **Indonesia** and **Viet Nam**, and other countries, such as **Malaysia** – include obligations of due diligence on timber operators, usually in relation to timber imported into the partner country.

Australia

The Illegal Logging Prohibition Act 2012 prohibits the import of all timber products containing illegally logged timber, and the processing of domestically grown raw logs that have been illegally logged. Since 2014, under the Illegal Logging Prohibition Regulation, importers and processors have been obliged to have in place a due diligence system covering the following steps for each regulated timber product imported into, or raw log processed within, Australia: gathering information relating to the timber product or raw log and the legality of the harvest; using that information to assess the risk that the timber or raw log was illegally logged; and mitigating that risk if it is found to be greater than low. This is similar to the due diligence requirements of the EUTR.

Japan

Under the 2016 Clean Wood Act, Japan requires all wood-related business entities to check the legality of wood and wood products they handle (the government has established the Clean Wood Navi website to provide information on timber producing countries). Those companies first placing wood and wood products on the Japanese market must meet specified information collection requirements to verify that the timber was harvested legally and must check the contents of the collected documents (information collection and risk analysis). If legality is not confirmed by the process of information collection and risk analysis, the companies must gather additional information confirming that the timber was legally harvested (risk mitigation).

Switzerland

The Timber Trade Ordinance, applying from January 2022, is equivalent to the EUTR, requiring operators (enterprises first placing) timber products on the Swiss market to implement due diligence to ensure that no wood or wood products that have been illegally felled or traded are placed on the market.

United Kingdom

The Environment Act, approved in November 2021, makes it illegal for large businesses operating in the UK (above a turnover threshold, yet to be specified) to use key commodities associated with deforestation produced on land illegally occupied or used. The businesses will also be required to undertake due diligence on their supply chains to assess and mitigate the risk that relevant local laws pertaining to land use and land ownership have not been complied with, and to report on this exercise annually.

The government has identified cattle products (beef and leather), cocoa, coffee, maize, palm oil, rubber, and soy as potential commodities to be covered (timber is included in the UK Timber Regulation, which mirrors the EUTR), and is currently consulting on which of them should have priority in a phased implementation, along with other features of the legislation; secondary legislation is anticipated during 2022.

United States

The Lacey Act (originally passed in 1900 and amended to include plants in 2008) makes it unlawful to import, export, sell, acquire, or purchase fish, wildlife or plants that are taken, possessed, transported, or sold in violation of US law, or in interstate or foreign commerce involving any fish, wildlife, or plants taken, possessed or sold in violation of US state or foreign law (Lacey, 2008[17]). “Plants” includes timber and wood products, though not common cultivars or common food crops. Importers of timber must also submit an import declaration containing information on the country of origin, species, volume and value of the products.

Penalties for non-compliance rest on the level of intent that can be shown on the part of the violator. Even when no intent to break the law can be shown, the extent to which the individual should have known “in the exercise of due care” that the products had been illegally produced is taken into account. In all cases the illegal products can also be forfeit. Although this is not an explicit requirement to exercise due diligence, the “due care” obligation is similar; and the measures required by the courts of a number of companies subject to enforcement action have helped to clarify the due care obligations in a manner similar to the due diligence requirements of, for example, the EUTR.

The proposed FOREST (Fostering Overseas Rule of Law and Environmentally Sound Trade) Act was introduced to Congress for consideration in 2021. The proposed legislation is designed to restrict certain commodities produced on illegally deforested land from accessing the US market; the proposed initial

list includes palm oil, soy, cattle, rubber, wood pulp and cocoa. Companies importing from countries identified by the government as having no adequate and effective protection against illegal deforestation in place would be required to submit a declaration stating that they had exercised reasonable care to assess and mitigate the risks that any covered commodity used to make the covered product was produced from land subject to illegal deforestation on or after the date of enactment.

Other relevant legislation

Many other items of market-related legislation have the potential to affect enterprises seeking to apply due diligence frameworks in order to minimise the risk of deforestation in their operations and supply chains, without themselves placing obligations of due diligence on enterprises. Some are listed below (this is not an exhaustive list).

The **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** requires parties to put in place a system of import and export permits to avoid trading in endangered species listed on the appendices to the agreement. Several tree species and non-timber forest products, are included.

China: in 2020 the Forest Law was amended to include a ban on buying, transporting, and/or processing illegally sourced timber, and to require processing companies to establish a data record of their raw materials and products.

EU: the Forest Law Enforcement, Governance and Trade (FLEGT) regulation requires timber imports from partner countries that have timber legality assurance and export licensing systems in place under a Voluntary Partnership Agreement with the EU to be accompanied by a FLEGT export license; otherwise, they are refused entry. FLEGT-licensed products are automatically assumed to be in compliance with the requirements of the EUTR.

Korea: the Act on the Sustainable Use of Timbers requires operators not to import, distribute, produce or sell timber produced illegally in Korea or other countries. Importers are required to submit an import declaration including evidence that the imported products are legal. FLEGT-licensed products are automatically assumed to be compliant.

Public procurement policies: many countries, including most EU member states, now have in place public procurement policies requiring government purchases of timber and wood products to meet criteria for legality and/or sustainability. A few governments are now extending this approach to other commodities, and including criteria that relate to deforestation associated with products such as palm oil or cocoa.

Renewable energy policies: in many countries, renewable energy is given financial and/or regulatory support. This can affect commodities associated with deforestation, including wood for biomass power and heat generation, and vegetable oils such as palm oil and soybean oil for transport biofuels and power and heat. Often sustainability criteria are in place that restrict support to feedstocks with the aim of protecting forests; these may include, for example, requirements that the feedstock is not associated with direct land-use change (e.g. deforestation) or sourced from high-conservation-value areas.

The wider business regulatory environment

Governments are increasingly putting in place obligations for **transparency and reporting** of business' exposure to risks in their supply chains. Examples include the EU's Non-Financial Reporting Directive, designed to enable investors and other stakeholders to evaluate the performance of large companies with regard to their performance on environmental protection, human rights, social responsibility and other issues, and to encourage those companies to develop a more responsible approach to business.

A proposal for a revised Corporate Sustainability Reporting Directive is currently under debate; this aims to strengthen the rules and extend them to more companies, helping to bring sustainability reporting on a par with financial reporting. Reporting requirements are increasingly common in regard to climate-related financial disclosures, through which companies and other organisations disclose climate-related risks and opportunities through their existing reporting processes. By 2021, Brazil, the EU, Japan, New Zealand, Singapore, Switzerland and the UK had all introduced, or were planning to bring in, legislation following the recommendations of the international Task Force on Climate-Related Financial Disclosures.

Such reports may not include information on forest-related risks, but the Task Force on Nature-Related Financial Disclosures, launched in June 2021, is aiming to develop appropriate mechanisms that would. Their work was given a boost by the announcement by more than 30 financial institutions, ahead of the world leaders' summit on forest and land use at the COP26 climate conference in 2021, that they would use their "best efforts" to eliminate investment and lending in activities linked to deforestation by 2025. Participating organisations committed to disclose publicly any deforestation risk and mitigation activities in their portfolios and report on their progress.

There are also many voluntary initiatives under way to encourage enterprises to report forest-related risks in their operations and supply chains. One of the best known is CDP Forests, which provides a framework of action for companies to measure and manage forest-related risks and opportunities, report on progress, and commit to action for the restoration of forests and ecosystems.

Regulation of flows of **finance and investment** has the potential to play a key role in combating deforestation. Apart from legislation on reporting requirements, and issues such as money laundering (which is of significant relevance to deforestation, given how much is illegal – see Chapter 2), initiatives on this topic have mostly so far been voluntary. Examples include the Equator Principles, which aim to provide a common baseline and risk management framework for financial institutions to identify, assess and manage environmental and social risks when financing projects. The principles themselves were based partly on the International Finance Corporation's Performance Standards on Environmental and Social Sustainability, which incorporate recommendations to conduct due diligence. However, most of the activity has been in the development of specialist "green finance", or "sustainable investment" options rather than on regulating ordinary flows of finance to activities that may be linked to deforestation.

Finally, the wider area of **responsible business conduct** – including, alongside deforestation and other environmental impacts, human rights, workers' rights, disclosure, consumer interests, and other criteria, is also relevant. A very wide range of international, national and company-based initiatives exists; notable international examples include the National Action Plans on Business and Human Rights encouraged by the UN Office of the High Commissioner for Human Rights. Several such Action Plans now include explicit references to the protection of forests; examples include those of Colombia, Thailand and the US. These and similar developments are helping to promote debate on the inter-relationship of human rights and environmental impacts. As the *UN Framework Principles on Human Rights and the Environment*, published in 2018, states: "our human rights are intertwined with the environment in which we live. Environmental harm interferes with the enjoyment of human rights, and the exercise of human rights helps to protect the environment and to promote sustainable development" (UNFPHE, 2018[18]). In practice, however, existing corporate due diligence practices often treat human rights and environmental issues separately (Bright and Buhmann, 2021[19]) (CHRB, 2020[20]), though frameworks such as the Accountability Framework are being developed to help bring them together. The issue is complicated by the absence of an environmental equivalent to the UN human rights instruments on which human rights due diligence processes usually rest. In turn this emphasises the value of defining carefully the environmental criteria that underlie due diligence requirements – such as deforestation and forest degradation.

Annex C. Resources

Sources of data on forests and deforestation

Numerous datasets, processing tools, and platforms exist to help gain information on forest area, forest type, deforestation, and reforestation. Datasets refer to either the primary data or the processed data used to produce information. All datasets listed here are freely available to download (e.g. from a website) or view (e.g. in a web data portal). Once downloaded, datasets can be used in more sophisticated analyses using geospatial data processing software.

Processing tools are individual algorithms or software that can be used to add value to data or information to produce higher-order products and analyses. Most tools are freely available, though some require specific licensing for commercial use. Processing platforms are web-based or desktop collections of tools capable of providing end-to-end support for data access and processing. Platforms, as well, can be free to use or require licensing for commercial applications. Collectively, these resources can be very valuable in tracking supply chain impacts at local to global scales.

When seeking and using data on forests, it is important to remember some key points about the information available. Tree cover and forest are different. Tree cover describes a biophysical characteristic of the Earth's surface (e.g. there are trees). Forest, however, is a land use and may or may not have tree cover due to management practices (e.g. temporary tree removal from harvest as part of normal management cycles or due to fire). Deforestation, then, refers to a loss of tree cover and a concurrent change in land use from forest to non-forest. Forest degradation refers to a loss of tree cover but no change in land use.

Clearly understanding these terms will help to prioritise datasets based on the information sought.

Disclaimer: The following tables are not comprehensive and only intended to provide a robust snapshot of available tools and platforms to access forest change related information as of June 2022. Most of the information is synthesised and updated regularly in several lists, such as REDD Compass (https://www.reddcompass.org/) or Open MRV (https://openmrv.org). We invite the reader to consult them for more in-depth understanding of the data and tools.

Table A C.1. Primary datasets

Primary datasets	Info Type	Spatial Resolution	Open Source	Producer	Ease of Use	Update	First data available	Geographic Scale	URL
MODIS mission	Imagery	250–1000m	Yes	NASA	Moderate	Day	2000	Global	https://modis.gsfc.nasa.gov/
Landsat mission	Imagery	30m	Yes	NASA	Moderate	16-day	1972	Global	https://landsat.gsfc.nasa.gov/
Copernicus mission	Imagery	5–20m	Yes	ESA	Moderate	5-day	2015	Global	https://www.esa.int/Applications/Observing_the_Earth/Copernicus

Table A C.2. Processed datasets

Processed datasets	Info Type	Spatial Resolution	Open Source	Producer	Ease of Use	Update	First data available	Geographic Scale	URL
UMD GLAD	Imagery, tree cover, change, alerts, fire	30m	Yes	University of Maryland, USA	Easy	Month	2000	Global	https://glad.umd.edu/
JRC TMF	Forest cover change incl. degradation	10-30m	Yes	Joint Research Centre, EU	Easy	Annual	1992	Tropical	https://forobs.jrc.ec.europa.eu/TMF/explorer.php
GLAD alerts (L&S)	Alerts	30m	Yes	University of Maryland, USA	Moderate	Month	2017	Global (L), Latin America (S)	https://glad.umd.edu/dataset/glad-forest-alerts
RADD alerts (S)	Alerts	20m	Yes	Wageningen University, Netherlands	Moderate	Month	2020	Primary humid tropical forest	http://radd-alert.wur.nl
Dynamic World	LCLU	20m	Yes	Google, World Resources Institute	Moderate	Day	2015	Global	https://developers.google.com/earth-engine/datasets/catalog/GOOGLE_DYNAMICWORLD_V1
ESA CCI	LCLU	300m	Yes	ESA	Moderate	Annual	1992	Global	http://maps.elie.ucl.ac.be/CCI/viewer/index.php
ESA Worldcover	LCLU	10m	Yes	ESA	Easy	Annual	2020	Global	https://worldcover2020.esa.int/viewer
JAXA Forest / Non-forest	Tree cover	25–1000m	Yes	JAXA	Easy	Annual	2007	Global	https://earth.jaxa.jp/en/data/2555/index.html
UMD GLAD	Imagery, tree cover, change, alerts, fire	30m	Yes	University of Maryland, USA	Easy	Month	2000	Global	https://glad.umd.edu/
JRC TMF	Forest cover change incl. degradation	10-30m	Yes	Joint Research Centre, EU	Easy	Annual	1992	Tropical	https://forobs.jrc.ec.europa.eu/TMF/explorer.php

Table A C.3. Data access platforms / tools

Data access platforms / tools	Description	URL
Global Forest Watch	Global Forest Watch (GFW 2.0) is an online platform led by WRI that provides data and tools for monitoring forests. GFW 2.0 provides a dashboard with precalculated zonal statistics on various tree cover change and forest extent products, essentially at national and subnational levels. It also allows users to visualise the GLAD datasets in a geoportal and refine those calculations for user-defined zones.	www.globlaforestwatch.org
Terra-i	Terra-i detects land-cover changes resulting from human activities in near real-time, producing updates every 16 days. Currently it works for the whole of Latin America and the tropics. It is led by CIAT.	www.terra-i.org
FAO *Forest Resources Assessment* series	FAO Global Forest Resources Assessment (FRA) provides essential information for understanding the extent of forest resources, their condition, management and uses, at national level.	https://fra-data.fao.org/
OpenForis EarthMap	EarthMap is a tool for quick historical environmental and climate analysis based on Google Earth Engine and developed within FAO's Open Foris Initiative.	https://earthmap.org

Table A C.4. Data processing platforms / tools

Data processing platforms / tools	Description	URL
Google Earth Engine	Google Earth Engine is a geospatial processing service, powered by Google Cloud Platform. The purpose of Earth Engine is to: provide an interactive platform for geospatial algorithm development at scale; enable high-impact, data-driven science; and make substantive progress on global challenges that involve large geospatial datasets.	https://code.earthengine.google.com/
OpenForis SEPAL	SEPAL is a cloud computing platform that allows users to query and process satellite data quickly and efficiently, tailor their products for local needs, and produce sophisticated and relevant geospatial analyses quickly. Harnessing cloud-based supercomputers and modern geospatial data infrastructures (e.g. Google Earth Engine), SEPAL enables access and processing of a wide range of satellite data.	https://sepal.io
OpenForis Collect Earth	Collect Earth is a tool that enables data collection through Google Earth. In conjunction with Google Earth, Bing Maps and Google Earth Engine, users can analyse high and very high resolution satellite imagery for a wide variety of purposes.	https://openforis.org/tools/collect-earth/
OpenForis Collect Earth Online	Collect Earth Online (CEO) is the next generation of web-based, crowd-sourcing technology for Earth Science analyses. It allows users to collect reference data using high-resolution satellite images and big-data analysis through Google Earth Engine. Multiple users can simultaneously collect information.	https://collect.earth/
Open Data Cubes	The Open Data Cube (ODC) is an Open Source Geospatial Data Management and Analysis Software project that helps harness the power of satellite data. At its core, the ODC is a set of Python libraries and PostgreSQL database that helps users work with geospatial raster data. The ODC provides an open and freely accessible exploitation architecture and seeks to foster a community to develop, sustain, and grow the technology and the breadth and depth of its applications for societal benefit.	https://www.opendatacube.org/

Digital Earth Africa	The DEA platform and services enable African governments, industry and decision makers to track changes across the continent in unprecedented detail. This provides valuable insights for better decision-making across many areas, including flooding, drought, soil and coastal erosion, agriculture, forest cover, land use and land cover change, water availability and quality, and changes to human settlements.	https://www.digitalearthafrica.org/
EU Forestry Thematic Exploitation Platform	The Forestry Thematic Exploitation Platform (Forestry TEP) enables commercial, governmental and research users in the forestry sector globally to efficiently access satellite data based processing services and tools for generating value-added forest information products. Via the platform, the users can also create and share their own processing services, tools and generated products.	https://f-tep.com/
Proposed EU Observatory	Not yet in operation, the EU Observatory on deforestation and forest degradation is aimed to provide open, transparent and free information related to forest loss, degradation and EU trade in relevant commodities and products.	

Table A C.5. Supply chain mapping tools

Supply chain mapping tools	Description	URL
SPOTT	SPOTT is a free, online platform assessing commodity producers, processors and traders on their public disclosure regarding their organisation, policies, and practices related to environmental, social and governance (ESG) issues. It provides a dashboard to download assessment data, analyse trends, and access further resources.	https://www.spott.org
TRASE	Trase is a supply chain mapping tool at scale with three main characteristics: It systematically links individual supply chain actors to specific, subnational production regions, and the sustainability risks and investment opportunities associated with those regions; It identifies the individual companies that export, ship and import a given traded commodity; and It covers all of the exports of a given commodity from a given country of production.	https://supplychains.trase.earth
Open Land Contracts	OpenLandContracts is a global repository of publicly available contracts and related documents for agriculture, forestry, and other land-based investment projects. Users can access original documents in PDF form; the full text of each contract; plain language summaries of contracts' key social, human rights, environmental, fiscal, and operational provisions; and tools to search and compare contracts.	https://openlandcontracts.org

Voluntary sustainability standards and certification systems

Voluntary sustainability standards and certification systems based on them have an important potential role to play in due diligence frameworks covering deforestation, alongside other tools. They contain often very detailed sets of environmental, social and economic criteria which products certified to their standard must meet, together with comprehensive arrangements for chain-of-custody, verification, assurance and monitoring systems for the certification process. Many standard systems have strong participatory, inclusive elements, either because they are organised as multi-stakeholder commodity roundtables or because their standard is regularly reviewed in a participatory process, or both.

In principle, they can be used as:

- A means of adopting criteria related to the protection of forests and avoiding deforestation after a specific cut-off date for an enterprise's forest policy.
- An indicator of compliance with the due diligence criteria.
- A source of information in the risk assessment step of a due diligence system.
- A tool to be used in the risk mitigation step of a due diligence system.
- A framework for engaging with and supporting farmers and other actors in the supply chain.

As discussed in Chapter 5 (mapping the supply chain, in Step 2 of the due diligence process), certification schemes generally provide a range of supply-chain traceability models, including identity-preserved, segregated, mass balance and book-and-claim (not all of these may be available for each commodity or each certification scheme). Mass balance systems have tended to predominate for most agricultural commodities, though the use of the segregated and (more rarely) identity-preserved models are becoming more common. Neither the mass balance nor book-and-claim models can guarantee zero-deforestation supplies.

Some certification systems have also developed simpler systems for the verification of a more limited range of criteria when certified materials are mixed with non-certified – e.g. the FSC Controlled Wood standard, which requires the wood not to have been harvested illegally or in violation of traditional and civil rights or from forests with a high conservation value, forests being converted to plantations or non-forest use, or forests in which genetically modified trees are planted. While not meeting the full range of FSC criteria, this does ensure that such products meet certain minimum requirements, including those in some legislative frameworks. There are also some simpler legality verification schemes, which verify whether products have been produced in accordance with national laws in their countries of origin; these will include laws related to deforestation.

There can be significant variation in the quality, design and implementation of certification schemes. Accordingly, some legislative frameworks specify conditions that certification systems must meet to be eligible as a source of information or to play a role in risk analysis and mitigation. These may include, for example, requirements that the scheme possesses publicly available systems, minimum levels of field checks on certified enterprises, third-party verified traceability systems or controls adequate to avoid mixing certified with uncertified products.

Even schemes which meet these criteria can face challenges, however, including attempts at defrauding the systems (e.g. by reusing certification documents for uncertified products). There can also be challenges with the initial costs of implementation; some standards organisations have made efforts to address this for SMEs and smallholder farmers through, for example, specific smallholder standards, the provision of support for audits or processes for group certification – and certification of course can carry the benefits of reducing risks and ensuring access to increasingly demanding markets.

Certification schemes can provide valuable tools to help enterprises implement the steps described in this Handbook, and, importantly, they also incorporate a wider range of criteria than just forest conservation and land use change. However, they are unlikely to provide all the elements of the due diligence process set out here; they cannot, for example, provide the definition of a responsible enterprise policy as described in Step 1, nor the assessment of risks covered by Step 2, nor the disclosure of results described in Step 5. They may also not satisfy all the requirements of national due diligence legislation. They should be viewed as an important potential component of, and information source for, the enterprise's due diligence policy, not a substitute for it.

The table below lists the main voluntary sustainability standards and certification schemes for commodities mentioned in this Handbook. Only those with international coverage are listed; there are also many national and regional schemes, particularly, though not only, for timber and wood products (many of these are members of the PEFC scheme). There are also a number of government-supported (and sometimes

mandated) standards, including the Indonesian and Malaysian Sustainable Palm Oil schemes (ISPO and MSPO) and the African Standard for Sustainable Cocoa.

Table A C.6. Voluntary sustainability standards and certification schemes

Standard / certification scheme	Commodities covered	URL
Bonsucro	Sugarcane	https://bonsucro.com
Fairtrade	Wide range of products, including cocoa, coffee, sugar, tea	https://www.fairtrade.net
4C Association (Common Code for the Coffee Community)	Coffee	https://www.4c-services.org
International Sustainability and Carbon Certification (ISCC)	Agricultural and forestry biomass, biogenic wastes and residues; mainly used for biofuel feedstocks such as vegetable oils	https://www.iscc-system.org
Forest Stewardship Council (FSC)	Wood products	https://fsc.org
Programme for the Endorsement of Forest Certification (PEFC) (recognises national forest certification systems aligned with PEFC standards)	Wood products	https://pefc.org
ProTerra	Any agricultural commodity; mainly used for soy	https://www.proterrafoundation.org
Rainforest Alliance	Wide range of products, including cocoa, coffee, palm oil, tea	https://www.rainforest-alliance.org
Round Table on Responsible Soy (RTRS)	Corn, soy	https://responsiblesoy.org
Roundtable on Sustainable Biomaterials (RSB)	Wide range of bio-based feedstock and biomass-derived material; mainly used for biofuel feedstocks	https://rsb.org
Roundtable on Sustainable Palm Oil (RSPO)	Palm oil	https://rspo.org
Sustainable Biomass Programme (SBP)	Woody biomass used in large-scale industrial energy production	https://sbp-cert.org

Other relevant resources

Table A C.7. Other relevant resources

Name	Description	URL
Accountability Framework	Set of norms, definitions, and guidance to achieve ethical supply chains in agriculture and forestry, aiming to bring clarity and consistency in how companies set commitments, take action, and monitor progress toward achieving supply chains free from deforestation, conversion, and human rights violations. Includes protocols and guidelines for many of the steps discussed in this Handbook.	https://accountability-framework.org
CDP Forests	Framework for companies to measure and manage forest-related risks and opportunities, report on progress, and commit to action for the restoration of forests and ecosystems.	https://www.cdp.net/en/forests
Global Reporting Initiative	Wide range of sustainability reporting standards.	https://www.globalreporting.org
ISEAL	Network of voluntary sustainability standards, including many of those listed above. Sets Codes of Good Practice and Credibility Principles to help users make informed choices over credible standards.	https://www.isealalliance.org
OECD Alignment Assessments process	Seeks to evaluate the alignment of industry or multi-stakeholder initiatives, such as certification systems, with the recommendations of OECD due diligence guidance (does not yet cover agricultural commodities).	https://www.oecd.org/corporate/industry-initiatives-alignment-assessment.htm
OECD e-learning Academy on Responsible Business Conduct	Courses include OECD Due Diligence for Agriculture and Seafood Supply Chains	https://mneguidelines.oecd.org/oecd-e-learning-academy-on-responsible-business-conduct.htm

Annex D. Example of corporate policy

A commitment to responsible sourcing in tackling deforestation, forest degradation and responsible business conduct in agricultural supply chains

In line with the *OECD-FAO Guidance for Responsible Agricultural Supply Chains* and the *OECD-FAO Practical Business Tool on Deforestation, Forest Degradation and Due Diligence in Agricultural Supply Chains*, Company X recognises that the world's forests are crucial to the sustainable and equitable growth of our planet and our economies.

Working together with our suppliers, Company X commits to implementing the Five-Step Framework for Risk-Based Due Diligence, as outlined in the OECD-FAO Guidance, to ensure that our corporate commitments translate to concrete action.

Owing to the magnitude of the challenge, and its impact on development, Company X commits to work with its suppliers and stakeholders to reduce the impact – and likelihood – of deforestation taking place through sourcing.

Company X expects suppliers to meet the following guidelines to stop deforestation from a specified cut-off date:

- Communicate their own expectations, efforts and actions on how they intend to tackle deforestation through their operations and business relationships
- Ensure that all products supplied come from legal sources
- Confirm that no deforestation or conversion of primary forest or natural ecosystems of high conservation value (HCV), and illustrate how this is being monitored
- Commit to no development in high carbon stock (HCS) areas
- Ensure that there is no development on peatlands
- Commit to no clearance of land by burning to prepare it for production
- Work within credible, landscape-level frameworks where these exist
- Communicate supply chain transparency and ongoing efforts to address deforestation through due diligence, according to the *OECD-FAO Practical Tool on Deforestation and Forest Degradation in Agricultural Supply Chains*

Company X expects suppliers to:

- Support existing human rights commitments including respect for farmers' and communities' land rights, free prior and informed consent, and the rights of indigenous and forest-dependent people
- Resolve land rights disputes through a balanced and transparent dispute resolution process
- Support farmers and plantation owners to comply with our deforestation-related requirements
- Where relevant, support enhanced agroforestry, reforestation or restoration of natural ecosystems

Annex E. List of MSWG members

Table A E.1. Multi-Stakeholder Expert Working Group (MS-WG) List of Participants as of 17/05/2022

#	Type of organisation	Organisation	Representative	Country
1	Civil Society	Fair Trade Advocacy Office	Charlotte Vernier, Policy and Project Officer, Deforestation and sustainable cocoa supply chains Juan Pablo Solis, Senior Adviser, Climate and Environment	Belgium
2	Civil Society	Fern	Nicole Polsterer, Sustainable Consumption and Production Campaigner	Belgium
3	Civil Society	Global Witness	Giulia Bondi, Forests Campaigner – EU Richard Gardiner, Senior Campaigner on Corporate Accountability	Belgium
4	Civil Society	IUCN	Heleen van den Hombergh, Coordinator Collaborative Soy Initiative	Netherlands
5	Civil Society	Reforestamos México A.C.	Daniel Sánchez y Sánchez, Private Sector Engagement Director	Mexico
6	Civil Society	World Resource Institute	Katie McCoshan, International Engagement Coordinator, Food and Land Use Coalition	UK
7	Civil Society	WWF	Pablo Pacheco, Global Forests Lead Scientist	USA
8	Company	Cefetra Group	Bas Geerts, Lead, sustainability team of Cefetra Group, a subsidiary of BayWa	Germany
9	Company	Chocolaterie Galler	Isabelle Petit Dufrenoy, Ethical and Sustainability Coordinator	Belgium
10	Company	Ferrero	Francesco Tramontin, Vice President, Sustainability Anders Saxbol Stefano Severi	Italy
11	Company	Golden Agri Resources (GAR)	Ian Suwarganda, Head of Policy and Partnerships	Indonesia
12	Company	Grupo Bimbo	Alejandra Vazquez Langle Nieto, Head of Global Sustainability Marianna Contreras Ana Claudia Turrent Juan Pablo Andrade Meijueiro Jimena Hernandez Cejudo	Mexico
13	Company	Kaufland	Viktoria Kary, Sustainability Manager Paulina Elena Mathey Stephan Carbach, Head of Sustainability Melanie Binvignat	Germany
14	Company	Louis Dreyfus Company (LDC)	Wei Peng, Global Head of Sustainability - Grains & Oilseeds	Switzerland
15	Company	Musim Mas	Rob Nicholls, General Manager of Programs and Projects	Indonesia
16	Company	Tetra Pak International	Anni Vuohelainen, Sustainable Sourcing Driver, Packaging Solutions & Commercial Operations - Sustainability	Sweden
17	Government	Brazil, Ministry of Foreign Affairs	Bruno Soares Leite, Head of the Agribusiness Promotion Unit II	Brazil

		Brazil, Ministry of the Environment	Leonardo Margonato Ribeiro Lima, Environmental Analyst Luiz Vicente Vicentin Aguilar, Project Manager Clarisse Elizabeth Fonseca Cruz, Director Tatiana Andrade Ramidoff, Project Manager Vanessa Silveira, Advisor	Brazil
18	Government	Colombia, Ministry of Agriculture and Rural Development	Angela Maria Burbano Paredes, Office of International affairs	Colombia
		Colombia, Ministry of Environment	Rodolfo Rodriguez, Zero Deforestation Agreements Manager (MADS)	
19	Government	Cote d'Ivoire, Ministère des Eaux et Forêts	Robert Yapo Assamoi, Technical Advisor, Coordinator of the Cocoa and Forest Initiative	Cote d'Ivoire
20	Government	European Commission (DG ENVI)	Bojan Grlaš, Team Leader – International Forest Issues	Belgium
		European Commission (DG INTPA)	Patrice Moussy, Head of Sector Forest	
21	Government	France, General Commission for Sustainable Development (CGDD)	Marine Reboul, Advisor (Chargée de mission)	France
		France, Ministry for Ecological Transition, Department for International and European affairs	Béatrice Galin	
22	Government	Germany, Federal Ministry for Economic cooperation and Development (BMZ)	Michael Krake, Director General Lisa Kirfel-Rühle, Deputy Head of Unit Sustainable agricultural supply chains, international agricultural policy, agriculture, innovation	Germany
		Germany, GIZ	Maike Moellers, Head of Progamme Franziska Rau, Advisor deforestation & EU processes	
23	Government	Indonesia, Ministry of Environment and Forestry (MoEF)	Dr. Belinda Arunawati Margono, Director Forest Resources Inventory and Monitoring Ruandha Agung, Director General for Climate Change Ahmad Basyiruddin Usman Agus Justianto, Director General of Sustainable Forest Management Sigit Pramono Riva Rovani	Indonesia
24	Government	Malaysia, Ministry of Plantation Industries and Commodities (MPIC)	Pubadi a/l Govindasamy, Senior Undersecretary, Timber, Tobacco and Kenaf Industries Development Division Habibah binti Ahmad, Deputy Undersecretary, Timber, Tobacco and Kenaf Industries Development Division Aida Baizura Mohd Nor, Senior Principal Assistant Secretary, Cocoa and Pepper Industries Development Division Ahmad Fuad Nordin, Principal Assistant Secretary, Palm Oil and Sago Industries Division Emelia Gunggu, Senior Assistant Secretary, Timber, Tobacco and Kenaf Industries Development Division Nurul Huda Hamid, Senior Assistant Secretary, Strategic Planning and International Division	Malaysia
		Malaysian Palm Oil Council (MPOC)	Belvinder Sron, Deputy CEO	

25	Government	UK, Foreign, Commonwealth and Development Office	Neil Scotland, Senior Forestry Advisor	UK
26	Government	U.S. Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, Office of Conservation and Water, Forest and Genetic Resources Division	Janet Shannon	US
27	Multi-stakeholder and Industry Association	Fédération du Commerce et de la Distribution (FCD)	Matthieu Riché, CASINO, Group Corporate Social Responsibility (CSR) Director Agathe Grossmith, CARREFOUR, CSR Projects Director Philippe Joguet, Directeur Développement durable, RSE, Questions financières (on copy)	France
28	Multi-stakeholder and Industry Association	FEDIOL	Natalie Lecocq, Director General	Belgium
29	Multi stakeholder and Industry Association	Ghana Cocoa Board	Emmanuel A. Opoku, Deputy Chief Executive (Operations) Hans Gyimah Gyamfi (on copy)	Ghana
30	Multi-stakeholder and Industry Association	Roundtable on Responsible Soy (RTRS)	Marcelo Visconti, Executive Director	
31	Multi-stakeholder and Industry Association	Roundtable on Sustainable Palm Oil (RSPO)	Nicholas Hurt, Head of Stakeholder Engagement Ruben Brunsveld, Deputy Director EMEA	Malaysia
32	Multi-stakeholder and Industry Association	Tropical Forest Alliance	Felipe Carazo, Head of Public Sector Engagement	Costa Rica
33	Multi-stakeholder and Industry Association	World Cocoa Foundation / Forest and Cocoa Initiative	Ethan Budiansky, Director of Environment Elizabeth Howard, Environmental Associate	USA
34	Other	Accountability Framework Initiative (AFI)	Karen Steer, Manager	USA
35	Other	CIFOR	George Schoeneveld, Senior Economist	Kenya
36	Other	CIRAD	Guillaume Lescuyer, Researcher	France
37	Other	Columbia Centre of Sustainable Investment	Sam Szoke Burke, Senior Legal Researcher	USA
38	Other	European Forest Institute (EFI)	Thomas Sembres, EU REDD Facility, Supply chain transparency and land-use planning	Spain
39	Other	ISEAL Alliance	David D'Hollander, Manager, Policy and Innovations	Switzerland
40	Other	ProForest	Mike Senior, Deputy Director – Conservation and Land Use Sophie Higman, Director – Programmes	UK

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