Understanding the Supply Chain: Traceability and Risk Analysis

The Palm Oil Toolkit supports companies in the responsible sourcing of palm oil, highlighting a wide range of tools and initiatives which aim to decouple palm oil production and trading from deforestation, development on peat and human rights violations. This document summarises the key points on traceability and risk analysis within supply chains.

01 The palm oil supply chain

To better understand their own exposure to risks and assess the level of progress and compliance with their responsible sourcing policies, companies need to be able to trace the origin of their palm oil. Here we summarise key information for companies to understand, manage and assess the main risks associated with their palm oil supply chain by implementing traceability systems and conducting risk assessments.

To understand where and how the risks described in **Briefing Note 02A** are present or inherent in oil palm production, it is important to understand the supply chain and types of producers who can be related to respective environmental and social risks.

Palm oil production begins with the planting of oil palm seeds within nurseries or farms. The young seedlings from nurseries are then transferred to plantations where they will fully mature after 30 months and are ready to be harvested. Palm oil fruits grow in dense bunches known as Fresh Fruit Bunches (FFB) and can be harvested continuously within a year throughout its lifespan of around 25 years. The harvested FFBs are transported by trucks to mills, where they are processed into two main products: crude palm oil (CPO), which is extracted from the flesh of the fruit, and palm kernel oil (PKO), which is extracted from the nut and kernel of the fruit.
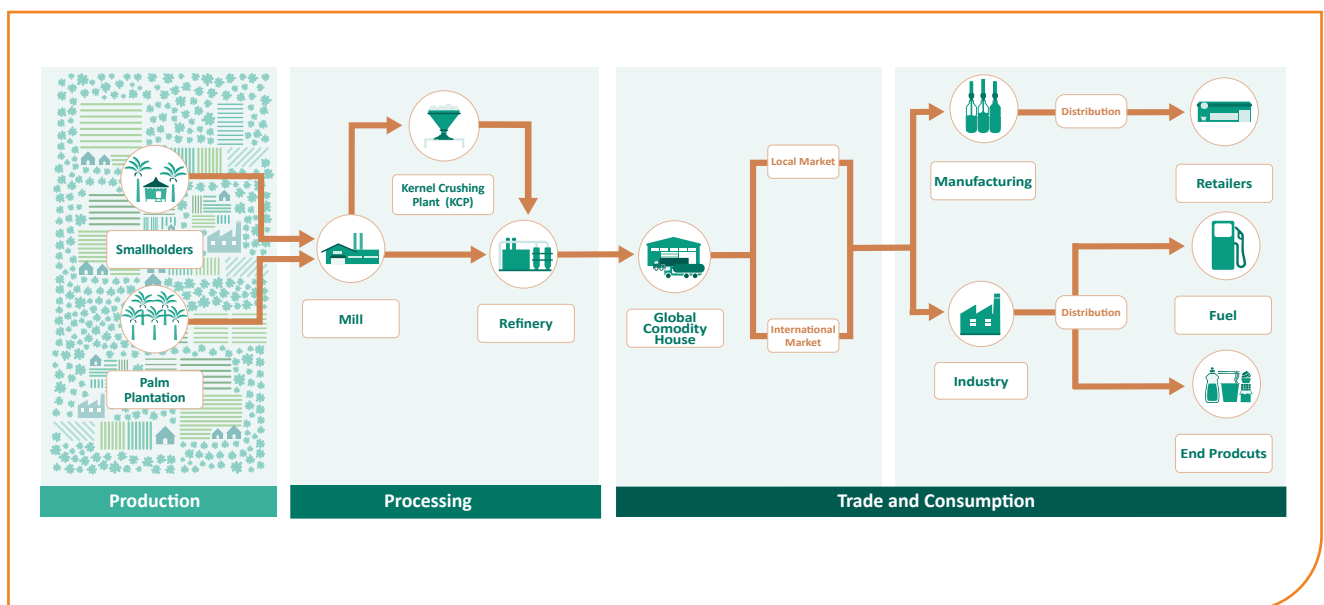

Figure 1: Example of a typical palm oil supply chain and involved actors. (Image source: Proforest).

FFB producers and suppliers throughout the supply chain vary in their characteristics, and it's important to understand the supple chain process and different actors involved in order to assess risk and traceability thoroughly.

FFB Producers	Details	Type
Mill-owned and managed concessions	• Total landholdings above the thresholds defined for smallholders. • Range from a few hundred to sv everal thousands of hectares, in some cases cumulative of scattered smaller plots, to large contiguous blocks of land. • Associated with a mill either through ownership, joint venture or via parent companies	Direct FFB supplier
Independent concessions	• Total landholdings that are above the thresholds defined for smallholders. • Not associated with any mill and operate within their own business. • Range in size may be similar to that of mill-owned concessions.	Indirect FFB supplier
Scheme smallholders	• Structurally bound by contract, by a credit agreement or by planning to a particular mill. • Typically do not have freedom to choose which crop they develop. • Often organised, supervised or directly managed by the managers of the mill, estate or scheme to which they are structurally linked. • Typically receive technical, processing and marketing support, as well as financial assistance from their umbrella organisations.	Direct FFB supplier
Independent smallholders	• Typically those with cumulative landholdings of less than a certain hectarage typically 50ha or by national legislation. • Make up to 40% of the oil palm supply base and there are more than 3 million making their living from palm oil globally. • Characterised by their freedom to choose how to use their lands, which crops to plant and how to manage them. • Self-organised, self-managed and self-financed; and not contractually bound to any mill or any particular association.	Indirect FFB supplier

02 Key steps, tools and approaches for traceability and supply chain transparency

2.1. Map the supply chain and implement traceability systems

The first step to achieving transparency to the upstream source is supply chain mapping. This is a process where companies identify each actor from their direct supplier onwards and understand the relationship between them. This is part of building the trust in the supply chain, to facilitate information sharing on traceability. Traceability is fundamental to implementing responsible sourcing commitments, as it allows companies to comprehend their potential sustainability risks and entry points for interventions across the supply chain, ultimately contributing to meeting the responsible sourcing commitments. It is divided into:

- Traceable to mill (TTM)
- Traceable to plantation (TTP) – traceability to direct FFB suppliers
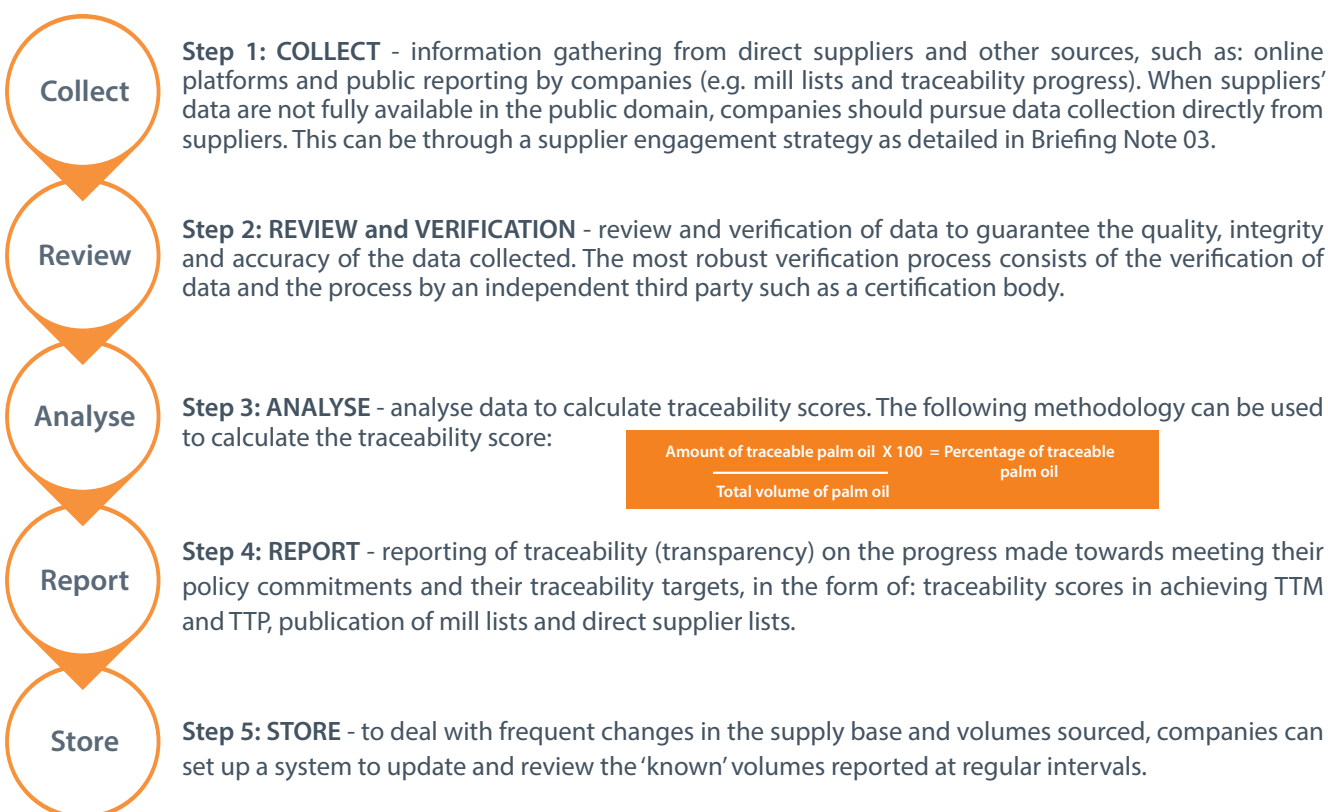- Traceable to production region – traceability to indirect FFB suppliers

Supply Chain Assessment and Traceability is also a core principle of **The Accountability Framework (AFi)**.

Industry-accepted definitions for traceability	
Accountability Framework (AFi)	Traceability is the ability to follow a product or its components through stages of the supply chain (e.g., production, processing, manufacturing, distribution, etc.). Traceability allows companies to link product volumes to specific attributes of suppliers and/or production sites.
Traceability Working Group (TWG)	Knowing all palm sources within one's supply chain all the way to plantation level (including smallholders), and traceability to mill as an intermediary step in achieving full traceability.

2.2. Approach to collection of traceability data

To operationalise traceability, companies should start with defining traceability and set commitments including targets to achieve both TTM and TTP. From there, the process flow can be broken down into several steps:

Collect

Step 1: COLLECT - information gathering from direct suppliers and other sources, such as: online platforms and public reporting by companies (e.g. mill lists and traceability progress). When suppliers' data are not fully available in the public domain, companies should pursue data collection directly from suppliers. This can be through a supplier engagement strategy as detailed in Briefing Note 03.

Review

Step 2: REVIEW and VERIFICATION - review and verification of data to guarantee the quality, integrity and accuracy of the data collected. The most robust verification process consists of the verification of data and the process by an independent third party such as a certification body.

Analyse

Step 3: ANALYSE - analyse data to calculate traceability scores. The following methodology can be used to calculate the traceability score:

$$\frac{\text{Amount of traceable palm oil}}{\text{Total volume of palm oil}} \times 100 = \text{Percentage of traceable palm oil}$$

Report

Step 4: REPORT - reporting of traceability (transparency) on the progress made towards meeting their policy commitments and their traceability targets, in the form of: traceability scores in achieving TTM and TTP, publication of mill lists and direct supplier lists.

Store

Step 5: STORE - to deal with frequent changes in the supply base and volumes sourced, companies can set up a system to update and review the 'known' volumes reported at regular intervals.

03 Key steps, tools and approaches for risk assessments in supply chains

Risk assessment is a systematic process of evaluating potential risks in a company's current or future operations, supply chains, and investments. Understanding and assessing environmental and social risks allows a company to develop action plans and take action to address (i.e. mitigating or remediating) the risks that are highlighted. Using the results of the risk assessments, companies can prioritise their actions. Information on prioritisation and taking action is detailed in **Briefing Note 03**.

Environmental risk assessment

Several tools such as geospatial monitoring have been developed over the years to allow companies to assess potential environmental risks in their supply chain. With the advancement of technology, environmental risk

assessments have now become accessible to all companies to better understand risks in their supply chain. The main environmental risks that can be evaluated and monitored remotely via satellite are deforestation, land use change and fire use. Land use change risk assessment is possible once a certain level of traceability in the upstream supply chain is achieved. With this information, and a risk monitoring tool, companies will be able to assess the recent and historical land use changes in these production areas and understand the level of risk associated with the sourcing of palm oil. The same tools can be used in the longer term to monitor deforestation. Example of tools:

- Global Forest Watch Pro (GFW Pro) (Free, paid service options)
- Earthqualizer (Free, paid service options)
- MapHubs' Forest Report (Free, paid service options)
- Satelligence (paid service)
- Starling (paid service)
- Nusantara Atlas (Free)

Social risk assessment – process and tools

A social risk assessment is an exercise to identify and evaluate the risk of negative social issues occurring. All companies should respect human rights as expressed in the International Bill of Human Rights. Companies are encouraged to use the United Nations Guiding Principles on Business and Human Rights (UNGPs), to ensure they are upholding their responsibility to respect human rights throughout the palm oil production and sourcing process. The scope of a risk assessment should cover the company's entire supply base and should include all internationally recognised human rights issues, including beyond the scope of legal compliance. Risk assessments should be initiated as early as possible in the development of a company's new activity or relationship, as part of their ongoing Human Rights Due Diligence (HRDD) processes.
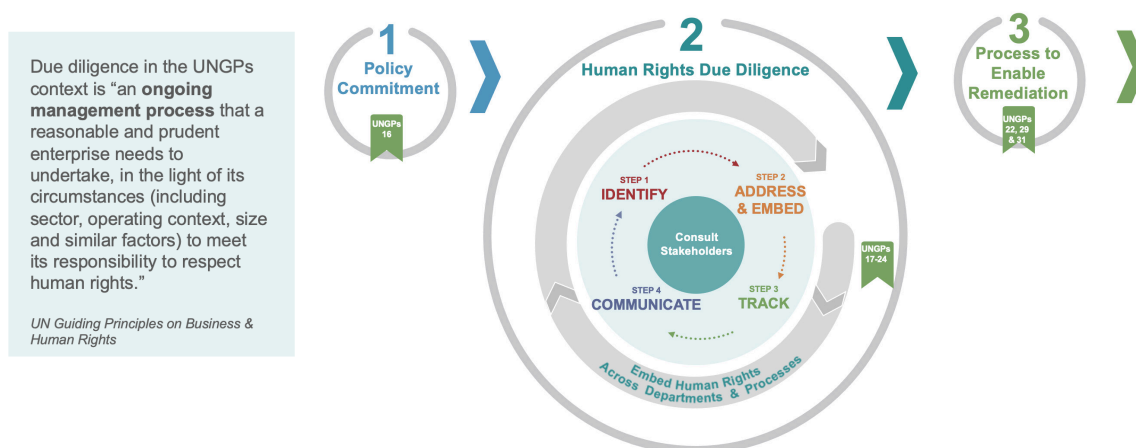

Figure 2: The UNGP approach to responsible business conduct. (Image source: Proforest).

We highlight here three main types of social risk assessment:

Human Rights Risk Assessment (HRRA): The identification of actual and potential human rights risks is the critical first step in the HRDD process, and this can be done through a Human Rights Risk Assessment. An HRRA can take various forms, for example: a qualitative desktop study of social risks in sourcing regions; a baseline assessment seeking to highlight groups of people who might be most at risk; or the identification of any significant gaps in available knowledge. The scope of social risks identified can include labour, land and community rights, women's rights and gender equality, smallholder and farmer livelihoods.

Social Impact Assessment (SIA) is a project planning tool, which can be part of an environmental impact assessment (EIA), especially when EIAs are part of a legal or regulatory requirement or standard. SIAs are used to identify, predict and assess the direct and indirect impacts occurring at a project site or within the project's wider area of influence. SIAs are therefore more likely used in the upstream supply chain.

Human Rights Impact Assessment (HRIA): A human rights impact assessment is a direct assessment used at site-level, such as refineries, mills, and plantations. It is a voluntary tool used to identify, understand, assess and address the adverse effects of a business project or activities on the human rights enjoyment of impact rightsholders, such as workers and community members. To learn more , please visit the **HRDD library of tools** curated by the Palm Oil Collaboration Group.

Learn more and help us improve

For more information, see the full briefing note, available at **www.palmoiltoolkit.net**

Please also share with us information that will improve this Briefing Note
(via **palmoiltoolkit@proforest.net**).