



NIRAS

Investment and Sourcing through Smallholder Supply Chains

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Acronyms

AFI	Accountability Framework Initiative
ASD	Action for Sustainable Derivatives
BCI	Better Cotton Initiative
CGF	Consumer Goods Forum
ESG	Environmental, Social and Governance
FPIC	Free and Prior Informed Consent
FSC	Forest Stewardship Council
HCS	High Carbon Stock
HCV	High Conservation Value
ICI	International Cocoa Initiative
PEFC	Programme for the Endorsement of Forest Certification
PES	Payment for Ecosystem Services
RSPO	Roundtable of Sustainable Palm Oil
SHF	Smallholder Farmer



1. Introduction

1.1 RESEARCH OVERVIEW

Smallholder Farmers (SHFs) are one of the largest agricultural producer groups worldwide, accounting for the production of up to 80% of certain crops. SHFs are often the primary source for multi-national consumer goods companies of key products such as palm oil, cocoa, coffee, soya and timber, among others. However, SHF supply chains are often associated with significant environmental, social and governance challenges, ranging from deforestation to forced labour to bribery and corruption. These supply chains are increasingly being placed in the public spotlight as consumer interest in sustainable produce grows and consumer goods companies, those at the furthest point downstream in the supply chain, are under rising pressures to implement appropriate measures to mitigate the environmental and social issues found throughout global SHF supply chains.

A long-established sustainable investment manager contracted NIRAS-LTS International Limited (NIRAS-LTS) for a bespoke research assignment regarding the key sustainability issues in investment and sourcing through SHF supply chains, and the approach of ten specific companies towards these issues. These companies are primarily food and beverage manufacturers, but also include producers of cosmetics and medical goods. They are geographically diverse with at least one company per continent and represent a range of sustainability practices and approaches.

The objective of this assignment is to understand better the key sustainability issues for investment and sourcing through SHF supply chains and how these are addressed by companies. To achieve this, this report is presented in six sections:

1. This introduction sets out the assignment background and research approach;
2. An overview of the common models in SHF supply chains, including an assessment of their strengths, weaknesses and limitations;
3. An overview of the key Environmental, Social and Governance (ESG) risks found in SHF supply chains and options to mitigate them;
4. An in-depth exploration of the link between SHF supply chains and deforestation;
5. Assessments of the ten selected companies against key sustainability criteria to identify where companies reflect innovative or best practices and where there are opportunities for improvement; and
6. General conclusions and a summary of best practices to address common weaknesses identified in the chosen companies.

1.2 RESEARCH APPROACH

The research for this assignment was conducted in three stages. First, desk-based research to compile a high-level bibliography for SHF engagement contextualisation to support the Research Questions (RQs) on SHF supply chain models, key ESG factors in SHF supply chains, and the link between SHFs and deforestation. These RQs primarily relied on secondary data sources, including academic literature, journals and media articles, and existing research material developed by NIRAS-LTS.

The responses to these RQs were used to inform the development of a SHF sustainability matrix against which the selected companies were assessed. The matrix includes over 100 indicators across seven core policy areas relevant to SHF supply chains, including deforestation, labour rights and traceability. These indicators were selected from similar existing sustainability assessment tools, with additional indicators added based on the desk-based research.

The second stage of the research was the company assessments (RQ1). Publicly available material on the companies was gathered, including both company produced documentation and third party material. These documents were used to prepare tailored interview guides for each company to inform engagement with them. Four of the ten companies chose not to participate in the interviews, or did not respond to the request. Additional interviews were undertaken with market experts.

In the final stage, the company responses were coded along with available documentation and relevant secondary source material against the sustainability matrix to develop grades against each policy area. Companies were analysed based on their grades, and common trends were extracted for the general conclusions. These assessments also informed the best practices discussion in the final chapter of this report.



2. SHF Supply Chains: Definitions, Products and Typologies

2.1 DEFINING SHFS

Smallholder farming directly and indirectly supports the livelihoods of many of the planet's most vulnerable people, and coexists with some of its most diverse and ecologically threatened landscapes. Whilst defined differently in different countries and agro-ecological contexts, for the purposes of this research SHFs are best characterised as having 'limited resource endowments relative to other farmers'.¹ Smallholder farming is predominantly a household business, where families face constraints (varying widely across contexts) including lack of access to technology, finance and high-yield production techniques, limited market access, low bargaining power, informal or insecure landholdings, climate vulnerability and resource scarcity, as well as structural social challenges including aging population, limited education, and marginalisation.²

Defining Smallholders

The definition by the United Nations Food and Agriculture Organisation (UN FAO) is: farming households manage a certain amount of land at most as large as the weighted median threshold of operated land identified at national level. In Ghana, for example, the threshold is 4.85Ha, and in Guatemala it is 1.52Ha.

By one measure, there are as many as 525m SHF farms globally,³ and in many countries smallholder farming predominates. Typically, a smallholding might constitute between 1ha and 10ha of cultivated land. In Tanzania for example - a country where agriculture contributes to 28% of GDP - there are around 3.7m smallholdings farmed by 19m people, making up 80% of total farms by number.⁴ The number of SHFs - and those who work for or with SHFs - is also growing at a faster rate than global population growth (SHF families are usually large), whilst smallholdings themselves tend to get smaller as members of large families split inherited plots between them. This poses a structural challenge to prospective development of economies of scale (one means by which SHFs can improve their livelihoods).

Figure 1: Estimated Proportion Grown by SHFs of Key Products

ESTIMATED PROPORTION GROWN BY SMALLHOLDERS



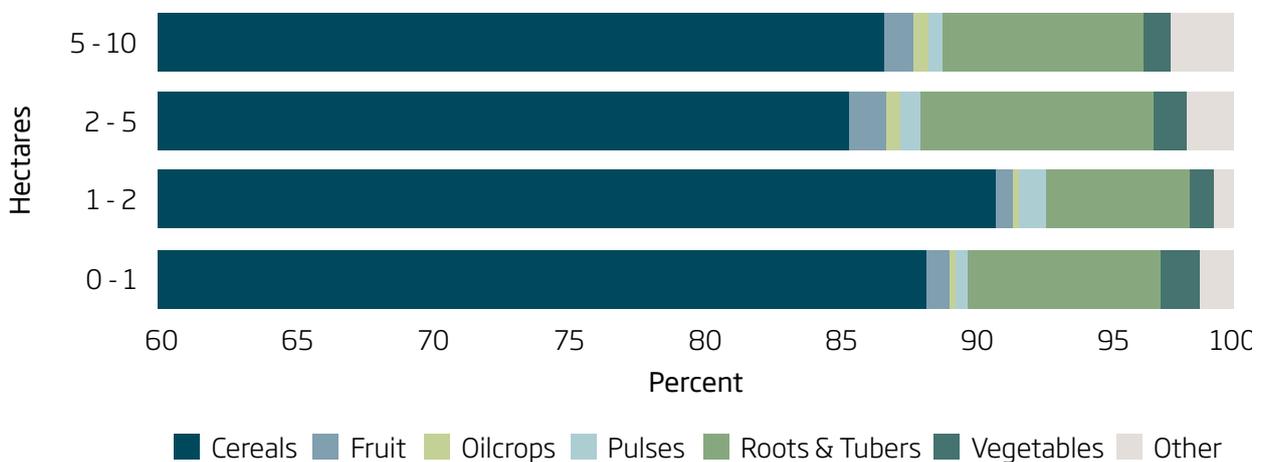
2.2 SHF PRODUCT TYPOLOGIES

Given the immense diversity of SHF geographies and contexts, grouping and classifying SHFs is challenging. For the purposes of this research a simple typology was developed of three key groups of products produced by SHFs, categorised by their relevance to global companies and supply chains: Subsistence and Staple Products, Tropical Soft Commodities (Figure 1), and High Value Niche Products. Some SHF families may cultivate products across these typologies (in fact, many SHFs purposely diversify livelihood sources to manage risk), and there may be significant overlaps and interrelations between these typologies in different contexts.

2.2.1 Subsistence and Staple Products

Many SHFs have to prioritise the cultivation of subsistence and staple crops on their holdings to feed families and local communities (Figure 2). Hence crop types most associated with SHF production include cereals (such as maize in East Africa, and rice in Southeast Asia), and roots and tubers (such as potatoes in Latin America), with strong national and regional variations. Fruits, vegetables and even livestock/poultry cultivated by SHFs are also often for family/local subsistence, though they may also be sold into local or even international markets (though they usually struggle to compete with the lower unit production costs of larger farms). Despite their pre-eminence in SHF production systems, subsistence and staple crops are not the primary focus of this research, which focuses on global supply chains.

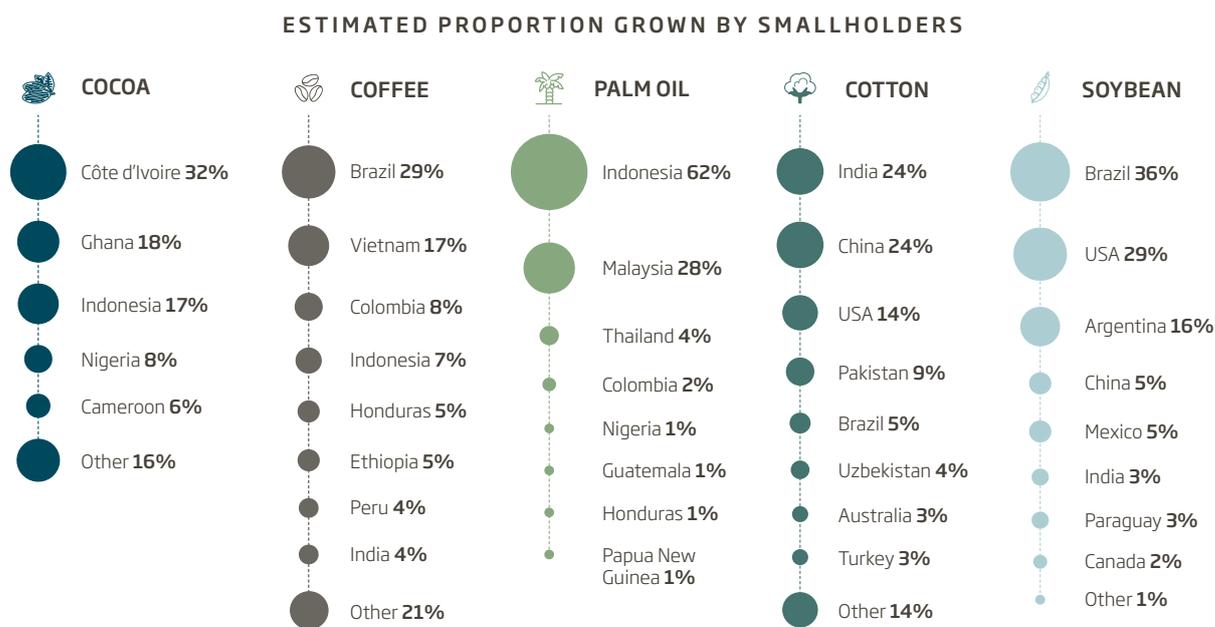
Figure 2: Distribution of global production by crop type across farm size classes (<10Ha classified as SHF)
(Source: The Institute for Resource, Environment, and Sustainability UoBC; AtlasBig.com)



2.2.2 Tropical Soft Commodities

Key soft commodities - often grown in the tropics and sometimes requiring a high degree of labour intense inputs - have become synonymous with SHF production (Figure 3), and feed notably into the supply chains of large (often multinational) consumer goods companies. Pre-eminent amongst these - and the three commodities that feature most heavily in this research - are cocoa (70% produced by SHFs living on less than USD2 a day),⁵ coffee (70-80% of global production from SHFs),⁶ and oil palm (40% of global production from SHFs).⁷ Cotton (75% of production from SHFs)⁸ and soy (majority of global production from large plantations rather than SHFs, but also a SHF subsistence crop in some contexts) can also be categorised in this group. Products such as coconut, cashew, rubber, sesame, sugar, tea, wood products and vanilla can also fall into this category in some contexts (or in the third category in others). There is sometimes limited scope for differentiation across these crops at producer level, and so they lend themselves to aggregation. Whilst many millions of SHFs globally rely on incomes from these products, destructive farming methods such as “slash-and-burn” have become synonymous with the cultivation of tropical soft commodities in some contexts, pricing is volatile and seasonal, whilst social issues such as forced and child labour can also be prevalent in the SHF production of these crops.

Figure 3: Percentage of Tropical Soft Commodities Produced by Country



2.2.3 High Value Niche Products

A final key category of SHF products considered in this research is a more disparate group of high value niche products sourced from SHFs and often sold into global supply chains. Other than their relatively high value, these products cannot be considered fungible ‘commodities’ in the strictest sense. They are often harvested or extracted rather than cultivated, often from communal lands or land not owned by SHFs themselves. They include some consumables, but also products used in health and beauty consumer goods, and in manufacturing. Shifting cultivation to produce these products is a major driver of land use change and contributes to forest loss and land degradation. Due to differing quality, there is often a high threshold for compliance with product and process standards that constrain SHF participation in the niche product value chain. Inadequate farm level resources and difficulty in complying with market access requirements means that technical support and access to inputs is key for a well-functioning supply chain. Some (non-exhaustive) examples of these products are listed in Table 1 below.



Table 1: Examples of High Value Niche Products

Product(s)	Main Smallholder Production Area(s)	Production/Extraction Method	End Uses
Non-timber forest products (e.g. Brazil nuts, Ucuuba seeds, acai, tropical fruits)	Major global tropical forests, especially the Amazon, Congo and Indonesian forests	Wild harvest and some limited cultivation	Consumption (local and international)
Rare herbs, spices and nuts (e.g. cumin, ginger, shea, turmeric)	Global (especially India for Ayurvedic medicine, West Africa for shea)		Consumption; health and beauty products
Extractive minerals (e.g. mica, precious metals, rare earths)	For example, Madagascar/ India for mica, the Democratic Republic of Congo for rare earths, West Africa for gold	Mining	Manufacturing



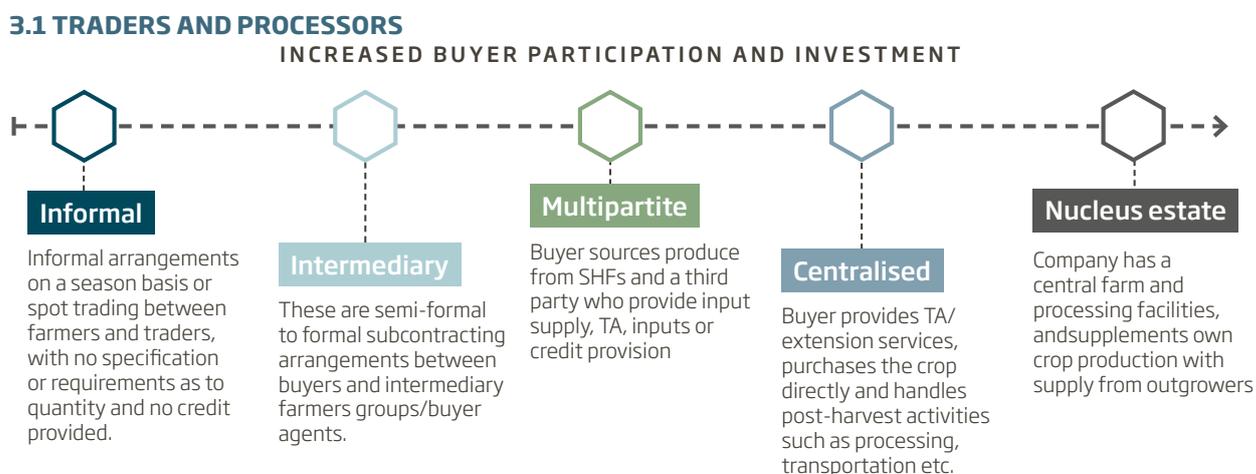
3. Key SHF Supply Chain Models

Much SHF produce – particularly of Subsistence and Staple Products – is consumed by SHFs themselves or traded locally within communities, whilst much regional trade in SHF produce is done through informal and localised collection. Indeed, only 10% of the world’s SHFs are linked to global markets through aggregators.³ There is a range of **formalised models and approaches to SHF engagement** applied by these aggregators – particularly for the Tropical Soft Commodities and High Value Niche Products that flow into the global supply chains in scope of this research. Broadly, these models are set along a continuum of involvement and investment of buyers with their SHF suppliers, as outlined in Figure 4 below.

Engagement with SHFs through these models encompasses both the purchase transaction for the SHF produce, but also **the provision of products and services to SHFs**. Extension services equip SHFs with the agronomy skills, knowledge and tools needed to boost their productivity and the quality of their produce. Farm inputs (e.g. seed, fertilisers, tools, machinery) and finance are often also provided through these engagement models. It is also common for the final retail company (including the companies in scope of this research) to finance these schemes, sometimes through certification premiums. These approaches can raise both the visibility of the firm amongst SHFs and demonstrate its credibility as a committed trading partner or offtaker.⁸

The models set out below are not mutually exclusive, often working in combination with one another in different contexts and supply chains.

Figure 4: Buyer Participation Typology



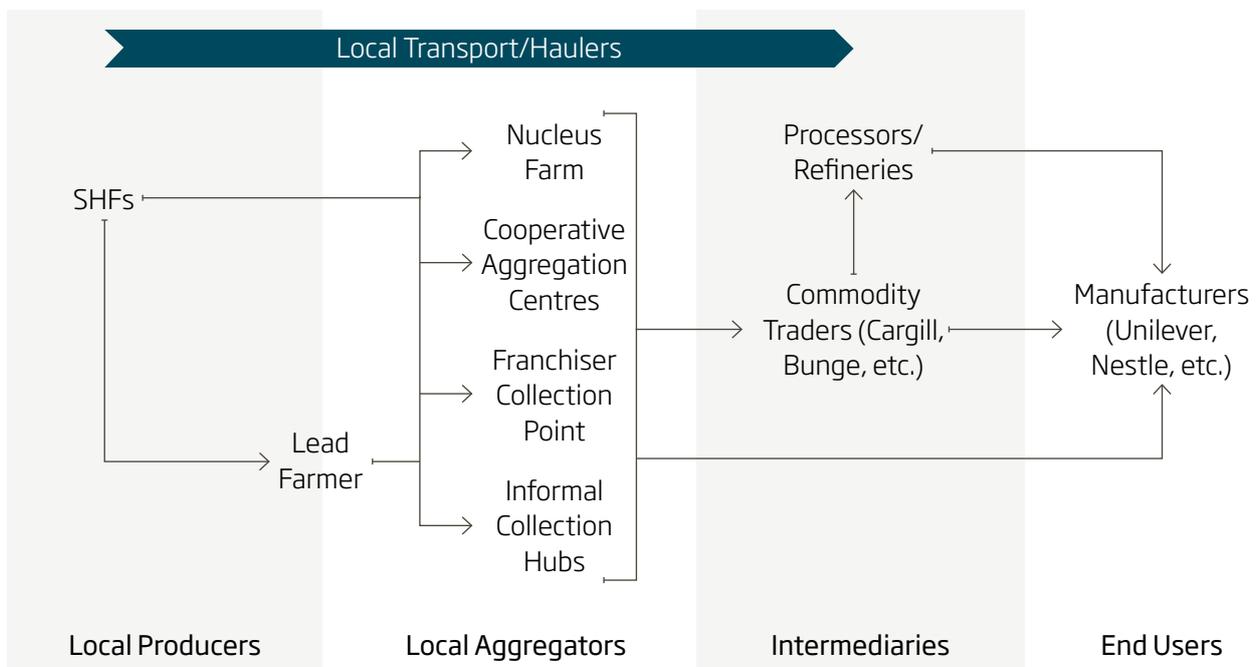
In the context of the ten companies in scope, product aggregation is largely done indirectly through traders and/or processors (both primary and secondary). These aggregators span small scale informal local collectors, to multinational commodity trading groups (see Ecom case study). Sometimes working sequentially, their purchase from SHFs is facilitated by sourcing operations that reach to (sometimes disparate) production areas. Traders may work with SHFs on a more one-to-one basis, facilitating product collection from individual farms within a set region or radius, or may work to aggregate supply from producer groups like cooperatives.

Multinational traders, such as Cargill, Bunge and Olam, typically operate their own standards and policies for sustainable sourcing and their clients – including several companies assessed in this research – will pass responsibility for enforcing sustainability standards down to these traders. However, the failings of these traders to act sustainably have been well documented over the past decade, with regular incidents of forest clearing, child and forced labour, and forced removal of indigenous peoples being highlighted. While many of these traders have shown good faith attempts to mitigate or remove these harmful practices, others have continued and pressure is now being directed at their enablers – the multinational purchasers who make up their client base – to promote change or cut ties with the worst offenders.

3.2 CONTRACT FARMING

Contract Farming is a formal agreement between an individual or group of farmers, and a firm seeking to ensure its supply of agricultural products. The firm will make a pre-harvest commitment to provide inputs on credit and farmer training and will buy the produce, usually subject to strict quality product requirements.⁵ Typically entered into by traders and/or processors rather than retail companies themselves, contract farming arrangements generally fit two broad categories. Outgrower schemes are contractual partnerships between land or farm owners and a company for the production of a specific product. These arrangements vary considerably in terms of the length of the partnership, and the extent to which costs, risks and the responsibility for production is shared between parties. AgDevCo's Farways Flowers programme in Zimbabwe provides a good example of a nucleus hub outgrower scheme.⁹ Ingrower schemes see farmers work on a nucleus farm hub owned by a company. The firm provides them access to land at scale and sometimes production facilities, irrigation, technical support and inputs. Between these two models are dozens of variations, adapted to suit local contexts, different products, and purchaser needs. Integration of ingrowers can be found in the National Smallholder Farmers' Association of Malawi programme.¹⁰

Figure 5: Simplified SHF Supply Chain Aggregation Model



ECOM CASE STUDY

ECOM's Sustainable Management Services (SMS) implements sustainability and sourcing programmes, and provides products and services for rural populations on behalf of major retail clients working with complex supply chains. SMS applies a 'bottom of the pyramid' approach working with over 1,000,000 farmers in coffee and cocoa across over 40 countries. SMS works in partnership with development banks and agencies, NGOs and financial institutions to generate innovative financing schemes unlocking more than USD100m in prefinancing for farmers each year. To roll out its SHF programmes, SMS engages R&D and programme partners such as CIRAD and independent third-party

bodies like FairTrade and 4C. ECOM's consumer business clients usually run long-term supply agreements where SMS execute field activities with SHFs, including deforestation prevention, increased biodiversity, reduction in soil degradation, prevention of child labour and delivering cash payments to farmers. In SMS' data analysis lab in Costa Rica, SHFs are registered users of their dashboard systems which provide important data to improve productivity and analyse the outcomes of initiatives. SMS provide extra incentives for compliance through cash premiums along the supply chain, often funded by sourcing end clients.

3.3 COMMODITY AGGREGATION

Commodity Aggregation can be a formal or informal arrangement between SHFs and an intermediary such as a cooperative, union, lead farmer, or other SHF producer groups. The intermediary will set the price for a traded commodity such as nuts, plants for essential oils or fruit, and provide assistance with transport to a processing facility.⁶ They will then collect cash crops and staples from large numbers of SHFs and sell these in a single transaction to buyers at the top of the supply chain.⁷ This approach can bring together both farmers and hectareage to support shared purchases of inputs, provision of extension services and even rental of mechanised equipment. SHF producer groups are a type of commodity aggregator that are a crucial mechanism for organising SHFs. SHF producer groups, like cooperatives, are farmer-owned autonomous groups who have created a jointly owned and democratically controlled enterprise, often with a single external facing focal point responsible for organisation and marketing.

Cooperative: a farmer-owned enterprise in which multiple SHFs pool resources, share inputs and make collaborative decisions. Cooperatives are normally democratic in nature and function as a single commercial entity. For example, the Kenya Tea Development Agency.¹¹

Union: an association of SHFs to develop greater market and negotiating power, often structured around a collection hub or shared transport network. Within a union, SHFs may still operate independently.

Lead farmer: a central lead farmer, usually one with an existing leadership position, serves as a central point of aggregation for local SHFs and facilitates training.¹²

3.4 COLLECTION HUBS

Commodity aggregation in many cases occurs through a centralised collection hub which is not affiliated with the local SHFs. These SHFs become aggregated usually due to geographical proximity and shared access to produce transport networks. In these models, SHFs are reliant on transporters to deliver their produce to a centralised collection point and to negotiate the best market price for it. These collection hubs will then sell on to multinational traders or processors, in instances where they are not already managed by multinational actors. These hubs can also be a place to provide training. Products and pricing are easily segregated by quality and can provide an incentive for farmers to improve yield and quality for increased financial gain. However, in this model, purchasing companies may not have oversight of the SHFs engaged, location of production and what practices are maintained by the SHF to achieve that further yield or quality. Interactions occur at the hubs rather than the farms which risks pushing SHFs into monocultures instead of identifying livelihood opportunities.

3.5 FRANCHISE MODELS

Franchise models for SHFs operate as expected. SHFs or producer groups agree exclusive production arrangements with larger entities in exchange for fixed or premium prices, agricultural inputs, and training. As such, franchise models are similar to contract farming. However, franchise approaches have also been used for other actors in the agricultural space: financiers and agro-dealers. For financiers, a franchise model between micro-finance organisations and larger financial institutions can enable greater access to finance for SHFs by offering local financiers access to liquidity and improved systems. The franchising institution receives access to new, rural markets with reduced risk, as the local entity retains responsibility for administering loans and collecting repayments. Agro-dealers - entities who supply agricultural inputs and often play a role in transportation or aggregation - often face similar challenges to SHFs in terms of access to finance and knowledge. A franchise model can resolve these challenges as well as providing financial and management training to the local agro-dealers. The franchising company again receives access to new markets which can be brought to scale. Both franchising models offer benefits to SHFs by improving their access to finance, agricultural inputs, transportation and information or training. Babban Gona in Nigeria demonstrates an effective SHF franchise model,¹³ whereas Farm Shop in Kenya demonstrates an agro-dealer franchise.¹⁴

3.6 IMPACT INVESTMENT

A relatively new model being applied by consumer goods multinationals sees an indirect form of engagement with SHFs via capital allocation to impact investment initiatives focused on SHF supply chains. These include the [IDH Farmfit Fund](#) (part capitalised by major manufacturers Unilever, Mondelez and Jacobs DE), the [Livelihoods Funds](#) (contributions from Mars and Danone amongst others), and the [&Green Fund](#) (also capitalised by Unilever). Investments made by these funds are not necessarily linked to the supply chains of the companies who capitalise them.

Table 2: Pros and Cons of Smallholder Supply Chain Models

✔ Pros	✘ Cons
Traders and Processors	
<p>For farmers</p> <ul style="list-style-type: none"> ▶ Reach/logistics to ensure collection and offtake for their production. ▶ Cash liquidity/provision of credit. <p>For sourcing companies (retail groups)</p> <ul style="list-style-type: none"> ▶ Mitigates risks of direct engagement with SHFs, including product quality and uniformity, financial/counterparty risk. ▶ Allows focus on core (and often more profitable) business of marketing/retail. 	<p>For farmers</p> <ul style="list-style-type: none"> ▶ Limited opportunity for value addition/differentiation by the farmer. ▶ Lack of price transparency. <p>For sourcing companies (retail groups)</p> <ul style="list-style-type: none"> ▶ Risk of monopoly/oligopoly in highly consolidated markets.
Contract Farming	
<p>For farmers</p> <ul style="list-style-type: none"> ▶ Release of working capital. ▶ Provision of technical assistance. ▶ Cost and/or risk sharing. ▶ Formation/strengthening of farmer groups. ▶ Market access. <p>For sourcing companies (retail groups, and traders/processors)</p> <ul style="list-style-type: none"> ▶ Better quality and safety standards. ▶ Consistent and reliable supply. ▶ Reduction of input/labour costs compared to integrated production on company owned land (for outgrower schemes). 	<p>For farmers</p> <ul style="list-style-type: none"> ▶ Potential production problems whilst working with technology, standards or methods that are new to farmers. ▶ Potential indebtedness and dependency due to excessive loan provisions by the buyer. ▶ Lack of flexibility and inability to sell to alternative buyers with higher price or respond to price fluctuations. <p>For sourcing companies (retail groups, and traders/processors)</p> <ul style="list-style-type: none"> ▶ Risk of side-selling due to price fluctuations. ▶ Misuse of inputs. ▶ Land constraints of farmers may limit production possibilities (for outgrowers).

Commodity Aggregation: Intermediary Aggregators

For farmers

- ▶ Provides a market route for products. Intermediaries play an important role in collecting products and distributing them to consumers/sourcing companies.
- ▶ Often provides access to credit.

For farmers

- ▶ Dependency and a constraint on disruption/digitalisation which could render intermediaries redundant.

For sourcing companies (retail groups, and traders/processors)

- ▶ Intermediaries can carry out activities which add value such as collecting, selecting, packaging, processing and delivering.
- ▶ Often a necessary step if ICT adoption is low in rural farming areas or enabling infrastructure (i.e. roads) is poor.

For sourcing companies (retail groups, and traders/processors)

- ▶ High price level due to long chain and high logistic costs associated with distribution from intermediary.

Commodity Aggregation: Cooperatives

For farmers

- ▶ Collective bargaining and knowledge.
- ▶ Economies of scale for input provision.
- ▶ Lower costs of acquiring inputs or hiring services.

For farmers

- ▶ If SHFs only grow one type of crop or are provided with crop species uncommon to the local environment this may have negative impacts.
- ▶ Individual SHFs forego their political voice or market power once organised in this way.

For sourcing companies (retail groups, and traders/processors)

- ▶ A supply-base of numerous geographically dispersed SHFs reduces widespread crop failure risks due to disease and weather.
- ▶ Access to extensive local knowledge and growing conditions.

For sourcing companies (retail groups, and traders/processors)

- ▶ Dispersed SHFs may lead to higher transaction cost of providing product traceability and quality assurance.

Collection Hubs

For farmers

- ▶ Reach/logistics to ensure collection and offtake for their production.
- ▶ Cash liquidity/provision of credit.

For farmers

- ▶ Limited opportunity for value addition/differentiation by the farmer.
- ▶ Lack of price transparency.
- ▶ Reliance on independent transporters.

For sourcing companies (retail groups)

- ▶ Mitigates risks of direct engagement with SHFs, including product quality and uniformity, financial/counterparty risk.
- ▶ Lack of purchase commitment offers flexibility.

For sourcing companies (retail groups)

- ▶ Limited oversight of product origin and agricultural practices.
- ▶ Challenges in testing product quality.
- ▶ Inconsistent product volumes.

Franchise Models	
<p>For farmers</p> <ul style="list-style-type: none"> ▶ Increased access to agricultural inputs, finance and equipment. ▶ Production training and quality certification. 	<p>For farmers</p> <ul style="list-style-type: none"> ▶ Deduced bargaining power due to uniformity of model design. ▶ Inability to sell to alternative buyers with higher price or respond to price fluctuations.
<p>For sourcing companies (retail groups)</p> <ul style="list-style-type: none"> ▶ Exclusive production arrangements. ▶ Expanding into new markets and territories. ▶ Increased brand presence and awareness. ▶ Ability to reach economies of scale. 	<p>For sourcing companies (retail groups)</p> <ul style="list-style-type: none"> ▶ Dispersed SHFs may lead to higher transaction costs. ▶ Brand risks due to limited oversight of practices by franchisees, and potential exposure to corruption.
Impact Investment	
<p>For farmers</p> <ul style="list-style-type: none"> ▶ Stronger value chains to sell into and source inputs/finance, through growth in invested companies. ▶ Freedom to buy/sell unencumbered by contracts/pre-defined commitments. 	<p>For farmers</p> <ul style="list-style-type: none"> ▶ Impact can be indirect. ▶ No security of sale to the retailer.
<p>For sourcing companies (retail groups)</p> <ul style="list-style-type: none"> ▶ Can target systemic value chain challenges independently without direct link to supply. ▶ Can reach more SHFs and raise awareness beyond their direct supply chain. 	<p>For sourcing companies (retail groups)</p> <ul style="list-style-type: none"> ▶ Not directly linked to commercial supply/core business. ▶ Can be high risk for investors in certain cases.

3.7 KEY ENABLERS AND CONSTRAINTS OF SHF SUPPLY CHAIN MODELS

3.7.1 Land Issues

Farm level suppliers are usually required to have access to land, meaning that outgrower schemes rarely work with the poorest in society, and often work predominantly with male farmers. The schemes often require SHFs to have both a minimum hectareage of land and the right to till this land. Land issues can become paramount as education and asset endowments act as entry barriers to the poorest having direct access to viable markets via these schemes. Furthermore in many jurisdictions, the right to farm the land and land ownership are often separated and/or poorly defined and documented. This tenuous attachment to the land may influence their treatment of it, and limits propensity to invest in inputs for best soil/crop management. Best practice – especially when looking to convert land use to a particular crop and to avoid ‘land grabbing’ – is to ensure that the principle of free, prior and informed consent is adhered to, respecting local custom and convention.

3.7.2 Access to Inputs

There is often an unequal distribution of risk between SHFs and companies. SHFs are typically asset-poor and have limited access to affordable inputs. To minimise their risk, companies will prioritise SHFs with large amounts of land, capital equipment and agronomy training or provide inputs on credit without adequate insurance. This results in a high degree of capital exposure for SHFs. This is a greater risk for captive markets where there are limited outlets for the SHFs' output. In open markets, SHFs are more likely to sell their produce to third party buyers to mitigate cash flow issues and take advantage of fluctuations in market prices¹¹. This creates a risk to SHFs in that less credit and other support will be made available to them, as trust is diminished by farmer side-selling. Notwithstanding this, contract farming requires that the producer meets strict quality and output requirements, and off-takers should therefore have an incentive to support SHFs with quality inputs and capacity building. In practice, poor quality produce is often left unpurchased leaving SHFs little recourse.

3.7.3 Recruitment and Capacity

Key factors for success of an SHF scheme include aggregators with capacity that is closely aligned to the requirement of buyers. A sourcing company's relative proximity to the SHFs it sources from, and its ability to provide technical assistance as required, are also critical for providing the necessary transportation, sorting and grading in a timely and cost-efficient manner. This is especially a challenge when a scheme involves the introduction of a new crop into the region which will require farming methods unknown to the farmer.¹²

3.7.4 Availability of Expertise

Providing training support is key to the success of SHF models. It establishes trust and supports a closer relationship between the buyer and producers. In addition, this can increase yield and product quality through better implementation of improved farming practices, which benefits both the purchaser and SHFs.

COCA-COLA CASE STUDY

Problem: The Coca-Cola Company's 2020 Vision includes the ambition to triple sales of its juice business. To meet this goal, the company needed to secure sustainable supplies of fruit pulp. Coca-Cola's Central, East and West Africa Business Unit (CEWABU) sought to identify and develop local supply sources to reduce import costs and manage local market product affordability, but needed to improve small-scale farm productivity and identify a low-cost way of collecting this supply.

Solution: Coca-Cola launched Project Nurture with the Bill and Melinda Gates Foundation and TechnoServe to build a network of local aggregators in Kenya and Uganda. Coca-Cola's CEWABU identified and contracted

promising processors, while TechnoServe strengthened farmer agricultural and business skills and helped organise them into business groups.

Outcomes for SHFs: Farmers were aggregated into Producer Business Groups (PBGs) of 30 to 50 farmers that can attract investment to provide access to agricultural goods and services, and market access for products beyond just fruit. Over 42,000 farmers in 1,300 PBGs engaged in Project Nurture and have sold more than 36,000 metric tons of fresh fruit. Participant farmers' annual fruit incomes have, on average, more than doubled through increased sales volumes, improved quality, and increased farm gate prices.⁹



4. ESG Issues in SHF Supply Chains

ESG issues are an important and growing consideration in SHF supply chains. Continued growth in demand for food requires greater production and higher agricultural intensity, particularly in developing nations where SHF agriculture remains prevalent. At the same time, risks posed by climate change and growing consumer interest in sustainable agricultural practices are driving greater scrutiny into how consumer goods (especially food) are actually produced and sourced.

Over the past decade, a wide range of tools and guidance materials have been developed for identifying and engaging with ESG issues in SHF supply chains, ranging from commodity-specific scorecards like the Zoological Society of London's Sustainability Policy Transparency Toolkit (or SPOTT)¹⁵ to broader industry wide guidance such as the International Finance Corporation's Handbook.¹⁶ There is also a wide range of legislation, such as the International Labour Organization standards, and international agreements, such as the Roundtable on Sustainable Palm Oil (RSPO), designed to set standards for key ESG factors in SHF supply chains. In this section, we will review and highlight key generalisable ESG factors in SHF supply chains and offer options for companies sourcing through SHF supply chains to mitigate or manage these factors.

4.1 ESG VARIABLES

Before considering the relevant ESG issues, it is worth noting that there are several variables or dimensions which may impact the relevance of given factors.

4.1.1 Sourcing vs Investing

The first of these is the difference between sourcing from SHF supply chains and investing directly in them. A direct investor will likely be more exposed to ESG risks in SHF supply chains, particularly in terms of governance factors, and is also likely to have more influence in mitigating these risks. A company sourcing products through SHF supply chains will have different exposure and can be expected to mitigate risks through diversification of supply, and has less direct influence in changing practices or approaches at the SHF level. However, that does not mean companies sourcing through SHF supply chains are exempt from ESG considerations or that they should not strive to mitigate these risks where identified. As the focus of this research is on consumer goods companies, we have prioritised ESG factors which are more relevant for those sourcing from SHF supply chains rather than those directly investing in them.

4.1.2 Direct vs Indirect Exposure

The impact of ESG risks can be direct or indirect, and the type of impact may vary between companies for the same factors. For example, product scarcity due to soil degradation caused by improper chemical usage would be a direct risk for the sourcing company, raising the cost of inputs. Whereas, child labour exposure may be more indirect, primarily affecting a company brand or public perception. This is the materiality of the ESG risks, which must be considered on a case-by-case basis and cannot be fully explored here.

4.1.3 SHF Supply Model

ESG issues may also vary based on the SHF model used in the supply chain. The two approaches outlined above, for CF and CA, each have different considerations. For example, with a SHF cooperative, owned and managed entirely by the SHFs themselves, governance issues like equal voting rights for cooperative members will be an important consideration, whereas for a commercial aggregator the equitable distribution of income or ensuring appropriate health and safety standards may be more important.

4.1.4 Immediate vs Long-Term Factors

A number of the factors highlighted below do not present immediate risks, but are likely to have long-term consequences, both for the SHF supply chains and the companies sourcing through them. Particularly in relation to the environmental factors, it is expected that the impact of these risks will increase over time unless action is taken now to mitigate them. As one purpose of this research is to encourage proactive mitigation, the below ESG factors are not split into immediate or long-term categories.

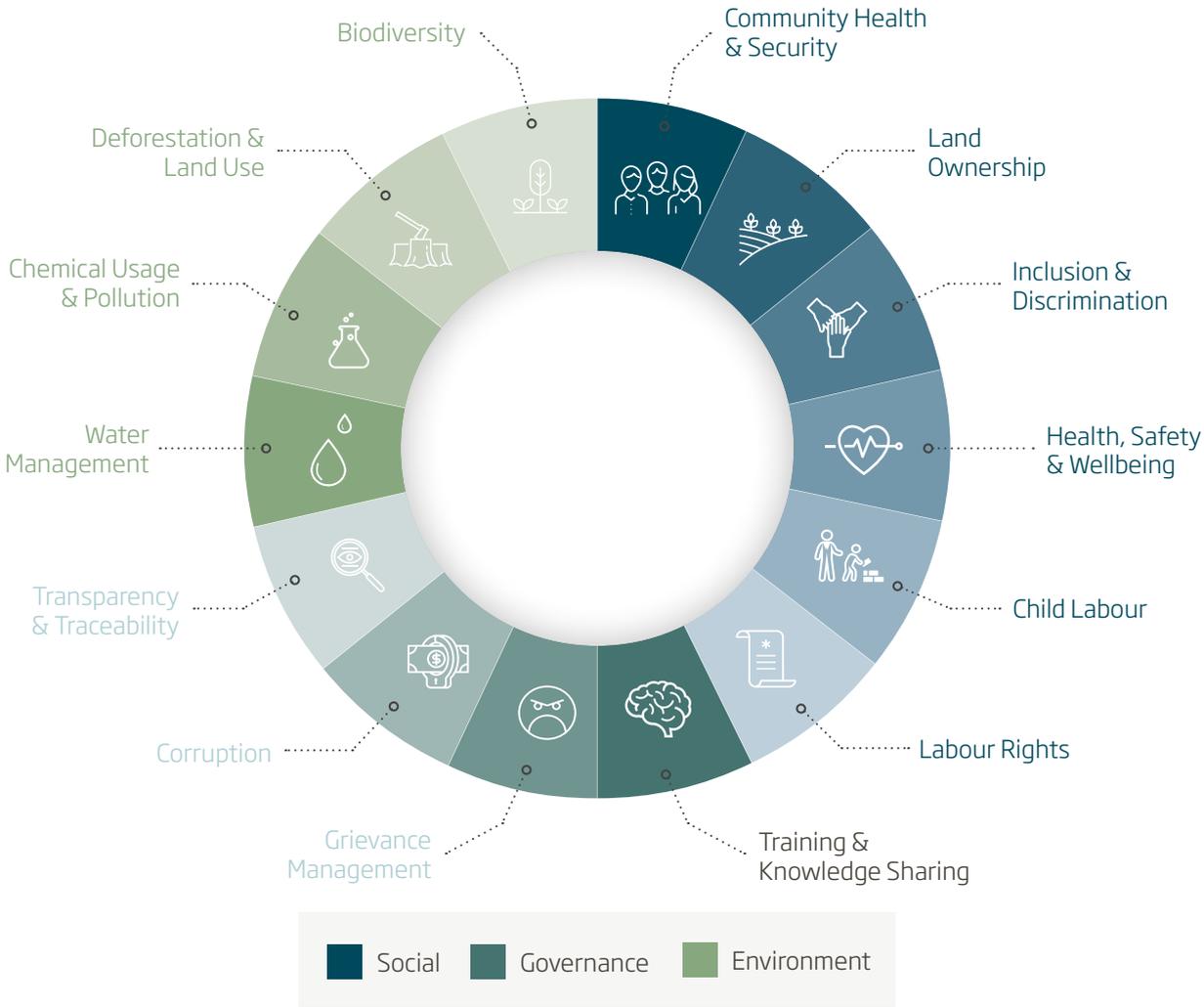
4.1.5 Products and Geographies

Finally, ESG issues are both region and product specific. A palm oil SHF in Indonesia may encounter different ESG issues than a cotton SHF in Uganda. While it is not possible in this research to identify all relevant factors for all products or regions, the below factors represent the most generalisable issues which are likely to apply across a range of products and regions.

4.2 KEY ESG ISSUES

In the following section, we present a selection of key common factors which are relevant across SHF supply chains. In several cases, factors may have implications for multiple ESG categories (for example, remuneration is both a social factor and a governance factor in terms of how remuneration is shared across SHFs). These risks are accompanied by potential mitigating strategies which the supply chain operators (i.e. nucleus hub farms, cooperative boards, etc.) or companies sourcing through SHF supply chains can implement to minimise the risks for themselves, their purchasers and their investors. In addition, we have included case examples where appropriate to demonstrate significant red flag breaches of these factors or best practice mitigations.

Figure 6: Key ESG Issues in SHF Supply Chains



4.2.1 Environmental Factors

4.2.1.1 Biodiversity

Biodiversity loss is a risk in SHF supply chains arising from other ESG factors such as land clearance and use of chemical inputs. In general, biodiversity risks can be mitigated through management of these other factors, although SHF producer groups can also consider implementing biodiversity risk assessments to manage their own risk. Those using SHF supply chains for sourcing can also impose requirements on biodiversity management, either through standards on usage of potentially harmful practices, or through direct mitigation support in training and education linking biodiversity with economic value.

In addition, education about biodiversity loss impacts has been shown to be an effective approach for changing behaviour. B-BOVID, for example, delivered training on biodiversity friendly agricultural practices in Ghana which incorporated approaches to enhance SHF income.¹⁷

Risks which need to be assessed in more detail prior to investment

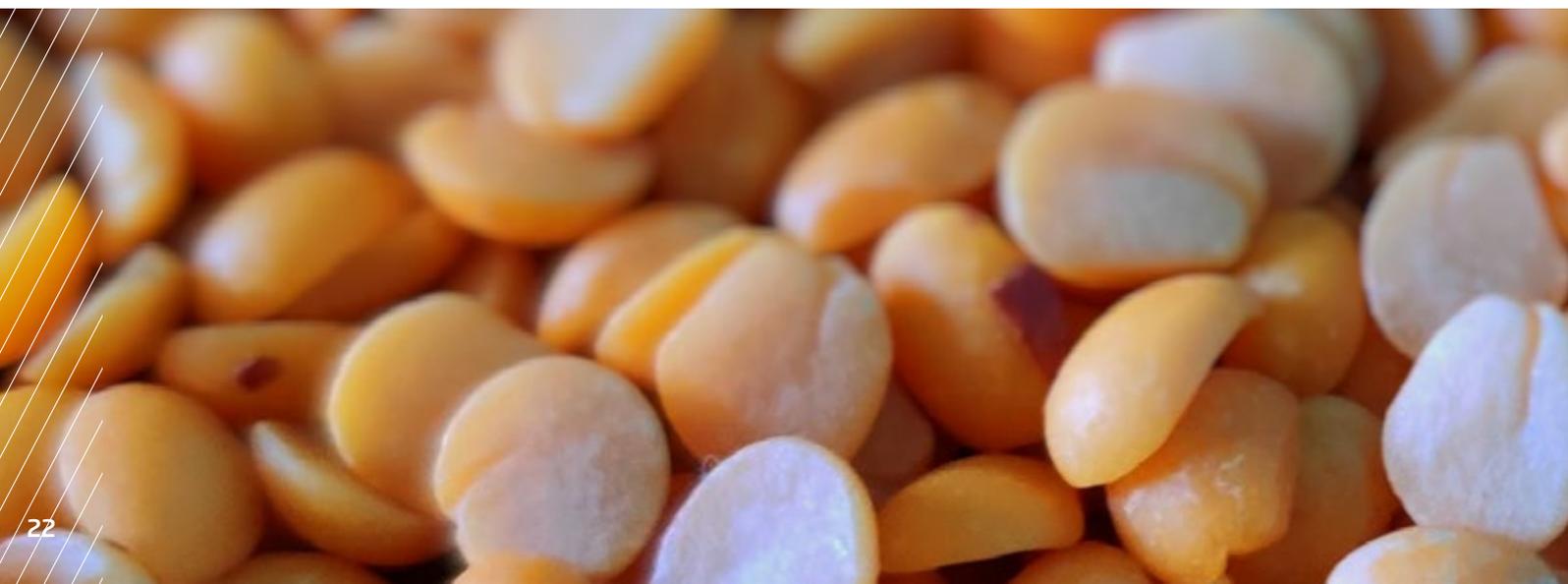
- ▶ Biodiversity loss to flora and/or fauna.
- ▶ Habitat destruction or damage.
- ▶ Conversion of High Conservation Value Land.
- ▶ Pesticide/herbicide usage.
- ▶ Use of non-native/potentially invasive species.

Risks which need to be assessed in more detail prior to investment

- ▶ Land clearance methods (i.e. slash and burn) and associated climate/ environment impacts.
- ▶ Soil management and erosion.
- ▶ Conversion of High Carbon Stock Land.
- ▶ Encroachment on protected or restricted land, leading to deforestation or biodiversity risks. Encroachment may also be classified as a social issue (encroachment on culturally important land).

4.2.1.2 Deforestation and Land Use Change

There are numerous existing standards for companies to reference when seeking to mitigate deforestation and land use concerns, including those presented by the CDP, the Consumer Goods Forum and the Rainforest Alliance, as well as commodity specific standards such as the RSPO. Companies should engage with and report against these standards to better understand deforestation in their supply chains. Mitigating deforestation can be effectively achieved by incentivising alternate approaches. Payment for ecosystem services, carbon crediting systems and offering markets for sustainable forestry products have all been demonstrated to be effective options, offering alternative sources of income to incentivise reduced deforestation. At the stricter end of the scale, refusal to purchase products grown on deforested land encourages both more sustainable practices and transparency. Further options are considered in the deforestation chapter of this report.



4.2.1.3 Chemical Usage and Pollution

Chemical usage risks can be mitigated in a variety of ways, depending on SHF needs. For example, provision of environmentally friendly, organic or certified chemical inputs by the centralised SHF entity can reduce use of harmful chemicals. Likewise, the use of integrated pest management systems can reduce reliance on pesticides. Producer groups could also undertake regular soil assessments throughout their supplier farms to proactively identify risks. Sourcing companies can support this mitigation through the provision of training on the use of agricultural chemicals or sustainable alternatives or, in more extreme cases, the exclusion of outputs grown using harmful chemicals from the supply chain. In terms of training and provision of alternatives, examples such as the organic milk producer Akshayakalpa's work in India have enabled smallholder dairy farmers to develop chemical-free, low environmental impact practices and more sustainable livelihoods through training and equipment investment.²¹

Risks which need to be assessed in more detail prior to investment

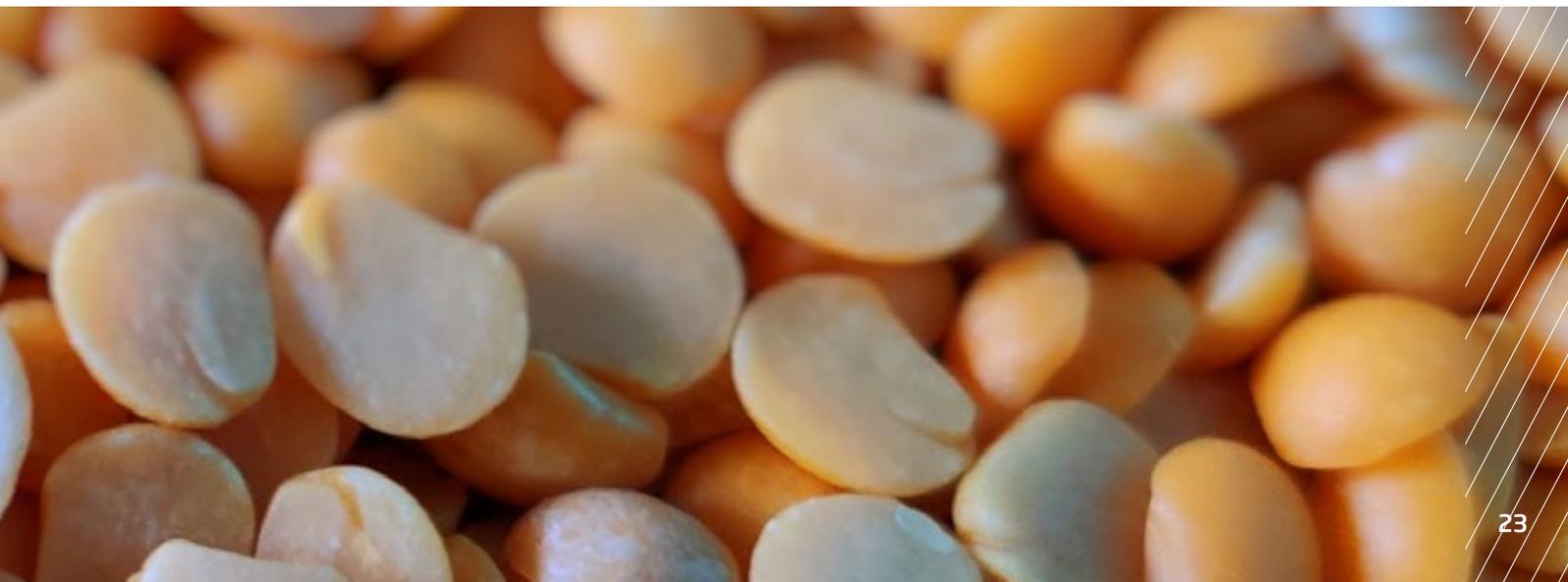
- ▶ Soil acidification.
- ▶ Chemical pesticides/herbicides.
- ▶ Pollution (i.e. excessive nitrogen fertiliser).
- ▶ Chemical usage risks can also pose social risks in terms of individual and community health risks.
- ▶ Disposal of harmful or toxic waste.
- ▶ Air quality/pollution through slash and burn practices.

Risks which need to be assessed in more detail prior to investment

- ▶ Water resource management and water scarcity.
- ▶ Water pollution and effluent.
- ▶ Irrigation.
- ▶ Community water security.
- ▶ Water, sanitation and hygiene.

4.2.1.4 Water Management

Mitigating water related risks can be achieved through a variety of ways. Studies show that training on sustainable water use practices, such as runoff water collection systems and drip irrigation, can minimise water use from non-renewable sources. Several of these approaches have equipment costs, and so financing support to SHFs to procure new systems can also therefore help. From the central SHF producer perspective, the use of a water management policy with maximum consumption guidelines can be encouraged. Leading beverage company Diageo's Water of Life programme, implemented in 20 countries over the past decade, has had significant success integrating water and sanitation standards throughout its SHF supply chains and offering direct support through construction of sustainable water systems, both for its SHFs and their communities.²²



SLASH-AND-BURN IMPACTS IN INDONESIA SUPPLY CHAINS¹⁸

In 2019, Greenpeace released a report concerning the link between palm oil SHF supply chains in Indonesia and rising levels of forest fires triggered by illegal slash-and-burn practices.¹⁹ The report contains analysis which identifies first the producer groups (many of which consist of SHFs, with 40% of Indonesian palm oil produced by SHFs²⁰) most closely linked to the fires and then assesses the presence of palm oil from these producer groups in the supply chains of some of the world's biggest commodity traders and consumer goods companies. The results are startling, with Greenpeace finding that three-quarters of the fire alerts in the first nine months of 2019 were associated with members of the RSPO. More striking is that multiple consumer goods companies with public deforestation commitments were found to purchase palm oil from the producer groups most closely connected to the fire alerts, including Unilever, Nestlé, P&G and Mondelez, as were global traders such as Cargill and Wilmar. Many of these

producer groups had either previously faced or were currently facing legal action in relation to these fires, which were estimated to be endangering the health of nearly 10m children in Indonesia, Singapore, Malaysia and the Philippines due to air pollution.

Both Unilever and Nestlé responded publicly to the report, highlighting where they had removed suppliers listed in the report from their supply chain for failing to comply with their internal sourcing standards. Nestlé also highlighted its ongoing SHF training programmes which seek to end slash-and-burn activities and make forest conservation more economically attractive to SHFs, whereas Unilever noted its improvements in terms of forest monitoring making use of satellite and remote sensing data. Whether these actions have had an impact on the prevalence of forest fires in Indonesia has not yet been assessed.

4.2.2 Social Factors

Social issues in SHF supply chains are particularly challenging to assess. SHFs are often self-employed, with remuneration dependent on productivity and a lack of centralised approaches to ensure sustainable labour practices. In addition, SHFs often live and work in remote, decentralised regions where compliance with national or international regulations may have less influence than local norms. For these reasons, companies should be encouraged to pay particular attention to social issues when engaging with SHF supply chains, regardless of the model used, to promote better practice.

4.2.2.1 Labour Rights

Labour issues in SHF supply chains can vary depending on the supply chain model. Labour associations or unions, for example, may be effective at mitigating labour risks where SHFs form a part of a larger system. Producer groups can also implement centralised labour conditions assessments and offer minimum wages to SHFs independent of production quantity, which can be difficult to provide in more market-based systems. Centralised producer groups should appoint labour directors to manage labour policies, ensure their effective implementation, and engage with SHFs. Options to ensure equitable remuneration include the use of longer contracts or pricing arrangements, split-pricing schedules to improve liquidity, and working with third parties to provide credit or quality assurance. Companies sourcing from these supply chains can (and should) exclude outputs cultivated with forced labour. Addressing forced labour can be a significant challenge, although new standards such as those provided by the Better Cotton Initiative's Task Force on Forced Labour and Decent Work are advancing the approaches companies can take to identify and mitigate forced or unsafe labour.²³ Unsafe or abusive labour practices continue to occur within SHF supply chains, with recent examples of large commodity traders seeking to conceal such practices.²⁴

Risks which need to be assessed in more detail prior to investment

- ▶ Forced labour and working hours.
- ▶ Exposure to dangerous conditions.
- ▶ Equitable remuneration.
- ▶ Provision of non-financial benefits, including housing, food, electricity, water or agricultural inputs.

4.2.2.2 Child Labour

The minimum mitigation companies should take when addressing child labour risks is an assessment of the local minimum working age, its compliance with international requirements and of the safeguards employed by the SHF supply chain. In supply chains with a centralised aggregator, a policy to prevent child labour should be available. Companies should seek to exclude products cultivated using child labour from the supply chain. Other mitigation efforts, such as incentivising education as noted below, can also address child labour issues.

However, child labour is a complicated challenge to address. The line between children supporting family subsistence farming and working on commercial crops is often difficult to draw, particularly where intercropping is common. Measures to increase transparency in the supply chain may mitigate this risk. It should also be recognised that isolated interventions to address child labour are unlikely to achieve systemic success, with more landscape level approaches including government partnerships needed. That being said, it is insufficient for companies to rely on this challenge as an excuse to not address child labour in their own supply chains. Responses to recent litigation filed in America relating to systematic child labour in the Ivory Coast chocolate supply chain have relied on corporate policies to eliminate child labour, distancing the corporations involved from both the actual situation on the ground and culpability for ongoing child labour. It should be noted that these lawsuits relate to forced child labour, for which there is an even greater onus on the companies involved to act.

Risks which need to be assessed in more detail prior to investment

- ▶ Child labour is still common practice in SHF agriculture, particularly in remote locations.
- ▶ Child labour and forced child labour are two separate topics, with significantly different risk implications.

THE INTERNATIONAL COCOA INITIATIVE'S APPROACH TO CHILD LABOUR IN GHANA AND CÔTE D'IVOIRE²⁶

The International Cocoa Initiative (ICI) has a long history working with SHFs to reduce child labour in supply chains. In its most recent report on the impact of community development programmes in Ghana and Côte d'Ivoire, the ICI presents a range of useful mitigation strategies drawn from its work with 75 cocoa growing communities in the region. The ICI used participatory approaches to collaboratively identify activities to address child labour concerns with the supported communities. These activities included:

- ▶ Establishing **Community Child Protection Committees** to raise awareness of child labour risks, promote good educational practices and identify children at risk;
- ▶ Support to **gender diversified** income generating activities;
- ▶ Setting up **community service groups** of ICI trained and equipped young community members to be employed below market wages to substitute child labour;
- ▶ Supporting or establishing **Village Savings and Loans Associations** (or VSLAs) or similar community financial support vehicles; and
- ▶ Supporting **educational activities for children**, by encouraging school attendance and offering

renovations to educational facilities, and supporting adults with vocational training.

The results of the programme were broadly positive, with the prevalence of child labour in Côte d'Ivoire decreasing by 10% in supported communities, the hours per day spent by children working on hazardous tasks in cocoa farms decreasing by 25%, and school enrolment increasing by 22%. The results were less significant among the communities supported in Ghana, but still demonstrated a 28% reduction in hours worked by children and a 30% reduction in the number of days worked in a week.

It should be noted that this is a relatively young initiative and that these results are preliminary based on an internal evaluation; there is insufficient evidence to conclude that these results will be sustained once the programme ends. It should also be recognised that the ICI board includes a range of stakeholders with commercial interests in the cocoa supply chain (such as Nestlé, Cargill and Mondelez). Nevertheless, Independent evaluations of ICI supported programmes have also found positive results, although concerns about sustainability and recommendations to continue monitoring have been raised in several evaluations.²⁷

4.2.2.3 Land Ownership and Relocation

The primary approach to mitigating land ownership issues is to ensure compliance with local land regulations. In practice, this can often be challenging when engaging with SHFs given the use of traditional or informal boundary markers. A central SHF management group could take responsibility for maintaining a land register and mitigating boundary disputes while supporting formal registration of land ownership. For contract farmers, the challenge is harder to address, but modern approaches relying on satellite data have demonstrated options to mitigate these risks for companies using SHF supply chains.²⁸ Where relocation is a risk, a practical policy on resettlement or facilitated resettlement programmes involving community consultation should be established. Companies sourcing through SHFs should administer an exclusion on products cultivated on land procured through forced relocation.

Risks which need to be assessed in more detail prior to investment

- ▶ Relocation of communities and/or indigenous peoples to expand land for agriculture.
- ▶ Land ownership/boundary disputes.

Risks which need to be assessed in more detail prior to investment

- ▶ Gender inclusivity.
- ▶ Racial, cultural or regional discrimination.
- ▶ Age discrimination.
- ▶ Appropriate representation in governing groups.
- ▶ Fair access to resources such as agricultural inputs.
- ▶ Preferential or discriminatory treatment is avoided.

4.2.2.4 Inclusion and Discrimination

As a minimum, both SHF producer groups and companies sourcing through them should have policies on discrimination and gender inclusivity. This should extend to cover equal remuneration for equal work/product regardless of gender, race, culture, or age. However, the gender imbalance in SHF supply chains is often not visible or confined to the market prices offered. As such, companies sourcing through SHF supply chains should consider initiatives which facilitate access to education/training for female SHFs or support access to credit and land ownership for women in agriculture. For example, Mondelez' Cocoa Life programme helped establish cocoa cooperatives which embedded gender inclusivity in their foundations by requiring minimum gender representation among cooperative executives.²⁹

4.2.2.5 Health, Safety and Wellbeing

Health, safety and wellbeing risks can be mitigated with the implementation of the good labour practices noted above. These risks can be further mitigated by proactive health and safety training, particularly for agricultural equipment and chemical usage. This is expected to be more systematised where a centralised or ingrower approach is taken, where equipment is used and managed more centrally, although it can also be provided in other supply chain models, either by the companies engaged in the supply chain or third party providers. For example, first aid training for SHFs working in potentially dangerous situations or with potential dangerous equipment is an excellent approach to mitigate some of these risks, particularly given SHFs often work in areas with limited or no access to emergency healthcare. Lastly, the provision of income support for workplace accidents/incidents can disincentivise dangerous working practices. The Rainforest Alliance certification incentivises the provision of many of these mitigation measures, with encouraging results in Sri Lanka, India and Kenya.³⁰

Risks which need to be assessed in more detail prior to investment

- ▶ Safe working environments. In decentralised systems, this may be especially difficult to ensure.
- ▶ Exposure to chemicals.
- ▶ Provision of safe transport systems with appropriate safeguards to reduce risks in road transport.

Risks which need to be assessed in more detail prior to investment

- ▶ Maintenance of common resources (i.e. water).
- ▶ Protection of culturally significant land.
- ▶ Community consultation.
- ▶ Theft and criminal activity.

4.2.2.6 Community Health and Security

Maintaining and supporting community health is an important requirement in sourcing through SHFs. Policies on the preservation of common resources, such as water, and training or provision of equipment are the most common mitigation strategies. Community health also includes education, with support to youth/school children to improve education performance and incentivise attendance have been shown to benefit the overall community. Companies should be respectful of indigenous and/or cultural norms in supply chain policy and utilise a Free and Prior Informed Consent (FPIC) process for all dealings with local peoples.

HERSHEY'S PROJECT PEANUT BUTTER

The Project Peanut Butter initiative was started in the early 2000s to address severe acute malnutrition in children in Malawi and Sierra Leone. The initiative developed a highly nutritious food source to treat malnutrition using local produce – the peanut based Ready-to-Use Therapeutic Food (or RUTF). The initiative uses mobile clinics to distribute RUTF where it is most needed. By using locally sourced ingredients, Project Peanut Butter is also able to stimulate economic growth and provide local ownership of the process, ensuring long-term sustainability.

In 2012, Hershey – a long-time user of cocoa sourced through SHFs in West Africa – began exploring options for a commercial venture in Ghana that would use local ingredients and facilities to produce outputs which could be beneficial to local communities and meet Hershey's CSR requirements. To do so, Hershey partnered with the

Project Peanut Butter team to establish its first facility in Ghana. Hershey's support ensured the new facility was in operation within a year, with Hershey staff providing input to the plant design, processing capabilities and manufacturing processes. Working through Project Peanut Butter, Hershey has now been able to deliver training to Ghanaian peanut farmers, improving their agricultural practices and improving livelihoods of both the SHFs involved and their communities.

However, it should be recognised that Hershey is one of several firms facing allegations of child slavery within its West Africa cocoa supply chain. Thus, while Project Peanut Butter is an excellent example of a programme to support SHF community health, Hershey's support of the programme is somewhat marred by the pending lawsuits and may be an example of a firm using effective marketing to conceal failures within its supply chain.



4.2.3 Governance Factors

4.2.3.1 Transparency and Traceability

Traceability risks can be managed at various levels in the supply chain. A traceability processes should be used to record product origin by aggregators, although in decentralised models this can be highly challenging to implement. For companies sourcing through SHF supply chains, reducing the use of mass balance-based chains or implementing innovative technologies (i.e. satellite data) can enhance traceability. There are now modern cloud-based solutions available, such as the Koltiva FarmCloud commodity tracing platforms, for addressing traceability risks for companies sourcing through SHFs. Beyond transparency in the value chain, transparency is an important governance factor in all SHF models used. With contract farming models, transparent pricing decisions are important to engender trust and ensure equity. For SHF owned enterprises the implementation of a clear, enforceable voting policy for SHF cooperative members and publishing of general meeting minutes, as well as regular structured engagement with SHFs, can mitigate transparency risks.

Risks which need to be assessed in more detail prior to investment

- ▶ Records of supply origin and/or use of mass balance.
- ▶ Certification of supply.
- ▶ Fair and transparent decision making by governing bodies.
- ▶ Transparent/ equitable voting processes.

Risks which need to be assessed in more detail prior to investment

- ▶ Bribery and corruption, particularly in relation to concessions, permits and certifications.
- ▶ Leveraging influence with decision makers.
- ▶ Undue influence of employees/ stakeholders.
- ▶ Management of criminal offences/ associations.
- ▶ Fraudulent or counterfeit inputs.

4.2.3.2 Corruption

Corruption risks can be mitigated by ensuring compliance with national and international standards to mitigate bribery and corruption. However, in practice, given the decentralised nature of SHF supply chains, this can be challenging to achieve. Again, modern technologies can play a role in mitigating corruption. Most notably, the introduction of blockchain-based transaction verification systems has been shown to reduce corruption and increase accountability in SHF supply chains. For example, AB InBev recently piloted a blockchain-based mobile app to provide SHFs a secure, transparent system to track and compare transactions in Uganda and Zambia, which reduces corruption and offers SHFs a bankable, secure financial history.³¹ Compliance with certification standards, such as the Kenya Plant Health Inspectorate Service,³² can also reduce the prevalence of fraudulent agricultural input sales, such as misrepresented

seed quality. At a central level, transparent financial systems which are compliant with local regulations and regularly audited can minimise these challenges.

4.2.3.3 Grievance Management

The implementation of accessible, transparent Grievance Redress Mechanisms (GRMs) by sourcing companies is of paramount importance for SHF supply chains. Where appropriate, companies using these supply chains should extend their own GRMs to SHFs to provide an option for redress in the event that the complaint is with a centralised body. Access to the GRM should be embedded within supply chain management and be structured in a transparent, accessible way. This should be accompanied by the implementation of a whistleblowing policy and protection procedure. GRMs can be found in the policies of most leading players in the sector, although limited reporting on how these are used or how effective they are is available across the industry. An example of an appropriately designed GRM can be seen in AB Sugar's collaboration with Illovo Sugar Africa which establishes a gender representative GRM to address farmer grievances and land rights issues.³³

Risks which need to be assessed in more detail prior to investment

- ▶ Feedback and grievance management.
- ▶ Whistleblowing or reporting of malpractice.

Risks which need to be assessed in more detail prior to investment

- ▶ Training to increase SHF knowledge/ improve sustainability.
- ▶ Access to knowledge is not restricted.

4.2.3.4 Training and Knowledge Sharing

Training and knowledge sharing could also be described as a social factor, and often appears as a mitigation strategy for other ESG risks. In this context, the focus is on systemic, structured training processes made available to SHFs to strengthen organisational capacity of the supply chain. This type of training is commonly provided in donor or NGO programmes, although sourcing companies are increasingly engaging internal agronomists to facilitate such training, recognising the potential to increase product volume and quality.

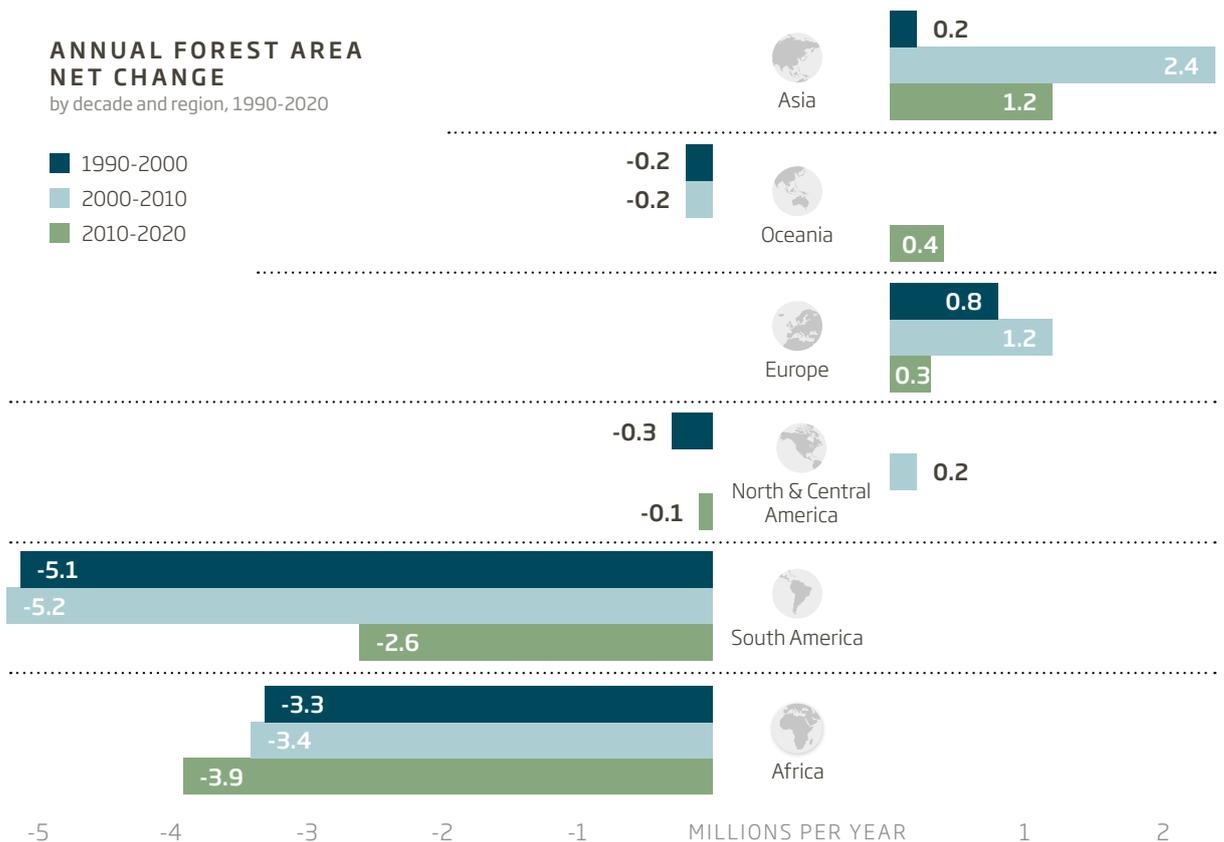


5. SHF Supply Chains and Deforestation

The world has a total forest area of approximately 4bn hectares, which covers 31% of the world’s land area. More than 50% of these forests are in just five countries – Russia, Brazil, Canada, the USA and China. Over the past 30 years, more than 178m hectares of forest have been lost; an area roughly equal to Libya. The tropics lost 12m hectares of tree cover, the fourth highest annual loss since 2001 and representing an area the size of Belgium. This has significant implications including risks of irreversible damages to biodiversity and the potential loss of significant carbon stores.

Forests provide food, income, shelter and resources to hundreds of millions of people in forest communities around the world. Agriculture can play a significant role in causing deforestation, though this (and the contribution of SHFs) varies regionally. For example, in Latin America almost 70% of deforestation was a result of agriculture, though SHF activity is less significant compared to other factors like mining. In comparison, agriculture only represents a third of African deforestation, but this is primarily driven by small-scale farming.

Figure 7 Annual Forest Area Net Change (FAO, 2020)



In many developing countries, SHFs produce 80% of the food that is consumed. However, the proportion of deforestation as a result of SHF activities varies across different regions and commodities, meaning context is key. For example, 75% of cocoa is produced in West Africa, of which 90% is grown by SHFs, making it a significant driver of forest loss in the region. On the other hand, there is the Amazon, a high-risk deforestation frontier and key production area of cattle and other commodities, where only 12% of deforestation is linked to SHFs. Clearly SHFs cannot be classed as a single, homogenous group as the focus should be on the context in which SHF are working, which supply chains they feed into, the national laws they must comply with (and their enforcement) and so on.

According to WRI’s 2021 Forest Review, production of just seven agricultural commodities accounted for 57% of agricultural tree cover loss. Crops such as sugar cane may not contribute to tree loss as significantly as other crops, but can still contribute to significant loss of biodiversity.

Figure 8 Forest Area Replaced by Analysed Commodities ³⁴

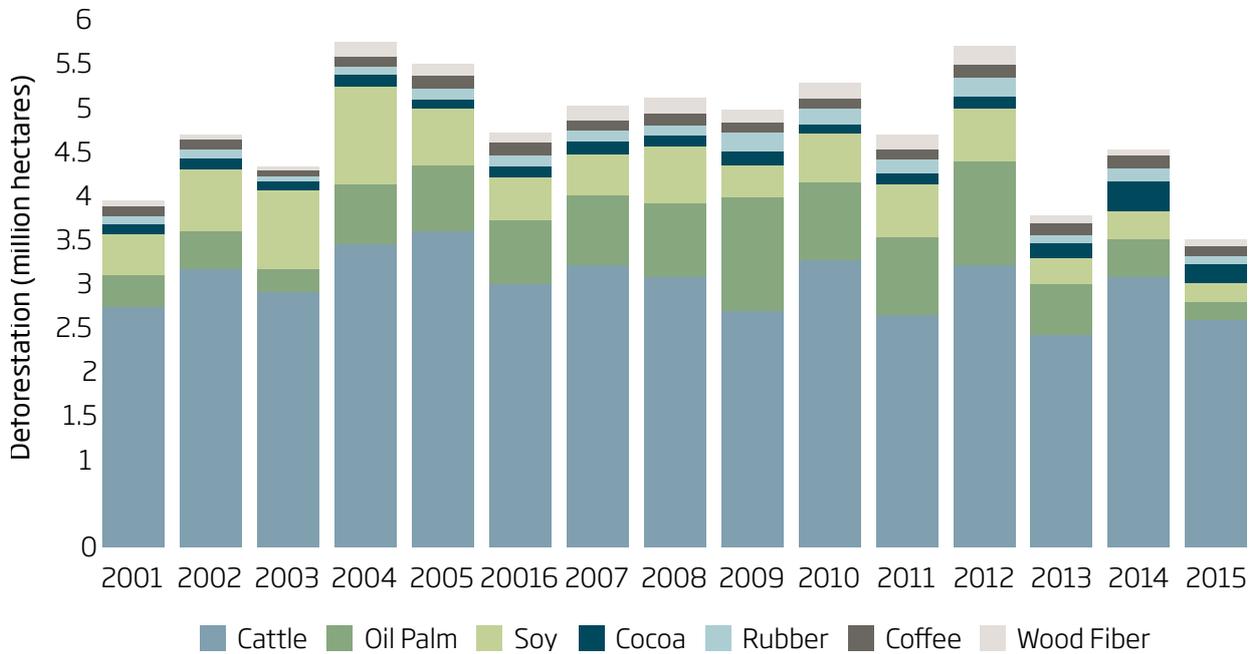


Table 3 Countries at Risk from Agriculture Linked Deforestation ³⁵

Commodity	Countries at risk
Cocoa	While Côte d'Ivoire and Ghana are the highest producers of cocoa, Indonesia was found to have had the most forest area replaced by cocoa. Other countries at risk are Brazil and Cameroon.
Rubber	Tree cover loss data shows Indonesia, Malaysia and Cambodia report tree cover loss due to increasing rubber plantations. Other important producers are China, Thailand and Vietnam but a lack of data means it is challenging to assess the impact.
Palm oil	Indonesia and Malaysia have the highest level of palm oil-related deforestation. Forests in the provinces of Central Kalimantan, East Kalimantan, and Riau in Indonesia and Sarawak in Malaysia in particular are identified as at risk.
Sugar	80% of global sugar production is sugar cane, the remainder being sugar beet. Brazil and India combined account for 60% of global sugar cane production. Other countries producing sugar cane include Thailand, China and Pakistan.
Coffee	Forest replacement by Robusta coffee is most prevalent in Indonesia, Brazil, Madagascar and Vietnam. The rate of deforestation to produce Robusta coffee has increased, whereas Arabica coffee has remained steady, with some forest replacement occurring in Brazil, Peru and Colombia.
Soy	Globally, 97% of deforestation linked to soya occurred in South America, with Brazil considered most at risk, particularly the state of Mato Grosso. The Amazon and Cerrado biomes account for most of Brazil's forest replacement by soy. Other countries identified as being at risk include Argentina, Bolivia and Paraguay.

Nevertheless, the number of SHFs growing commodity crops such as cacao, palm oil, maize and raising cattle is rising across South America, Sub-Saharan Africa, Southeast Asia and Oceania; meaning that smallholder farming is becoming an increasing driver of deforestation. In addition, SHF are weakly positioned in the supply chain, and less able to take on the risk of transitioning to more sustainable practices. There is therefore a role for companies to support SHF through providing clear market signals and support to meet these new market requirements. A recent study estimated the demand for SHF financing to be USD240bn annually, and current supply reaches only an estimated USD70m, indicating a clear opportunity to create systemic change. There is also a role for governments to address the wider, systemic challenges through government-to-government collaboration.

5.1 KEY INITIATIVES

There is clear agreement between public, private, and civil society actors that it is impossible for SHFs working alone to remove deforestation from supply chains, but rather all actors have different roles and responsibilities to deliver progress. For this reason, many initiatives, be they geographically or commodity specific, typically include a range of stakeholders.

The New York Declaration on Forests is a voluntary, non-binding international declaration to take action to halt global deforestation. Since its inception in 2014, the declaration's supporters have grown to over 200, made up of national governments, sub-national governments, multi-national companies, civil society organisations and groups representing indigenous communities. Supporters agree to end natural forest loss by 2030, with a 50% reduction by 2020 as a milestone toward its achievement. In its most recent assessment, it was found that company support for small-scale supply chain actors and local communities is unable to address underlying structural vulnerabilities. While projects in cocoa and palm oil supply chains have shown success in increasing productivity and reducing deforestation, they remain small in scope, limiting their impact. However, collective efforts that engage companies and governments in mutually beneficial collaboration offer greater potential, ensuring holistic and complementary activities.



The Consumer Goods Forum (CGF) is a global, CEO-led initiative which aims to drive positive change and address key challenges impacting industry across six umbrella pillars of work, including environmental sustainability. CGF members commit to achieving zero net deforestation by 2020 in key commodity sectors (soya, palm oil, paper and pulp, timber and beef) but most companies have failed to meet this target. In response, the CGF conceived the Forest Positive Coalition, which includes 19 companies with a collective market value of \$1.8 trillion USD. Realising a new approach was required, the Coalition came together to remove commodity driven deforestation from individual supply chains and drive transformational change in key commodity landscapes, recognising that a 'smart-mix' of different measures was required to achieve success. A key part of this work includes defining measurable outcomes against which all coalition members agree to track and report their progress. Activity includes:



- ▶ **Government and stakeholder engagement:** The Coalition is working with key governments and stakeholders in Brazil, China, Indonesia and the EU to support the creation of better enabling environments for sustainable supply chains. Despite Covid-19 limiting face to face engagements, the Coalition has engaged with 20 meatpacking companies representing 100 meatpacking plants in the Amazon and Cerrado biomes (key for beef and soya supply chains).
- ▶ **Commodity specific roadmaps:** Focusing on palm oil, soya, and paper, pulp and fibre-based packaging (PPP), the Coalition is developing roadmaps including a set of commitments, a supporting action plan for achieving them and a set of key performance indicators that each member will implement over the next three years. Activities identified aim to maximise the collective impact of individual Coalition members through the implementation of Coalition wide actions. For example, the creation of forest positive policies, reducing dependence of materials driving forest risk, shifting financial capital to conversion free production, and creating consumer demand for sustainable product choices to name a few. Each roadmap sets out actions to take at both an individual and Coalition wide level, addressing challenges in individual supply chains but also across the wider supply base and market.

In 2019, the **Global Platform on Sustainable Natural Rubber (GPSNR)** was launched to address deforestation and human rights abuses linked to the rubber industry. Developed through the work of World Business Council for Sustainable Development, this initiative included civil society, but was created in partnership with major rubber using companies in the tyre and car manufacturing industries (collectively representing two thirds of global tyre production). The platform’s creation followed growing civil society pressure on companies using natural rubber in their supply chain to tackle these issues, for example Global Witness’ influential 2013 ‘Rubber Barons’ report which documented how international banks were financially backing land grabs in Laos and Cambodia. The platform brings together five working groups, through which recommendations are provided to supply chain actors and implemented at an individual company level, building on the unifying support of the platform. For example, through the strategy and objectives working group, companies were advised to champion livelihood and living income initiatives, focusing on the creation of partnerships, but also to create strong labour standards, conditions, and practices within their supply chain, involving governments where possible. In March 2021, the smallholder representation working group reported onboarding smallholders from Indonesia and Vietnam. The group is now developing strategies to improve representation in countries represented in GPSNR.³⁶



High Conservation Value (HCV): areas of outstanding significance or critical importance due to high biological or ecological value.

High Carbon Stock (HCS): approach to distinguish carbon stock value of forests to designate them for protection or development.

The **High Conservation Values (HCV) network** is an example of a group that is working to address a global challenge, regardless of geography, commodity or supply chain. Since 2005 the group has promoted and supported the use of the HCV approach, a tool to ‘avoid detrimental effects on people and nature by identifying, managing and monitoring critically important natural and social features in production landscapes’. For example, the Better Cotton Initiative (BCI) collaborated with the HCV network in 2019 to ensure the BCI standard would support the many SHFs working in the Indian cotton industry. Together, the collaboration launched a simplified risk-based HCV procedure and created a new biodiversity assessment approach, considerate of the issues and challenges faced by SHFs.



At the end of 2020, the CGF Forest Positive Coalition provided its first collective investment, providing financial support to the ongoing Siak Pelalawan Landscape Programme (SPLP), a private sector-driven initiative to promote sustainable palm oil production in two districts in Riau Province, Indonesia.³⁷

5.2 KEY STANDARDS

A common method for companies to attempt to engage with SHF remains voluntary sustainability standards. These allow companies to work to a higher standard, beyond the legal minimum and based on the latest information as standards commonly rely on experts in their field to inform standard creation, implementation, and monitoring. Given the number of voluntary sustainability standards in use, it would be difficult to list all of them, but listed below are a number of leading examples.



Certification creates a clear, harmonised 'ask' of producers and is relatively straight forward for a downstream company to support and become involved in. Certification is also a potential route to market access and additional financial support. FSC found community forest owners in Mexico were more likely to receive biodiversity funds from the government if they were certified and thus able to demonstrate sustainable forest management. The costs of becoming certified can be high and challenging for SHFs to fund if it requires significant changes to farming practice. Analysis shows that demand for sustainability standards is mainly from the European and US markets, where companies can use standards to positively differentiate their products in the marketplace. This focus means demand will always be lower than potential supply, meaning SHFs risk higher production costs for possibly little or no additional income for their efforts. For these reasons, sustainability standards are typically viewed as a tool as opposed to a 'driver' of sustainable sourcing.

This is not to say that certification schemes are unaware of the challenges faced by SHFs who wish to access their standard, and many schemes produce targeted guidance or rules to support SHF uptake. For example, the RSPO SHF standard provides a simplified process for achieving certification for groups of independent SHFs. Bonsucro, the largest sugarcane certification standard, has taken a similar approach, maintaining the core indicators of the standard and adding additional, SHF specific principles that include 'stepwise' indicators to support continuous improvement. FSC and the Programme for the Endorsement of Forest Certification (PEFC) also allow smaller businesses to come together to be accredited under a single group certification.

Certification without Verification

While certification schemes are an important tool in encouraging best practice, they suffer almost universally from the challenges associated with verification of supply chains in practice. In 2015, the Environmental Investigation Agency (EIA) released its report on the RSPO, *Who Watches the Watchmen*, which highlights a number of these challenges, many of which are common across certification schemes.³⁸

- ▶ **Poor technical knowledge of auditors:** The investigation found that many auditors had insufficient understanding of the RSPO standards, particularly relating to social factors. This issue is compounded by a range of weaknesses and ambiguities identified in the RSPO guidelines, many of which have not been resolved five years on.
- ▶ **Conflicts of interest:** Certification bodies are often involved with investigating complaints against companies who they have certified which impacts the validity of the entire complaints process. Furthermore, many certification schemes receive the majority of their income from company verification, which incentivises certification despite performance.
- ▶ **Fraudulent behaviour:** Evidence of bribery and corruption among certification auditors has been found in a number of studies, including the EIA's RSPO research. Auditors have been found to give fraudulent certifications, intentionally overlooking failings in the supply chain.
- ▶ **Limited oversight of supply chains:** Certification schemes are often challenged on the rigor of their audits, with auditors often assessing only a small sample of a supply chain and usually infrequently. As such, audits are often conducted of the best examples of a supply chain and fail to capture failings elsewhere in the chain.

In addition to these challenges highlighted by the EIA, certification auditors face more serious criminal threats when undertaking their duties. Members of the Rainforest Alliance working in the cocoa industry have reported receiving death threats while undertaking audits,³⁹ and organised crime has been linked to the illegal trade of timber and marine commodities, often integrated into legal supply chains, which presents significant risks to those undertaking audits.⁴⁰ These dangers cannot be underestimated when discussing the effectiveness of certification schemes and the potential for fraudulent activity.

When looking at SHF supply chains, it is important to recognise that certification schemes can reflect a shifting of responsibility to producers and, as noted above, there are a range of challenges in rolling out such certifications among SHFs.⁴¹ Recent research suggests SHFs participate in certification schemes reactively to reduce personal risks and the potential to lose access to important markets can incentivise fraudulent behaviour at the producer level to maintain certification, further hindering verification efforts.⁴²

A shared challenge faced by initiatives is that while they can create positive impacts, they are at risk of creating 'pockets of good' without supporting a mass market, transformational change. Greater connectivity and collaboration across different initiatives in a landscape may help deliver this greater change, but this needs to be balanced with not making the programme overly complex and increasing the risk bureaucratic delays.

5.3 COMPANY ACTIONS, APPROACHES AND PARTNERSHIPS

Many companies created zero deforestation commitments for 2020, but there is a disparity between making commitments and identifying and delivering actions to meet them. Global Forest Watch identifies tracing implementation and consequences through complex supply chains as a key challenge area, since even where commitments exist, removing deforestation from supply chains occurs unevenly. For example, 81% of Indonesian palm oil exports came from companies with 'no-deforestation' pledges, compared to just 32% of Brazilian beef imports. Furthermore, the complexity of global supply chains means it is difficult for companies to link the commodities physically in their supply chain with a specific producer, particularly SHFs. The supply base itself is also changeable. For example, a soya producer will sell beans to different shippers based on price, rather than through any agreed contract. As a result of these challenges, SHFs can be excluded from specific commodity supply chains, due to the additional resource required to ensure compliance with company policy and the perceived greater associated levels of risk in comparison to larger farms. Intermediaries are often used to mitigate risk, allowing larger companies to buy commodities from a single contact who has a strong understanding of the local context, producers and risks. This has the potential to cause 'leakage' in supply chains, where companies sourcing to higher sustainability standards are more likely to source from a smaller number of trusted providers, sometimes consolidating their supply base, with the other suppliers turning to less discerning markets for business.

The **Accountability Framework Initiative (AFI)** operational guidance for including SHFs supports companies with developing a greater understanding of traceability that can be improved over time and guidance on how they can work with SHF groups to develop a control system to reduce risk. Suggested actions include supporting SHFs to achieve group certification and engaging with SHFs via groups such as farmers associations and cooperatives to improve outreach. If the SHF group is operating where there is a known risk of deforestation, and SHFs cannot access certification, the company may need to deliver support to farmers in the form of training or developing assessments. This support provides information to the company and can provide additional benefits to SHFs such as the opportunity to collaborate and develop economies of scale. Benchmarking initiatives such as CDP and Forests 500 are both supporting partners of the AFI and both benchmarking systems align to this guidance. For example, asking how companies facilitate the inclusion of SHFs into the supply chain or supporting good agricultural practice. Figure 10 below is taken from the CDP forest questionnaire, providing examples of how a company may support good practice or reduce deforestation.

Figure 9: Replication of CDP Forests Questionnaire



WILMAR SUPPORTING SHFS TO REDUCE DEFORESTATION

Wilmar International is one of the world's largest agribusiness groups, based in Singapore and the global leader in palm and lauric oil processing as well as one of the world's top ten raw sugar producers. The first company to implement a No Deforestation, No Peat, No Exploitation Policy (NDPE), which includes supporting the inclusion of SHFs into the supply chain, Wilmar has played a leadership role in advancing sustainability since 2013. Rising pressure from civil society around the negative environmental and social impacts of the business led Wilmar to take a USD200m sustainability linked loan in 2018 to advance the company's sustainability agenda. Despite Wilmar plantations being identified as contributing to deforestation as recently as 2020, Wilmar has created many programmes to support independent SHFs and is on track to achieving all three of its 'SHF support' targets by 2025. Programmes include support for:

- ▶ Independent SHFs: Though not bound to any single mill, Wilmar is supporting SHFs achieve group RSPO certification. This is a potentially expensive process for individual farmers to undertake alone but, once certified, SHFs are more likely to form long-term relationships with mills such as Wilmar's. This not only ensures SHFs have a market to sell to and Wilmar has a consistent supply of sustainably produced palm oil, but also protects forests as RSPO has clear no deforestation and NDPE policies which protect against forest degradation.

- ▶ Access to finance: SHFs can struggle to access finance for land improvements, but Wilmar is facilitating access to finance to support replanting of oil palm trees to replace aged trees with decreased yields. This allows Wilmar to benefit from an increased future supply of sustainable palm oil and the independent SHFs increase their income through higher rates of productivity and greater market access. Furthermore, by increasing the efficiency and profitability of existing land, this removes the need for SHFs to clear more land to increase yields, protecting forests. Increasing the financial benefits to SHFs is also more likely to secure and retain buy-in, as well as allowing for more organic expansion as SHFs opt to become involved. This facilitation is achieved through innovative risk sharing models aiming to lower the cost of financing and working with sustainability focused financial actors to secure better interest rates for SHFs.

Through various assistance programmes Wilmar has directly supported thousands of SHF. For example, the Wilmar Smallholder Support Honduras programme has trained 3,300 SHFs over three years, and the follow up Wilmar Supports Sustainable Entrepreneurs programme aims to train a further 1,800. It should, however, be recognised that while Wilmar has improved its performance in recent years in relation to environmental impacts, it has still come under scrutiny for its labour practices⁴³ and was named in Greenpeace's 2019 report on the link between palm oil and deforestation.⁴⁴

The Cocoa and Forests Initiative is an example of how company activity is changing direction with a greater focus on public-private partnerships. It recognises that, while it may not currently be possible to make specific claims about an individual supply chain, it is possible to collaborate in a shared sourcing area to create change. This collaboration provides a greater understanding of risk, and the opportunity to improve supply chain transparency over time. The pre-competitive industry group is formed of 35 cocoa companies, working together with cocoa producing countries to remove deforestation from cocoa supply chains. The initiative works in Côte d'Ivoire and Ghana (responsible for 60% of global cocoa production), as well as Colombia, and aims to support conservation and restoration of forests, sustainable intensification and diversification of farming and the empowerment of cocoa growing communities. Each country's government has developed a national implementation plan, and each company has released a supporting individual action plan to deliver on their commitments, which combined would represent 85% of global cocoa production. Through government and industry partnership, there is a greater opportunity to achieve a mass market transition to deforestation free practices, which in turn companies can identify as being linked to their own physical supply chain.



5.4 STRATEGY IMPLEMENTATION

The European Commission's 2019 Communication on Stepping Up EU Action to Protect and Restore the World's Forests recognised that supply chain activities can be mutually supportive, enhancing effectiveness and efficiency. A 'carrot and stick' example was used, of providing SHFs assistance while supporting jurisdiction's ability to monitor deforestation and illegal activities. Similarly, a company may choose to gradually increase requirements, but provide support to suppliers within their supply chain in order to create more impactful, long-term change. However, as it can be challenging to accurately measure the contribution of SHF to changes on the ground it is difficult to measure SHF impact. In the Brazilian Amazon, it was reported that Brazil had reduced deforestation rates in Amazonia by 84% in 2012, compared to the historical peak.⁴⁵ However, a second study found the annual deforestation attributed to SHFs increased by 69% between 2005 and 2011, and it was suggested this was due to policy focuses that targeted only larger properties, limiting the effectiveness of the legislation by not applying the requirement to all actors equally. While 2020 data shows that deforestation in the Amazon is increasing (attributed to recent political changes)⁴⁶ this approach of combining market exclusion activity, such as the Amazon Soy Moratorium, which came into force in 2006, with incentive-based policies to support SHF transitions could potentially be more effective than market exclusion alone.

In the Brazilian Amazon, it was found that although the overall deforestation level was decreasing in the region (by 68-88%), the annual deforestation attributed to SHFs increased (by 69%), and it was suggested this was due to policy focuses that targeted only larger properties, limiting the effectiveness of the legislation by not applying the requirement to all actors equally. Therefore, combining market exclusion activity such as the Amazon Soy Moratorium with incentive-based policies to support SHF transitions could potentially be more effective than market exclusion alone.

MONDELÉZ'S COCOA LIFE PILOTS INNOVATIVE APPROACHES TO COMBAT DEFORESTATION

Mondelēz International is the world's largest chocolate company. It sources 100% of its palm oil as RSPO certified and was the first cocoa company to raise the issue of deforestation in cocoa supply chains in 2015. Currently 63% of its cocoa is sustainably grown with the aim of achieving 100% sustainability by 2025.

Mondelēz works with SHFs to implement best practice through their own programme launched in 2012, Cocoa Life, a USD400m investment aiming to support 200,000 SHFs from six cocoa origins by 2022. The aim is that all cocoa will ultimately be sustainably sourced as SHFs learn to avoid deforestation and apply good practices to mitigate climate change risks. Cocoa Life also supports progress towards Mondelez's recent target to reduce GHG emissions by 10% by 2025 by protecting and restoring forests in cocoa-growing regions. It supports increased yields for farmers (disincentivising deforestation), reporting a 15% increase in yields in Ghana compared to non-Cocoa life farms. Cocoa Life includes a range of activities:

- ▶ Payment for Ecosystem Services (PES) pilot in Côte d'Ivoire. PES is a financial incentive paid to farmers who plant non-cocoa trees on their farms, which not only supports transitions to agroforestry but also protects and renews existing forest areas. At the end of 2019, over 1,000 farmers in the programme had agreed PES contracts.
- ▶ Piloting new approaches. An example of this would be the launch of a tree registration app launched in Ghana, allowing farmers to register trees digitally via smartphones.

From 2017 to 2019, the number of farmers in the Cocoa Life programme more than doubled to 175,000, all of whom have been trained in good agricultural practices. Mondelēz is also prominent within the Cocoa and Forests Initiative (CFI), leading private sector action to combat deforestation in West Africa. However Mondelez's first three 'cohorts' of farmers and communities inducted under their Cocoa Life certification in Ghana are not yet traceable from farm to first purchase point (a key CFI indicator). Furthermore, Mondelēz was named in Greenpeace's 2019 Burning down the House report as being linked to deforestation in Indonesia, and is a defendant in the recent forced child labour lawsuits.

Between 2015 and 2020, there has been an increase in jurisdictional approaches, which enable companies to collaborate with local governments and other stakeholders in areas where they source their commodities. Jurisdictional approaches can increase productivity, reduce deforestation and provide other benefits over an entire region (instead of a single supply chain). One commonly cited aim of such initiatives is to support legal ownership and land tenure, alongside increasing SHF yields, to increase environmental stewardship amongst SHFs. Jurisdictional initiatives were first established in Indonesia and Brazil, and there is a clear opportunity to replicate this approach in other regions. To do so, local differences need to be considered and accounted for, as each will respond to unique cultural and geographical considerations. For example, in African countries there is likely to be a higher proportion of 'food' crops, like maize, as well as 'cash' crops, like cocoa, in comparison to SHFs in other regions. Although jurisdictional approaches offer a more holistic approach to addressing deforestation and supporting SHFs, they are still relatively new and not all jurisdictional or landscape approaches will succeed.

The Cerrado Manifesto is a landscape approach focusing on the Brazilian Cerrado, the world's most biodiverse savannah. Established in 2017 to halt deforestation and landscape conversion, 160 global downstream organisations, including Unilever, Nestlé, and the CGF, signed a Statement of Support pledging to protect the landscape by developing no deforestation, no conversion policies and working with producers, governments, and civil society to protect landscapes. However, upstream companies in Brazil, including traders and grower associations, were hesitant to take part due to a lack of agreed specific actions from signatories. They were specifically concerned about compensation for protecting land they had a legal right to convert. Given the large global market for soya, these producers could easily sell 'conventional' soya to alternative markets. While some of the largest global retailers such as Tesco have pledged large amounts of funding, the Cerrado Manifesto has yet to move forward. This is a clear example of how SHF buy-in is essential: even ambitious multi-stakeholder approaches can stall if there is no buy in from producers.

Strategies that utilise a combination of market exclusion and incentivising positive activities are more likely to be effective as they practically recognise that SHF should not solely carry the burden of creating change. Whilst some incentives can be financial, there are a range of other activities such as technical or legal support, and these are strengthened further when value chain actors collaborate, such as when supply chain requirements and legislation work in tandem. Strategies that focus on the provision of technical support and access to finance are more numerous and faster to report results compared to those which provide payments to avoid deforestation, but usually rely on the private sector taking the lead in the development, perhaps encouraged through civil society pressure. While these leading companies can make significant progress, it is challenging to provide the same level of leadership across all commodities, leading to mixed results as seen by Mondelez prioritising cocoa yet being called on to do more in palm oil by Greenpeace. Alternatively, those strategies that pay SHF directly tend to be led by governments, meaning that, although they can be slower and more bureaucratic, they have the potential to influence mass market change as they can be applied to wider areas. What remains unclear is the longevity of such projects, if payments were to be stopped would deforestation increase again to pre-strategy levels? This is an issue that strategies utilising technical assistance are hoping to address, as the skills and benefits of such assistance should be retained should the initiative itself end. A key driver of success is the engagement of SHFs, both when establishing the approach and throughout its implementation, as buy-in from farmers is essential for success. **In summary, the most effective strategies to preventing deforestation linked to SHF production are typically those which are responding to a regional and/or commodity specific context, with a range of invested stakeholders,** including companies (from across the supply chain), civil society and governments all working together collaboratively.



6. General Conclusions

Few consumer goods companies are sufficiently integrating SHFs within their sustainability commitments.

Of the companies assessed, only three directly reference SHFs in their company policies or commitments, and this is relatively reflective of the market as a whole. A majority of companies, both those assessed and those reviewed as comparators, pass management of SHFs down to their core suppliers and do not explicitly extend their own policies to the farm level. Where such suppliers have an effective approach to integrating and engaging SHFs, this may be sufficient, but this is often not the case. Surprisingly, several companies operate SHF support programmes but do not explicitly include SHFs in company policies and it is unclear what rights SHFs in these supply chains actually have in terms of their relationship with the company.

Of the companies assessed, a surprising number are lacking commitments on basic aspects of SHF sustainability.

The two most notable omissions throughout the companies assessed are in relation to FPIC and indigenous rights commitments. A surprising number of companies do not reference ILO 169 or acknowledge the need for FPIC in their supply chains, both of which are relatively fundamental requirements on the path towards sustainable sourcing from SHFs.

Diversity in the selected companies highlights different regional approaches. The selected companies represent a diverse range of jurisdictions, with only the three India-based companies being directly comparable. As such, they provide an interesting insight into the sustainability approaches adopted in different markets, as well as local regulations and consumer interests. In India and Brazil, for example, the focus appears more domestic, focusing on sustainability of local production rather than international supply chains.

Looming 2020 commitments have impacted company reporting. For several companies reviewed, sustainability reporting appears to have declined in terms of detail and progress against previously reported indicators. A number of companies have detailed reporting against measurable indicators in their 2015 or 2016 sustainability reports, but these are not featured in more recent materials. No justification for this has been provided, but it is likely that this reflects poor progress against 2020 targets, leading to hesitation around transparency. One example is Beiersdorf, which used a measurable framework for reporting sustainability issues prior to 2018, but which appears to have either stopped using or stopped reporting against the framework in the lead up to 2020.

Companies need to go further than identification of Critical Supply Chains for traceability efforts. All companies assessed are prioritising a limited portion of their supply chains in terms of traceability, focusing on "critical" products. However, the term "critical" is used with different definitions by different companies. It may be critical due to scarcity, concentration, or dependency of the material, or critical in the volume or revenue it generates for the business. Assessing the level of materiality is important but it was found that by reducing the materials under consideration and focusing on critical products, it can result in significant commodities within SHF supply chains falling outside the scope of application of good practices. Whilst an effective use of resources is important, this strategy has hidden underperformance against old traceability targets.

There is a lack of third-party verification throughout the industry, and the trend is moving towards increased internal certification. Several companies assessed referenced use of third-parties to assure sustainability policies, audit suppliers, and verify results, but none have made these third-party assessments available publicly. In addition, more companies are developing their own internal sustainability certification standards. While this initially appears a positive step, indicating sustainability is becoming more embedded in internal operations, it also reflects a departure from market standards and further reduces transparency.



7. Best Practice for SHF Supply Chain Engagement

There are good economic and social reasons for supporting the development of SHFs, from raising rural incomes and employment opportunities, to encouraging indigenous entrepreneurship and securing more consistent and better-quality supply of raw materials. However, value chains where SHFs are present result in specific sustainability challenges namely those related to deforestation, traceability of crops, child labour, and so on.

It was found that the degree of interdependence between companies and SHFs vary in these value chains.

At one extreme, a company may offer some limited services to SHFs as part of a “Corporate Social Responsibility” programme with little core commercial involvement. At the other extreme those involved may be 100% dependent on contracted SHFs for their raw material and therefore cooperation with SHFs and providing or arranging all necessary production services becomes a commercial imperative. Whilst there is considerable momentum for corporate commitments within the reviewed companies, it was found that lack of corporate action persists. The depth and detail of each company’s commitments and actions differ significantly.

A single multinational cannot bear the burden of solving complex value chain challenges found at scale within SHF linked operations.

This does require long-term collaboration between stakeholders within those value chains. Those companies supporting sustainable production, consumption and protection of landscapes are increasingly calling on governments to create policy changes, and other value chain partners to not leave them in isolation.

Duncan Pollard, vice president of sustainability and stakeholder engagement at Nestle until mid-2020 said “Companies, investors and consumers are unlikely to make these changes alone; regulation and policy incentives on nature and biodiversity are also needed. Shifting global taxation away from people to resource use (justifiable also for tackling inequalities) would be a good start. As would a more explicit focus on true costs and true values, involving the measurement and financial reporting of environmental externalities.”

However, this should not be used as an excuse by companies to not engage with and do all in their power to resolve these challenges. Many of these companies have a market value many times greater than the national GDP of the countries where their supply chains operate, and their corporate influence cannot be understated.

8.1 SUPPLIER AND SHF ENGAGEMENT

SHF engagement model design assists with restoration of biodiversity and is aligned with key social values including improved livelihood opportunities. When designing SHF engagement models, companies must reflect on how much influence and oversight of key sustainability aspects their approach allows for. For example, IDH (the Sustainable Trade Initiative) has analysed engagement models across jurisdictions and commodities and has developed a data driven approach to help set up financially sustainable models. These Service Delivery Models are designed to provide services such as training and access to inputs and finance, improving farmer performance, profitability and livelihoods. Through a better understanding of these models, IDH is assisting value chain stakeholders to create a relationship with farmers and engage as part of core business, not simply to create farmer loyalty.

SHF engagement models should be commercially integrated. Companies committed to sustainable SHF development must favour situations of “mutual dependence”. Multinationals early in their sustainability journeys often focus primarily on securing supply to meet commercial KPIs, and support to SHFs is provided as a stand-alone project. There is limited commercial integration, which potentially lowers positive developmental outcomes and, counter-intuitively, also comes with higher commercial risks to quality and consistency of supply. Investing capital in sustainable supply chain models inclusive of SHF wellbeing can, on the other hand, generate direct, long-term

commercial value. Over the years, cocoa focused companies have been faced with issues of potential scarcity of raw material. Tree rehabilitation and best management practices have therefore appeared as essential for the continuation of their business. Nestle's recent partnership with Cargill in Indonesia, for example, which will support cocoa tree replanting, shade tree planting, and access to farm inputs involves deep financial and technical support ensuring that for years to come the companies will be able to secure supply in a sustainable manner.

SHF engagement should follow a holistic approach. As reflected above there are a number of complex goals, sometimes conflicting, when operating in SHF value chains. Companies that implement a holistic approach, which is able to integrate working with SHFs into a wider sustainability framework are first in class. A good example is Costco's Sassandra Cocoa Programme. The Cote d'Ivoire based programme has provided training to over 9,000 SHFs on agronomic practices, financial management, traceability and reducing child labour. The programme also offers premium prices to participating SHFs and interest-free loans to cocoa cooperatives. This approach strengthens the broader supply chain and local community, ensuring long-term sustainable production.

8.2 DEFORESTATION AND BIODIVERSITY

Use a blended approach to environmental targets and reporting. Some companies assessed have prioritised climate or carbon related targets and reporting, whereas others had a greater commodity focus. A recommendation for those carbon focused companies may be greater integration of their use of natural resources into planning as sustainably produced commodities are likely to contribute to reduced emissions and this is not currently captured effectively. Equally, companies that have previously focused on commodities have in the past year or so increasingly adopted commitments to science-based targets which includes monitoring carbon emissions – a blending of these two approaches is likely the future. Companies like Danone and Fuji Oil Holdings, both featured on the CDP's Forest A List, are already using this blended approach.

Accelerate regenerative agriculture and agroforestry to protect biodiversity-rich regions. Participating in biodiversity restoration is an important part of a company's approach to meeting sustainability goals. However, involving farmers in that process is challenging as it not only involves a change in practices but also requires practical examples to follow and incentives which support that transition. Danone has been supporting farmers in developing and implementing effective soil health practices to transition to no-till agriculture and crop rotation, plant cover crops and other sustainable practices. The company's programme in North America, for example, is in its third year involving 82,000 acres of farmland and has to-date 'reduced more than 80,000 tonnes of carbon dioxide equivalent and sequestered more than 20,000 tonnes of carbon into the soil' according to a recent report. Similarly, Louys Dreyfus, in partnership with WWF Brazil, has launched a long-term facility incentivising SHF producers not to convert native vegetation as part of its continued focus in developing better practices through its soy sourcing in the Cerrado.

8.3 LAND AND COMMUNITY RIGHTS

Assist SHFs' access to land titling and implement of cohesive management practices. Traditional land tenure systems need to be researched and understood when engaging in SHF value chains. Some jurisdictions have moved towards issuing SHF families, or villages and groups, with formal, documented land rights, but in most cases, customary rights applied. By enabling SHFs to surpass the limitations that insecure land tenure brings and providing them with technical support for land management practices, companies ensure that even when the engagement model is not direct, it is closer to meeting international standards. AB Sugar, through its subsidiary Illovo, is Africa's largest sugar producer with a supply chain of over 14,700 growers. In a partnership with land consultancy TerraFirma and NGOs Indufor and the Cloudburst Foundation, a consultation and digital mapping process was carried out and more than 1,600 farmers received legal land certificates, 65% of whom were women growers. Ultimately, the programme allowed for increased capacity building and understanding of land rights at both farmer and company level.

Implement clear mechanisms to protect and strengthen the rights and livelihoods of the communities and indigenous peoples. Within the companies reviewed, there are several health and beauty focused entities drawing resources from forests for medicinal and/or natural cosmetic products. It is imperative that these operate in a way

such that indigenous and traditional communities are compensated, their forest-based livelihoods strengthened and they can become forest stewards. Natura implements this with communities in the Amazon through Access and Benefit Sharing, where both financial and social benefits derived from the economic exploitation of these traditional forest materials are shared.

8.4 CERTIFICATION STANDARDS AND ALTERNATIVES

Sustainability certification for non-priority or public-focus commodities. Certification remains one of the most popular methods of implementing company commitments and is also used as a market access tool, but it has its limitations. Unilever increasingly recognises the limitations to certification, noting that 'visibility on sourcing origins [through strict, more detailed traceability]', and simplifying the supply chain and working with more focused partnerships are also important to advance sustainability objectives. However, outside so-called critical commodities, such as oil palm, there is often no one standard equivalent to the RSPO. Growing consumption of non-critical raw materials with little traceability requirement presents a high likelihood that these commodities will start being produced unsustainably, or with the use of unfair labour practices to meet demand, particularly given their prevalence among SHFs. Of particular concern are tropical commodities not covered by an ethical sourcing scheme such as coconut. Some corporates have started to address the need for traceability in the coconut industry through partnerships. For example, Cargill, BASF, P&G, GIZ and Rainforest Alliance came together to establish a certified coconut oil supply chain in the Philippines and Indonesia. As a result, more than 4,100 coconut farmers have been trained in good agricultural and processing practices, and approx. 1,600 farmers have been certified against the Rainforest Alliance Sustainable Agriculture Standard. This certified chain of custody allows the tracking from refinery back to Rainforest Alliance Certified farms.

Engage in certification alternatives such as information sharing initiatives, particularly for landscape level work. There are a number of new initiatives and alternatives to ensure efficient and effective sustainability implementation strategies. Sedex, for example, seeks to provide a significant step forward in establishing greater consistency and harmonisation in sustainability approaches, particularly for audits. These alternative approaches can face pitfalls, such as a lack of detail, expertise or accuracy and not providing an accreditation in itself. It is, however, important that companies committed to sustainability engage, test, and provide feedback on such alternatives as holistic approaches are proven more effective. Within the companies reviewed, Unicharm has undertaken several consultations for options to improve its certification processes, and will soon start conducting Sedex audits on suppliers.

8.5 LABOUR RIGHTS AND GOVERNANCE

Implement robust policies and implementation systems focused on labour rights with a particular focus on child labour that extends to suppliers. One of the key risks in SHF value chains remains child labour. The advent of Covid-19 has arguably exacerbated this risk as schools are closed to prevent the virus' spread and monitoring groups are less able to operate in at-risk communities. The pandemic has also exacerbated existing root causes of child labour beyond lack of access to schools, such as farmer poverty driven by lack of access to markets and insufficient availability of professional labour due to movement constraints. Nestle have been integral in the development of a Child Labour Monitoring and Remediation System in their SHF cocoa supply chain in West Africa with the ICI, a methodology that has subsequently been rolled out by other companies. However, Nestle (as with others in this review) still faces claims of child labour within its supply chain and its robust policies and partnerships appear to be insufficient. The best approach remains tackling the root causes of child labour by ensuring that SHF engagement follows a holistic approach in which improved livelihoods are a focal point. Big data now makes it possible to identify risk areas by aggregating key variables, for example poorly served rural areas for access to school may discourage children and make it more attractive for them to assist the family. Using predictive analytics and machine learning to spot patterns is already being tested from councils across England to the Federal Labour Prosecution Office (FLPO) in Brazil to ensure families and children at risk are assisted efficiently. Barry Callebaut is using a combination of big data and technology to individualise farmer business plans and assess the risk of child labour; with that information the company is creating more relevant holistic initiatives focused on reducing child labour, including building schools, and promoting female economic inclusion.

Implement key grievance mechanisms and initiatives for the company and its suppliers. Effective dispute resolution is key for SHF supply chains to build trust. It also ensures that in these supply chains where there are multiple parties (i.e. traders, drivers, processors, etc.), there is mitigation against corruption and bribery. Dispute resolution also tends to appear when dealing with land issues. AB Sugar's land titling initiative mentioned earlier also created the additional benefit of developing a grievance redress mechanism based on international best practice that was applied across all Illovo countries of operation.

8.6 TRACEABILITY

Publicly disclose location of SHF farms, aggregation hubs, processing units, and country of origin of raw materials. By publicly sharing the origin of raw materials, companies not only build trust with the consumer but can also more organically be advised of malpractices among suppliers where internal audits have failed to identify them. Using this disclosure as a non-compliance management approach may incentivise greater uptake and transparency. As a founding member of ASD, since 2019, Beiersdorf has been actively promoting greater traceability in the palm oil sector. However, the company falls short in terms of best practice public disclosures and mapping, with limited information made publicly available. Suppliers of Unilever's twelve priority crops are obliged to be able to 'identify the farms or landscape where the raw materials were produced', and Unilever, together with Nestle, also took a step to further transparency by fully disclosing their supply relationships, setting an example for the wider industry.

Digitise Value Chains. Incorporation of digital tools within SHF supply chains has shown positive results in terms of traceability and use of imagery for biodiversity protection, educational messages to improve farming practices, and access to finance. Large commodity traders and processors, such as Olam, are building in-house digital procurement solutions, such as the Olam Farmer Information System (OFIS). The platform has over 430,000 farmers in 20 countries registered, allowing Olam to collect farm-level data and map their supply base using GPS. Unilever's innovative partnership with Orbital Insight in its palm oil supply chain also provides a good example by using geolocation data to identify the individual farms and plantations that are most likely to be supplying the mills in Unilever's supply chain. However, tracking the raw material throughout its journey requires consistent recording, storing and exchanging of data. Integrating blockchain technology allows for a transparent audit trail based on real time data. Estée Lauder's subsidiary, Aveda, launched a pilot in February 2019 with blockchain company Wholechain targeting its SHF-grown Madagascar vanilla - a core ingredient in over 100 of its products. Using QR codes, Wholechain and Aveda are creating a tamper-proof record which will be expanded to other product lines. Multinational retailer Carrefour, a blockchain pioneer in Europe, has gradually applied blockchain to its Carrefour Quality Line products since becoming a member of IBM Food Trust in 2018, and this year it announced an expansion of blockchain traceability to its textile products.

8.7 SUSTAINABILITY POLICY AND LEADERSHIP

Implement sustainability-related incentives for management. Research has found that in particular for those in procurement and leadership/ C suite functions, sustainability-related incentives drive best practice implementation. For example, as sustainability pay link mechanisms that link senior executive pay to sustainability targets, shareholders voting annually on climate targets, and so on. At Unilever, 25% of the incentive bonus of the more than 14,500 managers are linked to the achievement of sustainability objectives. Similarly, Vitasoy recently introduced sustainability objectives for staff linked to annual bonuses, demonstrating that it is seeking to embed sustainability within its practices.

Lead through partnerships. Whilst being a member of key industry sustainability organisations remains important, participating in the constant iteration based on practical experience and leading those sector wide groups differentiates those who are best in class. Particularly, as smallholder supply chains face specific challenges that operators can identify for example, the need for a simplified HCV approach for independent smallholders to become compliant. Through its carbon insetting partnerships, Natura has been a pioneer in implementation of practices which now align with the foundations being laid in Brazil for a national PES policy. Similarly, Nestle invests in partnerships with specialist providers (e.g. Earthworm Foundation, Proforest), and has an active membership of key industry sustainability organisations (e.g. RSPO).

Further Reading

This section lists several articles and useful materials for better understanding the challenges of working with SHFs and the best practice approaches to doing so. Many of these documents have been referenced throughout this report (please see endnotes section below) and are recommended here as further reading for those who are interested.

SHF MODELS AND WORKING WITH SHFS

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SHF SUPPLY CHAINS AND DEFORESTATION

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Annex 1: Summary of Interventions

The following table summarises the key interventions and initiatives described in the report.

Name	Partners	Description	Countries	Commodities	Page
Accountability Framework Initiative	Ceres, Forest Peoples Programme, Global Canopy, Imafloa, NYDF global platform and Rights and Resources.	The Accountability Framework initiative has been designed by a wide range of civil society, in consultation with industry. The Framework provides a common and coherent set of best practices, norms and definitions, addressing both the ecological and social dimensions of commodity production and trade.	Global	All	35
CDP	CDP has many partners including UNEP, UN Global Compact and WWF. CDP also partners with a range of companies and investors as part of their disclosure reporting.	Founded in 2000, CDP was the first platform to link environmental action with fiduciary duty. CDP runs a global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. Each year CDP supports thousands of companies, cities, states and regions to measure and manage their risks and opportunities on climate change, water security and deforestation, on behalf of investors, customers and government (city) stakeholders. Each year, nearly 10,000 companies report through CDP across three topic areas: Climate change, water security and forests.	Global	Cattle, palm oil, rubber, soy, timber. CDP also covers mining.	35
Forest 500	Endorsing organisations: National Wildlife Federation, Forest Trends, Code REDD, Fern, ZSL, SEI, CDP, Greenpeace, Althelia Ecosphere, Ecosia	Forest 500 identifies and ranks the most influential companies, and financial institutions in forest risk commodity supply chains. It explores whether the 350 most influential companies in forest-risk supply chains are addressing deforestation risks through their policy commitments, and at what action they are taking to implement these commitments. As well as companies, the tool also assesses 150 financial institutions providing finance to these companies.	Global	Palm oil, soy, cattle, timber, pulp and paper	41

Name	Partners	Description	Countries	Commodities	Page
Cocoa and Forests Initiative	Dutch Ministry of Foreign Affairs, the German Federal Ministry of Economic Cooperation and Development, the Global Environment Facility, the Green Commodities Program of UNDP, the UK's Department for International Development (now FCDO), USAID, the World Bank	The Cocoa & Forests Initiative is an active commitment of top cocoa-producing countries with leading chocolate and cocoa companies to end deforestation and restore forest areas, through no further conversion of any forest land for cocoa production.	Ghana, Cote D'Ivoire and Colombia	Cocoa	36
Amazon Soy Moratorium	The voluntary agreement was signed by the Brazilian Association of Vegetable Oil Industries (ABIOVE) and the National Association of Grain Exporters (ANEC), ensuring companies affiliated with those organisations did not buy raw materials produced in areas deforested after 2008.	The Amazon Soy Moratorium is an agreement signed in 2006 to ensure that soy production in the Amazon region only occurs on existing converted agricultural land and not through deforestation of native vegetation. By signing the moratorium, companies agree to external auditing and monitoring, the results of which are submitted to the Soy Working Group. The moratorium involves 76 municipalities, covering 98% of the soy produced in the Amazon region.	Brazil	Soy	37
Cerrado Manifesto	Tesco has pledged £10 million to the fund. Others such as Grieg seafood have pledged 2 USD per tonne of soya used for the next 5 years (the equivalent to buying credits).	In 2017, 60 NGOs, IPAM and Imafloira made a call for action in the Cerrado by releasing the Cerrado Manifesto. This was followed by 23 global brands signing a 'statement of support' (SoS) recognising the need to prevent deforestation. Together, a Funding Coalition was formed, which included GTC (a Brazilian, multistakeholder platform led by the Brazilian soya industry and civil society).	Brazil	Soy (but applies more broadly, i.e. cattle)	38
International Cocoa Initiative	Board members include Abou Camille, Barry Callebaut, Cargill, Ecom, Ferrero, Hershey's, Mars Wrigley, Mondelez, Nestle, Olam and Touton.	The International Cocoa Initiative is a Geneva-based nonprofit funded by major chocolate makers that focuses on addressing child labour in cocoa production in West Africa.	West Africa (Ghana and Cote D'Ivoire)	Cocoa	25
Better Cotton Initiative	The BCI Council includes Solidaridad, PAN UK, Cotton Australia, Supima, H&M, Levi Strauss & Co, Adidas, Basil Commodities and Anandi.	The Better Cotton Initiative is a non-profit, multistakeholder governance group that promotes better standards in cotton farming and practices across 21 countries. As of 2017, Better Cotton accounts for 14% of global cotton production.	Global	Cotton	33
Roundtable on Sustainable Palm Oil	Extensive membership list, with Board of Governors including representatives from World Resources Institute, AgroCaribe, Wilmar, Unilever, Procter and Gamble, WWF and Forest Peoples Programme	RSPO is a not-for-profit that unites stakeholders from the seven sectors of the palm oil industry: oil palm producers, processors or traders, consumer goods manufacturers, retailers, banks/investors, and environmental and social non-governmental organisations (NGOs), to develop and implement global standards for sustainable palm oil. The RSPO has developed a set of environmental and social criteria which companies must comply with in order to produce Certified Sustainable Palm Oil (CSPO). When they are properly applied, these criteria can help to minimize the negative impact of palm oil cultivation on the environment and communities in palm oil-producing regions.	Global	Palm Oil	25

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Investment and Sourcing through Smallholder Supply Chains

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