AGRI3 FUND
FOREST FARMERS FOOD

idh
the sustainable trade initiative

SECTOR PAPER
INDONESIA

Supporting the mobilisation of funds from commercial banks to finance forest conservation and sustainable agriculture in Indonesia.

APRIL 2022

Introduction

The Indonesian palm oil sector is at a crossroads in its development. Palm oil is the country's most important agricultural export product, worth US$17.36 billion. It contributes to poverty alleviation in many parts of the country, including Sumatra, Kalimantan and Sulawesi. According to the Central Bureau of Statistics, oil palm is the most widely cultivated crop in terms of area, covering approximately 14.6 million hectares.

At the same time, deforestation and fires linked to oil palm expansion continue to threaten Indonesia's tropical forests and protected landscapes, causing losses of endemic species and contributing globally to significant greenhouse gas emissions. Oil palm remains an important crop for rural economies, creating jobs and sustaining livelihoods. Yet overall productivity is low, and creating sustainable solutions requires investment, which is often jeopardised by several items including the sectors poor reputation, higher risk environment and lack of suitable projects.

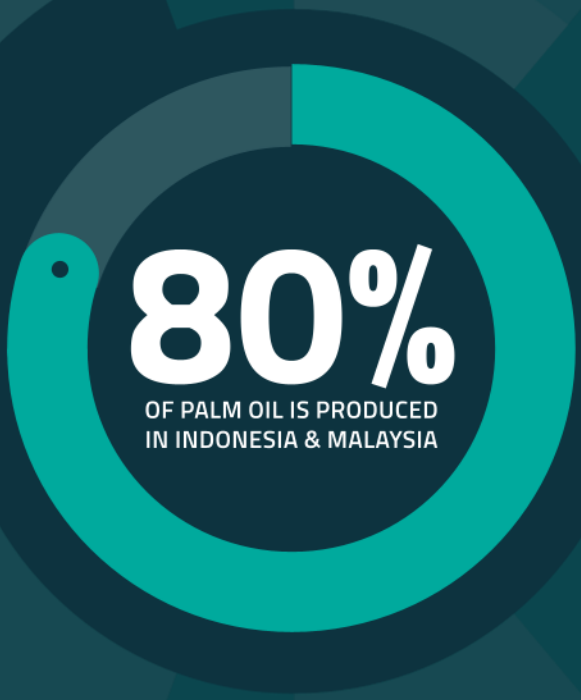
Farmers and agribusinesses are often best placed to implement the solutions required to bring about change in the sector. However, shifting to more sustainable, deforestation-free, agricultural production in key sectors, such as palm oil, requires significant amounts of finance directed at sustainable business models and production practices that can be deployed at scale. But Indonesia still has a significant funding gap to reach its broader sustainability targets.

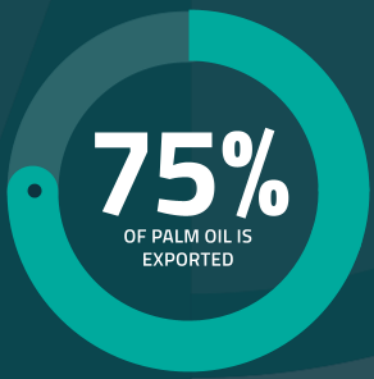
In collaboration with IDH and its partner banks, AGRI3 is aiming to support the mobilisation of commercial finance towards sustainable production in key agricultural commodity sectors in Indonesia – particularly palm oil. Together, the partners have analysed the critical interventions and financing needs in the palm oil sector, as well as the resources available to help producers shift to practices that conserve forest areas, implement sustainable agriculture, and support rural livelihoods. This document summarises these findings, providing details of intervention areas and examples of potential financing models to mobilise finance in each.

THE INDONESIAN AGRIBUSINESS SECTOR IS CRUCIAL TO THE COUNTRY'S ECONOMY.

Palm oil production plays a prominent role in the Indonesian agribusiness sector, which is crucial to the country's economy.

- In 2020, the value of Indonesia's total palm oil exports amounted to around US$18.45 million and is expected to grow even more to sustain future international and domestic demand.
- The product is primarily an export commodity. Around 75% is exported, and is primarily used as cooking oil (72% of all consumption), followed by beauty and cleaning products (18%).
- Indonesia and Malaysia produce over 80% of global palm oil by volume, with Indonesia capturing 63% of global production in 2019.
- The value chains in both countries are roughly split between 25 high-yielding, vertically integrated private companies with a landbank of over 100k hectares, and 2.67 million low-yielding, low-earning smallholders that manage a combined 40% of the total oil palm plantation area in the country, using 5.8 million hectares of land in total.
- Most companies (more than 60%) are addressing sustainability top-down through a broad set of programmes and policies such as certification (e.g. RSPO, ISPO), high conservation value (HCV) and high carbon stock (HCS) assessments, clear commitments to no planting on peat of any depth, and compliance with free, prior and informed consent (FPIC) procedures.





300%

INCREASE IN PALM OIL PRODUCTION SINCE 2000

However, despite improvements in recent years, the palm oil sector continues to experience significant sustainability challenges, including links to deforestation, land and soil degradation, and biodiversity loss – all contributing to climate change.

Deforestation

Since 2000, the palm oil production area has grown by 300% in Indonesia. This has partially been at the expense of high-carbon, high-biodiversity tropical forests. Small-scale clearing is particularly an issue: the area cultivated by smallholders has expanded in the last two decades, from less than 1.6 million to 5.8 million. The Indonesian forest frontier is home to around 26,000 forest villages and more than 37 million people. After a logging phase, people tend to follow and expand deeper into the forest zones, clearing more land for agricultural crop production such as palm oil. Independent smallholder deforestation may therefore be a growing risk in the palm oil sector.

Low and declining (smallholder) yields, poor market access and low incomes

Smallholders in particular are confronted with ageing trees and declining average productivity. In the next 25 years, US$18-28 billion may be needed to renew independent smallholders' plantations. There is also limited availability of improved planting material/inputs, as well as extension services, training and education for smallholder farmers. With a high dependence on palm oil production for income and a lack of income diversification options, many smallholder farmers have low incomes.

Conflict over smallholder land title

Land titles are often absent due to either lack of formal paperwork or illegality underlying an operation. Conflicts occur between smallholders, local communities/indigenous peoples and plantation companies as well as with local government.

Limited supply chain traceability

Traceability can be an important tool to support industry-level adoption of sustainable production practices and keep companies accountable. Many companies have made significant progress, but there is still a need to achieve full traceability across key production and sourcing areas, to allow for managing palm oil supply chain risks effectively, support smallholder farmer livelihoods and mitigate deforestation.

Resource use and general pollution

Intense application of fertilisers, pesticides and herbicides at production level, as well as effluent run-off at mill level, leads to water pollution. Mills also typically have a very high water footprint (including depletion of ground water). Poor cultivation techniques and lack of cover crops, as well as contour planting, result in pollution by siltation and soil loss. Poor fertiliser distribution and poor ground cover/mulching policies can also result in pollution.

Lack of infrastructure

Many smallholder farmers have plantations that are located outside the networks of infrastructure built by local government. With a lack of proper transport, logistics and processing infrastructure, fresh fruit bunches that have been harvested may not always reach processing facilities before the quality of produce starts deteriorating.

Labour and human rights

Human rights violations still occur in the oil palm value chain. Workers (at plantations, mills, farms and refineries) also often earn wages below minimum living wage standards. On top of this, women are often disproportionately impacted by palm oil development in rural Indonesia – for example, by having unequal access to land, resources and opportunities. Moreover, pre-existing social norms in which women's labour is consistently devalued and underpaid have been exacerbated by palm oil development.

Supporting sustainability

AGRI3 and partners identified seven key intervention areas to focus efforts to mobilise finance.

Key intervention areas and financing type required	What is the business case for farmers and companies?	
1 **Link core business practices to an enhanced sustainability strategy** e.g. OPEX, CAPEX for planting or mill construction, while increasing inclusion of smallholders in supply chain	Diversification of capital sources, (re)financing and additional credit for general (upstream) palm oil activities, improved reputation.	
2 **Certification, traceability and sustainability policy implementation**	Reduced costs of identifying sustainable supply, fewer supply chain risks, improved reputation, access to longer term capital.	
3 **Forest and peatland protection and restoration**	RSPO compensation and policy compliance, supply chain risk reduction (e.g. fire, community conflict), improved reputation, carbon credits/Payments for Ecosystem Services (PES).	
4 **Smallholder training, input provision and replanting** e.g. to increase yield per hectare	Improved quality and increased supply due to yield increases, supply chain risk reduction, improved reputation, improved volume and quality of supply to palm oil companies and access to finance for smallholders.	
5 **Improved, affordable input provision, and sustainable agrochemical and water use**	Reduced irrigation costs over time, reduced fire risk, improved reputation, reduced input costs, certification and policy compliance.	
6 **Mixed production models/intercropping and regenerative agriculture**	Improved quality, increased capacity to serve smallholders (and therefore increased supply), greater efficiency, better compliance with modern sustainability standards and potential premiums.	
7 **Processing enhancements and mill modernisation**	Improved quality, increased capacity to serve smallholders (and therefore increased supply), greater efficiency, better compliance with modern sustainability standards and potential premiums.	

The funding gap

Delivering on these interventions and to ensure a transition to more sustainable agriculture, improved rural livelihoods, and forest conservation and restoration linked to the palm oil sector in Indonesia continues to require significant amounts of funding, including from commercial financial sources.

For example, companies face climate transition risk with up to 76% (over 9 million hectares) of the country's unplanted concessions at risk of asset stranding. Mitigating this risk requires significant investments in profitable emissions mitigation measures, sustainable yield enhancements and technology innovation.*

Farmers who do not have the capital are likely to encroach into forested areas to supplement the lost income from declining yields.

Without replanting support, most smallholder oil palm plantations will encounter declining yields, which will exacerbate deforestation.

- Due to difficulties in accessing finance and land titles, many smallholder farmers have oil palm farms containing trees that have passed peak production and are due for replanting.
- Therefore, most farmers who do not have the capital are likely to encroach into forested areas to supplement the lost income from declining yields.
- It is estimated that the total financing need in the period 2017-2041 for replantation in oil palm in Indonesia is US$700 million per year. Around 175,000 hectares of oil palm plantations owned by smallholders will need to be replanted every year.
- Nearly 30% of smallholder farmland will require replanting before 2025.
- Total Indonesian production is expected to decline by 27% between 2025 and 2035 due to lack of replanting.

Productivity curve of the oil palm plantation and recommended replanting age

Yield in metric tonnes (MT) of fresh fruit bunches (FFB) per hectare (ha)

* According to a study by Orbitas, August 2021.

Barriers to finance

Commercial financiers, such as banks, may perceive a number of risks and other barriers to providing loans to support innovative, sustainable business and production models in the sector.

This includes the perception that the risks attached to these investments are too high and the required loan tenors are too long to comply with prudent and increasingly stringent banking regulations.

Some of the key barriers associated with providing commercial finance for sustainability purposes to Indonesian palm oil producers include:

- **Non-cash generating interventions**
  Many on-farm sustainability interventions, such as forest conservation, do not generate cash and therefore require integration with a strong business model by the producer itself to be commercially viable.
- **Long repayment periods**
  The implementation of sustainability interventions often requires longer repayment periods and thus longer loan tenors.
- **Inefficiency and high transaction costs**
  Loan administration and disbursement to smaller and medium-sized rural farmers in particular can be inefficient and costly.
- **Poor credit history**
  Some producers are in debt or lack the collateral required, such as land titles.
- **Low capacity of producers**
  Producers may be unable to implement the sustainability interventions.
- **Limited capacity for applying appropriate deal conditions for financing key sustainability interventions**
  These include identifying ESG risks and opportunities, and monitoring impact.
- **Limited understanding of key sustainability intervention areas**
  These include the associated business case and the financial risk appetite required.

Loan disbursement to farmers can be inefficient and costly.

AGRI3 enabling tools

Across the four intervention areas identified, AGRI3 and partners formulated a number of enabling tools that can support mobilisation of finance from commercial banks to address these risks, and subsequently to allow producers to access capital for sustainability.

1 Reduce risk and raise attractiveness of financing producer sustainability interventions

- Provide (partial) pari-passu guarantees in case of a bank's inability to provide the required amount of financing on its own
- Guarantee part of the loan with a longer tenor in order to allow a bank to provide longer term funding
- Take on higher risk tranches in funding structures, encouraging the mobilisation of commercial finance

2 Enhance deal conditions

Support partner banks in structuring transactions with improved deal conditions to support clients, manage risks, and monitor and steer towards creating positive impact. For example, by developing an environmental and social action plan (ESAP), key risks and areas for positive impact generation can be identified and systematically addressed by the client with support from AGRI3 and technical assistance where needed.

3 Partner with others on innovative models

Support innovative credit analysis tools with better measurement of systemic risk, or structure higher-risk financial products that allow for increased flexibility in the use of collateral.

4 Provide technical assistance

Provide technical assistance by the AGRI3 Technical Assistance Facility (TAF) to support producers in meeting pre-investment eligibility criteria, and in implementing post-investment interventions (e.g. by supporting capacity building and delivery of technical expertise), as well as supporting producers in identifying opportunities for increased environmental and social impact, monitoring those impacts, and thereby reducing the overall project risk for the investor.

AGRI3 support

The following examples illustrate how these instruments could support a sustainability intervention area identified for the palm oil sector in Indonesia.

1

Long-term financing for sustainability investments

The Challenge

For producers who are willing to invest in sustainable production practices, forest conservation and restoration interventions and/or oil palm replanting, it is difficult to obtain the necessary long-term financing from commercial banks.

AGRI3 Solution

AGRI3 can provide commercial banks with a so-called maturity subordination guarantee that has a longer tenor and amortises later than the banks' own exposure, making it possible for the bank to provide these producers with longer-term (10+ years) financing. This allows producers to make investments in longer-term interventions such as forest protection, tree replanting and on-farm improvements, with the goal of reducing negative environmental impact and increasing efficiency.

The long tenor also give producers ample time to generate the cash-flows required to repay the loan.

An ESAP, agreed as part of the financing and combined with technical assistance, will further help producers to implement any improvements needed to safeguard the sustainability of the investments and maximise positive impact.

ILLUSTRATIVE EXAMPLE

Sustainable palm oil production and forest conservation

Project

Financing a large palm oil producer in Indonesia to replant oil palm and develop their farm, inline with sustainable certification standards.

Financial structure

$20	12	3
MILLION USD	YEAR TENOR	YEAR GRACE PERIOD

AGRI3 participation

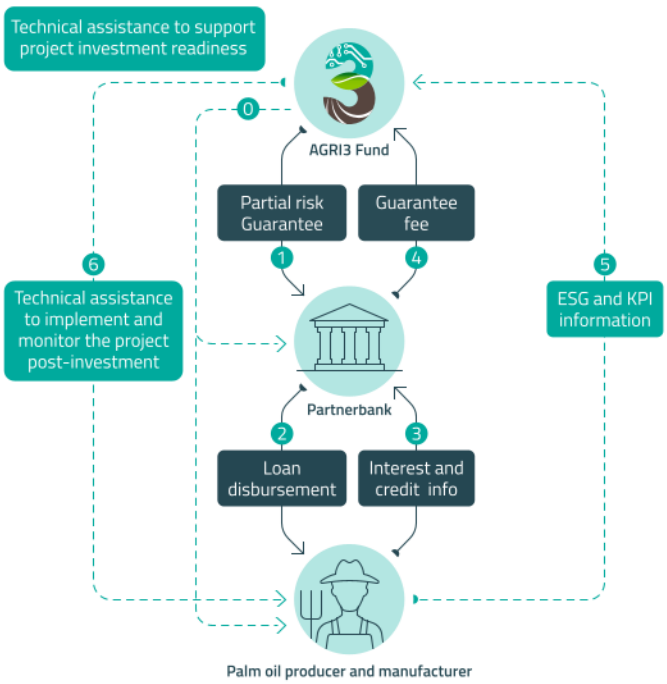
50% maturity subordination, AGRI3 exposure is longer and amortises later.

Positive ESG impact

- Replanting scheme to improve productivity
- Implementation of sustainable palm oil production techniques, in line with sustainability standards
- Restoration of forest areas surrounding the farm and conservation activities in other areas
- Training of workers and paying workers a living wage.

Additionality

- Request exceeds the maximum commercial tenor (7 years) of a bank usually unwilling to invest in replanting schemes
- Conditional on obtaining certification within 5 years of disbursement
- Forest protection and restoration do not generate any cash flow (higher risk profile of transaction).



AGRI3 support

2

Portfolio farmer financing to support sustainable production methods

The Challenge

Value chain players like cooperatives, off-takers and input suppliers want to support the provision of loans to farmers who are willing to adopt sustainable production methods and commit to maintaining certain standards, traceability requirements and/or certifications, but are unable to bring commercial financial players, such as banks, onboard because of the (financial) risks involved.

AGRI3 Solution

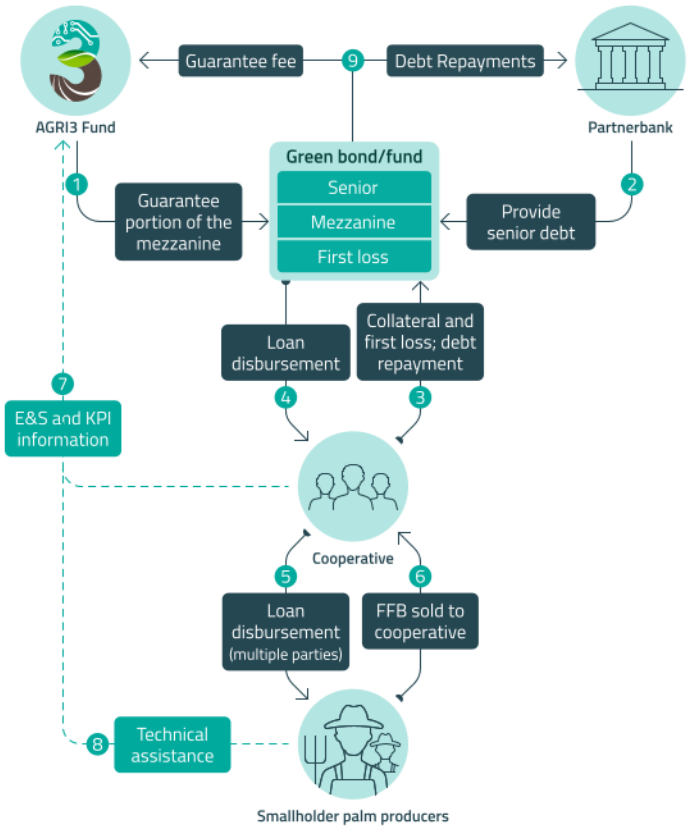
By taking a mezzanine position in a portfolio structure with value chain partners, AGRI3 can de-risk and mobilise funding from commercial banks in a senior position.

The portfolio approach with other value chain players, in combination with innovative credit analysis tools and inclusion of compensation mechanisms like carbon credits, makes it possible to provide attractive financing options to farmers while still achieving a structure that's commercially viable overall.

Technical assistance can support producers (directly or through the development of tools) in the pre-investment stage to meet eligibility criteria for portfolio financing, as well as in the post-investment stage to help monitor progress and further maximise positive impacts.

ILLUSTRATIVE EXAMPLE

Sustainable palm oil production and forest conservation



What's next?

AGRI3 and its partners are engaging with several companies and financial institutions in Indonesia to identify potential partnerships and early-stage projects that can benefit from technical assistance, to be scaled up through finance supported by the AGRI3 Fund.

AGRI3 and partners welcome others to connect and explore how to mobilise and accelerate additional commercial finance for these types of projects, to support the sustainability transition in the palm oil sector in Indonesia.

Interested?

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AGRI3 and partners welcome others to connect.

Data: This paper was developed with support from consultants, through desk-based research that took place in 2021. Availability of high-quality data on current trends is often limited, and statements included in this paper are therefore often based on expert assumptions (reflecting current conditions and future expectations) rather than more verified data.

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