

FINANCING INDONESIA'S INDEPENDENT SMALLHOLDERS

Summary Report | May 2018

About this Report

This report focuses on the prospects of providing green finance to independent smallholders in Indonesia's agricultural sector, especially those in oil palm. Smallholder plots are very small compared to those of the large plantations – smallholders typically manage 2 hectares or less, whereas the largest plantations can cover hundreds of thousands of hectares.

Yet their numbers add up. As a group, smallholders are highly significant in the supply chain, as they are responsible for the majority of Indonesia's agricultural output for crops ranging from rubber to cocoa. They are also significant in the Indonesian political economy, especially given how democracy has taken root in the country and the greater focus now given to ameliorating inequalities within society. There is now a renewed political incentive for understanding and addressing key issues for the smallholder, which will only increase as Indonesia heads into the presidential election in 2019. A third reason attention must be given to smallholders is their impact on environmental protection and sustainability. What smallholders do will affect not only the local and national environment but regional and global outcomes on a range of issues, from deforestation, fires, and haze to the management of biodiversity and carbon emissions. The commitments under the Paris Agreement underscore the need to give this issue attention.

Against this background, this Report surveys three projects in Indonesia that aim to expand independent smallholders' access to finance. Improving financial access for smallholders has significant potential to unlock better profitability, social cohesion, and environmental protection. Each of these projects represents a new kind of initiative through which private actors work in partnership not only with national authorities and international bodies, but also with local communities and smallholders.

While these projects are at present still nascent or limited in scope to certain crops or geographical areas, they hold promise and bear closer attention going forward. An analysis of the aims and methods used by these projects to achieve their economic, environmental, and social goals is offered, with the hope that this can help more people understand the different efforts that are currently emerging in Indonesia. Only then will it be possible for these projects to scale up and offer a broader impact.

This Report draws on studies about smallholders as well as interviews with a broad range of stakeholders, including plantation companies, NGOs, financial institutions, agricultural consultants, and multilateral development agencies. Inputs are also drawn from a workshop, "Making Green Finance Count: Impact Investing for Indonesia's Agricultural Sector", that was jointly organised in Jakarta by World Resources Institute Indonesia and the Singapore Institute of International Affairs (SIIA). The SIIA's work on sustainability has increasingly considered the shift in Singapore and ASEAN towards low-carbon growth that addresses economic, social, and environmental issues, and the role of green finance in assisting this transformation.

This Report begins by considering why independent smallholders are important and some of the key challenges they face. Benefits of financing independent smallholders are then considered, together with the components that can build towards a successful agricultural smallholder financing project. Examples are taken from a selection of existing smallholder financing projects to show how these can be implemented. We then survey some key initiatives that are emerging in different agricultural products, before concluding with suggestions for the next steps that should be considered to move forward on this issue.

This is the Summary version of the Working Paper on Financing Indonesia's Independent Smallholders. For the Working Paper, please go to www.siiainline.org/reports.

Why Independent Smallholders Are Important

Independent smallholders dominate Indonesia's agricultural commodities production, managing 85 percent of Indonesia's rubber plantations,¹ 90 percent of its coffee plantations,² and 95 percent of its cocoa plantations.³ For oil palm, Indonesia's most valuable agricultural export,⁴ the proportion of plantations managed by independent smallholders is smaller – about 30 percent⁵ – but still significant. Hence, the vast majority of companies operating in Indonesia's agricultural supply chains are either directly or indirectly impacted by the activities of independent smallholders.

Independent smallholders are linked to economic challenges, such as low productivity and crop quality, as well as environmental and social challenges, such as deforestation, fires and haze, and social conflict. These latter challenges arise as the plantations of independent smallholders are often located adjacent to or within Indonesia's sensitive forest and peatland landscapes. The sustainable management of these landscapes is critical for reducing carbon emissions, conserving biodiversity, and maintaining ecosystem services. The longer we wait to assist independent smallholders, the more complex these issues will become, and because of the massive size of these landscapes, the decisions made by Indonesia's independent smallholders have significant global impacts.

Supporting independent smallholders is also becoming increasingly critical because of the urgent need for replanting. Many of the plantations started by smallholders in the 1980s and 90s, including oil palm, rubber, and cocoa, are reaching the end of their productive lives. If these crops are not replanted, smallholders risk significant and accelerating declines in yield and revenue. However, replanting requires clearing land and purchasing new seed stock, which is prohibitively expensive for the majority of independent smallholders. In addition, crops such as oil palm and cocoa do not yield for the first 3 to 7 years following replanting, further increasing the financial burden.

If independent smallholders are not supported to conduct replanting sustainably, they may choose to abandon their plantations in favour of establishing new ones. This increases the likelihood of deforestation and land burning. From a long-term perspective, these new plantations will likely be established with cheap, low quality seedlings, locking smallholders into another cycle of inferior productivity and profitability, as well as prolonging the associated environmental and social issues.

Benefits of Financing Independent Smallholders

If performed effectively, financing independent smallholders can not only prevent negative environmental and social impacts, but also provide a range of economic, environmental, and social benefits to plantation companies, downstream off-taking companies, and financial institutions. These benefits and the institutions that stand to receive them are described below.

| Benefit | Plantation Companies | Downstream Off-takers | Financial Institutions |
|---|----------------------|-----------------------|------------------------|
| 1. Improve Yields, Quality, and Profitability | ✓ | ✓ | ✓ |
| 2. Reduce Reputational Risk | ✓ | ✓ | ✓ |
| 3. Reduce Environmental Impacts | ✓ | | |
| 4. Fulfil Traceability and Certification Commitments | ✓ | ✓ | ✓ |
| 5. Reduce Social Conflict | ✓ | | |
| 6. Create New Customer Base | | | ✓ |
| 7. Align with Government Push for Sustainable Finance | | | ✓ |

Improve Yields, Quality, and Profitability

In general, the plantations of independent smallholders produce significantly less yield and lower-quality crops than those of plasma smallholders and plantation companies. This can be attributed to a variety of reasons, including lack of access to high-quality seeds, poor knowledge of agricultural practices, and lack of access to high-quality agricultural inputs and tools such as fertiliser and heavy machinery.

The poor yields of independent smallholders can significantly impact the profitability of plantation companies, especially those that source a large percentage of their raw materials from independent smallholders. The entry of low-quality raw materials into the supply chain also has a negative effect on the quality of the products produced by downstream off-takers. Finally, sub-optimal yields and crop quality expose the banks providing loans to plantation and off-taking companies to additional credit risk.

On the other hand, providing independent smallholders with financing options allows them to purchase better-quality seeds, tools, and agricultural inputs. This will improve their yields and crop quality, creating knock-on profitability gains for all institutions in the supply chain.

Reduce Reputational Risk and Environmental Impact

By working with independent smallholders in their supply chain, companies may find it easier to identify potential environmental and social risks and address them before they escalate into public liabilities.⁶ For instance, independent smallholders have been linked to deforestation,⁷ as well as the use of fire to clear land. Once set, these fires may spread out of control, especially on sensitive landscapes such as degraded peatlands, generating large amounts of carbon emissions and haze pollution. In addition, 90 percent of Indonesian smallholders lack government-issued freehold land titles (Sertifikat Hak Milik - SHM),⁸ and many independent smallholders illegally operate in protected or restricted landscapes such as national parks.

Plantation companies found to be sourcing from these high-risk smallholders, whether knowingly or unknowingly, risk significant negative impacts on their reputation. This may translate to large financial impacts if customers, financiers, and investors decide to dissociate from the company as a result. Conversely, plantation companies that are able to demonstrate a proactive, sustainable approach towards working with smallholders may enjoy an improved reputation and be better able to attract customers and financiers.

Downstream off-taking companies may face similar consequences. Off-taking companies that produce consumer goods are especially vulnerable to reputational impacts and customer losses as a result of public advocacy campaigns.

Finally, financial institutions are also exposed to significant reputational risk through their clients in the agricultural sector. Recent examples of campaigns against financial institutions focusing on their links to unsustainable plantation companies include Greenpeace's Dirty Bankers campaign against HSBC in January 2017 and Rainforest Foundation Norway's campaign against six Southeast Asian banks in May 2017.

Fulfil Traceability and Certification Commitments

A growing number of consumers, especially in Europe and North America, are demanding more information on the origins and sustainability impacts of the goods they purchase. In response, many plantation and off-taking companies have made time-bound commitments to achieve full traceability of their raw materials to the plantation level. A smaller number of companies have also committed to sourcing only raw materials that have received sustainability certification.

As independent smallholders produce a large proportion of the supply of many agricultural commodities, it will be necessary for companies, especially larger ones, to work with independent smallholders to fulfil these traceability and certification commitments. This is becoming an increasing concern as the deadlines for these commitments approach.

Reduce Social Conflict

Active engagement with independent smallholders through financial and other support programmes helps plantation companies build better relationships with these smallholders. This reduces the risk of land conflicts and other disagreements with local communities, which may disrupt plantation companies' operations if not quickly identified and resolved.

Create New Customer Base

Though the loan amounts required by individual smallholders are small, smallholders collectively represent a large untapped market for retail and commercial banks. Equipping smallholders with greater financial literacy could also lead to greater demand for other financial products such as savings accounts, investment products, and insurance.

Align with Government Push for Sustainable Finance

In July 2017, the Indonesian Financial Services Authority (OJK) passed Regulation No. 51/POJK.03/2017, mandating financial institutions to develop a sustainable finance programme, as well as report on the economic, social, and environmental impacts of their operations. Providing financial options tailored to independent smallholders would allow financial institutions to fulfil this regulatory requirement.

Components of a Successful Agricultural Smallholder Financing Project

A number of projects aimed at improving independent smallholders' access to finance (both loans and savings) are currently being implemented in various locations across Indonesia, with crops including palm oil, cocoa, coffee, and corn. Some significant examples of these projects are:



Swisscontact's Sustainable Cocoa Production Programme, which supports 131,429 cocoa smallholders across Indonesia to improve cashflows and access savings accounts and loans.



Mercy Corps' AgriFin Mobile programme, which works with rural and commercial banks to disburse loans and bundled services to 2,773 corn smallholders in West Nusa Tenggara province.



Golden Agri-Resources (GAR)'s Innovative Financing Scheme, which is working to help 450 oil palm smallholders within GAR's supply shed conduct replanting.

*For full details of these projects, please refer to **Financing Indonesia's Independent Smallholders (Working Paper)** available at www.siiainline.org/reports.*

Though these projects all have different characteristics, they generally share certain components which can be identified as prerequisites for independent smallholders to access formal financing. The components and indicators are described in the following table, as well as in the sections below.

It is important to note that this list of components may not be exhaustive. A project may also not require all of these components to achieve its objectives, as projects vary significantly in terms of geographical coverage, objectives, and stage of implementation. In addition, most smallholder financing projects are still in the pilot stage, and their impacts are still being evaluated. Nevertheless, these indicators provide a useful framework for designing and assessing smallholder financing projects.

| STAGE | INDICATOR(S) |
|-------------------------------------|--|
| 1: Project Identification | <ul style="list-style-type: none">• Evaluation and Monitoring• Tracing, Mapping, and Spatial Planning• Supporting Legal Land Rights• Government Participation |
| 2: Community Engagement | <ul style="list-style-type: none">• Stakeholder Engagement and NGO Involvement• Forming Farmer Groups and Cooperatives |
| 3: Increasing Profitability | <ul style="list-style-type: none">• Education and Training• Providing Inputs, Productivity, and Extension Services• Providing Certification and Market Access |
| 4: Financing | <ul style="list-style-type: none">• Providing Access to Finance |
| 5: Monitoring Environmental Impacts | <ul style="list-style-type: none">• Ensuring Environmental Protection |
| 6: Monitoring Social Impacts | <ul style="list-style-type: none">• Protecting Gender and Labour Rights |

Stage 1: Project Identification



Indicator 1: Evaluation and Monitoring

Before any intervention is made, a baseline study is first conducted, a process that generally takes up to 12 months. During the study, the independent smallholders who are potentially participating in the project are interviewed and specific indicators for each smallholder are measured, including age, level of existing farming knowledge, value of assets held, and legality of land tenure. This helps to identify locations with the greatest potential for projects, ascertain improvements that could be made to farming processes, and collect baseline data against which the impacts can be measured.

Conducting a baseline study is important as the characteristics of independent smallholders may vary greatly from place to place. Another reason is to enable creditworthy smallholders to be separated from non-creditworthy ones. By analysing information about smallholders' yields, economic situation, and cashflow, financial institutions can restrict lending to smallholders with the highest productive potential, thereby reducing the risk of default.

Case Study: Financial Access Credit Risk Scoring Tool

Financial Access, a financial services advisory firm focused on developing countries, has designed a tool that estimates a smallholder's credit risk by measuring 25 financial, household, and production variables and their impact on cash flows. Using this tool allows banks to quickly separate bankable smallholders from non-bankable ones, reducing default risk and lowering the interest rates the bank needs to charge. The tool can be applied for various crops, in various countries, and for the purpose of both short-term and long-term loan products. The tool is currently being piloted in a joint SNV-Financial Access project in Jambi province that works with independent oil palm smallholders in need of replanting loans.

Indicator 2: Tracing

Once a project area has been chosen, smallholder farmers within the area are identified and geographically mapped. This provides a picture of the actors within the landscape and helps to identify smallholders with higher risk, such as those located in protected forests and other areas unsuitable for agriculture. Such smallholders can be excluded, or special provisions can be designed to allow their participation while minimising environmental and legal risk. In addition, the economic interactions of the smallholders with other actors in the supply chain, including local traders, middlemen, and plantation companies, are traced. This enables smallholders to be connected directly with downstream mills and plantation companies. In certain areas, middlemen may also be persuaded to take on new roles, such as disbursers or guarantors of loans.

Case Study: CocoaTrace

CocoaTrace is a cloud-based software programme developed by tech startup Koltiva to support the tracing and monitoring of cocoa smallholders. CocoaTrace provides each smallholder an ID card with a unique QR code, which is scanned during each transaction. By monitoring the farmers' transaction history, CocoaTrace is able to trace the supply chain in a particular area and track the cash flow of each smallholder, which is useful for helping banks make credit decisions. Following its successful use in Swisscontact's Sustainable Cocoa Production Programme, CocoaTrace is now being expanded for use with smallholders in other crops, such as coffee, coconut, and oil palm.

Indicator 3: Ensuring Legal Land Rights

Some projects may support independent smallholders to obtain government-issued land permits. Doing so both helps smallholders access financing from banks and encourages them to invest more into their plantations. For example, Swisscontact's Sustainable Cocoa Production Programme assists smallholders to register their plantations with the National Land Agency (Badan Pertanahan Negara – BPN) through the national PRONA (Proyek Operasi Nasional Agraria) programme at relatively little cost. In Musi Banyuasin regency, oil palm smallholders with plantations within protected areas are provided with amnesties by the government so that they can receive funding from the Oil Palm Estate Fund.

Indicator 4: Government Participation

Currently, many government bodies at both the national and sub-national levels in Indonesia lack a complete picture of the locations and characteristics of independent smallholders within their jurisdictions. This makes the information collected by smallholder financing projects especially valuable for the government. By incorporating this data into land use and economic development plans, governments can identify and resolve cases of overlapping land claims, allocate land for appropriate purposes, and develop other schemes for engaging with smallholders at the village level.

Some governments have committed to working closely with project implementers either through a jurisdictional approach, which aims to provide all smallholders within a certain jurisdiction with sustainability certification, or through a green growth plan, which aims to provide a model for sustainable development for the jurisdiction. These governments include those of Musi Banyuasin regency (jurisdictional approach) and East Kalimantan province (green growth plan).

Working closely with government bodies also helps successful models to be replicated quickly in other areas. For example, OJK is working to replicate Mercy Corps' AgriFin Mobile programme, which supports corn smallholders to obtain credit.

Stage 2: Community Engagement



Indicator 5: Stakeholder Engagement and NGO Involvement

Once all the necessary information has been gathered, a project moves to the community engagement stage, where independent smallholders are approached to participate in the project. This socialisation process is particularly important for the initial pilot, as farmers tend to be reluctant to cooperate until the benefits of doing so are demonstrated.

It is common for project implementers to engage NGOs to support the socialisation process. Partnering with NGOs can reduce the costs of hiring field staff and allow project implementers to draw on the NGOs' networks, social capital, and existing expertise in conducting socialisation activities in the area. Other organisations, such as agricultural companies and financial institutions, may also be recruited to lend their expertise in areas such as agricultural training and microfinance.

Indicator 6: Forming Farmer Groups and Cooperatives

Once smallholders agree to participate in the project, they are often collectivised into informal groups or formal cooperatives.

A farmer group may provide varying levels of services, depending on the needs and willingness of the smallholders to collaborate. An informal group, which is the most basic type of collective, may simply serve as a means to gather smallholders for training or monitoring. Formal cooperatives are more structured, and allow farmers to pool their crops and resources for trading or to fulfil certification requirements. More developed cooperatives may provide their members with access to agricultural inputs, distribute loans, create funds to be used for replanting and insurance, or collate and distribute profits to members after crops are sold. Members of a cooperative may also combine their plots and manage them collectively.

Establishing a farmer group or cooperative provides several advantages. It makes it easier to collect and disseminate information, distribute agricultural inputs, and achieve traceability. Forming formal cooperatives enables certification, improves profit margins by reducing logistical costs, and provides the scale and financial records necessary for the farmers to obtain loans from a commercial bank. However, as some cooperatives have fallen victim to mismanagement and graft, project implementers should take care to provide regular oversight over the farmer group's actions and only seek to collectivise smallholders who are ready and willing to do so.

Stage 3: Increasing Profitability



Indicator 7: Education and Training

The next stage in a project is to increase the profitability of participating smallholders. With higher yields, independent smallholders can become more profitable and thereby more able to access formal financing

options. The first key method for doing this is providing training in good agricultural practices to improve crop yield and quality. On top of this, smallholders may also receive training in financial literacy to improve their financial management.

Training can take place in person, through written materials such as guide books, and/or through the use of technology such as cellphones and radio. Topics covered include agronomic calculations, land use planning, fertiliser use, pest control, irrigation, and financial management.

Case Study: Musim Mas and IFC's Indonesia Palm Oil Development for Smallholders Project

The Indonesia Palm Oil Development for Smallholders (IPODS) project is a collaboration between palm oil grower and trader, Musim Mas, and IFC. IPODS is currently working with independent oil palm smallholders in North Sumatra and Riau to improve yields and provide certification, so as to enable them to access financing from commercial banks.

Under IPODS, Musim Mas and IFC agronomists train a team of field assistants drawn from the local community, who in turn lead training for local smallholders. This allows the local community to take ownership of the programme, improving the local standard of agricultural knowledge and multiplying the programme's reach while reducing costs.

IFC has designed guidebooks that provide photographs and simple explanations of common agricultural situations and actions to take to maximise outputs. These guidebooks are both used during training sessions and distributed to smallholders for everyday reference.

Indicator 8: Providing Inputs, Productivity, and Extension Services

Access to improved agricultural inputs, such as seed stock and fertiliser, is the other key method of improving yields and crop quality. These inputs may be provided to smallholders in various ways. For example, project implementers may provide inputs to smallholders at reduced prices through cooperatives.

Another way is through an outgrower programme. Under such a programme, a plantation company or financial institution purchases agricultural inputs in bulk and loans them to independent smallholders at the start of the season. In exchange, farmers agree to sell their crops to the plantation company when the harvest is complete. The cost of the inputs is then deducted from the proceeds from the harvest. This form of support has a number of advantages: it increases the likelihood that loans provided to smallholders will be used to improve their plantations, and helps decrease the likelihood that smallholders will fall into debt, as no monetary exchange takes place.

Indicator 9: Certification and Market Access

On top of improving yields, some projects also aim to help independent smallholders obtain sustainability certification, through certification bodies such as the Roundtable on Sustainable Palm Oil (RSPO) for oil palm smallholders and Rainforest Alliance for cocoa smallholders. Obtaining certification fits well with independent smallholder financing projects, because many of the performance standards required under certification are also required for accessing finance. This synergy also reduces the costs associated with the certification process.

Certification allows smallholders to sell their crop at a premium, improving their profitability. Helping independent smallholders get certified also allows downstream companies that source from these smallholders to meet their time-bound commitments to only source certified raw materials. Hence, downstream off-takers are often willing to support some of the costs of the certification process. Examples of downstream off-takers that are supporting the certification of independent smallholders include Unilever in North Sumatra province (with oil palm smallholders) and Mars in South Sulawesi province (with cocoa smallholders).

To reduce the risk of side-selling, project implementers may require independent smallholders to enter into a contract to sell their crop to specific downstream companies. This is especially common when certification is involved, due to the additional costs this imposes on project implementers. Although entering into a contract reduces independent smallholders' freedom of choice, they also stand to benefit through guaranteed market access and a guaranteed selling price.

Stage 4: Financing



Indicator 10: Access to Finance

Once the above elements are in place, independent smallholders are ready to obtain and manage financial loans. Loans for independent smallholders generally fall into three categories: working capital loans, agricultural input financing, and long-term loans for replanting purposes (in increasing order of loan amount and complexity). To maximise their effectiveness, loans are often structured to meet the specific financing needs and cashflow characteristics of a specific group of smallholders.

Banks may work with microfinance institutions, financial cooperatives, and local credit unions, tapping on their existing network and knowledge of local farmers' cash flows to improve oversight and identify the most creditworthy clients. Banks may also structure loans so that risk is shared among these local, specialised financial institutions.

Alternatively, loans may be disbursed to smallholders through supply chain actors such as off-taking mills or middlemen. The advantage of doing so is that the existing supply chain can be used as a means to channel finance, rather than having to create a new channel. However, going through supply chain actors will usually require a higher level of oversight, such as an off-taking agreement between smallholders and the supply chain actor so as to guarantee cashflow.

Finally, projects may also make use of mechanisms such as blended finance, through which loans are de-risked by providing grants or development aid. This could allow the participation of a much broader range of financial institutions, including commercial banks, institutional investors, and foreign investors. The objective of such mechanisms is usually to allow farmers to build capacity and a financial track record, so as to make them bankable even when the grant or aid money ceases.

Case Study: Golden Agri-Resources (GAR)'s Innovative Financing Scheme

Golden Agri-Resources (GAR), one of Indonesia's largest palm oil plantation companies, has developed an Innovative Financing Scheme (Skema Inovasi Pembiayaan) that is designed specifically to support independent smallholders to conduct replanting. One notable aspect of the Innovative Financing Scheme is the provisions it includes to support smallholders during the 4-to-5-year non-productive period following replanting. Grants are provided to smallholders to support their daily expenses during this period, with some of the grant money coming from downstream off-taking companies. Smallholders are also taught skills such as financial planning and food crop planting, and supported to generate income through alternative means, such as by providing skilled services.

To provide additional credit enhancement, GAR acts as a go-between for the smallholders to secure replanting loans from banks. The company helps smallholders negotiate subsidised interest rates and obtain extended loan tenor, and also serves as the guarantor of the loan.

Case Study: Rabobank Foundation

Rabobank Foundation is the social fund of the Dutch multinational food and agriculture bank, Rabobank. In Indonesia, Rabobank Foundation aims to incubate early-stage agricultural projects, such as smallholder cooperatives, so that they can develop to the stage where they are able to secure financing from commercial banks without external support.

Rabobank Foundation does this in a few ways. Firstly, the Foundation provides loans at below-market interest rates. Because the Foundation works with cooperatives rather than individual smallholders, it is able to extend relatively large loans of about 2 billion IDR per project. Secondly, the Foundation also provides technical assistance to help farmers scale up their productivity, in the form of training in good agricultural practices, governance, and financial management. Through this process, Rabo Foundation has been able to help smallholders command selling prices that are 50 to 60 percent higher than before.

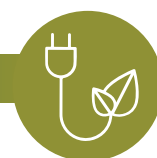
Case Study: Tropical Landscapes Finance Facility (TLFF)

The Tropical Landscapes Finance Facility (TLFF) was launched in 2016 as a collaboration between ADM Capital Foundation, BNP Paribas, UN Environment, and the World Agroforestry Centre. The TLFF has mobilised 1.1 billion USD for long-term, investable projects that ensure green growth and sustainable landscape use, including financing independent smallholders. This consists of a 1 billion USD loan fund, provided by BNP Paribas and other international investors, and a 100 million USD grant fund, provided by aid agencies such as USAID.

To offset the risks in the early stages of a project, loans are collateralised then de-risked using the grant fund. As the projects mature and begin generating sustainable cash flows, the loans are repackaged into green bonds, which will be sold by ADM Capital to institutional investors. Using the mechanism of green bonds allows TLFF to tap into international investors who are interested in building a portfolio of sustainable, long-term investments or meeting social impact objectives.

Currently, TLFF is still in its pilot stage, and has only been implemented to finance rubber smallholders supplying to PT Royal Lestari Utama, a joint venture between Michelin and the Barito Pacific Group. However, there are plans to expand the TLFF to projects such as oil palm replanting and developing off-grid power.

Stage 5: Monitoring Environmental Impacts



Indicator 11: Ensuring Environmental Protection

Smallholder finance projects may incorporate environmental protection in a number of ways. At the most basic level, environmental indicators are measured during the baseline study, and smallholders with a high risk of committing environmental violations are excluded. Another way is by incorporating environmental aspects into the education and training component, such as by teaching smallholders how to use pesticides and dispose of waste safely.

Some projects also measure environmental indicators, such as reduction in greenhouse gas emissions and fire incidents. GAR's Innovative Financing Scheme uses drones to monitor the project area for hotspots and enlists smallholders under the scheme in a fire prevention programme. As a result, GAR has been able to prevent any outbreak of fire within the project area since the project's inception.

A second approach is to incorporate conservation targets into the structure of the loans provided to smallholders. This is the approach taken by the &Green Fund, which was launched by Dutch development agency IDH in July 2017. The &Green Fund follows a "production, protection, and inclusion" model, and aims to provide investments to improve agricultural productivity while protecting existing forests. It does this by setting a criterion that for any project that it finances, the area of land that the project commits to protecting must be 5 times as much as the area of land used for agricultural production.

In return, the fund is able to offer financing with highly favourable conditions. Loan tenor can be up to 15 years, and repayments only need to commence after the 10th year. The fund is also able to offer large amounts of capital (up to 200 million USD), with interest rates significantly below the market rate. The de-risking function is carried out by grants donated by the Norwegian International Climate and Forests Initiative (NICFI), as well as other foundations and corporates. In total, the &Green Fund targets 2 billion USD of investments and the conservation of 5 million hectares of tropical forest, with Indonesia as one of the focus countries.

Stage 6: Monitoring Social Impacts



Indicator 12: Protecting Gender and Labour Rights

Women are a generally marginalised group among Indonesian smallholder families. Although female farmers constitute a large percentage of the workforce for certain crops, they are often excluded from

extension services and other support programmes, because smallholder farms in Indonesia are generally headed and managed by men. However, due to cultural norms, it is often women who bear the responsibility of seeking out loans.

In response, some smallholder financing projects have made providing equal opportunities to women a key component. For example, Swisscontact's Sustainable Cocoa Production Programme (SCPP) actively encourages women to join smallholder cooperatives and training activities, as well as take on leadership positions. Results observed include 80 percent female attendance in certain training sessions and 14 percent of farmer groups having women in leadership roles.

Some projects also explicitly monitor for other social issues. For example, the SCPP explicitly mentions its prohibition on the use of child labour during its training sessions, and regularly monitors the percentage of cocoa plantations within the project area that engage child labour.

Impacts of Smallholder Financing Projects

Though smallholder financing projects are still largely in the pilot stages, they have already been observed to generate significant positive economic, environmental, and social impacts.

Firstly, smallholder financing projects have been successful in raising productivity and profitability. Over a period of three years, Mercy Corps' AgriFin Mobile programme reported, on average, an 11 percent yearly increase in productivity and a 17 percent yearly increase in income. From 2012 to 2016, Swisscontact's Sustainable Cocoa Production Programme (SCPP) helped smallholders increase their productivity by an average of 60 percent and their income by an average of 157 USD per year.

Smallholder financing projects have also been successful at helping independent smallholders secure loans and access other financial products. From 2014 to 2017, Swisscontact's SCPP helped independent cocoa smallholders receive a total of 9.7 million USD in loans, with the number of loans issued in 2017 having increased 143 percent compared to 2014. The programme also had an impact on savings, which increased by an average of 8.9 percent.

Environmental and social benefits are not as well documented because they are not an explicit objective of many smallholder financing projects. However, projects such as Swisscontact's SCPP have demonstrated reductions in greenhouse gas emissions without any negative impact on productivity, due to the implementation of better soil, fertiliser, and environmental management practices. The mapping process undertaken in the baseline studies of smallholder financing projects also enables the government to initiate targeted programmes to resolve these smallholders' legality issues. Finally, smallholder financing projects enable greater oversight over the activities of independent smallholders, reducing the risk that encroachment or other illegal activities may occur.

Some of the most tangible social impacts can be observed in projects that explicitly engage women. These have generally seen significant increases in the participation of women in training sessions and leadership roles in farmer cooperatives. Women are also playing a greater role in managing household finances: for instance, in Mercy Corps' AgriFin Mobile project, the percentage of female bank loan borrowers increased from 4 percent during the 1st year to 19 percent during the 3rd year.

Overall, despite the short time frame during which smallholder financing projects have been implemented so far, they show a great deal of promise not just in enabling financial access for independent smallholders, but also in meeting other economic, environmental, and social objectives.

Conclusion and Next Steps

The financing of independent smallholders is a nascent field, but Indonesia's experience has demonstrated that it is a promising one. Indonesia's current supportive regulatory environment makes it an ideal time for project implementers and policymakers to analyse and refine the smallholder financing projects currently being piloted, so as to derive models that are applicable across multiple geographical locations and agricultural crops.

The need to take action is urgent. A lack of suitable financing options continues to drive smallholders towards unsustainable practices, causing significant environmental degradation. The upcoming need for replanting presents a crossroads that may lock the Indonesian agricultural sector onto either a sustainable or unsustainable path for several years to come.

Current smallholder financing projects should be seen as only the first step in integrating independent smallholders into the broader financial ecosystem. There are many possibilities for smallholder finance that have not yet been fully explored, including improved access to retail savings accounts, micro-insurance, mobile banking, and greater incorporation of mission-driven financiers such as impact investors and social enterprise lenders into the financing landscape. Expanding beyond loans to a broader spectrum of financial products would also allow smallholders to avoid falling into debt and better choose products that fit their needs.

It is now essential for more financial institutions, from both inside and outside Indonesia, to enter the smallholder financing sphere. These institutions should draw lessons from earlier financing projects to design new and ever more effective financing mechanisms for independent smallholders. Only with the combined effort of institutions from all branches of the financial industry can we arrive at a long-term, sustainable solution for financing Indonesia's smallholders and unlock the attendant environmental, social, and economic returns throughout the supply chain.

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