Access to finance

For forest and farm producer organisations (FFPOs)

Duncan Macqueen, Niclas Benni, Marco Boscolo and Jhony Zapata

With case study inputs from: Anu Adhikari, Juan Arce, Paulo DeLeon, Krishna Hengaju, Bernard Kamondo, Anne Mbora, Maria Murillo, Josphat Muthaka, Narendra Pradhan, Amit Poudyal, Prahlad Thapa and Racchya Shah

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Food and Agriculture Organization of the United Nations

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Summary

Introductory points – Forest landscapes are inhabited by approximately 1.5 billion people. The aggregate gross annual value of these smallholder producers approaches US$1.3 trillion. Adding value to that production, through financial investment, will be key to delivering the Sustainable Development Goals (SDGs). Therefore, access to finance is an important issue. The Forest and Farm Facility (FFF) commissioned this scoping paper to assess what might be done to improve access to finance.

Organisation of forest and farm producers allows finance to be channelled toward value-added investments. But the motivation to form forest and farm producer organisations (FFPOs) varies with context, from the desire to secure resource rights for Indigenous peoples in the forest core, to the desire to strengthen economic scale efficiencies in peri-urban forest product processing industries. The scale and type of finance needs vary and span *enabling investments* (grants or concessional loans) through to *asset investments* (market-rate capital that requires a return). Access to finance for FFPOs requires tailored approaches.

For FFPOs, enabling investments in four key areas are needed to create the conditions and necessary track record to attract asset investment: (i) secure commercial rights; (ii) strong organisation for scale; (iii) appropriate technical extension; and (iv) fair market access and business incubation. Enabling investments of this sort make FFPO businesses bankable and affords them access to finance.

Creating the enabling conditions and track record to attract asset investment, however, is not necessarily the same thing as achieving asset investment. To achieve asset investment, an interactive process of accommodation, a 'dance', is often needed between FFPOs and financiers that involves, for FFPOs, reducing the perceived risk-return ratio and transaction costs; and, for financiers, increasing understanding of the FFPOs' value chains and the acceptability of financial terms offered. Access to finance is therefore a dance between these two parties.

A finance gap exists, because in forest landscapes, the capital invested by asset investors (eg private sources and capital markets) dwarfs the capital invested by enabling investors (eg public sector funds and official development assistance – ODA) by a factor of approximately 100 to 1. There is plenty of asset investment finance – but the pipeline of bankable FFPO business is thin.

Moreover, while asset investors are comfortable with the risk-return ratio and transaction cost profiles for microfinance and industrial-scale investments, they struggle with the

profile of small and medium enterprises (SMEs), which are perceived as high risk, low return and with considerable transaction costs. A gap exists in access to finance for small and medium FFPO businesses – and as we have noted, enabling investments are in short supply, and so need to be well-directed.

Filling that finance gap requires three complementary emphases: (i) organisational strengthening that formalises rights and reduces the transaction costs of dealing with FFPOs; (ii) more sustainable business incubation that also addresses technical issues to improve the attractiveness of FFPO returns; and (iii) de-risking of FFPO investments for financiers – through concessional finance, guarantee funds, innovative use of collateral and credit reference partnerships. These three complementary emphases to improve access to finance for FFPOs require different sorts of partners and partnerships.

From the FFPO side, the organisational strengthening and more sustainable business incubation must recognise the advantages of value chain diversity that can originate from forest landscapes: not just timber, but multiple non-timber forest products (NTFPs) and services. FFPOs frequently start with one value chain but then diversify into a basket of products to spread risk and make more productive use of mosaic landscapes. Similarly, because most are democratically controlled, many FFPOs are driven by issues beyond finance and are willing to forgo some financial benefits in return for environmental or sociocultural benefits. Both may seem off-putting to financiers – but it is important to articulate that both strategies actually reduce risk of FFPO business failure in the long term.

Two important start-points in improving access to finance for FFPOs are to ensure: (i) that FFPO members recognise that they are the most important and accessible sources of finance; and (ii) that there is no financial leakage between the FFPO business and the broader interests and activities of FFPOs and their members. No external asset investor will touch an FFPO business that cannot be certain of where its cash is. There can be no grey boundaries between the finance and product of the FFPO business and the finance and product of its members – especially if some of those members are cultural authorities in the broader FFPO domain.

Financial literacy and bookkeeping training for staff within the FFPO business must therefore be a routine part of organisational strengthening for FFPO businesses. Many community groups have experience of managing group savings and loans schemes such as village savings and loans associations (VSLAs), in which collective accountability is a key feature. Those skills and principles can be built into FFPO business finances or may need to be developed from scratch where they do not exist.

Making the leap from physical to virtual records and transactions is a vital step and may require support, such as in helping FFPO businesses to open bank accounts and keep financial spreadsheets. Making use of improving digital banking services can be helpful

where these are available, but they need to be accompanied by an internal financial management system that keeps a balance sheet, a profit and loss account and a cash flow analysis to hand. These help to assess past progress, but also to conduct future financial projections.

In terms of future projections, financial managers within an FFPO business need to be able to assess the return on investment (ROI) or the net present value (NPV) of an investment – and present such figures to potential investors to show the increase in returns that will come from an investment. Equally important is for the FFPO business to be able to demonstrate broader environmental or socioeconomic returns that will come from an investment.

A thorough understanding of the value chain within which any investment is made is also vital, not only to assess which interventions will have a positive ROI or NPV, but also to understand how particular interventions will alter the motivation of other value chain partners to engage with the FFPO business.

Once there is clarity about what finance is needed, and that there is a need for external financiers to provide it (although provision should never automatically be assumed) – this needs to be articulated in a business plan. It is very helpful to be armed with such a business plan when mapping external sources of finance that might be able to fill an FFPO finance gap. Options extend far beyond banks, loans or investors (equity) to include family members, savings groups or credit unions, traders or buyers, non-governmental organisations (NGOs), moneylenders and so on. Mapping who is offering what and on what terms is a critical step in making wide investment decisions.

From the financier side – evidence points to there being serious returns to be had from asset investments into FFPO businesses (eg the two billion currently unbanked individuals can make immediate savings of US$116 billion per year) and the aggregate gross value of production exceeds that tenfold as noted earlier. Forest and farm producers will form the mainstay of rural commodity production for the future. And while the individual microfinance sector is increasingly well-served, asset investments into FFPOs business (in the US$5–50,000 range) can create future investment opportunities. Many emphasise (perhaps even overemphasise) the risk of investing in this sector. But with global challenges in view – around climate change, biodiversity loss, food insecurity, and migration to name but a few – we would stress the much higher risk of not investing in this sector.

Clarifying what finance (ie asset investment) is available on what terms, and using simplified language to explain it, is one way in which financiers can improve engagement in this sector. Investors also need to lay out clearly how they will assess possible investments – for example, how much they will weigh the logic of the value proposition, what the business stands to lose if the investment fails (ie skin in the game), and the

overall return on investment. Presenting some kind of assessment scorecard is one way of helping FFPOs understand how to meet the demands of the financier. Being prepared for a process that builds knowledge on both sides is a good start.

But financial literacy work with clients is not all that is needed. Financiers typically prefer big asset investments (low transaction costs) and short timeframes (low risk) – and on average charge small and medium enterprises (SMEs) a median interest rate of 32.7 per cent above large firms. But initial FFPO asset investment needs are often small with long-term repayments scheduled as trust within the FFPO is built, and capacity to manage businesses is developed. Financiers may need to revisit their perceptions of risk – since FFPO businesses tend to be rooted locally and committed for the long term. Developing a range of financial instruments that better meet the scale and repayment possibilities of FFPOs can pay dividends in the long run, as repeat business caters to ever-greater FFPO needs.

Apart from expanding the range of financial instruments that are designed for FFPOs, financiers can also bundle different products together to introduce new ones (with which clients may be unfamiliar) that would have a low uptake otherwise. But the bundling of financial products must also go hand-in-hand with the bundling of other services such as extension support, business and financial literacy training.

Improving credit information for FFPOs (eg through credit bureaus, registries or credit risk databases) can improve access to formal financial institutions – and allow those institutions to bundle and sell on pooled debt to other lenders (a practice known as securitisation). Improving information on orders, stock inventory, equipment and real estate can also open up new options for collateral that again improves access to formal financial institutions.

Intermediaries can play a critical role in helping bridge the gap between FFPOs and financial institutions – so as to enable mutually beneficial asset investments to take place. These intermediaries include public institutions, such as National Forest Funds, that are capitalised through earmarked taxes, general revenue streams, or even ODA. Such intermediaries can make enabling investments (grants or performance-based incentives) to improve FFPO bankability. Support for marginalised groups can be upscaled, including for women, where peer-to-peer mentoring, tailored business incubation, and networking services can build confidence and track records with potential investors.

Blending different sorts of finance can be a very useful activity facilitated by intermediaries. For example, concessionary rate finance from public sources or from ODA or climate finance can be blended with market rate finance. The blending can reduce risk for the lender and make interest rates more acceptable for the client (which is often a key concern in longer-term forest projects).

NGOs can also play a role – especially in the area of connected FFPOs and financial institutions. They can help FFPOs to link to, and improve integration between, the multiple strands of public development and climate finance and private capital markets as these emerge. Exploring how emerging digital connectivity and financial technology (fintech) might better serve FFPOs is another useful area of work – as is facilitating investor-client linking events.

De-risking is another area where intermediaries can play a vital role, including making information more readily available to both sides – about prospective FFPOs to financiers, and about potential financiers for FFPOs. Helping to facilitate group collateral arrangements, and improve liquidity for such collateral, for example registering and using standing trees as collateral, is a useful intermediary role. Similarly, exploring and connecting FFPOs with leasing schemes, guarantee systems, insurance providers and those offering trade credit can improve access to finance. Trade credit is often an excellent solution, as value chain partners stand to gain directly from any improvements in FFPO efficiency.

Concluding remarks – the FFF has an established reputation for channelling finance directly to FFPOs. This direct support can strengthen the role of FFPOs as aggregators of individual producer efforts. In FFF Phase II, the intention is that FFF support will improve access to finance from six potential sources of finance:

- *FFPO producer, friend and family finance* – through enabling investments for: membership expansion; internal FFPO financial management; women's collective agency; and risk self-assessment and response – to increase the scale of internal finances and the creditworthiness of FFPOs as clients for third-party financiers.
- *Buyers and trade-chain finance* – through enabling investments for: linking with potential buyers; researching and engagement of leasing, factoring, purchase order or warehousing options; exploration of out-grower arrangements; and documenting success – to improve the perceived creditworthiness of FFPOs as clients to third-party financiers.
- *Semi-formal and microfinance* – through enabling investments for: iterative business training that develops internal savings and loans procedures; exploration of potential crowdfunding; the fostering of links between formal and semi-formal providers; and longer-term business incubation and coaching to improve the perceived creditworthiness of FFPOs as clients to third-party financiers.
- *Formal banking finance* – through enabling investments for: the mapping of terms and conditions of different lenders; financial literacy training; brokered design of new financial mechanisms; the promotion of credit risk databases and assessments; and digital banking outreach – to enhance awareness of how to improve the perceived creditworthiness of FFPOs as clients to third-party financiers.

- *National public finance* – through enabling investments for: developing National Forest Finance or incentive schemes; advocacy for tenure, technical extension, business incubation support; financial regulatory reforms and reduced bureaucracy; and development of sectoral guarantee schemes – to upscale public finance that improves the perceived creditworthiness of FFPOs as clients to third-party financiers.
- *Climate finance and official development assistance* – through enabling investments for: linking FFPOs to existing in-country donor programmes; adapting eligibility criteria to be more inclusive of FFPOs; advocacy for targets on FFPO disbursements; and research in support of donor guarantee schemes.

Acronyms and abbreviations

CRD	Credit Risk Database
DSCI	Department of Small and Cottage Industry, Nepal
FAO	Food and Agriculture Organization of the United Nations
FAST	Finance Alliance for Sustainable Trade
FEGA	Special Fund for Technical Assistance and Guarantee for Agricultural Credits, Mexico (Fondo Especial de Asistencia Técnica y Garantía para Créditos Agropecuarios), Mexico
FFF	Forest and Farm Facility
FFPO	Forest and farm producer organisation
Fintech	Financial technology
FIP	Forest Investment Program
FIRA	Agriculture-Related Instituted Trust Funds (Fideicomisos Instituidos en Relación con la Agricultura), Mexico
FLR	Forest landscape restoration
FONAGA	National Guarantee Fund for the Agriculture, Forestry, Fisheries and Rural Sectors (Fondo Nacional de Garantías de los Sectores Agropecuario, Forestal, Pesquero y Rural), Mexico
GCF	Green Climate Fund
IIED	International Institute for Environment and Development
INAB	National Institute of Forests (Instituto Nacional de Bosques), Guatemala
IUCN	International Union for Conservation of Nature
MA&D	Market analysis and development
MCDA	Multi-criteria decision aid
NAP	National adaptation plan
NDC	Nationally determined contribution
NGO	Non-governmental organisation
NFF	National Forest Funds
NPV	Net present value
NTFP	Non-timber forest product
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
REDD+	Reducing emissions from deforestation and forest degradation
ROI	Return on investment
SAGARPA	Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food, Mexico
SDG	Sustainable Development Goal
SME	Small and medium enterprise
TAFs	Technical assistance facilities
UNFF	United Nations Forum on Forests
VCA	Value chain analysis
VNFU	Vietnam Farmers Union
VSLA	Village savings and loans association
WEDF	Women's Entrepreneurship Development Fund, Nepal

An example of business incubation near Kribi, Cameroon – using mangroves to smoke fish
© Duncan Macqueen, IIED

1 Introducing access to finance for FFPOs

1.1 The importance and role of FFPOs

Forest landscapes are inhabited by poor people – forest landscapes are usually lived in, mostly by smallholder farmers, but also by small numbers of Indigenous hunter-gatherer groups. This report is written for such people, whom we call forest and farm producers. Among such people, many are poor – and this is especially true of women. For example, of the 1.4 billion people living on less than US$1.25 per day, 829 million are girls and women, and only 522 million are boys and men. Most are found in forest and farm environments (Poschen, 2015). This report makes explicit mention of finance for women – since they constitute a particularly disadvantaged group.

It is difficult to count how many 'forest-dependent' people there are. How close people live to, and how much they rely on, different products and services from trees and forests vary a lot (Mayers *et al*., 2016). What we do know is that 2.4 billion people (34.5 per cent of the global population) depend on fuelwood and charcoal to cook – but many of those live in cities. In rural areas we know that 1.5 billion people, of the 2.5 billion people in poor countries making their living directly from the food and agricultural sector, live in smallholder households with between 1 and 10 ha of forest land (FAO, 2012). This tallies quite closely with the 1.5 billion estimated users of non-timber forest products (NTFPs) (Shanley *et al*., 2016). It also bears comparison with recent estimates of 1.3 billion forest-dependent people (Chao, 2012), or the figure of 1.3 billion people who use forest products as the main materials for walls, roofs or floors in their home or shelter (FAO, 2014).

Forest-dependent people produce considerable value – conservative estimates of the aggregate gross annual value of these forest-dependent smallholder products – fuelwood, charcoal, timber and NTFPs – lie between US$869 billion and US$1.29 trillion in 2017 dollars (Verdone, 2017). That is a lot of money. Taken together, it probably makes them the largest private sector. Since much of this value is simply for raw forest and farm products, there is vast scope to add value to those products. But this might require technology – which would need to be paid for or financed. This explains our interest in improving 'access to finance' for forest and farm producers.

It is these same forest and farm producers who are one major focus of the Sustainable Development Goals (SDGs) to address poverty (Goal 1), hunger (Goal 2), health and wellbeing (Goal 3), clean water (Goal 6) and affordable clean energy (Goal 7). Improving access to finance for them fits as a priority for the SDGs. Yet it is not just improving material outcomes, but also doing so in ways that address education (Goal 4), gender equality (Goal 5), decent work (Goal 8), reduced inequality (Goal 10) – and offer sustainability for climate action (Goal 13) and life on land (Goal 15). But how to reach these forest and farm producers with finance when they are so many, and so scattered over such large and remote areas? The answer to that question lies in organisation – in the strengthening of forest and farm producer organisations (FFPOs).

Organisation of producers allows finance to be channelled for value-adding investment – strong FFPOs enable finance to be channelled efficiently to those who need it – so as to deliver sustainable development. This is the now-proven theory of change that has been designed and tested and which has delivered impact within the Forest and Farm Facility (FFF) which commissioned this report (see FAO, 2018).

FFF commissioned this report to investigate what more could be done to improve access to finance by such FFPOs as the FFF considers them to be the main agency for implementing the SDGs and delivering effective climate action. It is worth noting immediately that FFPOs are not homogenous. There are at least four broad categories of

FFPO found in different forest contexts, each of which has a somewhat different need for finance (see Table 1 below).

Table 1. Different scenarios for locally controlled forests and the investment needs for the sustainability of resident FFPOs

Type of forest	Type of organisation	Characterised by	Strategic financing needs for people and forests
Forest core	Indigenous people's organisations (mainly rights based)	Low population density and low deforestation in natural forests	Investment in secure tenure rights and quantification and payment for environmental services
Forest edge	Community forest organisations (rights and business based)	Rapid population and agricultural expansion in (mostly natural) forests	Investment in secure tenure, sustainable forest management, certification, efficient processing and market development
Forest mosaic	Forest and farm producer groups (mainly business based)	High populations and co-existence of people and (mostly planted) forests	Investment in secure tenure, diverse tree planting, chain of custody, efficient processing and market development
Urban forest linked	Processing groups in urban and peri-urban contexts who use forest inputs	Very high populations in non-forest settlements	Investments in chain of custody, efficient processing and market development

Source: Adapted from Chapple (2010)

In this report we will focus mainly on the second to fourth categories of FFPOs – access to business finance. This is not to diminish the vital need to improve access for Indigenous people's or other community forestry organisations to grant finance for secure tenure rights to protect their way of life, or even to quantify forest environmental services which they offer. Significant work has been done, and must continue to be done, on options to channel climate-related funding and even payments for environmental services to these organisations. For example, the Dedicated Grant Mechanism of the Forest Investment Program (FIP) is one such specific funding channel and ideas have been developed by the Alianza Mesoamericana de Pueblos y Bosques (AMPB) for a Territorial Fund that would further develop dedicated support. Nevertheless, our brief in this report is to explore how to improve the sort of access to finance that will add value to the products and services generated by FFPO businesses.

1.2 The challenges for FFPO businesses

Access to finance is often a symptom of other difficulties – a lot has been written about the challenges facing sustainable FFPO businesses (see for example, Arnold *et al*., 1987; Molnar *et al*., 2006; Donovan *et al*., 2006; Kozak, 2007). There is little that one can add to the many bulleted lists of the difficulties faced by FFPO business in remote environments. From those earliest analyses it was recognised that access to finance 'while a real problem in its own right, is also often a symptom of other difficulties' (Arnold *et al*., 1987).

This conclusion – that access to finance was a symptom of other difficulties – was explored further in a prolonged series of 11 international dialogues on Investing in Locally Controlled Forestry (ILCF) between investors and forest and farm producers. The dialogue series found that four crucial challenges affect locally controlled forest businesses: insecure tenure; inadequate technical capacity; lack of business and market know-how; and limited cost efficiencies and bargaining power. Looked at another way, there are four enabling conditions underpinning access to finance (Macqueen *et al*., 2012):

- Secure commercial tenure (through rights-based advocacy and delimitation work);
- Technical proficiency (through technical extension);
- Fair market access and business skills (through business incubation support); and
- Scale efficiencies (through strong organisation).

If these enabling conditions are put in place, there is a good chance that FFPO businesses will be able to attract asset investment. But there is still considerable intermediation that may be required between the FFPO and the financier to build trust, reduce perceptions of risk, and reach an agreement on terms and conditions. The need for such intermediation poses an additional challenge to FFPOs' access to finance – as funding for it, and competent agencies to enact it, are in short supply.

Enabling investments into FFPOs are needed to create conditions for asset investment – what is clear from this body of work is that it is often necessary to undertake 'enabling investment' (to put in place the four enabling conditions) before 'asset investment' (ie investment that expects a financial return) can flow (see Figure 1). In other words, many FFPO activities might become commercially viable and bankable over time, but need early-stage grant funding, or risk-sharing mechanisms, in order to get off the ground. Recent reviews of effective investment strategies (eg World Bank, 2014) and a series of further forest investment dialogues have confirmed the peculiar importance of a blend of enabling investment to get a pipeline of FFPO businesses into which asset investment might flow (Dewees *et al*., 2011; World Bank, 2013; 2016). For

example, in a global review of investment into conservation, the main constraints identified by investors in order of priority were: (i) the lack of deal flow with appropriate risk-return profiles; (ii) a lack of deals with a management track record; and (iii) small transaction sizes (the lack of organisation or aggregation) (Forest Trends, 2016).

Improving FFPO access to finance involves a two-way process. On the one hand, FFPOs need to reduce for potential investors the perceived risk-return ratios and transaction costs. On the other hand, financiers need to increase their understanding of and outreach to FFPOs and the subsequent acceptability of financial terms offered. We explore what can be done practically to achieve such two-way proximation in Chapters 3 and 4, before turning to the potential role of intermediaries in Chapter 5.

Accommodation between investors and FFPOs can be helped by business incubators – clearly, access to finance is a dance between two parties. Now, more dancing might be required by the FFPO, as their need to access finance is often more pressing than investors' needs to find a way of getting a return on their finance. Elson (2012) describes this dance – and notes that the ability of the two parties to reach an agreement depends a lot on the FFPO's track record and how much and what sort of financing they are looking for, and the nature and experience of the investor, and how much return and of what sort they are looking for. It has also been argued that strengthening producer organisations is a particularly important enabling condition for access to finance, because of the options it introduces for securing the other enabling conditions and the credibility and scale it presents to potential financiers (Macqueen and DeMarsh, 2016). Electronic transaction records can also be used to create a 'track record' of financial dealings that can play to the advantage of FFPOs in situations where such systems are developed (see Section 5.2).

Because there is a necessary dance between FFPO and investor, intermediaries can often play a useful role. The most recent dialogues on forest landscape investment have seen a renewed emphasis on the role of forest business incubation (FAO, 2017). This emphasis comes precisely because it is in the nature of forest business incubators to make the enabling investments in FFPO business that will ultimately lead to asset investment. Recent global reviews of how these forest business incubation efforts are being structured (Macqueen and Bolin, 2018) have led to the development of practical guidance to making such business incubation support more widely available for FFPOs (Bolin *et al*., 2018). The preferred option for making such business incubation financially sustainable is to embed it in apex-level FFPOs, whose finances derive at least partially from value-added processing and marketing of local FFPO commodities.

1.3 The finance gap

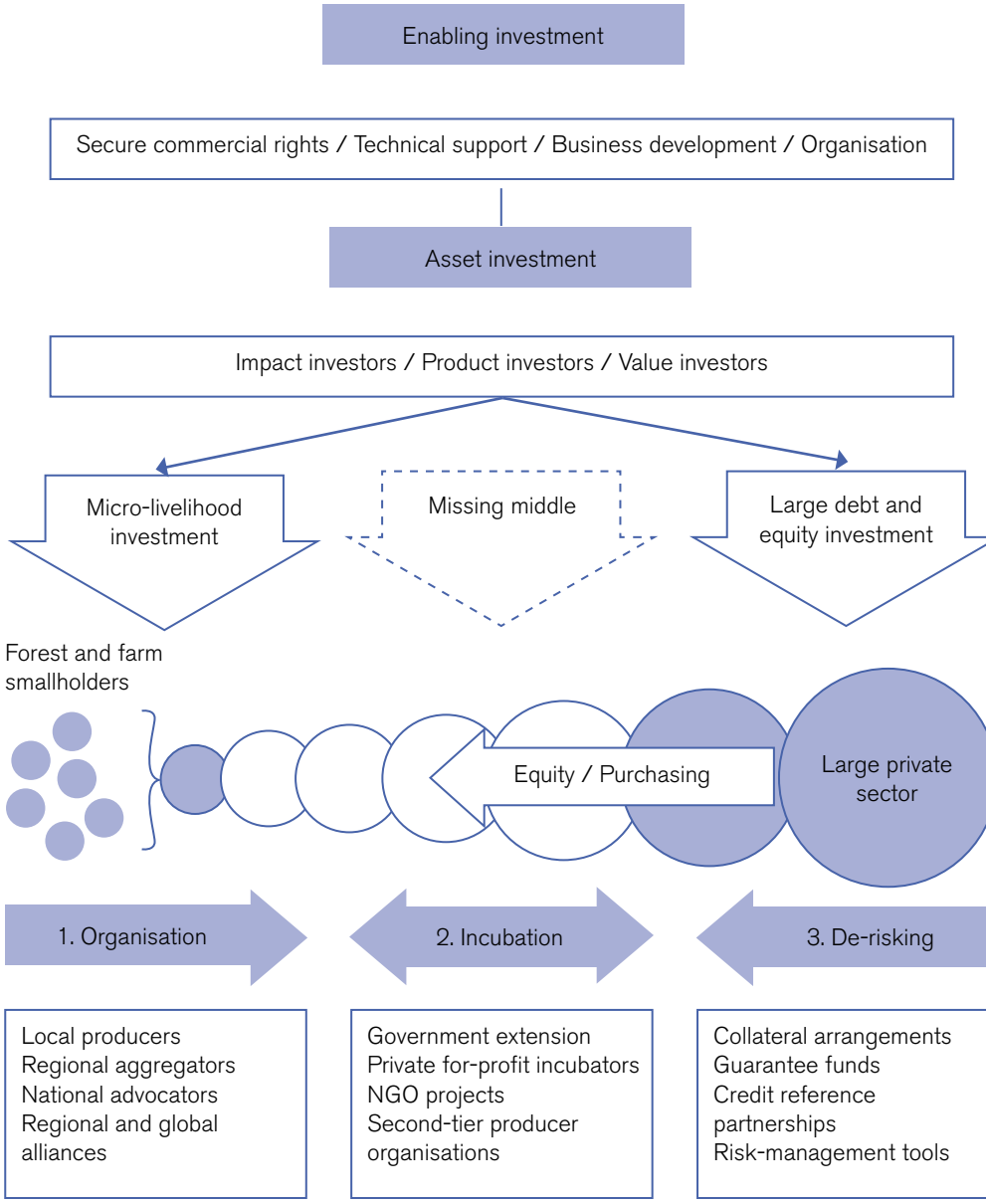
Private capital dwarfs ODA in forest landscapes – in 2006, it was estimated that US$36 billion was invested specifically in the forest sector of developing countries, of which only US$380 million was official development assistance or ODA (Trine, 2007) – with the rest coming from private sources and capital markets. While overall totals have increased since then (eg with ODA disbursements on forests rising to just below US$800 million in 2014 – Singer, 2016), the proportion between private and public finance has remained much the same. As noted by Campanale and Rhein (2008), much of the recent history of private investment in the forest sector is troubling. In the 1990s, there was an upsurge of investment into large companies listed on the stock exchange who acquired vast areas of natural forest, mined them unsustainably to return short-term profits for shareholders (in this short-term equity investment model), and then shifted capital into less risky assets, with the resultant collapse in the value of the listed forest companies. Much private capital is also concentrated in sectors known to be detrimental to forest cover, for example with exported palm oil, soy and beef, pulp and paper having a combined production value in tropical countries of US$1,068 billion. Only US$2.7 billion is recorded to be invested in sustainable commodity production and conservation in developing countries (Climate Focus, 2017). Obviously, not all private capital works are counter to sustainable forestry, and the number of commitments to reduce deforestation from supply chains increased to at least 760 public commitments by 447 companies by March 2017 (Donofrio *et al*., 2017). While such commitments are not always backed by action – and much needs to be done to improve their effectiveness – it does seem a step in the right direction (Lambin *et al*., 2018).

In order to reduce emissions from deforestation and forest degradation to zero, it is estimated that additional investment and financial flows of US$21 billion would be needed. There are currently results-based finance commitments for reducing emissions from deforestation and forest degradation (REDD+) of US$4.1 billion (Climate Focus, 2017). Given the current ratio of private to ODA investment into forestry – notwithstanding new public REDD+ commitments, notably by Norway – it is little wonder that attention has turned to large corporate pledges of zero deforestation. The problem is that such pledges by and large miss the agency of forest and farm producers, and their locally controlled forest and farm businesses. Indeed, as noted by Lambin *et al.* (2018), 'zero-deforestation initiatives may disadvantage small-scale producers and companies, who can play an important role in both deforestation and conservation'. Numbering 1.5 billion across almost all forest landscapes, this role must not be ignored.

The challenge appears to be to get finance to such producers. In a recent analysis of one of the main source of forest-linked ODA – the World Bank Forest Investment Program (FIP) – it was found that very little finance was actually getting to FFPO small and medium enterprises (SMEs) (Macqueen *et al*., 2018). A finance gap was present. In

part this was because the enabling investments in securing tenure, providing technical support, improving market access and business development services, and strengthening organisation were simply not being made. But even in places where such enabling conditions exist, the gap persists (see Figure 1).

Figure 1. Representation of the finance gap or 'missing middle' in forest investment



Source: Adapted from Macqueen *et al.* (2018)

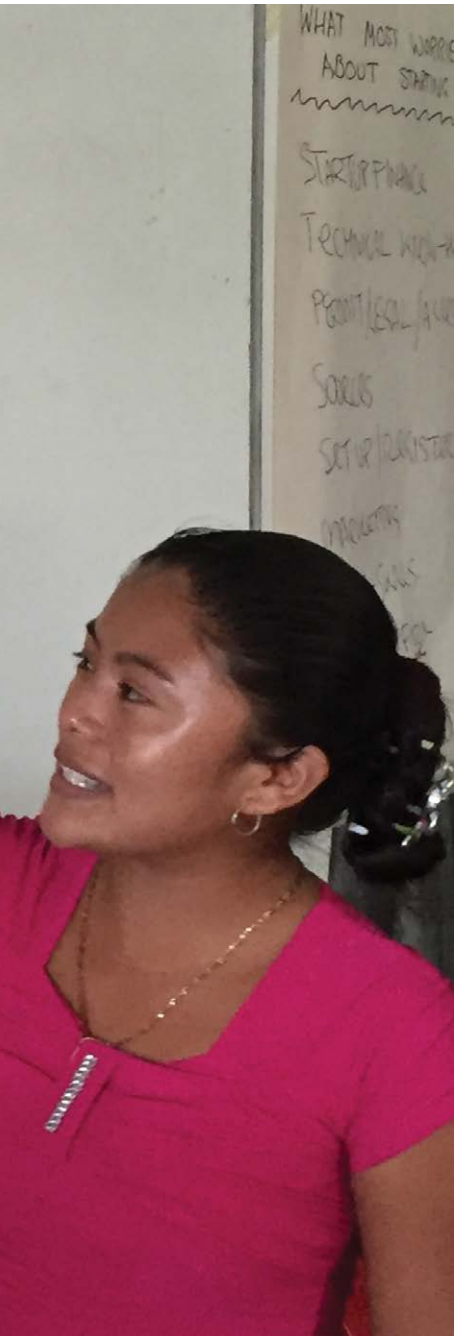
There is a finance gap for small and medium forest enterprises – it is relatively easy for NGOs, microfinance institutions, and even conventional banks, to disperse microfinance to informal individual entrepreneurs or household-level businesses at the micro to small end of the forest enterprises spectrum (FAO, 2005). That is not to say that all groups within a community can access such finance equally – as this depends on the degree to which 'inclusion' has been a central concern in the design of the mechanism. In general, however, for microfinance users, the financial needs are often low – and often involve a high ratio of working to fixed capital. The fixed capital equipment they can afford (and know how to manage) tends to be inexpensive compared with the costs of high labour intensity. They also tend to have to invest up front to assemble inventories of seed or raw materials, and pay recurrent management costs before any income accrues to them, hence the high need for working capital. But in many cases the returns are mostly predictable and well known. And the relatively high transaction costs can be offset by similarly high interest rates. From a financing perspective, low costs, a high ratio of working to fixed capital, and predictable returns mean that financing can be quite straightforward – even as simple as local producers themselves quickly establishing individual or group saving schemes. Microcredit simply provides a way of augmenting such saving schemes – and often involves group lending (so that the better knowledge of the borrowers about who is or is not creditworthy can ensure monies have a high chance of being repaid). Other complementary sources of microfinance include leasing schemes, microinsurance provision and remittances.

It is also relatively easy for conventional banks to disperse money to formal, industrial-scale forest businesses which can meet due diligence requirements and have a strong track record of operational and management capacity. Such businesses are usually led by experienced staff who can articulate their value proposition and risk-mitigation strategy clearly. The transaction costs of dealing with large professional companies are small. This means that investment in these industrial-scale businesses is often attractive, even with fairly low returns.

The finance gap has its roots in risk-return ratios and transaction costs – between those two extremes is a finance gap that relates to the difficult 'step change' that informal micro to small enterprises need to make in order to become a formal small- to medium-scale business (Elson, 2012). This often requires major jumps in leadership, organisational capacity, capitalisation and a formal relationship to the state. Many FFPO businesses are at that stage: too big for microcredit, but too small and with too little track record to be taken seriously by conventional banks. As Elson (2012) notes, such enterprises rarely have access to equipment leasing and insurance – which means they need a larger cash float to cover large orders, plus drawdown capital in the case of uninsured risks and capital loans for equipment that cannot be leased.

Microfinance rarely steps into this SME space and proactively fosters the organisation to build scale that will allow businesses to make gains in productive efficiency. Some even see microfinance as a block to SME development because it operates at a level that traps people in poverty rather than giving them the scale and technology to make innovations and productivity gains (Elson, 2012). Strong proponents assert instead that 'microcredit ignites the tiny engines of the rejected underclass of society. Once a large number of tiny engines start working, the stage can be set for bigger things. Microborrowers and microsavers can **be organised to own big enterprises**…' (Yunus, 1998 – emphasis is the author's). What is clear is that conventional finance mostly perceives the transaction costs and risks of investing in potential SMEs as too high to engage. So, enabling investment to organise FFPO businesses becomes the vital starting point in either case. Strategies for building up the bankability of these FFPO businesses include: (i) increasing organisation into larger-scale groups (eg cooperatives) to reduce transaction costs of dealing with FFPOs; (ii) improving business incubation services which improve FFPO creditworthiness and increase confidence in the returns to be had from investment; and (iii) finding ways to de-risk investments to those FFPO businesses, for example by arranging suitable loan appraisal processes, collateral arrangements or guarantee funds to reduce any lingering perceptions of risk. Once these measures are under consideration, an important entry point is to open up communication with banks that is mutually respectful, timely, accurate, and inspires confidence on both sides. This is what we mean by making FFPO businesses bankable – and that is what access to finance is all about.

Belize Mayan restaurant and craft business incubation © Duncan Macqueen, IIED



2 The reality of finance flows within FFPOs

2.1 Diversity of FFPO businesses

Dealing with multiple FFPO value chains requires an appetite for risk – Chapter 1 introduced the various types of FFPOs – some with a strong territorial and cultural focus in natural forests, and others with a much more commercial rationale based around planted trees, some even far from the forest itself.
For any of these groups, there are also many different products and services that can form the basis of forest enterprises (see Table 2). Each sub-sector, and the value chain divisions within it, offer different challenges for enterprise development.

Table 2. Typology of product and service sub-sectors that can form part of the portfolio of sustainable forest-related enterprises

Sub-sector	Secondary division	Example	Finance challenges to invest in FFPOs
1. Biomass energy	Fuelwood	Firewood branches and chopped logs	Low entry costs and informality in many countries mean inter-firm competition between FFPOs is intense, returns small, and risks high – though less so in advanced high-tech pellet gasification electricity plants.
	Charcoal	Rough charcoal or compacted briquettes	
	Wood pellets	Pellets	
	Wood chips	Chipped wood that may be dried	
2. Industrial round wood	Logs	Sawn logs that may or may not be debarked	High skill requirements and costs of certified sustainability for natural forest FFPOs reduce returns for timberland and processing investments but also reduce risk. Plantation processing investments more attractive, but patient capital needed to grow the resource base.
	Pulpwood	Sawn logs (including small logs and branches)	
3. Primary processed products	Sawn wood	Planks and posts	FFPO production efficiencies important in processing investments requiring significant capacity development – and chain of custody for certified sustainable sourcing adds costs.
	Veneer	Thin sheets of veneer	
	Pulp for paper	Pulp feedstock	
	Paper products	Paper and paper board	
4. Secondary processed products	Furniture and parts	Wooden office, kitchen or bedroom items	FFPO production efficiencies even more important and product uniformity requires careful sourcing and often large-scale efficiencies to move beyond domestic into international markets.
	Builder's joinery	Plywood, wood panels, shingles and shakes	
	Shaped wood	Unassembled parquet, strips, friezes, etc	
5. Timber construction	Engineered wood	Modern wooden architecture in homes and commercial property	Increasing wooden construction capabilities (in some contexts) introduce new opportunities.

Sub-sector	Secondary division	Example	Finance challenges to invest in FFPOs
6. Non-timber forest products	Food products	Fruits, nuts, seeds, including coffee and honey	Multitude of FFPO investment possibilities each with market and value chain peculiarities, product standards and legal issues – which require significant capacity development.
	Oils and resins	Cosmetic and medicinal oils, resins and gums	
	Fibre products	Thatch, wickerwork furniture, craft	
	Ornamental plants	Flowers, houseplants, urban amenity planting	
	Medicinal plants	Various internal and external remedies	
	Animal-derived products	Wildlife harvesting and captive breeding	
6. Services	Tourism	Parks, recreational sites	Markets for ecosystem services mediated by FFPOs are still unreliable and under development which increases risk – and exacting requirements for FFPO tourism services can take time to develop.
	Biodiversity conservation	Forest protection and management	
	Watershed protection	Riparian strips, cover and steep slopes etc	
	Climate regulation and REDD+ carbon sequestration	Sustainable management and restoration	
	Amenity, health and culture	Cultural practices, local amenity value	

Source: Adapted from Macqueen and de Marsh (2016)

Three points merit consideration here. First, this value chain diversity introduces a challenge for financing institutions, since there are risks in branching into business models with which one is not familiar or comfortable. In short, financing institutions working with FFPOs need to have an appetite for risk.

Second, it is not just diversity between FFPO business options that must be considered in relation to finance. Many FFPOs often also aspire to internal diversity of production – a basket of products that spreads and thereby reduces the risk of failure. While many successful FFPO business models start out in a particular 'anchor' value chain, they then diversify into various production lines. For example, the FFPO Cooperativa Mista da Flona Tapajós (COOMFLONA) in Brazil started with logs auctioned in patio areas, but once

successfully established, soon diversified into retailing finished furniture and craft, natural latex and latex products, medicinal plants and seeds (Macqueen *et al.*, 2015). What this means is that the initial 'anchor' investments that get an FFPO business up and running often feed into secondary investments. These are much lower risks, because the FFPO by that time has more of a business track record to draw on. Treating them as such, with better investment terms, would be one way of encouraging internal diversification to the benefit of both FFPO and lender. Investors with some appetite for risk, and who are also patient, might ultimately be rewarded for that patience.

For FFPOs, the fact that it is not all about money is disconcerting but important – third, investment options with the most attractive sociocultural and environmental profiles often have poor economic profiles (ie poor risk-return ratios and high transaction costs). For example, a strong environmental and sociocultural investment might be into an FFPO collecting *bacuri* fruit for juice processing in the Amazon natural forest. This might involve Indigenous people finding and collecting fruit from one of 2,500 different woody species scattered over off-road terrain and then processing it in several domestic areas with very limited infrastructure or technology. It is clearly more economically efficient to source the same production from one uniform corporate plantation and process the product in one industrial-scale factory with trained workers, but this has some environmental and sociocultural downsides. Investors in FFPOs would benefit from a deep understanding of the FFPO with whom they are working – which means presence in remote areas.

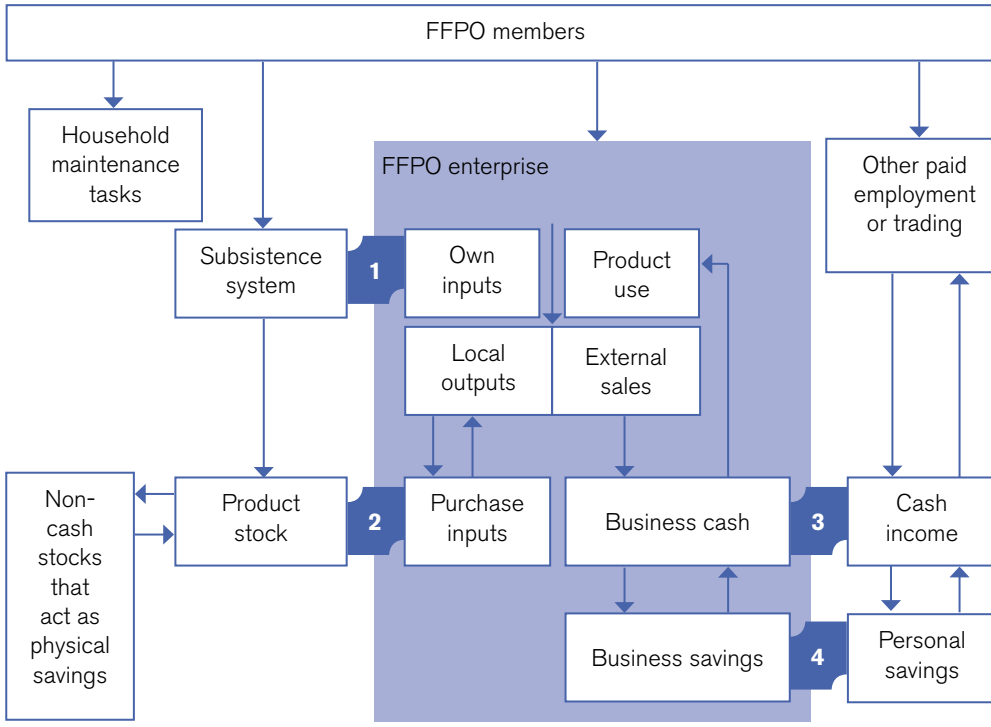
A related point is that strong FFPO organisation does not necessarily equate to a strong enterprise. The FFPO can have a strong organisation, governance and leadership, and the business side can still be rather weak. An FFPO may be strong and effective in social advocacy and environmental protection work, but that does not necessarily translate into business success. Entrepreneurial development needs attention that is different than that aimed at strengthening FFPOs in their governance and choice of priorities.

The issues concerning investor appetite for risk, preparedness to front-load investment risk, and willingness to trade off economic versus environmental and sociocultural benefits are both real and important. Because FFPOs tend to have some sort of democratic accountability, and their members tend to live in the environment where production takes place, they often deliberately forego some economic return in favour of environmental and sociocultural benefits. In the dance between FFPO and investor, finding a partner who understands the dance is a key issue – and one reason why cooperative and credit union finance may be better suited to rural landscapes.

2.2 Financial structure of FFPO businesses and links/leakage with members' finance

Understanding potential sources of financial leakage and how to address them – there are some general peculiarities of FFPO businesses that merit consideration here. Group businesses (like the blue square in Figure 2) have multiple members – each with some sort of financial stake in the FFPO and its decision-making. Members have their own subsistence production activities and cash income options, both within and outside the FFPO. This reality often introduces four potential areas of financial leakage – ie opportunities for the FFPO cash or product to be used by individual members and vice versa. These could become potential flashpoints between members and their FFPO business. Flashpoints regularly arise especially when members are not overly familiar with what a business is or how balances, profits and losses and cash flow need to be managed and accounted for. The start-point is to recognise that FFPO members are investors into a separate business entity – they put in land, labour and capital – but those contributions are then managed as a separate entity. The FFPO business itself, as a

Figure 2. Relationships between members and FFPO businesses' production and cash flows



NOTES: Indicates four potential sources of financial leakage or flashpoints: 1 = input leakage, 2 = output leakage, 3 = cash leakage, 4 = savings leakage.
Source: Adapted from Heney (2007)

separate entity, also becomes an investor, with its own savings and cash that can be used to upgrade productive capability. In the subsequent sections we illustrate four ways in which the assets of the FFPO business can sometimes leak out (ie be appropriated by) individual members.

Four key areas of financial leakage to look out for – setting up an FFPO business is all about setting up financial boundaries and systems. These can take time to establish. They may begin quite informally before eventually solidifying into well-managed systems. New information technology can help here, as discussed in Chapter 5. But without it, the four main sources of financial leakage or flashpoints are as follows.

A first flashpoint relates to founding contributions. In order to start a group business, individual members may agree to put land or some other form of non-cash input into the collective business (such as a building, a machine). Sometimes these contributions, and the financial and decision-making status they confer on the contributor, are not well agreed or recorded. This can quickly lead to financial conflict if the expectations of the founding members are not met as members try to take back what they believe to be theirs.

A second flashpoint relates to the management of stock. Not all of what the FFPO business produces (such as logs or NTFPs) may have a ready market. If there is not careful stock control, the risk is that FFPO members may start to make personal use of stock that really belongs to the business. This is particularly common in businesses where one powerful member may feel a discretionary right to make personal use or offer favours through gifts from an FFPO business to which he or she has contributed generously. Again, this sort of financial leakage can quickly become a source of financial conflict.

A third flashpoint relates to cash income generated by the business. Members will have their own cash income. They may confuse income generated by the business with profits that can be used by members. Since cash is often traded physically in remote areas, there is ample scope for leakage between members and the business if transactions are not carefully controlled and recorded. Failure to do so can result in financial conflict and the rapid demise of the FFPO business solvency.

A fourth flashpoint relates to business savings. When these are held physically, there is a strong temptation for members to borrow from those savings for personal use with the intention of paying back. While FFPO business may want to establish a loan fund for their members, this should be strictly and carefully accounted to avoid financial accusations between members and the loss of FFPO business savings.

In thinking how to improve access to finance for FFPO businesses – a very first step is to eliminate these sources of possible financial leakage. No investor will put their money into a business entity that leaks cash or product like a sieve. What this means in practice is that FFPO businesses need: (i) a thoroughly negotiated set of bylaws that

define membership rights, responsibilities, rewards and decision-making relationships; (ii) an accounting system that separates out business finance (the blue box in Figure 2) from members' finance – and is able at any point to offer a balance sheet, profit and loss account and cash flow projection (see below). Where at all possible, businesses should open and manage a bank account, and a properly supervised stock yard or premises. This can be a big step change for people only familiar with individual subsistence livelihoods – and may need discussion, training and regular review.

2.3 Structural issues within FFPOs that affect bankability

In the next section we will cover some steps that FFPOs can take to improve their 'bankability' – by which we mean being administratively credible, strategically astute, and organised enough to ensure profitability. An investor will put money into something that they have confidence will deliver a return at reasonable risk and transaction costs. This is true even for donors giving grants. For example, the Green Climate Fund (GCF) has basic fiduciary standards that grantees have to demonstrate including: clear and transparent organogram, reporting lines, and oversight bodies; strategic plan and monitoring to measure and report on its achievement; internal audit functions; financial information system in line with some sort of standards; disaggregated system for approval of payments; some form of external/independent evaluation; a set of control policies; some form of procurement rules and oversight; and a code of ethics. These are all good sensible things that any bankable business would need. We illustrate here some of the typical structural issues that affect FFPO bankability. These include issues to do with staff and to do with systems.

Staff competence is a critical issue for bankability – the ability to access finance, however technical it may seem at first glance, often comes down to trust between individuals. Staffing an FFPO business in such a way as to make the most of the people available to it is vital.

Leadership is a first key issue. A common failing is for FFPO businesses to install managers based on customary authority rather than business track record – and they are simply not equipped to do the job. To be bankable, it should be clear to both members within an FFPO business and to outside investors, exactly who is in charge – and how their track record justifies that responsibility. This includes not only the manager but also other key postholders, such as the treasurer or accountant, the input or supply coordinator, the production manager or the head of sales. Some of these posts may be rolled into a single person, but it is vital that everyone understands who is in charge of doing what. A business organogram and written job descriptions with clearly defined responsibilities can help. The business track record of the manager is a key element

of most loan assessment processes – but the clarity of business structure is also vital. Useful guides to the main positions needed in a business and the traits to look for in selecting them exist (eg Bonitatibus and Cook, 1995). For example, in Nepal, the Himalayan Biotrade Pvt Ltd company structure was carefully negotiated, as it involved not only four different community representatives of local handmade paper producers, but also four capital investors in a general assembly structure. Beneath them a business unit comprises a general manager, a technical and export manager, and an operational manager who in turn controls units in charge of purchasing, production, new product development, marketing, retail and customer relations. Being able to articulate such a structure was key to attracting the four main equity investors.

Membership rights, capacities and responsibilities are a second key issue. Many FFPOs fail even to keep lists of who is or is not a member – let alone what their rights and responsibilities are. To be bankable, it should be clear from some founding charter, articles of association, bylaws or their equivalent, exactly what is required to be a member of the FFPO, and what rights (including decision-making and financial and non-financial benefit sharing) come with that membership. It is not always necessary for an FFPO to become formally registered with the government, but formality certainly helps inspire confidence in investors – as it legally identifies named signatories and account holders. Investing in members' capacity development can greatly improve investor confidence. For example, in the Guatemalan Xate Mayaland Committee, which produces palm leaf decoration for the USA Easter market, members were given specific training in leaf selection, cutting, classification and packing – with clear membership rights and benefits linked to quality standards (Macqueen *et al*., 2015). This strengthens the profitability of the enterprise and customer satisfaction.

Systems to handle finance and risk are also vital for bankability – not everything can be predicted when running an FFPO business – but if the right systems are in place, an investor can have confidence that any issues will be noticed and addressed.

Financial management is a third key issue. Many FFPOs are let down by their failure to know what cash they have in hand, what they will need to put in before returns allow them to break even, and whether the returns will exceed the costs. They may be profitable, or may not, but no-one actually knows. Clearly, to be bankable, there must be both a person in charge of finance and a system of bookkeeping that avoids all of the possible financial leakage between members and the FFPO business described above. Preferably this bookkeeping should also relate to a bank account from which statements can back up the figures in the books and or computerised records. Many FFPOs identify early on that financial record keeping is key to success. For example, the Sunflower Weavers' Association in the Philippines identified poor record keeping as a threat to their group business, and so they assigned three staff to be trained to oversee expenses, deliveries, and sales respectively. Similarly, the Indonesian teak growers' cooperative, Koperasi

Wana Lestari Menorah (KWLM), felt that all staff should receive training in financial management, so as to ensure transparency and scrutiny of the cooperative's finance to improve trust within the FFPO (see Macqueen *et al*., 2015). Many FFPOs also assign a unit with the task of financial vigilance. For example, in the Ethiopian Aburo Forest Managing and Utilization Cooperative which has various product businesses, between the general assembly of all members and the executive committee of the Agubela frankincense business group, an independent audit committee was installed to ensure no financial irregularities occurred (Macqueen *et al*., 2015).

Measurable risk and returns are a final key issue. All FFPOs face a variety of threats to their profitable operation. These may have to do with insecure forest land tenure, over-dependence on a few buyers, lack of information on and high variability in market prices, poor security, lack of technical know-how, and low market awareness of what they have to offer. It is quite acceptable for an FFPO to face challenges, but it is reassuring to potential investors to know that FFPOs have considered these risks and have a strategy for dealing with them. A recent toolkit on risk self-assessment can help in this regard (Bolin and Macqueen, 2016). So for example, in using that toolkit, the Ecuadorian bamboo production business Associación Rio 7, identified their high dependence on an externally paid manager, weak organisational bylaws, and lack of administrative and financial management systems as key weaknesses, for which they then developed a twelve-month plan to address – giving confidence to their buyer, Allpabambu (Bolin and Macqueen, 2016).

Fishermen collecting their catch to process and smoke, near Kribi, Cameroon
© Duncan Macqueen, IIED

3 Demand-side steps for FFPOs to improve their access to finance

Acceptable risk-return ratios at bearable transaction costs – this is what FFPOs must aim to offer potential investors if they want access to finance. And the first and most important investor that must be considered is the FFPO itself. What can an FFPO do with its own money to increase the financial returns from its business (increase the sales price or reduce the sales cost), reduce any risks associated with its operations, and increase internal efficiency? If the FFPO needs further external support it can help to think of finance opportunities not as something it needs, but as something it can offer to a financial institution. FFPOs

are offering an opportunity for a financial institution to earn money – by agreeing a loan and then being paid back with interest. The offer needs to be sweet and compelling. In the following sections, we review some basic steps that FFPOs can take to sweeten the offer.

3.1 Developing saving and loan practices

Making fund management a priority – one thing that looks sweet to an investor is a group business that clearly knows how to manage money. Financial investment and management skills come with practice. So, a very useful first step is to build that practice within the FFPO business. Using members' own money (membership fees and other contributions), it is possible to set up business 'funds'. There is a considerable body of knowledge about how to set up what are commonly called village savings and loans associations (VSLAs), which are essentially groups who manage such funds (see Allen and Staehle, 2015). These funds may be managed in a variety of different ways – but the general principle is that they are capitalised or filled up through: (i) members purchasing shares – at least one every meeting (that entitles members to borrow from the fund, and at the year's end, receive a share of profit from the fund); (ii) service charges or interest paid by anyone who borrows money from the fund; and (iii) fines for anyone who has failed to honour their obligations (including failure to attend meetings etc). Shares in the fund can become a form of individual saving.

Once funds are set up they can then be used for: (i) member saving and loan facilities; and (ii) social grants – for emergency or distress situations. Loans can then be made to members in proportion with their shares in the fund, repaid over a period usually of not more than three months, at an interest rate agreed by the members. Social grants can be an agreed objective of a fund – but must be kept separate from a loan fund, and do not function as savings (ie they pay no interest). Financial management involves a chairperson, accountant or record keeper, and money counters. Regular meetings, record keeping, and independent money counting (financial vigilance) form the backbone of such schemes. Once such schemes are in place, members quickly become familiar with the concepts of separate funds, saving practices, loan practices, interest payments, financial transparency, joint investments, and profit.

VSLAs are now very widespread (with 11.5 million members worldwide) – and seen as one means of addressing the fact that more than 2 billion people are excluded from formal financial services – with a disproportionately high percentage of women, and mostly from rural areas (Allan *et al.*, 2016). Nevertheless, an important shortcoming of the VSLA model is that it confines access to finance to individuals within VSLA groups. There

is no provision for financing larger joint business investments of the group as a whole. Conceivably, investments in a joint business project could be made from a dedicated group fund in the same way that social grants are made – and could either be written off or paid back from the joint business. This would establish fund management at the heart of a new group business venture – a vital first step. Even though the VSLA model does not translate directly to financial management of an FFPO business, the principles and the financial management rigour that comes from establishing VSLA funds are certainly useful skillsets to develop.

Making the transition from physical to virtual records and transactions – although not always possible, in many countries there are growing options to open a formal bank account because of the increasing reach of service providers and mobile money services. Between 2011 and 2014, some 700 million adults gained such access (Demirguc-Kunt *et al*., 2015). While much of this increase comes from individual access to accounts, there has also been a rapid increase in the outreach to group accounts. Nearly two thirds of the products identified in a recent survey are now offered by retail banks (eg commercial banks, credit unions, rural banks, housing banks, cooperative banks and postal banks), demonstrating the growing interest and confidence of the formal financial sector in offering these savings (and credit) options (Allan *et al*., 2016). These have greatly improved the linkage of local VSLA physical record books and cash boxes to mobile banking services. For example, it is possible now to keep saving group records on smart phones using programmes such as Ledger Link that connect automatically to a participating bank. Similarly, saving group deposits of cash can be made to agents (eg in pharmacies, convenience stores and utility vendors where financial safety is more assured) who then confirm receipt using SMS (short message service) text messaging technology – helping push safer ways of saving into remote areas (Allan *et al*., 2016).

The great advantage of moving from physical records and cash-box savings to virtual records and transactions is that the latter are much more credibly recorded. Bank balances and records can then be offered as evidence of financial management capability to potential investors. But it is also possible for FFPOs to build up substantial funds from their own profits. In some countries, second-tier FFPOs (eg regional cooperative associations), such as Fedecovera in Guatemala, have even taken out a major shareholding in the country's most widespread rural bank (Banrural) and have made their own credit system available to members from a fund worth US$6.6 million, with guarantee options and favourable rates. They also run training in financial management through their accounting department for their member cooperatives (Macqueen and Bolin, 2018).

3.2 Establishing a transparent accounting system

Preparing and keeping financial records – once the practice of managing money gets underway, it is vital that someone is tasked with overseeing the maintenance of financial records. As noted in Section 2.3, having a financial management system in place with properly trained staff is an essential part of running an FFPO business. Any FFPO business, at any time, should be able to present a potential investor with:

- A balance sheet – showing where money came from and how it has been used;
- A profit and loss account – showing the ratio between income and costs; and
- A cash flow analysis – showing when money needs to be put into the business and when the business will break even and start to give out money.

Simple guidelines as to how to create these financial records are widely available even for audiences with little formal education (eg Bonitatibus and Cook, 1995).

Getting used to assessing investment returns – for a functional business, each of these types of financial records can be used to show actual past records – or to generate future projections. The ability to prepare future projections is very helpful when thinking through whether to put money into (invest in) some new technology or way of doing business. Will the upfront money for a particular new investment pay back highly – or might it be better to use that money differently?

There are many ways of assessing whether it is necessary to invest in a particular area of a business. Commonly used methods include:

- Urgency method – immediate investment required to fix complete disruption of production;
- Payback period – the cost of the investment divided by the increase in annual cash inflow derived from that investment;
- Return on investment (ROI) – the amount of return on an investment over a particular time period (ie the gain on investment minus the cost of investment) divided by the cost of that investment;
- Benefit-cost ratio (BCR) – the sum of discounted future cash inflows divided by the sum of discounted future cash outflows;
- Net present value (NPV) – the sum of the discounted future cash flows (both inflows and outflows) minus the original investment;

- Internal rate of return (IRR) – the maximum rate of interest that could be charged on investment capital such that the project's NPV equals zero; and
- Terminal value method – the value of a project's expected cash flow beyond the explicit forecast horizon.

Perhaps the simplest method for making non-urgent decisions is to estimate the return on investment (ROI), a performance measure that is used to evaluate the efficiency of putting money into one option versus a number of possible alternative options. When comparing different returns from different options over different numbers of years, you have to divide by the number of years to give an average annual ROI. Investors will look carefully at calculations of ROI to see whether the money an FFPO thinks it needs from the investor will actually give a strong return on investment (ie more profit), taking into account the interest payments on the loan.

FFPOs might also want to analyse the profitability of a projected investment using the net present value (NPV) approach as this is generally considered to be the best method of assessing investments. NPV introduces the notion that money now is worth more than money in the future (because money now could be invested elsewhere to get a return). So future money has to be 'discounted' by a certain multiplier. NPV can be used to calculate, for different investments, the future discounted cash inflows and outflows (minus the costs of each different investment) to assess which investments give positive outcomes – and which give the best (financial) outcomes. In simple terms, it is only worth making an investment if the NPV is greater than one. These calculations are relatively complex and require both training and practice to perform.

3.3 Planning around value chains

Knowing the value chain from forest to customer – from the forest to the end customer there are many steps. At each step, something is done to add value. So, we call the entire sequence of steps a value chain. For example, a tree log in a remote forest area is dragged to a clearing where it can be loaded onto trucks. That log is then transported to a sawmill. At the sawmill, the log is cut into shaped wood planks and beams. From the sawmill, the shaped wood from the log may then be transported to an urban furniture factory. At the factory, those pieces are assembled into furniture. The furniture may then be bought by a retailer who aggregates many different pieces of furniture for sale to customers. At each of these steps, the value of the wood increases. Some steps are much more profitable than others (ie have a higher value addition to cost ratio than other steps). And there are many businesses that could do the same thing – enhancing competition.

To be successful, a business must create a distinctive value proposition that meets the needs of a chosen set of customers. It must decide which of the steps in that value chain it can manage, and how it can offer something distinctive. But it must also consider the whole value chain – and whether the people managing the other steps are thinking the same way about that distinction. This is not just about producing something more cheaply than the competition, but about design, quality, sales, delivery and support for the product or service. A business gains competitive advantage from how it configures its part in the value chain, and how it partners with other business to make the whole chain work (Kaplinsky and Morris, 2000). Value chain analysis (VCA) is basically the process of breaking down the multiple steps that run from the forest to the end customers into distinct segments in order to study them – to study costs and any sources of distinction (Shank and Govindarajan, 1992). This can be done both for steps controlled by the business (intrafirm steps) and for the steps managed by business partners. For example, it is always good practice to assess whether alternative business partners might offer better value – benchmarking what your partners offer versus what other firms might offer, conducting strategic 'what-if' discussions about changing partners, and monitoring ways of cutting costs more generally. At the core of such value chain analysis is the question 'In what can we invest that will maximise our ROI or NPV?'. But there are also other important questions relating to how the various actors in the chain relate to each other, through which mechanisms, and facing which incentives/disincentives to collaborate (see Neven, 2014 and Vizcaíno *et al*., 2018).

Looking beyond financial to social and environmental returns – increasingly, it is recognised that there is (financial) value to be had by organising the production process to improve social and environmental benefits for those working in the business – a notion sometimes called 'shared value' (Porter and Kramer, 2011). This can be challenging for corporations where increases to shareholder returns are the prime consideration. In more democratic forms of FFPO businesses where voting members own the business (such as cooperatives, not-for-profit companies, associations), the alignment of economic, social and environmental objectives can be integral to the cohesion and strength of the group. Indeed, these types of FFPOs always have to balance the economic stability of the business and the broader needs and wellbeing of the member-owners – such as access to markets for producers, or employment for workers (Reynolds, 2013). And it is precisely because cooperatives intimately know the needs of their members and are prepared to tighten profits to continue meeting the needs and wellbeing of their members, that they perform particularly well in times of economic crisis (Birchall and Ketilson, 2009). But just because more cooperative types of businesses can better maintain basic member needs, such as employment in times of crisis (Burdin and Dean, 2009; Cheney *et al*., 2014), this does not ultimately shield them from market failures or poor financial decisions (eg the takeover of the Cooperative Bank in Britain).

Yet, as FFPOs look to the future, it is clear that business cannot go on as usual. There has to be a closer alignment, indeed a complete synergy, between the generation of financial profit and social and environmental sustainability. There has to be a triple win (Raworth, 2017). A finite environment ultimately makes that inevitable. Recent financial collapses and growing social and environmental concerns have generated an upsurge in various types of 'social investment'. Social investment broadly speaking includes the financial capital (money), social capital (networks), human capital (skills and labour), natural capital (resources), and physical capital (infrastructure) necessary to empower positive social and environmental change (Nicholls and Pharoah, 2008). FFPOs can speak strongly to this agenda as organisations that address social and environmental challenges.

3.4 Preparing a business plan and investment proposal

Articulating finance needs within sharp business plans – most business plans are written to raise finance (Barrow *et al*., 2001). They may also have other management functions (helping people within the business understand aims, strategies and roles) but presenting an investment proposal to a source of finance is their most common function. In order to do that well, therefore, it is vital that FFPOs know what financiers might be looking for. The quick answer is that 'a clear and compelling case on financial considerations' is the most important bit (see Table 3), especially if you want a bank loan (see Mason and Stark, 2004). For equity investors, including angel investors and other more social types of investor, there may be other elements of the business plan that also require attention, as the table shows. Forest-sector investments may weight some of those factors differently, but there is no reason why the overall picture would look substantially different to what is summarised below.

FFPOs should bear the emphases in mind when preparing their business plans, for which many useful guides exist (eg Sahlman, 1997). Even when dealing with a social investor, it is in the FFPO's interests to ensure that those elements of the business plan are sound.

Table 3. What investors look for in business plans (depth of blue indicates the degree to which investors weight this)

What investors consider	What they are looking for	Loan finance	Equity finance
Entrepreneur/ management team	The personality, enthusiasm and track record of the entrepreneur and the range of skills/functions of the management team		
Strategy	The overall concept and strategy of the business and how realistic and professional it is in context		
Operations	The practicalities of how the business is organised to produce and deliver the product or service (ie issues associated with the production process)		
Product or service	The nature of the product/service concept and its distinctiveness, quality, performance standard, aesthetic appeal, function and flexibility		
Market	The potential and growth of the market, demonstrated market need, level and nature of competition and barriers to entry		
Financial considerations	Including: (i) the financial structure (eg costs and pricing, revenue projections); (ii) the worth of business (equity); and (iii) the likely return on investment and repayment or exit possibilities		
Investor fit	Including the investor's: (i) familiarity with the market, technology, etc of the investment opportunity; and (ii) preferences to be in that sector		
Business plan package	The combined business plan package as a living document, more than the sum of its parts – in such a way as to give confidence		
Other	Any other issues particular investors may be concerned about		

Source: Adapted from Mason and Stark (2004)

3.5 Mapping and engaging potential investors

Consider carefully the need for, and risks associated with, finance – the most secure way to finance any FFPO venture is to use FFPO savings. In the literature on access to finance this avenue is not sufficiently stressed. Savings will have to be made – whether in advance, or in order to repay loans (plus the additional interest that will be charged). It is important to weigh the risks of accepting finance from an external source. However good the likely ROI is, problems can emerge within the broader country context, the market, the value chain, or the business itself. Failure to repay can result in legal consequences – including loss of business assets, and the interest charged on any loan may soon build into a substantial sum. FFPOs need to make a careful assessment of possible sources of risk when weighing up investment decisions. Risk self-assessment can in any case be good annual practice in order to prioritise areas of the business that need particular attention in the future (see Bolin *et al.*, 2016).

Once the need for finance has been carefully assessed, it is worth FFPOs taking a careful look at the 'investment universe' that surrounds them. There are many potential ways to source additional money, from many different sorts of people such as:

- Family members/group members;
- Savings groups/credit unions;
- Traders/buyers of your product;
- NGOs;
- Microfinance agencies;
- Moneylenders;
- Bank managers (loans); and
- Investors (equity).

Each of these different sources will offer different quantities, at different rates of interest, and with different sets of stipulations (eg due diligence procedures).

A final point is that any discussion regarding ROI with a potential investor involves cultivating a relationship with that investor. Investors vary significantly, from those who are interested only in the hard financials to those who are amenable to broader considerations (eg social investors). For example, research of comparable businesses in Italy has shown that members of cooperative banks (eg local credit unions) enjoy easier access to credit, and better terms, irrespective of the length of their track record in business (Angelini *et al.*, 1998). Careful research of this sort can help identify the type of financial investors that FFPO businesses should ideally orient towards.

Workers process timber at a community sawmill in Java, Indonesia © Duncan Macqueen, IIED

4 Supply-side steps for financial institutions to take FFPO opportunities

Better outreach and more acceptable terms and conditions – this is what financial institutions must aim to offer potential FFPOs if they want to improve their access to finance. There is ample literature on the use of alternative delivery channels to reach specific underserved client categories with financial instruments such as overall rural populations, youth and women (see for example: Pagura, 2004; IFC, 2014; Abrams *et al*., 2016; Rita, 2018). These give detail on a range of innovative new loan products, savings products, insurance and other services – including remittances.

Many financial institutions are realising that with US$116 billion per year – the potential amount of immediate savings of the 2 billion currently unbanked people (Allan *et al.*, 2016) – there is opportunity to be had in reaching such groups. What is a challenge however, is not so much about reaching down into the microfinance sector, or engaging with VSLAs, but in making available sums in the US$5–50,000 range to FFPO businesses in the early phases of their development (before owner equity and track record are fully developed). This requires an appetite for risk. But with global challenges in view – around climate change, biodiversity loss, food insecurity and migration to name but a few – we would stress the much higher risk of not investing in this sector. It also requires an understanding of opportunity. The current annual production value of smallholder forest and farm producers approaches US$1.3 trillion globally and the sustainability of that production and its productivity and efficient value addition will become increasingly important for meetings the world's future needs. There is much that financial investors can do to grow that opportunity, offering financing in ways that accommodates local needs. In the following sections, we review some basic steps that financial institutions can take to enter this space.

4.1 Helping to improve financial literacy

Clarifying what finance is available on what terms – large-scale corporates invariably have trained financial staff who are familiar with presenting financial data within loan or equity proposals to financial institutions. Microenterprises involving single individuals or households do not need to present such data in order to obtain microcredit. It is in the missing middle of FFPO businesses (see Figure 1) that the finance gap occurs. Here the loans or equity are too big to pass off without financial due diligence on the part of the financial institution. But the staff of FFPO businesses are often unfamiliar with the financial calculations and vocabulary necessary to present their case. Pande *et al.* (2012) show how lack of access to finance traps people in poverty and prevents economic growth.

Lack of access to finance is at least partly linked to poor financial literacy among FFPO business managers (Cole *et al.*, 2009). Analysis of SME's financial skill needs indicates that FFPO business managers might need to know how to price goods and services; analyse and forecast cash flows; benchmark business performance against competitors; set up contracts; do business online; and set up and run employee pension funds (Lee and McGuiggan, 2008). Not all areas affect access to finance – but many do (Foley, 2018). Indeed, FFPOs' lack of financial literacy may even mean that they do not really know what financial products they want (Miller *et al.*, 2009). The lack of familiarity with financial products translates into entrepreneurs not using them (Beck *et al.*, 2007). The situation can be particularly acute in developing countries (Nkundabanyanga *et al.*, 2014).

Broadening, blending and bundling the range of financial instruments – Elson (2012) provides comprehensive guidance on how to build the relationship that might lead to access to finance. Indeed, a good start is to clarify the type of finance on offer. Evidence suggests that simplifying the language associated with financial products and using simple rules of thumb can lead to significant improvements in financial practices of small businesses (Drexler *et al*., 2014). The main finance options used by small businesses in Europe include the following sources: members' savings, bank account or credit card overdrafts, leasing, bank loans, trade credit, and retained earnings (Gvetadze *et al*., 2018). For a full discussion of finance options see OECD (2015).

Table 4. Types of finance that an FFPO might wish to access

Finance type	Terms	Implications for FFPO business
Member or family/friends' savings	Unlimited duration, with no repayment or interest required	• Restricted by FFPO savings capacity – often limited • No loss of control – risk associated with social status • Low fundraising costs unless system becomes formal • High flexibility and high replicability but low volume
Grants	Short-term duration with no repayment or interest required	• Restricted by pre-defined donor interests • No loss of control – low risk • High fundraising costs in securing project • Low flexibility or capacity to replicate after first grant
Bank or credit card overdrafts	Medium-term duration (but with high interest)	• Restricted by availability in certain countries • No loss of control – but interest rates can be high • Low fundraising costs • High flexibility and high replicability if repaid
Loans (debt capital)	Medium-term (3–7 years), with repayment and interest payments	• Restricted by FFPO securable assets – collateral and low-risk business model • No loss of control – high risk in the event of default • High preparatory costs to meet investment criteria including need for credit history • High flexibility and high replicability if repaid

Finance type	Terms	Implications for FFPO business
Trade credit (factoring/ purchase orders/ warehouse receipts)	Short-term (1–2 years) asset-based lending with repayment and interest	• Restricted by availability of providers (which advance cash on invoice/receipts and then are repaid when the client settles the bill) • No loss of control – high risk in event of default • Medium fundraising costs – useful for cash flow • High flexibility and high replicability if repaid
Leasing	Medium-term (3–7 years) asset-based lending with annual payments and return of item	• Restricted to specific capital items of equipment • No loss of control – but risk of breakage • Low fundraising costs – but capital provider can recover asset in case of default • Low flexibility but high capacity to replicate in future
Equity capital	Unlimited duration without repayment but with annual dividend and shared ownership	• Restricted by FFPO-investor fit and palatability of risk-return ratio to investor • Dilution of control in favour of the investor • Support forthcoming from investor who now has vested interest in profitability • Flexible but may alter business culture
Crowdfunding	Varies – including grants, rewards, pre-selling, lending or equity	• Restricted by online capabilities and available 'crowds' of potential supporters • Occasionally dilutes control • High fundraising costs but high flexibility
Bonds (or blended debt-equity mezzanine finance)	Long term (5–15 years) with repayment on completion (with interest built into that final payment)	• Restricted by high transaction costs of designing and issuing bonds (likely to be beyond most FFPOs) • Investors in those bonds have first call on business in case of default • High fundraising costs • High flexibility as repayment date matched to future revenue flows
Insurance	Short-term duration (eg 1 year) with annual payment	• Restricted by available products • No loss of control – reduces costs in the event of unforeseen risks or failures • Low fundraising costs • Low flexibility but high replicability if available

Of these types, loans, equity, trade finance (including leasing) and insurance are the most common ways of dealing with external financial institutions. Trade finance and insurance require minimal financial requirements (eg in terms of formal credit history). However, while an insurance broker might be willing to insure whatever an FFPO wanted, a lack of requirements only means that the risk profile will be higher, and the premium most likely too costly for any FFPO (see Kloeppinger-Todd and Sharma, 2010). If the business has significant assets and track record, loans tend to be easier to secure; but if not, equity may be the easier investment route. Financiers may want to take advantage of offers from public or official development assistance (ODA) of guarantees or concessional finance (money offered with below-market rate interest) so as to be able to offer something that attracts greater interest from potential FFPO clients.

External investors invariably want to scrutinise any investment idea, and the business behind it, before responding to an application for loans or equity – and they look at certain things in considerably more detail than others. For the investor, what matter most is the financial structure of the business (the logic of the value proposition), the worth of the business (what the business stands to lose if the investment fails – sometimes called 'skin in the game'), and the ROI (which will affect confidence that a loan can be repaid, or that an equity investor can exit profitably). But there are also other elements of a business plan that an investor may scrutinise, depending on what sort of investor they are (see Table 3).

Apart from expanding the range of financial instruments and taking advantage of opportunities for blending finance, bundling (linking together) different products is also fundamental (Zimmerman *et al*., 2016). This allows financial institutions to introduce new products (with which clients might be unfamiliar) that would otherwise have a low uptake, by coupling them with established products that are already quite popular. Furthermore, they often allow for information and risk mitigation (for example by coupling and sharing data, as is common for insurance with credit). It is also fundamental to bundle financial and non-financial services; that is, bundle them together with complementary extension services, business skills training, and financial literacy, as a common enabling practice (see Kloeppinger-Todd and Sharma, 2010).

Helping FFPO managers understand what financial institutions want – FFPO businesses often lack clarity over what financial institutions look for when assessing whether to offer finance. They may be blind to the issues perceived as risks by investors (Miller *et al*., 2018), including:

- Endogenous or internal factors inside the control of the FFPO:
  - production and price risks;
  - structural (infrastructure) risks;
  - financial risks; and
  - institutional and management risks.

- Exogenous or external factors outside the control of the FFPO:
  - political and country risks;
  - currency risks; and
  - disaster risks.

For some forms of finance, the requirements are relatively simple (eg trade finance, leasing, insurance). But for more substantial sums, the financial institution might need a good business plan and investment proposal and may be blind to what the investor is concerned about and what approach it will take to finance. For example, bank lending approaches can be grouped into four categories (Angilella and Mazzu, 2015): financial statement lending (using balance sheet data); asset-based lending (based on provision of collateral); credit-scoring models (using hard finance data); and relationships lending (based largely on qualitative assessments). Equity investors are more varied. Because of this it can be very helpful if the investor provides clear guidance about the sort of issues that it will need to scrutinise in order to make an investment decision (eg a loan or equity proposal guide).

Increasingly, investors are turning to multi-criteria decision aids (MCDAs) in investment appraisals to ensure that, alongside financial criteria, various other qualitative variables are also taken into account (Zopounidis and Doumpos, 2002). These techniques are still in their infancy with some authors suggesting banks find lending easier when based on hard financial criteria (Beck *et al*., 2011), while others suggest that banks find lending easier if based on relational lending using non-financial information (Moro and Fink, 2013). Either way, for more innovative FFPO businesses with little track record, some form of qualitative non-financial information is needed alongside hard financial data (Czarnitzki and Hottenrott, 2011). Investors can greatly help FFPO businesses by laying out the variables they will use to assess investment proposals, and what weighting they have. This could take the form of an investment scorecard (see Figure 3).

An investment scorecard of this sort might be accompanied by explanatory text to lay out what exactly is expected in each of these areas – and what source of evidence from the FFPO business will be used to make the assessment (such as legal documents, business plan with sections on market analysis, financial projections for the investment, risk analysis or organisational structure). The clearer this can be made to the FFPO business, the more likely it is that the financial institution will receive investment proposals that are acceptable. Indeed, in Chapter 5 we consider how intermediaries can help by conducting loan appraisals to screen and help improve loan proposals from FFPOs before they reach the financial institution.

Figure 3. Example of an investment scorecard to guide FFPO businesses on the factors and rough weighting that will be considered during investment appraisal

Source: Duncan Macqueen (2018)

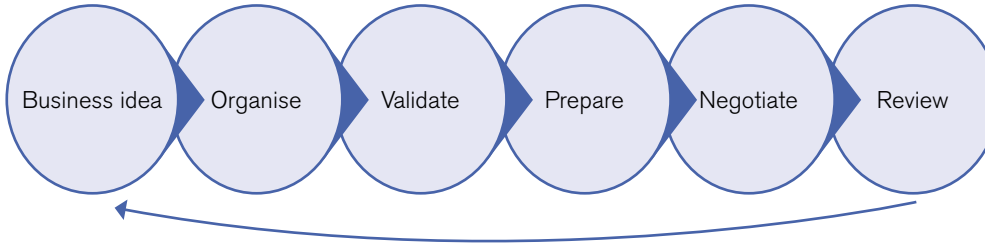
4.2 Improving financial relationships with FFPOs

Approaching FFPO business investments as a process – equally important is that both investor and investee see the investment possibility as a process that will have several points of interaction. This can avoid the unfortunate outcome that an FFPO business comes unprepared to the investor and ruins a one-off pitch – or that an investor impatiently rejects an unprepared FFPO business that might in the long run deliver strong financial returns. When dealing with FFPO businesses, this 'process approach' is

especially important, as there is often a need to nurture such investment clients through a process. This process generally involves the following multiple stages for the FFPO business (see Elson, 2012 and Figure 4):

- Business idea (clarifying the business idea and commitment of FFPO members);
- Organisation (formalising FFPO leadership, organisational structure and registration);
- Validation (conducting FFPO pilot sales, evaluating and making improvements);
- Preparation (developing an FFPO business plan, funding model design, and preparing an investment scorecard);
- Negotiation (conducting due diligence and agreeing how best to achieve return on capital for investor while helping the FFPO business to achieve its aims and mitigate risk); and
- Performance review (monitoring progress, resolving disputes and measuring impact).

Figure 4. The investment process that ideally involves a relationship between financial institutions and FFPO



Source: Adapted from Elson (2012)

For banks adopting a more 'relationships lending' approach (Moro and Fink, 2013) – and for equity investors – this investment process takes on particular importance. Both types of investor want to know potential clients in more detail. Throughout the process, but especially in the negotiation phase, it is important that both parties work hard to achieve the following approach (World Bank, 2009):

- Mutual respect – neither side comes from an internal position of superiority;
- Trust – both sides start from a position of trust in the other party's word;
- Self-determination – neither side feels compelled to negotiate;
- Communication – both sides make efforts to share necessary information;
- Common expectations – both sides work towards a shared vision;
- Mutually agreed outcomes and incentives – both sides benefit from the deal;
- Verifiable obligations – what is agreed in terms of action can be easily checked; and
- Legal recognition – what is agreed can be enforced in law.

4.3 Rethinking scales and terms of investment

Re-visioning investment to start small in the short term but think big in the long term – part of the challenge in arranging a mutually beneficial dance between financial institutions and FFPO businesses is that the ideal scales of investment have different starting points. For financial institutions, bigger investments reduce transaction costs, and short timeframes reduce risk. But for FFPO businesses (and indeed for SMEs in general), investment needs are often relatively small in nature – especially at the start of a group business, when trust is being developed and the capacity to manage a large complex business is not yet developed. For example, in the Democratic Republic of the Congo (DRC), artisanal logging associations with whom IIED partners were working, were estimating start-up costs of between US$10–20,000. In Belize, where IIED was working with Mayan community business groups to develop sustainable forest business, start-up costs ranged from US$19–28,000 for agroforestry and ecotourism.

These first FFPO business investments are typically oriented towards capital equipment and infrastructure (eg new changing rooms and stores for a river tubing tour in Belize) as patterns of paid labour may not yet have developed or been formalised within new groups. Despite this asymmetry in scale, financial institutions might consider the unusual property of FFPOs – that they are expandable through increasing membership. Once financial management systems are established, the scale of production, and need for investment can expand rapidly. So, although initial investments may incur high transaction costs for the scale of return, that may only be a short-term reality. Building a trusting relationship at that stage can pay dividends later. This is particularly the case when investing in second-tier umbrella cooperatives that form to aggregate, process and market the product of multiple member cooperatives. Once a core value chain is established, the FFPO business can quickly diversify into other value chains linked to members' production (see Macqueen *et al.,* 2015). The potential to scale up investments across landscapes is one reason for adopting a more patient and relational approach to dealing with FFPO businesses (Savenije *et al.,* 2017).

Reconsidering repayment periods – another area of asymmetry between financial institutions and FFPOs can be that of debt repayment periods (Hou-Jones *et al.,* 2018). For example, sometimes FFPO finance is required to help establish trees through plantation. Yet even using the fastest species of tropical acacia, albizzia or eucalyptus in the most favourable environments, harvesting ages rarely fall below seven years. So, in these cases, longer timeframes are also needed. Negotiating changes to the repayment period can unleash a wave of profitable financing. For example, in Vietnam, the Vietnam Farmers Union (VNFU) structured negotiations with government credit agencies to consider the emerging need for the financing of acacia and magnolia timber plantations.

With more than 10 million farmer members within Vietnam, the adjustments in repayment period to accommodate tree growers were quickly made (see FAO, 2018). In countries such as Mozambique, government credit programmes have extended repayment periods for FFPOs to five to ten years in order to encourage tree-based businesses (Hou-Jones *et al.*, 2018). Adjustments of this sort, including the introduction of grace periods, can be make or break for an FFPO's access to credit.

Clearly there are financing mechanisms that are more suited to longer timeframes, such as bonds or new hybrid mixes of debt and equity – that are sometimes packaged as 'mezzanine finance' (OECD, 2015). Mezzanine finance usually takes the form of a private investment partnership with 'buy-and-hold' timeframes of seven to ten years, in which there are elements of: (i) subordinated debt (a loan in which senior secured creditors are paid before any interest); (ii) a share of the firm's profits; and (iii) an equity portion which will increase with any rise in the value of the investee company. The problem of these longer duration, more advanced investment options is that they require sophisticated general financial partners to administer – and investees with a demonstrable track record of profit or at least no loss, and with a strong business plan for the future. Neither of these conditions is frequent in developing countries.

Rethinking approaches to risk and interest rates especially for women – a third important area of asymmetry between the interests of financial institutions and FFPOs is that of interest rates. Across a large number of countries, the spread in the average interest rates charged to SMEs and to large firms has widened following the financial crisis. In 2008, the median interest rate charged to SMEs was 15.5 per cent higher than that charged to large firms, but by 2016 the percentage had more than doubled to 32.7 per cent (OECD, 2018).

Perception of risk, especially following the financial crisis, is a major constraint to SME financing. The situation is particularly acute for women-led enterprises (see Box 1) – where a body of evidence shows that women wishing to pursue business also have constrained access to finance, not because of their business performance, but because sociocultural norms around prescribing what it means to be a 'good entrepreneur' advantages male entrepreneurs (Brusch *et. al.*, 2013; Malmström *et al.*, 2017; Leitch *et al.,* 2018). Financial institutions need to revisit some of their perceptions over risk in relation to FFPO businesses in general, and to women's FFPO businesses in particular – not least because they may be missing profitable investment opportunities.

To some extent, however, the interest rates charged by financial institutions are reflective of the real concerns over FFPO business risk profiles. What can then be helpful is for financial institutions to promote and support credit information infrastructure projects. Better credit risk assessments, such as credit bureaus, registries or data warehouses, can be set up to give better detail (granularity) to loan decisions. This can reduce the perceived riskiness for investors of financing FFPO businesses (and lower interest rates

Box 1. Case study of innovations in Nepal to improve access to finance for women

(Based on a longer case study report produced by Thapa *et al*., 2018)

In Nepal, people living in the remote Terai hills and mountains have difficulty in accessing financial services. Many of their businesses consequently rely on local moneylenders, friends, and relatives to arrange credit, but the availability and terms are frequently not adequate. Almost all Nepali farming is integrated with some farm animals, some trees, and some land under crop (cereal, fruits or vegetables). Small producers are mostly associated with some form of FFPO – such as the 22,266 community forestry user groups (CFUG) that involve over 2.9 million households and manage over 2.23 million hectares of forest (in 2018).

Women have no recognised assets and are unhelpfully dependent on men for collateral; they also lack recognition and capacity support as entrepreneurs. Yet despite these challenges, data on a broader spectrum of 44,258 FFPOs involving 951,200 households show that about 56 per cent are women, including 10,281 women-only FFPOs.

There are at least six categories of microcredit schemes in Nepal such as the Grameen model, small farmers' cooperative model (SFCL), financial intermediary NGO model (FINGO), savings and credit cooperatives (SACCOS), and project-based microfinance – including production credit for rural women and the Microcredit Project for Women (MCPW). But there are few initiatives focused on the larger credit needs of FFPO businesses. In response, the government has instigated new programmes for FFPO business clients such as the 2003 Poverty Alleviation Fund (PAF), the 2003 Micro, Cottage and Small Industry Development Fund, the 2008 Youth and Small Entrepreneur Self-Employment Fund (YSEF) and the 2015 Economic Rehabilitation Fund (ERF). In recognition of the challenges faced by women, in 2015, the Women's Entrepreneurship Development Fund (WEDF) was established under the Ministry of Industry (MOI).

WEDF offers up to US$4,250 to women's FFPO businesses, with a priority on sustainable resource use and co-investment by the local FFPO. Four stakeholder groups are involved: (i) the women FFPO entrepreneurs themselves; (ii) umbrella organisations that endorse loan applications, such as the Federation of Women Entrepreneurs Association of Nepal (FWEAN) or the Federation of Nepal Cottage and Small Industries (FNCSI); (iii) the Department of Small and Cottage Industry (DSCI) that receives and analyses the application against criteria; and (iv) the Rastriya Banijya Bank, which then issues the loan as the channelling organisation on behalf of the Nepal Rastra Bank (NRB), the central bank of Nepal. By 2018,

WEDF had covered 60 districts and lent US$1.5 million at 6 per cent interest (but with a discount of 1 per cent for repayment on time) aided by the institutional reach of DSCI. Criteria for evaluation include: viability of proposal; resource use plans; agricultural priority product; entrepreneurial training received; minority status (various categories); and likely employment generation. But there are still supervisory challenges in staff capacity to evaluate loan proposals rather than focus on meeting lending targets.

While too early for definitive comment, successes to date are seen in: the empowerment of women's businesses; solid repayment rates (better than men); the reduction of moneylenders' rates to compete with the new scheme; rehabilitation of many businesses affected by natural disasters; the creation of an entrepreneurial learning environment (because of the criteria on trainings received); and the increasing uptake in microfinance training as a result.

Challenges remain, including the need for: education on loan repayment (understanding that this is not a grant, avoiding duplicate payments); financial literacy training; business development training on how to evolve and diversify business to avoid over-competition in easy-entry markets; training on market research and technology research and development; and, above all, how to strengthen and expand their organisations to achieve scale and cut out unhelpful intermediaries.

for SMEs). For example, in 2001, Japan established a Credit Risk Database (CRD) led by the Japanese Ministry of Economy, Trade and Industry and the Small and Medium Enterprise Agency (see OECD, 2018). The CRD provides data, statistical information and credit-risk scoring for registered SMEs. This improves SMEs' access to the banking sector and also enables the banking sector to 'securitise' claims (ie bundle and sell on pooled SME debt to other investors – which is a way of refinancing and improving the liquidity of banks so as to enable further SME lending). While there are advantages to SMEs and banks from securitisation, the mechanisms require sophisticated financial institutions, which are often lacking in developing country contexts. Simpler credit bureaus or registries can, however, be set up in ways that improve the financial literacy of SMEs and decrease risk for banks – which are important steps in the right direction.

Innovating in collateral for asset-based lending – a major barrier for FFPO businesses, especially in the early phases of their development, is the lack of assets that are easy to collateralise (ie be held by the bank as potential cash in the event that the recipient defaults on a loan). This is a major obstacle for conventional bank loans, which remain one of the major sources of finance for SMEs worldwide. But innovations in asset-based lending can be developed in each of the four main sources of collateral or asset

classes. These four types of collateral are those usually secured in asset-based lending before allowing access to debt finance:

- Orders/accounts receivable;
- Stock inventory;
- Equipment; and
- Real estate.

For each category of collateral or asset, there are risks for the financial institution associated with possibly declining value of the asset; difficulty in converting the asset into cash (liquidity) – especially for equipment; and legal costs of recovering the assets in the event of default. An efficient and sophisticated legal system is essential to make asset-based lending work (Beck and Demirguc-Kunt, 2006).

Examples of innovation in collateral for asset-based lending are given below. It should be noted that there is an increasing trend towards asset-based lending both in OECD and non-OECD countries (OECD, 2015). Mortgage lending, factoring and leasing are particularly important. But there are some major gaps in the forest sector, such as the very small extent to which standing trees can form part of accepted collateral. The options include:

- Factoring – where a financial institution would lend an FFPO business money based on accounts receivable so that the FFPO business has short-term cash flow in order to meet the demands from those clients – and then repays the loan once the client settles the bill.
- Purchase order finance – where a financial institution would lend an FFPO business money (usually a smaller amount than in factoring) based on purchase orders from clients – which involves higher risks because the FFPO business might have less of a track record with clients, and the clients may be a relatively unknown quantity.
- Warehouse receipts – where a financial institution would lend an FFPO business money based on stock inventory deposited in a warehouse, and unsold until the loan is repaid.
- Standing stock – where a financial institution would lend an FFPO business money based on the standing stock of crop – such as on-farm trees, which can be verified by some sort of tree-grower union.
- Leasing – where an equipment supplier would lend an FFPO equipment based on records of cash flow that generate confidence that the lending FFPO will have the capacity to meet regular payments until the equipment is returned.
- Mortgage lending – where a financial institution would lend an FFPO business money based on the real estate that it can credibly claim to own (which underlines the need for secure tenure arrangements).

A forest honey business incubation in Indonesia © Duncan Macqueen, IIED

5 Intermediaries – making the bridge between FFPOs, investors and policy makers

At times it can seem that the gulf between what FFPOs offer/accept and what financial institutions can offer is broad. This is primarily a function of the challenges that face FFPO businesses. But second, it is also a function of the lack of enabling policymaking on the part of government to reduce red tape constraints to access credit and open accounts for smallholders and FFPOs, which are usually very similar in developing contexts (age limitations, gender discriminations, need of a guarantor, etc). Third, it

is due to a lack of enabling investment that intermediaries direct towards four enabling preconditions (see Section 1.2): secure commercial tenure; appropriate technical extension and support; fair market access and business support; and scale efficiencies through strong organisation. The following section describes how intermediaries can source and direct such policy work and enabling investment through two main channels: national public forest funds and official development assistance, which in forestry is increasingly synonymous with climate funds (eg Eliasch, 2008).

5.1 Making enabling investments to improve pipeline of bankable FFPO businesses

Providing blended support for FFPOs in National Forest Funds – nationally, forest usually fall under the Ministries of Agriculture, Rural Development or the Environment. Information on domestic public and private finance is generally poor and much harder to come by than for international official development assistance (ODA) and foreign direct investment (FDI) (CPF, 2012). Despite this, it is likely that national public and private finance makes up the 'overwhelming majority of forest finance' (UNFF, 2016). In many countries (70 in 2014 according to Matta, 2015) public finances are channelled through dedicated financing mechanisms known as National Forest Funds (NFFs). These vary hugely and can be capitalised by earmarked taxes, regular sectoral or extra-sectoral revenue streams and even ODA (see Box 2). They can also perform a wide variety of functions from grant-based enabling investments relating to forestry and performance-based payments for ecosystem services (PES), to co-financing arrangements to leverage private investment into forestry (Matta, 2015). Their capacity to blend different sources of finance and flexibility in how the finance is used gives them strategic importance – both in creating an enabling environment for FFPO business (eg securing tenure, improving technical and business capacity, and catalysing producer organisations), and in improving the pipeline of bankable FFPO businesses (eg by strengthening FFPO business organisations, providing forest business incubation services, and de-risking investment for conventional financial institutions).

Despite their strategic importance, many NFFs, or equivalent sectoral funding streams, do not live up to their potential. In addition to political battles to secure money within such funds (the complexity of which is increasing with climate finance that often has strong forest modalities), there are often problems to do with poorly defined goals and weak links to national forest policies (Matta, 2015). In part this may be because the authorities governing such funds may have sectoral expertise (eg in forest and farming), but lack understanding of how structured investments can make FFPO businesses bankable (to conventional debt and equity finance institutions). Nor are they aware of the dynamic possibilities of trade credit that builds on asset-based finance (eg secure forest land tenure and inventory services that would allow the use of standing trees as collateral).

Box 2. Case study of the Probosque government incentive programme, Guatemala

(Based on a longer case study report produced by DeLeon, 2018)

Guatemala's population is 17 million. Between 2008 and 2015, this grew by 18.26 per cent, requiring an increasing provision of ecosystem services, such as water for people and crops, fertile soils for food production, energy for cooking, and construction material for houses. Local forest and farm producers are sensitive to these growing demands. Many have begun to work together in local cooperatives that sustainably grow specific crops, or in regional umbrella cooperatives – such as Fedecovera, which provides processing and marketing services to 43 local cooperatives and 33 associations (140,000 people in total), or the National Alliance of Community Forestry Organisations (the Alianza) that unites ten regional umbrella cooperatives for policy advocacy.

Such organisations recognise that supporting livelihoods built on sustainable ecosystem services requires long-term financing. So, for example, Fedecovera helps member cooperatives access credit from banks such as Banrural, has its own credit programme financed by accumulated savings, and links members to incentive programmes. The latter are important, because conventional loan finance mechanisms find forest restoration challenging because of the lengthy timeframe before trees mature and can be harvested to repay the loan.

For this reason, Guatemala's National Institute of Forests (INAB) has established and manages two main financing initiatives: Probosque (renamed from the Forestry Incentive Programme or PINFOR after its renewal in 2015); and the Incentive Programme for Small-scale Possessors of Forest or Agro-Forest Land (PINPEP). Both are payment-for-results schemes – the former with a 30-year funding commitment.

Probosque encourages tree planting and management for anyone with a title to forest land and a forest restoration plan, but there are limits on tree species and scale of planting. INAB specialists administer the system from forest plan to certified execution. Once an applicant has been accepted by INAB, they receive a monetary subsidy that lasts six years at a predetermined rate per hectare (reaching up to US$1,200 per ha). Exactly 1 per cent of the total budget of the Guatemalan state is allocated to Probosque. Advocacy by the Alianza has ensured that incentives must be distributed equally between small producers (under 15 ha) and large producers (over 15 ha). Of this, 80 per cent must be allocated to reforestation projects and 20 per cent to natural regeneration projects.

To date, Probosque has invested US$262 million, involving new tree planting and natural regeneration on 139,915 hectares during the 20 years of the programme (7,000 ha per year on average). Also, more than 243,652 ha have been incorporated into natural forest management (12,182 ha per year on average) in its two types of modes: production and protection. The number of beneficiaries exceeds 87,000.

PINPEP meets the needs of those not covered by Probosque. Also run by INAB, it is a payment for ecosystem services such as management of forest plantations, natural forest management, and agroforestry systems. PINPEP has invested US$85 million over its lifetime, resulting in 91,600 ha (9,160 ha per year) of plantation management, agroforestry systems, and natural forest management (protection and production). The number of beneficiaries exceeds 53,000.

Both schemes require recipients to open bank accounts with Banrural or the National Mortgage Credit Institute. Once INAB approves plans and certified progress against plans, money is deposited in the recipient's accounts. These incentive flows are also recognised by Banrural as collateral against which other loans may be raised.

Other linked finance schemes are also piggy-backing on the growing forest cover. For example, a group of cooperatives known as MICOOPE have developed a 'My Forestry Loan' product that grants loans to forest businesses, using their management plan inventory of standing trees as collateral.

Even in developed countries such as the UK, familiarity with the types of partnership that could leverage more private-sector finance into forestry are not widely understood (Forestry Commission, 2017).

A judicious NFF mix of enabling investment grants, accessible loans (perhaps linked to clients within a forest business incubation programme) and guarantees for particular types of FFPO business that are in line with policy objectives, could make a decisive different to access to finance.

Promoting gender equality and resilience in FFPO investment mechanisms – as noted in Section 4.3, women are often particularly disadvantaged in terms of access to finance due to discriminatory attitudes, their higher need for local financial infrastructure, and cultural patterns of ownership that rob them of collateral (ADB, 2015). In many countries and programmes, data that is disaggregated by gender is not even collected at local, regional or national levels. Nevertheless, collective action by women (involving more than 50 per cent women in a group) is known to result in gender transformative impacts and can be both facilitated and monitored using indicators of representation

and recognition of rights and resource distribution at household, institution and national levels (see Bolin, 2018). For this reason – in pursuing gender equality that leaves no one behind (in line with the SDGs) – it has proven useful to strengthen peer-to-peer women's business mentorship, incubation and networking services (Bolin, 2018), such as the apex-level organisation known as the Government of Mayangna Women which represents all 13,525 Mayangna women, including many all-women's business groups from the nine Mayangna territories in eastern Nicaragua (see FAO, 2018). More pertinent to this study, it has also proved useful to establish dedicated women's business funds – such as the Women's Entrepreneurship Development Fund (WEDF), established by the district government office in response to demand from women's business groups within community forestry user groups affiliated to the Federation of Community Forestry Users (FECOFUN) in Nepal (FAO, 2018).

Forest and farm producers regularly face climate shocks and market shocks, for which there are different gender dimensions. There is a need to design innovative financial instruments which provide a degree of insurance or safeguard against unforeseen events such as heatwaves, excessive rainfall or droughts, or commodity price downturns. NFFs or other sectoral funding streams can be used both to build diversity and resilience into FFPO systems (such as grants for research and development (R&D) to diversify forest and farm production options, improve land hydrology or fertility) and to provide insurance against catastrophic events (eg rainfall events). But there is also a growing number of other programmes and financing mechanisms focusing on gender-responsive climate change resilience in National Adaptation Programmes of Action (NAPAs) and Local Adaptation Programmes of Action (LAPAs), such as those in Nepal (CFAS, 2016). A challenge is to integrate within one holistic system the necessary financial mechanisms that FFPO businesses might need (eg grants during market development alongside concessional loans as markets mature). It may be necessary to employ different financing mechanisms – such as the complementary work of the Central Bank of Bangladesh (that provides public credit to intermediary financial institutions for low carbon resilient development), and the Infrastructure Development Company Limited (IDCOL – that channels donor finance through intermediary institutions as grants) in Bangladesh (Rai *et al*., 2015).

Working to integrate public sectoral, development and climate finance – achieving integration between the objectives of central bank credit, sectoral funds such as NFFs, and programmatic development or climate funding mechanisms is a challenge. Internationally, forests fall under a range of international agreements and agencies, including the United Nations Forum on Forests (UNFF), the United Nations Framework Convention on Climate Change (UNFCCC), the Sustainable Development Goals (SDGs), the Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification (UNCCD), and the New York Declaration on Forests (NYDF).

The four global objectives on forests of the UNFF broadly sum up shared international commitments to: (1) reverse the loss of forest cover worldwide; (2) enhance forest-based economic, social and environmental benefits; (3) increase the area of sustainably managed forests (and the proportion of product coming from them); and (4) mobilise new sources of finance for sustainable forest management (Oakes *et al.*, 2012). These are negotiated by and feed into national-level policies and programmes. National and international finance can and should be blended behind these shared objectives.

As noted in Section 1.3, there are currently results-based climate commitments of US$4.1 billion for REDD+ (Climate Focus, 2017). Bilateral public finance makes up most of this, led in order of value by commitments from Norway, the United States, Germany (all exceeding US$700 million) – with slightly smaller multilateral public finance commitments through mechanisms which, in order of value, include the Forest Carbon Partnership Facility's Readiness Fund and Carbon Fund (US$800 million combined), the Forest Investment Program (US$600 million), the Biocarbon Fund and the United Nations REDD Programme (UN-REDD) (both less than US$400 million) (Norman and Nakhooda, 2014). To some extent, these are now being outpaced by commitments to the Green Climate Fund (GCF), which as of May 2018 had raised US$10.3 billion equivalent in pledges from 43 state governments. How these flows of finance complement one another, and how they reach FFPOs in order to shape the behaviour of their businesses, are both critical concerns. It should be noted that the credit ratings of major financial institutions (such as multilateral development banks) do not necessarily equate to the degree to which they can reach FFPOs. Indeed, excessive due diligence requirements administered in major urban centres cannot possibly reach FFPOs without partnership with other much more flexible and dispersed trade-related financial intermediaries (see Macqueen *et al.*, 2018) – it's a question of connectivity.

Two main areas require significant further action in relation to better linking FFPOs to development and climate finance. First, on the supply side, it will be important that climate funds adjust their design features to better target local action. At present, the design of the funds incentivise large-scale investments. To turn this around in favour of FFPOs will require:

- Aligning investment criteria for the fund with the needs of FFPO projects. For example, at present criteria tend to give more weight to measures of economic efficiency rather than measures of socioeconomic development.
- Expanding the risk appetite of the funds for investment in decentralised forestry projects. This would mean raising the share of non-performing loans (NPLs) and grants within climate funds.

- Adjusting the results framework of the funds to emphasise the higher importance of socioeconomic development outcomes (in line with adjusted criteria mentioned above).
- Channelling funds directly through appropriate agencies such as special purpose vehicles (eg second-tier FFPOs) that can absorb risks while channelling funds to local first-tier producer organisations.
- Earmarking climate funds for local forestry projects.

Second, on the demand side, local FFPOs need to be capacitated to access finance and manage it well. This would mean investment in capacity support:

- Helping them prioritise and develop bankable projects.
- Developing capacity to better manage and deliver projects.
- Investing in strengthening second-tier FFPOs such as umbrella cooperatives that can provide forest business incubation support to local first-tier FFPOs so as to help them manage risks and support access to finance.

5.2 Connecting FFPO businesses to financial institutions

Making the most of digital connectivity – The growing reach of conventional banks through digital technology has been highlighted in Section 3.1. (see Allan *et al.,* 2016), but also the challenges that FFPO business (rather than VSLA groups) might encounter (see Box 3). Intermediary organisations, especially NGOs, can support FFPO business by researching the main finance providers at local level and connecting them. Estimates suggest that there are 200 million small businesses in emerging economies that lack access to savings and credit (Osafo-Kwaako *et al.,* 2018) and FFPO business often number among them. The financial landscape in which they operate usually includes institutions that are formal (eg banks), semi-formal (eg credit unions, NGOs and microfinance institutions), and informal (eg VSLAs, moneylenders, pawnbrokers, shopkeepers etc).

In most developing countries, the formal financial sector only serves 5–20 per cent of the population (Rabobank, 2005). As a result, semi-formal financial institutions continue to play a pivotal role that needs to be engaged. But a major issue is the sustainability of many of these semi-formal alternatives (their revenue often does not cover the cost of delivering the services) – and the partial services they can offer to those without banking licences.

Box 3. Case study of digital banking innovations in Kenya that help FFPOs

(Based on a longer case study report produced by Mbora *et al.*, 2018)

Across rural Kenya, 75 per cent of the population is dependent on forest and farm production, making up 25 per cent of GDP (gross domestic product). Limited market and technical knowledge and inputs, together with inaccessible financing have given rise to low levels of value-addition investments – trapping some smallholders at subsistence levels. However, some are forming FFPOs, improving scale efficiencies in production, market knowledge and negotiating power, and advancing their businesses.

Eight such FFPOs were interviewed about their main challenges – including the South Coast Forest Owners' Association (SCOFOA), the Molo Tumaini Smallholders' Group and the Laikipia Tree and Fruit Smallholder Producers' Association. Together they produce a wide range of products, including timber, poles, charcoal briquettes, fruit, agricultural crops, fish, poultry and other products such as baskets. All eight FFPOs indicated access to finance as a key challenge – because of perceptions that smallholder groups are high risk compared with big farms.

But that situation is changing due to digital banking innovations within Kenya's 42 banks, 13 microfinance institutions, 17 money remittance providers, and three credit reference bureaus. Notable successes include M-Pesa, a mobile phone-based money transfer service. This is now being bundled with M-Shwari, which is a loans and savings product. Additionally, FarmDrive uses mobile phone and digital transaction data to provide a very useful credit-scoring application. Arifu is similarly gaining traction as a market information-management and dissemination platform. And WeFarm is a peer-to-peer knowledge-sharing platform. The innovations are designed for individuals and groups, for example M-Pesa and M-Shwari being used by all eight FFPOs surveyed. Financial services delivered digitally can address several barriers women face such as accessibility, convenience, privacy and security – and so contribute to gender empowerment.

M-Shwari was rated as the most effective digital innovation by all eight groups. All eight FFPOs had opened formal bank accounts for the groups, but stated that M-Shwari was the most commonly used digital savings and loans service at the individual level – to improve the production linked to group business. Formal loans to the groups were limited, with some grants issued by, for example FFF and WeEffect. M-Shwari is designed as a bank account with swift lending facilities accessible on a mobile phone. Its rapid uptake stems from: ease of self-registration through the mobile phone; instant access to (limited value) loans; low cost of operation; no

account management fee; use of widely available mobile networks; and bundling with the M-Pesa mobile money transfer and payment system. Loans are credited into M-Pesa accounts for ease of withdrawal, payment or transfer to other M-Pesa users. The lending facility also uses the mobile phone and M-Shwari account usage to develop a credit score.

While M-Shwari has achieved considerable reach (14 million members by late 2016), with 80 per cent of members improving access to credit, the short repayment period (30 days) and low borrowing limits (US$500 compared to the average demand of US$5,000 for the FFPOs), present a challenge. Similarly, it might be useful to bundle the service with extension service applications such as WeFarm or Arifu. M-Shwari is also yet to facilitate the opening of a group account which extends financing from US$500–5,000 and above and repayments from 30 days to 1–10 years, but is conducting research into these options.

The major lesson is that despite the many digital financial innovations, there is still a huge gap for financial services that suit FFPO enterprises rather than individual smallholders. Information products such as Arifu are moving into this space and need to be followed by financial products that evolve into something that helps FFPO businesses pull smallholder members out of poverty.

Keeping abreast of fintech developments – another area worth exploring in the next few years is the growing opportunities afforded by new financial technology (fintech). For example, blockchain is making it possible to transfer money into remote areas without the use of intermediaries, develop distributed ledger systems that can record transactions across multiple sites rather than in one centralised banking institution, and execute contracts between buyer and seller remotely (Walnycki and Green, in prep). Big data – the use of digital information recorded in electronic transactions to develop predictive algorithms – can accelerate access to, and monitor engagement with, finance (Gabor and Brooks, 2016). For example, information on smallholder enterprises, phone top-ups, local weather and so on can be used in systems, such as the Kenyan FarmDrive platform, to provide credit scoring for farmers that improves their access to credit. There are ways in which global satellite geographical information system (GIS) data may be used to develop payment systems for FFPO management of forest landscapes – through payments for REDD+ or for forest landscape restoration (FLR). The same big data systems can also help to detect illegalities in timber supply chains and improve the reliability of digital forest product marketplaces, such as BVRio Responsible Timber Exchange (Instituto BVRio, 2016).

In addition to such bespoke systems, widespread social media applications, such as Facebook, are routinely being used to market business products from remote areas to adjacent urban markets – and it is even possible to organise digital delivery systems, for example by linking to moped courier services such as Ojek in Indonesia. New networks, such as WeFarm in Kenya, allow more than 800,000 farmers to share information, ideas and advice via SMS and online. The great benefit of fintech is that it provides attractive opportunities for youth to become involved in the development of FFPO businesses.

Supporting FFPO-investor linking events – as noted above, there are various new ways in which FFPOs and investors or buyers can interact over the internet to improve sales or even access finance. Matchmaking platforms such as the Access and eXchange for Impact Investment and Sustainability (AXiiS) are beginning to link investors with potential FFPOs. Similarly, fund management platforms such as Disberse can distribute funds from development donor agencies to humanitarian agencies without costly intermediaries (Walnycki and Green, in prep). But there are also more conventional ways in which intermediaries can support FFPO-investor links.

The Finance Alliance for Sustainable Trade (FAST), for example, has since 2010 been pioneering FAST Financial Fairs which pair eligible small and medium enterprises with prospective lenders in one-on-one meetings. The majority of the lenders are socially oriented financial institutions. These face-to-face meetings are often backed by internet-based information platforms (such as the FAST Financial Marketplace) that can give background information on prospective lenders, and indeed on the advice from financial services on how best to make a pitch for finance. But while setting up internet-based matching and advisory services may be beyond some local intermediaries, the practice of meetings at which prospective FFPO business and investors meet can more easily be contemplated.

5.3 De-risking FFPO businesses

With digital technology, many formal banks are reaching into the informal VSLA market (see Allan *et al*., 2016). Ideally, it is also useful to identify and link to rural credit unions and cooperatives who have a vision to restructure with the aid of digital technology into a rural finance network – to create a scale and branch density that can serve all customers, ensuring greater sustainability. Support institutions for such restructuring include the Rabobank Foundation (Rabobank, 2005).

Improving information sharing on credit applicants – any financial institution that has to evaluate a request for credit can either collect information directly (a time-consuming and costly process) or source this information from others who have engaged the applicant (Brown *et al*., 2008). The latter can occur voluntarily via some form of loan appraisal partnership or private credit bureau, or be enforced by public credit registries.

Information sharing helps banks to avoid making mistakes (Pagano and Jappelli, 1993) and it can encourage borrowers to repay loans for fear of blemishing credit records (Padilla and Pagano, 2000) and dissuade them from borrowing from several banks (Bennardo *et al*., 2007). Especially where credit applicants, such as FFPO businesses, may have little financial track record, partnerships with intermediaries which improve information and help them register with existing or potentially new credit bureaus or registries can greatly improve their access to finance.

In countries where digital rural networks are more advanced, it can be possible to extend the reach of credit. For example, in China, the Alibaba Group is the biggest e-business service provider with, for example, an online selling platform (Taobao), a consumer-to-consumer trading platform (Tmall), an e-pay platform (Alipay), a logistics business (RiRiShun) and a cloud service provider (Aliyun). Since 60 per cent of total listings in Taobao were trading agricultural products, the group decided to open a rural micro-loan provider (Ant micro-loan) – which uses client data from trading on their various platforms to assess loan applications. Loan applications of between US$3,125 and US$156,250 are assessed in one to three days using client data and without the need for any pledge or guarantee – and then must be repaid over 12 months (Hernandez, 2017). The information on clients is itself sufficient to establish a reliable guide as to which clients can receive credit with low risk of default. Such information systems will be beyond most other developing countries. But one way to improve access to finance is to embrace the same general principles: building FFPO financial literacy; extending FFPO track records of financial interactions with formal credit institutions; and ensuring that those interactions are captured in any credit bureaus or registries.

Innovating to develop collateral that includes standing trees – collateral refers to anything that can be committed by borrowers to lenders as security for debt payment, and this has been discussed in Section 4.3. Ideally it must be something that has 'liquidity' or can readily be converted into cash to settle an unpaid debt – hence the focus of asset-based lending on collateral to do with orders/accounts receivable, stock inventory, equipment and real estate. But FFPOs, especially those growing trees, have a living standing stock of woody biomass or fruit trees that has innate liquid (ie fruit can be picked, or trees can be cut and sold for cash). Poor producers and their emergent FFPO business rarely have much in the way of real estate or equipment that might serve as collateral. Moreover, they might want to risk their land, homes or livelihoods as collateral for a loan. But the trees on their land can be cut and handed over and then regrown – such is the beauty of nature.

If financial institutions were to accept standing trees as collateral that would make a decisive difference to a producer's access to finance – strengthening economic capital. Registration of trees would have to involve some form of social accountability within the FFPO group to ensure that members actually had the trees on-farm – strengthening

social capital. A working system would also incentivise tree planting and management which would have strong carbon sequestration benefits – strengthening environmental capital. Normal repayment would then leave the producer with a valuable tree asset, with liquidation fairly flexible over time that could be sold to diversify income in the future – strengthening resilience. The use of trees as capital is therefore a considerable win-win-win situation and is emerging as an option in separate places. In Bolivia, the Centre for Research and Regional Development (CIDRE) developed one of its many credit lines for forestry (both in natural forests or plantation forests – both of which have substantial upfront costs). It did this through the Integrated System of Forest Assets (SIAF) which accepted trees as collateral but was frozen because the government forest authority (ABT) did not have the staffing to conduct appraisals on forest assets – which were required for the loans (FAO, 2016).

In Thailand, the problem of asset registration is handled by some 300,000 forest and farm producers who voluntarily collect information such as on planted tree numbers, species, size and value which is collated at the 3,000 Treebank offices at village and provincial levels before being uploaded to a TreeVal database recording economic, ecological and carbon value. Currently loans based on these assets are impeded by the lack of legal recognition, but this may be set to change upon gazette of the Community Tree Bank Bill. At that point, tree values will be reflected using a tree asset card (TAC) which can serve to make payments for trees' environmental services or to access tree asset-backed loans (Soanes, 2018).

Working with guarantee funds – although approximately 2,250 credit guarantee systems now exist across 100 countries, they are relatively recent phenomena. The first was set up in Japan in 1937; Europe and the Americas followed in the 1960s and 1970s, and the practice spread to developing countries in the 1960s and 1970s (Miller, 2013). Guarantees aim to offset a situation in which borrowers with equal probability of default have differing probabilities of obtaining credit because some have insufficient capital (Potts *et al*., 2011). Two types of guarantor exist – those with better information than the lender on the probability of repayment and who can then step in to help the borrower to get credit (eg mutual guarantee institutions or MGIs – see Columba *et al.,* 2009), and those for whom a particular element of economic, social or environmental return from certain types of borrowers provides justification for them taking on a higher level of risk.

Guarantees establish confidence between lenders and borrowers that might not have been possible in their absence – by guaranteeing to the lender a certain percentage of the borrower's repayment in the event of a default. Such guarantees may be offered for particular borrowers, particular loans between lender and borrower, or portfolios of loans based on agreed parameters (see Box 4). Research suggests that guarantees of between 60–80 per cent of loans give the highest ratio of financial coverage to default rate. Lower rates reduce interest from the lender. Higher rates reduce proper borrower screening by

Box 4. Case study of a Mexican guarantee scheme that helps FFPO access to finance

(Based on a longer case study report produced by Murillo and Arce, 2018)

In Mexico, 47.5 per cent of land is covered in forest and 60 per cent of this is in the hands of 15,000 communities which have developed some 1,600–2,000 forest businesses. The FAO suggests forest is being lost at a rate of 91,700 hectares per year as alternative land uses are proving more profitable than forests, with significant subsidies, and it is difficult to find markets or finance for forest businesses. Financial institutions generally perceive FFPO businesses to be high risk and in rural areas there are also high financial transaction costs; lack of acceptable guarantees; lack of infrastructure; and lack of business and technical skills within FFPOs.

To address those issues, in 1972, the Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA) set up and resourced the Fondo Especial de Asistencia Técnica y Garantía para Créditos Agropecuarios (FEGA). This is a trust fund and guarantee scheme belonging to a second-tier development bank, Fideicomisos Instituidos en Relación con la Agricultura (FIRA). The guarantee scheme covers up to 90 per cent of the guaranteed loans extended by financial intermediaries on its behalf (and is free to loan recipients). The bank FIRA also provides (or links to SAGARPA to provide) training, technical assistance and technology-transfer support to the agriculture, livestock, fishing and forest sectors (alongside almost 80 per cent of all development financing for the rural sector in Mexico).

In 2008, FIRA was still struggling to reach smaller FFPOs and so also rolled out the Fondo Nacional de Garantías de los Sectores Agropecuario, Forestal, Pesquero y Rural (FONAGA). The main purpose of its guarantee scheme is to increase the availability of credit for low and middle-income producers in those sectors as a first-loss fund that limits the risk assumed by FEGA. The average size of the loans guaranteed is about US$42,105 and most of them relate to working capital.

Since its creation in 2008 until June 2018, FONAGA has given US$13.3 billion in loan guarantees, an average of US$79,000 per year, with 75 per cent of the referred loans granted to low-income producers. But of these, only US$136 million were granted to forestry and forest management in the same period to 46 producers on average per year.

FIRA extends FONAGA through intermediaries such as 24 banks, 43 financial societies, 7 credit unions, 2 deposit warehouses and 2 cooperatives. These agree to

basic guidelines on business development (client selection) analysis and approval, implementation and disbursement, and follow-up. The guarantee establishes that the client must put up 10 per cent of the loan as a liquid guarantee (used first upon default), with FONAGA acting as a second line of default up to 20 per cent of long-term loans or smaller percentages of shorter-term loans. Subsidies and incentives are also available to cover up to 80 per cent of the costs of technical assistance. Since its creation, FONAGA has introduced new categories of guarantees to encourage specific sectors (eg FONAGA Verde in 2010 to foster investment for the production of renewable energy and biofuels).

FIRA has invested heavily in human capital – which is viewed as the most important reason for the success of FEGA/FONAGA. Staff have a deep understanding of the rural sector and are spread across 5 regional offices, 31 state residencies and 88 local agencies with close relationships with its many partner financial institutions.

General success factors for the FEGA/FONAGA scheme have been documented as the restricted targeting for small FFPOs with loans of up to US$52,000; priority to particular regions; support to a range of production activities to diversify risk; use of a software platform that can be shared with financial intermediaries; and providing incentives for technical support and collaboration between firms. The challenge is how best to strengthen client institutions to take up products, and reach remote areas, communicate products better, and develop products to stimulate new value chains.

the lender (Green, 2003). Over time, the role of the guarantor might be withdrawn once the borrower has cemented the relationship of trust with the lender.

It has been noted that clear and precise goals for any guarantee scheme, against which performance is regularly monitored, are key prerequisites for such schemes to have a good chance of truly achieving desired improvements of the guarantor (Honohan, 2010). For example, one example relevant to forest and farm landscapes is among the oldest and largest guarantee funds in the world – Fideicomisos Instituidos en Relación con la Agricultura (FIRA). It was established in Mexico in 1945 to manage loans (54 per cent), loans with guarantees (37 per cent), and guarantees without loans (9 per cent). But it has more specific integrated funds with particular aims that account for its success.

One of FIRA's funds, the Fondo Especial de Asistencia Técnica y Garantía para Créditos Agropecuarios (FEGA), focuses on agricultural, forestry and livestock loans to upgrade installations, machinery and equipment. Within that fund, from 2008 to 2010, a special guarantee fund known as the Fondo Nacional de Garantías de los Sectores Agropecuario, Forestal, Pesquero y Rural (FONAGA), guaranteed approximately US$4.2 billion in loans

– of which US$3.4 billion (82.5 per cent) were targeted at low-income small producers. Careful risk-management methods are applied which shape the proportion of particular loans guaranteed (mostly in the 40–50 per cent range but occasionally in the 80–90 per cent range – Miller, 2013). FEGA/FONAGA work through financial intermediaries and cover their costs through a service fee to intermediaries based on their operational costs and the degree of credit risk calculated over the seven-year preceding period. They also have partnerships in place with government agencies, mutual guarantee funds (who take the first level of risk exposure), and they also encourage financial intermediaries to manage risk, for example through agricultural insurance. Finding and working with guarantee funds such as these is one way in which intermediaries can support FFPO businesses' access to finance. But there are challenges to finding guarantee funds that might be amenable to international financing – most are set up only to work nationally (Potts *et al.*, 2011)

Linking FFPOs with technical assistance facilities (TAFs) – while not common practice in the forest finance sector, TAFs are usually embedded in socially oriented investment funds (see Miller *et al.*, 2018). They provide technical assistance not just to investee companies (such as agro-forestry FFPO businesses), but also to financial institutions that wish to provide finance to them. They also engage a plethora of other stakeholders in value chains that could have a beneficial effect on the TAF's target. In this way, investment fund managers see the merit in providing a wide range of technical support to their investee companies (Smith and Schramm, 2017a; 2017b) to help them grow and ultimately achieve an expected return on investment. The costs of this support are usually covered by fund management fees and sometimes additionally by consulting fees. However, development impact-focused funds, such as support from within TAFs, is often not enough to respond to the technical assistance needs from their investees. Hence, often technical assistance from third parties is also supported by grant funds. Grant-funded technical assistance goes beyond conventional support by fund managers and is used to enhance financial returns and the development and social impact of the investment.

Spreading awareness of insurance options to counter climate or economic shocks – perceptions of high risk in FFPO businesses are partly a function of the significant climatic and market-related variabilities in forest landscapes. Resultant credit constraints can prevent FFPOs from investing in higher productivity options, value-added processing, or diversification. Insurance that underwrites loans to FFPOs can potentially help overcome these constraints (Meyer *et al.*, 2017). Although insurance may unlock credit, it is not a magic solution to the credit problem. Financial service providers can often see the benefits of offering insurance; being able to reduce costly risk assessment procedures, reduce interest rates and thereby attract more loan clients, compete with clients, and generate insurance-fee income. But there are also costs and challenges for funding agents to explain the product to smallholders, and handle complaints when

clients experience loss but do not qualify for pay outs. We wish to underline how hard it is to implement effective insurance schemes (conventional and parametric) in developing contexts in general (and especially in agro-forestry settings). It is not just about getting the smallholders and FFPOs on board, but actually convincing the financial institutions and insurance brokers to engage in the sector. A careful summary of all the constraints that have to be overcome is provided by USAID (2006) and Carter *et al.* (2014).

In developing countries, conventional insurance is being substituted by parametric solutions, in general (Mahul and Stutley, 2010). Area-yield insurance has been quite popular in low and lower-middle-income countries, together with index-based weather insurance. The vast majority of parametric insurance schemes in developing countries that are effective today are a result of public-private collaboration. The private sector today has a very hard time in making them sustainable (Carter *et al.,* 2014). Research suggests that this is because better-off producers may already have strategies in place, such as income diversification to offset risks. Poorer producers who might be in greater need of insurance are credit constrained and so cannot afford the pre-season payments (Binswanger-Mkhize, 2012). Nevertheless, some insurance schemes have been designed specifically to reach marginalised groups – such as the Self-Employed Women's Association (SEWA) rainfall insurance in 14 states of India designed for women (with great emphasis on clarity and affordability). The degree of uptake of such schemes needs to be monitored, and options for insurance communicated clearly by intermediaries to FFPO businesses.

5.4 Helping to redesign financial rules and instruments or promote trade credit

Policy platform work involving financial institutions – one of the advantages of working with FFPOs rather than individual producers is that they have strength in numbers – which increases political and financial bargaining power. There is general advocacy that is needed to improve the investment climate within a country. For example, governments should have policy initiatives and compliance of laws to protect the interest of investors, while maintaining an alignment with country development priorities (Miller *et al.*, 2018). They could also usefully reduce red tape associated with accessing credit and opening accounts. By facilitating dialogue between FFPOs and financial service providers or government finance agencies, it can be possible to adjust the terms and conditions of credit so as better to reflect the needs of the producer. For example, in Vietnam the Vietnam Farmers Union (VNFU), with support from FFF, set up local, district, regional and national policy platforms to hear the constraints of forest and farm producers. Tree growers complained of an overly short credit repayment period (since the acacia trees being grown required at least seven to ten years before generating income). Government credit programmes repayment lengths were adjusted accordingly (FAO, 2018).

Studies of forest-sector lending in several countries show that it is not only the repayment period that needs adjustment, but often also concessional interest rates (potentially through blending with social or environmental lenders); grace periods; loan size limits; collateral requirements; and insurance (see Hou-Jones *et al*., 2018; Nhantumbo *et al*., 2016). Because of the relevance of forest landscapes to climate change mitigation and adaptation, there are increasing options to blend concessional finance with commercial rate finance in loans to FFPO businesses – although the operational modalities of current climate finance agencies (such as the multilateral development banks within the Forest Investment Program – FIP) can prove an impediment (Macqueen *et al*., 2018).

Making the most of trade credit – since value chain partners stand to benefit directly from the quality of an FFPO business within the supply chain, they may have a stronger appetite to offer credit in what might otherwise be seen as a risky environment. Building fair links with other players in the value chain is a good way to improve access to finance for FFPOs. First-hand knowledge between the actors helps build trust. In studies of the main sources of SME finance, leasing and factoring are also highly important (Kraemer-Eis and Lang, 2012), providing a way for a third party (the lessor or factor) to share the risk of capital equipment or cash flow with the borrower in exchange for some form of payment. Low-rated firms (such as many FFPOs) with poor credit availability tend naturally towards greater leasing and factoring (Sharpe and Nguyen, 1995).

In Asia, the growth of SMEs has been particularly assisted by trade credit. For example, in recognition of its importance, the Small Industries Development Bank of India (SIDBI) has implemented a trade finance scheme for SMEs including trade financing and factoring services, lines of credit in foreign currency to commercial banks for on-lending to exporting SMEs, and discounting schemes for export houses/trading houses sourcing their export requirements from SMEs (Narain, 2015). Intermediaries can help to promote dialogues to discuss how better to develop trade-related market development services (ibid). One important element that can help is for public financial institutions to support trade credit in all its forms, for example through appropriately structured guarantee funds (Kraemer-Eis and Lang, 2012).

Tree nursery owned by a community forest business in Oaxaca, Mexico © Duncan Macqueen, IIED

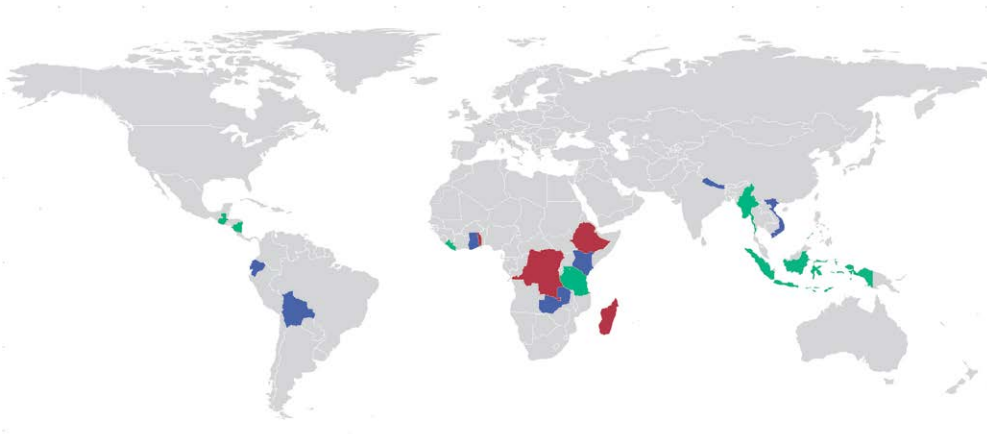
6 Conclusions – how the Forest and Farm Facility (and likeminded ODA) can improve FFPO access to six main sources of finance

6.1 FFF as a funding facility for FFPOs

The Forest and Farm Facility (FFF) is a programme designed to support FFPOs. It has proved an effective FFPO funding mechanism, co-managed by a partnership of FAO, IUCN, IIED and Agricord (Gasana *et al.,* 2016). It aims for climate-resilient landscapes and improved livelihoods. Since 2014, its unique comparative advantage has been in channelling money where it matters. FFF has provided direct grants to diverse FFPOs in 10 countries, helping to strengthen their organisations (900+ engaged) and businesses (262 added value) and having policy impacts (51 policy changes) in favour of more than 30 million producer members (FAO, 2018).

Now in Phase II (2018–2022), FFF wishes to build on past successes in expanding FFPO access to finance in its partner countries. This work will take place in seven core partner and seven networking countries (see Figure 5 below).

Figure 5. FFF core, networking and prospective partner countries (as of July 2018)



Key: Blue = FFF core partner countries; Green = FFF network partner countries; Red = countries in which FFF partners are developing active programmes.
Source: map from www.un.org/Depts/Cartographic/english/htmain.htm

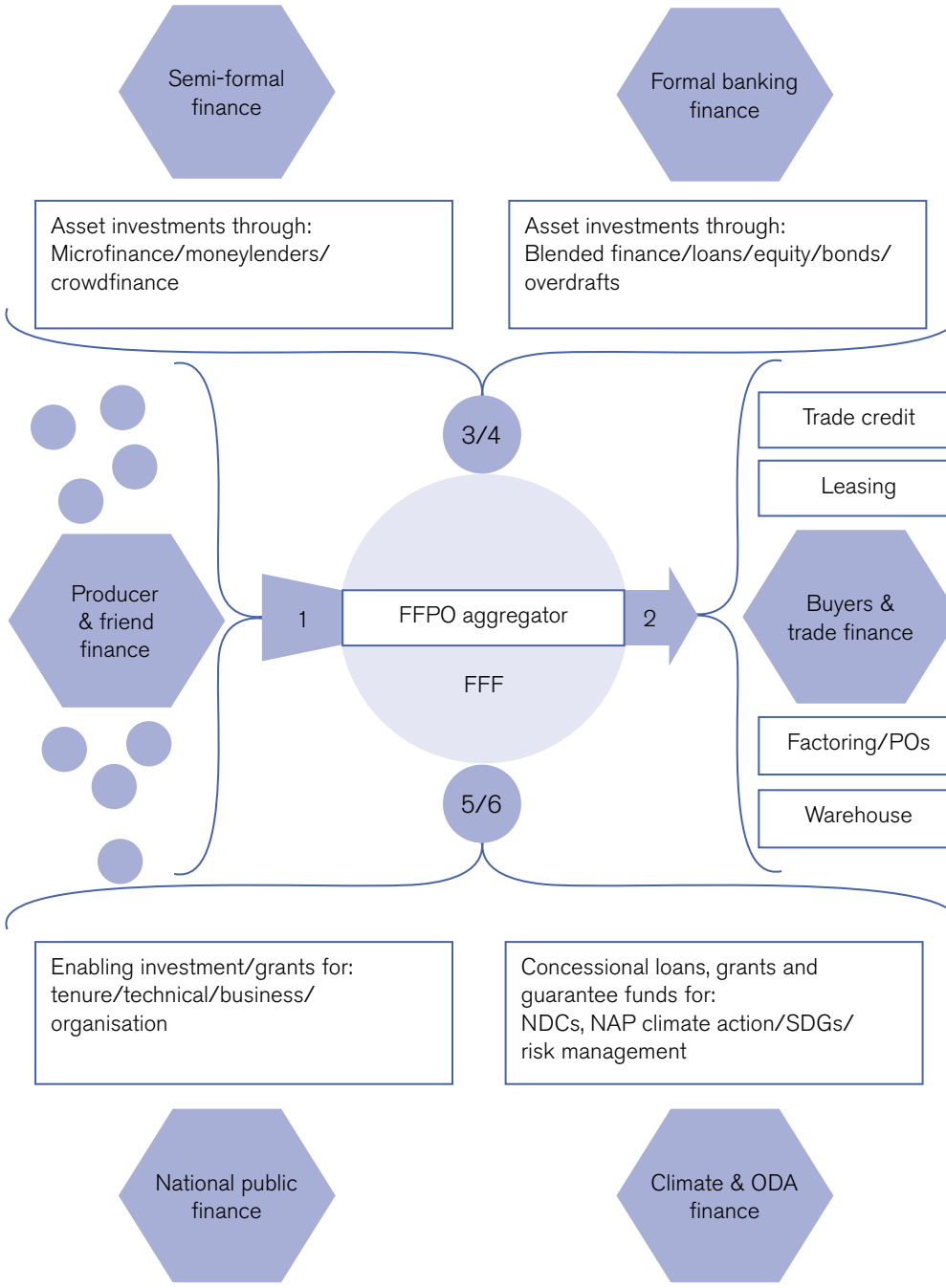
We have seen in the analysis above that finance can potentially come from a variety of different sources – not least the savings of the forest and farm producers themselves – but also including national public funds, international ODA and climate finance, and trade-chain finance. Based on this analysis, improved access to finance could be achieved by crowding in finance from six main sources (see Figure 6). The intention is a triple win: (i) increased economic profitability and resilience through (ii) upscaled sustainable forest farm business using (iii) more inclusive business models.

FFPOs can act as aggregators of individual producer efforts – and so offer a scale for investments that seek financial, social development or climate/environment returns. FFPOs are investors, not only of land, labour and time, but also of members' savings that form the basis for financial management capability. As such, FFPOs can also be the channels through which external investors of different types can get money where it matters (eg climate finance for local forest restoration efforts).

FFPOs face different challenges and therefore need different types, blends and sequencing of finance. FFPOs that are very developed can access all six types of finance shown in Figure 6, but for FFPOs in the early organisational phases the focus initially may need to be on producer finance and buyers and trade finance. This is reflected in our rough sequencing of the types of finance normally accessed as an FFPO develops (categories 1–6 in Figure 6).

In providing direct grants to strengthen FFPOs, FFF Phase I demonstrated that FFPO business models could overcome financial management challenges to deliver a triple win of economic social and environmental sustainability. It proved FFPO business models could be made bankable and attract outside financial support (from the public sector, climate and ODA finance, private-sector trade chain partners and financial institutions). Key features included being driven by local end markets and being focused on the whole value chain. In Phase II, FFF plans to build on lessons learnt to develop a clearer and more sophisticated approach to accessing the types of finance listed in Figure 6.

Figure 6. What FFF does to improve access to finance and get money where it matters



Source: Duncan Macqueen (2018)

6.2 Making the most of producer savings and reinvestment

Producer, friend and family finance – FFF will expand both the recognition that FFPOs are themselves investors and the scale of that investment, by supporting FFPOs both through small grants, and also financing revolving funds that improve financial learning within FFPOs and build a track record of responsible financial management, all of which is targeted to enable FFPOs to:

- Expand their membership so as to increase the pool of internal funding;
- Professionalise the management of internal FFPO funds through financial management training within the market analysis and development (MA&D) and other dedicated training programmes;
- Build on or develop useful linkages with VSLAs;
- Develop collective agency and funds among groups of women entrepreneurs in line with a gender strategy;
- Increase profitability of FFPO businesses through business training and risk self-assessment practices, and so;
- Increase their creditworthiness and appeal as potential clients in the eyes of formal financial institutions.

6.3 Working to develop partnerships for trade-chain finance

Buyers and trade-chain finance – FFF will, through facilitation at national level, develop partnerships that build knowledge of trade-chain finance options – and confidence on all sides to use them including:

- Working to install within FFPO grant workplans and in-country facilitator actions the engagement of buyers to explore possible equity or loan finance that could upgrade and upscale the supply from FFPO to buyer;
- Researching and documenting useful leasing, factoring, purchase order or warehouse receipt financing options to improve FFPO access to short-term cash flow and equipment;
- Exploring outgrower arrangements where these are mutually beneficial between FFPOs and other actors; and

- Documenting successful examples of attracting trade-chain finance to share across partner countries.

6.4 Improving financial institutional confidence about FFPO business investments

Semi-formal and microfinance – FFF will, through its MA&D process of iterative business training, help FFPOs to investigate and improve interactions in the financial landscape through:

- Developing internal group savings procedures (drawing on VSLA experiences) that can be used to convince investors of financial management capability and that guarantee microfinance loans to members;
- Conducting further research on mechanics and options for crowdfunding of FFPO activities;
- Fostering linkages between semi-formal and formal financial institutions to develop tailored financial products for FFPO producers, leveraging on the informational advantage held by semi-formal groups and the financial specialisation possessed by formal financial institutions; and
- Providing longer-term coaching services to FFPOs to identify and overcome specific capacity gaps related to financial and business management (including strategic planning), thus placing them on a more sustainable pathway towards growth and unconstrained financial access.

Formal banking finance – FFF will provide grant support for FFPOs to map the finance landscape, including the terms and conditions of credit from different banking institutions, thereby:

- Improving FFPOs own capacity to understand bank loan appraisal processes and prepare business plans and credit proposals that give appropriate quality financials and market assessments;
- Making any necessary FFPO transitions from physical to digital cash transfers by working with banks that offer mobile banking accounts for FFPO business groups;
- Working with financial institutions to discuss and design debt and equity finance arrangements suited to the realities of FFPO business development in terms of rates, repayment periods, and collateral arrangements;

- Exploring FFPO-bank-NGO partnerships that can act to establish private credit bureaus or provide loan appraisal advisory services to de-risk bank investment into FFPO businesses;
- Improving FFPOs' capacity to carry out strategic planning for their growth, by providing them with the data and skills required to evaluate their market position and the financial options available for expansion and consolidation;
- Supporting the adaptation of existing digital financial technologies to the specific needs and constraints of FFPO producers – or fostering linkages between mobile network operators and formal financial institutions (with FFPOs in the centre) to develop digital financial services tailored to their necessities; and
- Investigating with financial institutions the possibilities for providing insurance products that decrease risk and are affordable and attractive to FFPOs alongside other options for risk reduction (eg diversification).

6.5 Blending enabling investment from national public finance, international ODA and climate finance

National public finance – FFF will, through its facilitation of policy engagement platforms, direct a greater proportion of national public finance towards creating an enabling environment for FFPOs through:

- Investigating and making more transparent to FFPOs the funding modalities within the National Forest Fund or other sectoral finance and incentives programmes (including preferential tax rates, subsidies, waivers, etc);
- Advocating for greater public expenditure targets towards transfer of tenure to FFPOs, technical extension for FFPO businesses, forest business incubation, and support for social organisation;
- Advocating for reforms of the financial regulatory framework that lower specific constraints to formal financial access for FFPOs, including for example: developing critical financial infrastructure such as a national credit bureaus; formalising use of alternative forms of collateral (eg tree-growing stock suited to the FFPOs' operations); reducing red tape/bureaucratic requirements; regulating and fostering the expansion of the digital financial services' market in forest landscapes; and improving specific financial instruments for underserved categories of producers (such as women and young entrepreneurs); and

- Advocating and supporting the establishment of national credit guarantee schemes (either public or public-private) that can mitigate risk on the side of formal financial institutions and unlock financing for SMEs belonging to FFPOs.

Climate and official development assistance (ODA) finance – FFF will, through in-country facilitation units, improve the flow of climate mitigation, adaptation, FLR, and ODA funding to FFPOs through:

- Facilitating linkages with national and international climate programmes and funds, especially with the nationally determined contributions (NDCs) and national adaptation plans (NAPs) processes articulated through REDD+, FLR, or adaptation and resilience projects;
- Working with agencies to adapt eligibility criteria to be more inclusive of FFPOs;
- Advocating for targets on financial disbursement through FFPOs for mitigation, FLR, and adaptation in the major in-country climate programmes; and
- Researching options for providing capital in support of credit guarantee schemes that involve FFPOs.

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