

Innovative finance for sustainable landscapes

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Executive summary

Agriculture, forestry and other land uses are central to the implementation of the sustainable development goals (SDGs) and the Paris Agreement. Agriculture and forestry shape the landscapes they are part of and have multiple interactions with ecosystems and people. Any investment in a specific activity has diverse impacts on landscapes, with synergies and trade-offs for society and the environment.

Smallholders are important contributors to food production, but still represent a considerable part of the poor and the food insecure. They also play a major role in managing land and other natural resources. Local farm and forest producer organizations (LFFPOs) have an important task in making smallholder agriculture and forestry economically viable and sustainable. These organizations are, therefore, essential actors in any strategy that aims at sustainability and climate resilience in landscapes. LFFPOs need investments to secure livelihoods and food security, and these investments should be provided in a way that preserves natural resources for future generations. At the same time, LFFPOs encounter considerable difficulties in obtaining finance. They generally do not benefit from the external funds dedicated to sustainable development and climate action. For instance, less than 10% of global climate and nature conservation finance is assigned to the Agriculture, Forestry and other Land Use (AFOLU) sector, and only a small proportion of **official development assistance** (ODA) and climate finance reaches local farm and forest producer organizations.

This publication explores some of the barriers that hinder external finance from making

greater contributions to the sustainability of tropical landscapes. It also discusses the ways in which some forms of innovative finance may be able to overcome these barriers. Smallholders and LFFPOs are critical to the sustainability of landscapes, because they are an essential part of them and because of their role in natural resource management. Their involvement is critical not only to the social dimension of sustainability but also to the environmental dimension.

The publication does not discuss all the means by which smallholders can access finance by progressively building capital or by organizing themselves; nor does it review the direct investments by big private investors in specific commodities. It focuses on three emerging financial initiatives – blended finance, green bonds and crowdfunding – that aim to, or have the potential to, increase financial flows to sustainable landscapes. In addition, the document looks at the conditions that will improve the impacts of investments on the natural and social environment.

As defined by the Council of Europe (2000, 2), a landscape is “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.” Landscapes are “place-based systems that result from interactions between people, land, institutions (...) and values” (Minang et al. 2014, 5). These interactions result in a mosaic of land uses and ecosystem services that influence the livelihoods of the people and may change over time. **Sustainable landscapes** are those landscapes where human activities are conducted in such a way that they do not compromise the capacity of future

generations to benefit from at least the same level of ecosystem services. This includes the capacity of the landscape to be inclusive, benefitting diverse groups, now and in the future, which is often linked to the governance of natural resources, particularly land and water. Often, finance flowing into such landscapes in developing countries mainly addresses the needs for raw materials for large, vertically integrated companies, including infrastructure for transport and processing plants. Increasingly, a growing proportion of these investments considers their impacts on landscapes – social or environmental – but in spite of that, the reduction in deforestation and forest degradation, and in poverty, hunger and inequity, lags behind. This is partly due to the lack of or insufficient application of sustainability criteria in investment selection, and partly due to a lack of consideration of the needs and aspirations of smallholders, small and medium enterprises (SMEs) and community initiatives. This may lead to social conflicts.

New ways have been developed to unlock funds for investments that efficiently and effectively contribute to environmental and social sustainability: **innovative finance**. Three of these options are of particular interest. Blended finance is the strategic use of public or philanthropic development capital to mobilize additional external private commercial finance and can support SDG related investment. Green bonds are a form of debt that links the generated funds to climate goals or environmentally friendly investments. Crowdfunding is the pooling of small amounts of capital from a potentially large number of interested funders.

Two types of difficulties hinder the large-scale implementation of finance initiatives for sustainable and inclusive landscapes. First, LFFPOs encounter problems in accessing finance. At the same time, the mechanisms or institutions that provide financial support find it difficult to allocate money to LFFPOs due to the relatively large transaction costs. Thus, there is a gap between supply and demand of finance for LFFPOs that needs to be bridged.

Second, even those financial flows that do go to LFFPOs may not achieve their expected contribution to the SDGs or inclusiveness due to factors that hinder the sustainability of the practices being funded.

There are seven factors that in various combinations may facilitate access by LFFPOs to financial instruments: scale; return; risk; the nature of financial instruments; financial literacy; physical access; and being able to provide a contribution to the funds needed. Six components could positively or negatively affect the impact of these financial instruments on sustainable and inclusive landscapes: social networks; internal organization of operations; smallholder risk management, knowledge and experience; tenure rights and access to natural resources; and the application of standards and certification schemes.

Risk management warrants special consideration. High risk, even perceived high risk, is a major limitation for investment in tropical landscapes. This is partly due to a lack of knowledge about actual risks. Therefore, risks need to be better understood and documented. Once understood, risks can be mitigated through various structures; for example, where public funds absorb part of the risks, such as at the LFFPO level by supporting crop diversification or crop insurance. Public funds may also reduce the risk for investors; for example, by providing first loss guarantees. Little has been documented about the drivers for implementation of adequate risk strategies by LFFPOs in tropical landscapes, and studies of the costs and benefits of such schemes are scarce.

Mobilizing innovative finance for sustainable and inclusive landscapes

Many investors consider that scaling finance for sustainable and inclusive landscapes is a matter of balancing the size of the investment and the risk and rate of return against the objective of achieving a measurable impact. But these factors cannot be addressed simply by looking at the financial part of

the problem. Addressing these issues does not guarantee that investments reach the people who can contribute the most to achieving the SDGs and who most need the finance. While blended finance, green bonds and crowdfunding offer more opportunities for sustainable and inclusive investments than conventional mechanisms and instruments do, they can achieve this only if enabling conditions unlock finance for smallholders and communities. Local banks and microfinance institutions could make an important contribution, as could producer organizations that are able to scale up these efforts. Conventional official development assistance, in coordination with national host governments, could address some of the enabling conditions that go beyond the operational requirements of the investee, such as national policy and regulatory frameworks, strengthening human capital (skills and knowledge), and developing the infrastructure needed for financial transactions using mobile phones. More needs to be done to create truly inclusive processes that help build trust between stakeholders and to form the producers' organizations required for scaling up, greater cost-effectiveness and reduced risk. Adjusting the nature of financial instruments requires greater interactions between investors and investees so they better understand each other's realities. Adjustments such as lower interest rates, flexible payback periods, and alternative requirements for proof of ownership can make financial instruments more appropriate to the needs and conditions of local stakeholders.

Blended finance can create opportunities to aggregate funds and objectives, strengthen networks and ensure “on the ground” suitability. It also has the potential to address some of the above-mentioned constraints and achieve the desired impacts. In most cases of blended finance, development funds are used to reduce the risks of the investments, either by providing for first loss cover, or in the form of guarantees. This increases the risk-adjusted rate of return for private investors. Combining development finance with commercial finance in specific funds

can also allow technical assistance at the grassroots level to be provided by NGOs and CSOs. This allows funds to include specific technical assistance that can address local issues and further reduce risks. However, more evidence is still needed to assess the true value of blended finance in achieving greater sustainability and inclusiveness in tropical landscapes.

Green bonds offer opportunities for sustainable landscape development, since the proceeds can be used for a variety of actions, as long as they are considered ‘green.’ The initial investment consists of ‘patient capital’ that does not have to be paid back until the bonds mature. Without strong local institutions it may be necessary to work through an intermediary organization that has the capacity to issue a bond and manage the proceeds according to internationally established regulations and criteria. Few examples exist where proceeds from bonds are channeled to local stakeholders; in addition, these examples have not been well documented, and their impacts have not been analyzed by independent third parties.

Crowdfunding appears to be better suited to the scale of local operations. However, it requires investors that have a close affinity with the issue, the location, or the proposed activities. These conditions are rarely met in tropical landscapes. This situation requires new approaches. One would be to link crowdfunding platforms to funds that are prepared to meet financing needs as long as the investment complies with agreed sustainability criteria and raises a minimum percentage of the funding target. However, while crowdfunding has enabled LFFPOs to access finance that could not be obtained through conventional finance instruments and sources, it may not be able to provide access to financial services for a broad group of people or for larger sums of money unless it is coupled to other initiatives, such as the creation of locally controlled funds. Linking the latter to landscape priority action plans would further strengthen the opportunities for crowdfunding to contribute to sustainable landscapes.

Digitizing financial services (or fintech)¹ has facilitated financial inclusion, not by changing the instruments, but by changing the communication channels between sources and beneficiaries. This requires appropriate infrastructure, the availability of devices that provide the services, adjustments of regulatory frameworks and the organization of financial entities that use such services.

An integrated approach is required to scale up finance for sustainable and inclusive landscapes. This includes analyzing the best combinations of financial structures, mechanisms and instruments suitable for local situations, and identifying conditions that, if improved, would increase access to finance and the effectiveness of various innovative finance tools. Increasing financial inclusion will also require strengthening the enabling conditions that influence the impacts of financed practices. In comparison to conventional finance structures, mechanisms and instruments, blended finance and green bonds offer more opportunities for such an integrated approach, but few cases have been documented where they have been implemented in a landscape context.

Although few successful experiences have been well documented, this publication provides greater insights into how people can address some of the current constraints to various innovative tools in order to increase their effectiveness in achieving sustainable development objectives, their efficient deployment and the amount of finance that is dedicated to sustainable and inclusive landscapes. It is important to strengthen local organizations and the financial literacy of LFFPOs and to develop a greater

understanding of the need for investments in landscapes by financial entities.

This understanding should strengthen interactions among stakeholder groups and improve legitimacy, transparency and mutual agreement.

Secure land and tree tenure and risk management stand out as the factors that most affect the impacts of financed practices. While these factors are often considered to be prerequisites to realizing sustainability impacts, their role in achieving finance for inclusiveness and sustainability has been little documented. A range of land tenure arrangements affect access to finance, and it is important to understand what can be done to make them more acceptable as collateral by investors. In addition, financial institutions could explore more multi-asset investments and contribute to the design of local financial structures and/or appropriate structures for producers' organizations that can make it easier for these groups to obtain finance.

This publication gives some suggestions on what should be considered in designing finance strategies for sustainable landscape that are more inclusive of LFFPOs and smallholders. However, to better address the complexity of mobilizing and scaling up finance for sustainable and inclusive landscapes, more trials and evidence are needed to document how risk and return are addressed in complex multi-stakeholder initiatives under various local conditions. This includes detailed case studies that provide examples of innovative forms of financing used to achieve sustainable practices and bring these to scale.

1 In this case it means the use of technology across financial services functions.

1 Introduction



Photo 1. Opening up new landscapes in DRC

Photo by R. Zagt/Tropenbos International

The role of forests, trees and agroforestry in addressing the challenges of feeding the world and contributing to sustainable development goals and the Paris Agreement on climate has been widely recognized (FAO 2018; HLPE 2017). Numerous commitments have been made to strengthen this role, committing billions of dollars to forests and trees for the implementation of the New York Declaration of Forests, the Aichi Targets of the Convention on Biological Diversity, the Bonn Challenge for restoration, and for avoiding deforestation and forest degradation under the Paris Agreement. However, the commitments for climate finance and nature conservation – estimated at USD 20 billion since 2010 (Climate Focus 2017) – trail far behind the needs to meet the goals of these agreements (Sethi et al. 2017). Further, FAO

(2017) and the World Bank (2018) estimate that achieving food security will require annual finance of USD 255–275 billion from 2021 on. It is estimated that, at least initially, only about 30% of this funding will be available, leaving in particular the needs for long-term agricultural finance and of LFFPOs unmet (IFS Advisors and Mastercard Foundation Rural and Agricultural Finance Learning Lab 2019).

Although investing in sustainable land use in developing countries has growth potential, it often has, or is perceived to have, high risk and often requires more time to implement (Guarnaschelli et al. 2018). In developing countries, risk is increased due to structural problems such as uncertain land tenure rights, currency fluctuations, political instability and lack of coordination among stakeholders

(Huppe and Silva 2013), as well as weak institutional frameworks. Even impact investors, whose investments are currently worth more than USD 500 billion (GIIN 2019), invest only 9% of that in the AFOLU sector (GIIN 2018). Similarly, of all the “climate aligned” bonds, only 1% were assigned to this sector in 2017 (Global Canopy Programme).

The importance of smallholders in achieving the SDGs and the Paris Agreement cannot be overstated. They are important participants in food production, about 60% of which comes from farms smaller than 20 ha (Ricciardi et al. 2018) and represent a considerable part of the poor and food insecure. They also make a major contribution as managers of land and other natural resources. In other words, the SDGs cannot be achieved without them. However, smallholders need to be able to invest into their farms in order to secure their livelihoods and food security, and to do so in such a way that preserves natural resources for future generations. At the same time, they are the ones who encounter the most difficulties in obtaining finance.

Agriculture and forestry are part of the landscapes that they shape and have multiple interactions with ecosystems and people. Any investment in a specific activity will thus have diverse impacts on landscapes, with synergies and trade-offs for society and the environment. Such synergies and trade-offs may occur within sectors or may involve other sectors within the same geographical space. Globally, population and demand growth – combined with unsustainable agricultural practices and the negative impacts of large-scale land-use investments on local socio-ecological systems – are driving trends toward monocultures and simplification of landscapes. This puts many production systems in the tropics at risk (Brasser 2012; Pamerneckyte et al. 2020). For instance, investment in intensive, highly mechanized agriculture may increase inequalities and displace populations that were living on small-scale agriculture. Innovative finance mechanisms are therefore necessary that allow for greater inclusion of LFFPOs and for more diverse activities that consider possible synergies and trade-offs with other sectors.



Photo 2. Shifting cultivation in Indonesia

Photo by B. Louman/Tropenbos International

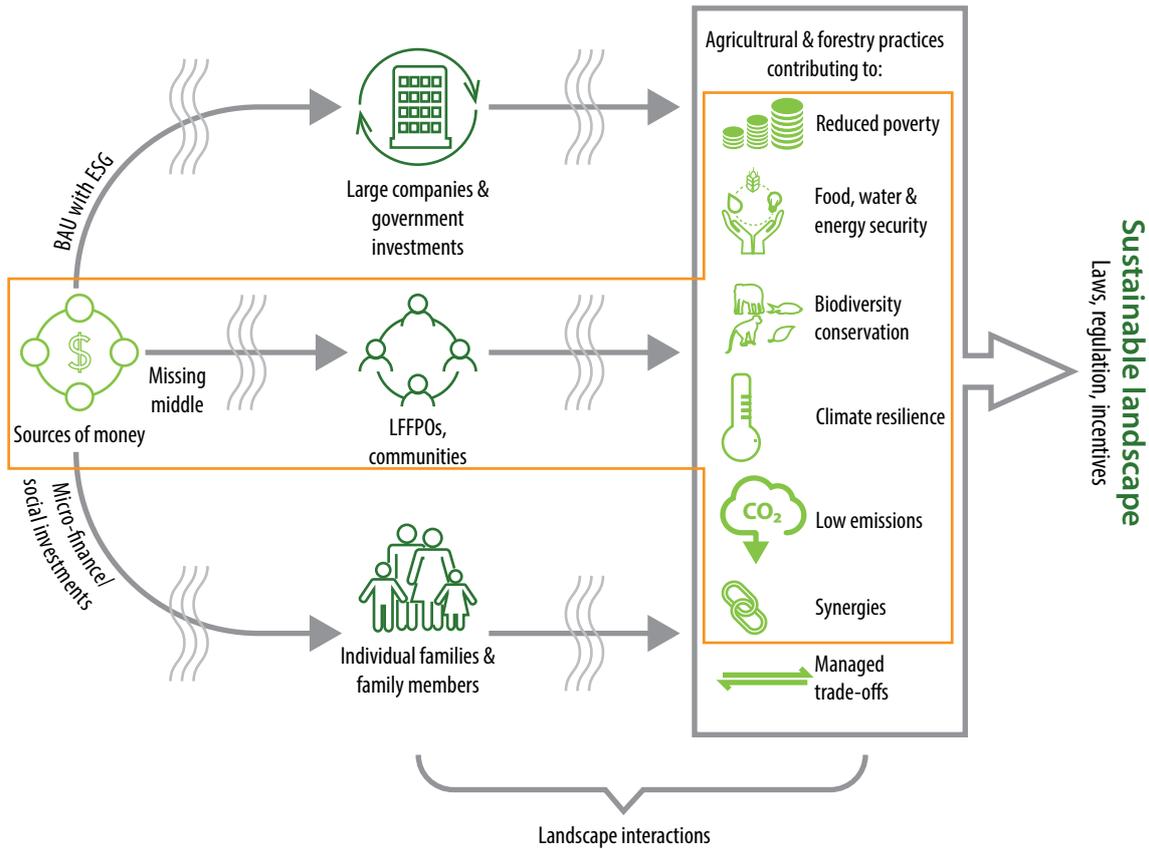


Figure 1. Conceptual framework for the study

From left to right: financial service providers (sources of money) face barriers to bridge the gap with LFFPOs. Even when LFFPOs can access finance, several conditions limit the degree to which they contribute to the sustainability of the landscape (curved lines represent barriers that exist in all transactions). This is set into a wider financial environment and concerns more actors, whose actions in the end may create synergies or trade-offs at the landscape level. Financial service providers will need to consider those possible impacts in designing their investment portfolios. This has led to add Environmental, Social and Governance (ESG) criteria to the Business as usual (BAU) decision-making process to improve impacts, and to the support of micro-financing services to increase inclusion of smallholder families and family members. It is difficult for LFFPOs that want to transform or expand their practices to access finance: they are the “missing middle.”

Figure by J. Franco/Tropenbos International

This approach will contribute to improved local livelihoods while avoiding the further degradation of natural resources.

Thus, in order to achieve international commitments to a sustainable and climate resilient world, there is a need to 1) increase finance that contributes to sustainable agriculture, forest and other land uses, and that takes into account multiple activities; and 2) ensure that more of that finance benefits those people who need it most: smallholder farmers and agricultural and forest-based small businesses.

The Forests, Trees and Agroforestry (FTA) program of CGIAR aims to reduce poverty, ensure food and nutrition security for all, address climate change, protect natural resources and ecosystem services, and achieve sustainable production and consumption by enhancing the role of forests, trees and agroforestry systems in addressing these challenges. FTA considers the landscape to be the spatial unit that is most appropriate to study in order to improve the contributions of forests, trees and agroforestry in addressing these challenges. The program recognizes that

the sustainability of landscapes depends on seeking a balance between various objectives and land uses in order to maximize synergies and minimize trade-offs. Studying how to increase investments in the land uses in such landscapes and improving the social and environmental impacts of these investments, is one of the priorities of the FTA program.

This document explores some of the barriers that prevent finance from making greater contributions to the sustainability of tropical landscapes, and the ways that some forms of innovative finance may be able to overcome these barriers. As mentioned above smallholders and LFFPOs are critical to the sustainability of landscapes, because they are an essential part of them and because of their work in natural resource management. Their involvement is not only critical to the social dimension of sustainability but also to the environmental dimension; but at the same time, they have limited access to finance. Section 3 considers the constraints faced by smallholders and LFFPOs to access finance and examines if some forms of innovative finance can be more easily oriented to sustainable and inclusive landscapes.

The publication does not discuss all the means by which smallholders can access finance by progressively building capital or by organizing themselves, nor does it address the direct investments by big private investors in specific commodities. It focuses on some emerging financial initiatives that aim to, or have the potential to, increase financial flows to sustainable landscapes. In addition, the document looks at the conditions that will improve the impacts that investments can have on their natural and social environment (see Figure 1).

Many conservation and development NGOs and other development organizations are experimenting with various forms of attracting more private finance to investments that benefit local people and the environment. This document provides them with an overview of the current knowledge and experiences to help bridge the gaps between financiers and LFFPOs. It also identifies new priorities for further research that supports efforts to raise finance that enhances positive impacts.

2 Definitions and analytical framework



Photo 3. Forest landscape in Sabah

Photo by B. Louman/Tropenbos International

This study started from the assumption that many researchers had already reported on barriers that limit access to finance by LFFPOs in tropical countries (e.g. Macqueen et al. 2018) but noted that these studies rarely looked at such finance in the context of landscapes. At the same time, other researchers looked at finance for integrated landscape approaches, but did not pay special attention to LFFPOs (e.g. Shames et al. 2014). For this study, the authors looked at web-based documentation of various studies (both peer-reviewed and non-reviewed), specifically looking for barriers to and opportunities for scaling up inclusive finance for sustainable landscapes.

Financial arrangements that contribute to the sustainability of landscapes require collaboration among many stakeholders and combinations of different forms of finance.¹ The authors reviewed the available documentation on three innovations: blended finance, green bonds and crowdfunding. These create structures that allow financiers to align their investments to achieve common objectives and that aim at achieving finance flows with better social and environmental impacts that go beyond the farm or forest

¹ <https://www.globallandscapesforum.org/Washington%202018%20-%20Donor%20and%20Partner%20Report-EN.pdf>

management unit. The first two (blended finance and green bonds) were identified as innovative during the Global Landscape Forum – Investment case, held in May 2018 in New York. The third (crowdfunding) is not new and has been used to coordinate supporters' donations to specific goals. Lately it has become popular for raising alternative funds for business start-ups and for the development of new ventures for which formal funding is difficult to obtain. The question is whether these innovations can address the issues that hamper the scaling up of investments that contribute to sustainable landscapes.

Many cases have been documented, but only a few have been selected to illustrate these findings. These were selected mainly for the availability of public information about them, because information came from more than one source, and because the information illustrated a generally positive response to at least one of the challenges encountered in the literature. Parallel to the literature review a selected group of representatives of stakeholders were interviewed who had worked on a range of promising initiatives (summaries of which have been published separately).² Finally, the draft document was shared with more than 100 scientists and practitioners through an on-line dialogue; in addition, key informants were asked to comment on a white paper³ summarizing the main results during a panel discussion of the Global Landscape Forum on Finance in Luxembourg in November 2019.⁴ Thus, this document is the result of a participatory review process and dialogue on existing experiences.

2.1 Sustainable landscape approaches and inclusive finance

As defined by the Council of Europe (2000, 2), a landscape is “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.” Landscapes are “place-based systems that result from interactions between people, land, institutions (...) and values” (Minang et al. 2014, 5). In spite of the increasing use of the term “sustainable landscape” there is no easy way to define one (Selman 2008). It is proposed here that “sustainable landscapes” are those landscapes where human activities are conducted in such a way that they do not compromise the capacity of future generations to benefit from at least the same level of ecosystem services. This approach is grounded in the notion that natural capital is an important part of the environmental dimension of sustainability, which is the backbone of economic sustainability. The approach also, however, recognizes the importance of the social dimension; that is, the capacity of the landscape to benefit diverse groups, now and in the future. This is often linked to the governance of natural resource management, particularly land and water. To better highlight this social dimension the term “sustainable and inclusive landscapes” is used in this publication to designate “sustainable landscapes”.

In some cases, landscapes are very homogenous, dominated by monocultural farms or intact rainforests. More often, the interactions between people, land, institutions and values have resulted in mosaics of land uses and ecosystem services that influence the livelihoods of the people who live there and that may change over time. This study focuses on this particular type of mosaic landscape, where agricultural and forest uses interact. However, even in a diverse landscape, many investments focus on a single aspect of it; for example, forest protection or oil palm production. This often causes unforeseen effects on the other landscape elements and stakeholders, particularly smallholder farmers. Looking to reduce trade-offs and increase synergies between sectoral initiatives, several

2 <https://events.globallandscapesforum.org/wp-content/uploads/sites/2/2019/06/Flyer-FTA-Summary-and-discussion-04.pdf>

3 <https://www.globallandscapesforum.org/publication/innovating-finance-to-overcome-current-barriers-towards-sustainable-landscapes-white-paper/>

4 <https://www.globallandscapesforum.org/video/innovating-finance-to-overcome-current-barriers-towards-sustainable-landscapes/>

organizations are proposing integrated landscape approaches (Minang et al. 2014; Sayer et al. 2013), expecting that these will provide greater sustainability results than sector-specific solutions do.

Financing landscapes or landscape initiatives is conceptually different from conventional financing of land-use activities; typically, landscape finance supports a range of activities within the landscape (Shames et al. 2014). All these activities aim to achieve sustainable development, making conscious choices on the trade-offs and synergies that arise within the combination of activities, and minimizing production risks by 1) investing in productive activities with a range of ecological requirements and climate vulnerabilities; and 2) investing based on an analysis of the mosaic of land uses that best reflect both land capacities and societal needs.

Finding finance for such integrated approaches was recognized to be a big challenge (Estrada-Carmona et al. 2014; Milder et al. 2014) and recommendations have been made for strategies to increase this type of finance (Shames et al. 2014). Until now, however, this lack of finance has remained one of the main barriers that hamper the implementation of integrated landscape approaches (Vermunt et al. 2020; Zanzanaini et al. 2017). This is despite the increased number of public and private commitments to obtain a larger proportion of agricultural and forest products from sustainable resource areas. For most investors this integrated approach remains a new concept that they have little knowledge or experience of, and they still prefer to invest in a single asset. It remains to be seen whether recent innovative finance initiatives can change that preference and attract finance to truly integrated landscape investments.

2.1.1 Sustainability

Any investment in a landscape is considered to help support sustainability in the landscape if it contributes to meeting one or more of the 17 Sustainable Development Goals (SDGs) of

the UN 2030 Agenda,⁵ without compromising the ability of future generations to meet their own needs and goals⁶ and while carefully considering possible synergies and trade-offs between these goals (see also Figure 1). For example, biomass production for energy may contribute to SDG 7 (Affordable and clean energy) and SDG 13 (Climate action), but locally cause deforestation, hindering SDG 15 (Life on land) and reduce opportunities for smallholders to achieve food security (SDG 2: Zero hunger), particularly in times of economic crises. In such a case, the negative effects need to be explicitly identified, and measures need to be taken to reduce these effects to an extent that satisfies all the parties involved and ensures the sustainability of the socio-ecological system.

2.1.2 Inclusive financial mechanisms and instruments

Agenda 2030 calls for leaving nobody behind. For example, SDGs 1–3 outline no poverty, no hunger and good health for all. SDG 5 on gender equality and SDG 8 on decent work and economic growth refer to inclusiveness, while SDG 10 is about reducing inequalities within and between countries. Still, for example, less than 10% of international climate finance is estimated to reach LFFPOs (Soanes et al. 2017), where the capacity to adapt to climate change is usually smallest. While guidelines for international finance stress the benefits of involving local people and small and medium enterprises (SMEs) in land-use investments, many of these SMEs do not have access to the finance they need (Savenije et al. 2017). Therefore, it is important to seek financial mechanisms and instruments that increase the accessibility of LFFPOs to finance for sustainable and climate smart actions. Vermeulen and Cotula (2010) consider that such access increases the inclusion of LFFPOs in sustainable and climate smart development, as long as it does not negatively affect the degree to which

5 <https://sustainabledevelopment.un.org/?menu=1300>

6 <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>

ownership of the resources is distributed; the degree to which local stakeholders participate in decision-making processes relevant to the economic activities; or the ability of local stakeholders to share in the benefits and risks of the economic activities being invested in.

This implies that a plantation company that sources from smallholders may very well contribute to inclusive growth in the landscape. There would still be room to improve its performance, however, if its sourcing creates economic dependence among the smallholders. Such dependence would endanger, for example, the ownership of the resources and the political scope for equitable decision-making. It would likely also transfer a disproportionate share of the risks of production to those smallholders.

2.2 Innovative finance: some definitions

Innovative finance for integrated landscape approaches involves relatively new ways⁷ to unlock funds that efficiently and effectively contribute to the sustainability and inclusiveness of landscapes.

Financial mechanisms are the legal and institutional arrangements that enable and regulate the use of financial instruments. These mechanisms, such as the Green Climate Fund, can use various combinations of financial instruments. In addition, finance for specific investments can come from a range of sources. Specific combinations of financial sources are called structures. Blended finance, for example, is a structure that combines development and commercial funding.

The ways to make money flow are **financial instruments** (see Box 1) that give rise to the financial liabilities of one entity and the financial assets or equity of another. Examples

of financial instruments are loans, grants, guarantees, equity investments and bonds.

Sales revenue, savings and remittances also generate financial flows, often provide the basis for the capacity to invest, and may affect both inclusivity and sustainability in a landscape. This study considers them important sources of finance for smallholders in a landscape but does not consider them financial instruments.

Some financial instruments aim to mitigate risk; examples are insurance, loan guarantees and offtake agreements (Global Canopy Programme 2017). In the context of government/state-owned enterprise projects, tools such as availability payment mechanisms, capital expenditure subsidies, feed-in tariffs or price-control instruments help reduce the risks in projects by decreasing the degree of uncertainty in challenging environments or sectors.

When reducing risks, it is also important to consider whom the risk is being reduced for. Finance tools tend to be designed mainly to reduce investment risks. This relates to the risks run by both the investees and the investors. The measures that reduce risks for investees also reduce the risk for investors. Practices that reduce the risk of crop failure, for example, help both investee and investor. There is an asymmetry, however. Not all measures that reduce the risks for investors reduce the risk for investees. Index-based insurance for crop failure may also help both investors and investees, but may become insurmountably costly due to the increased risks of climate change and may be feasible only in the framework of government-backed schemes. Likewise, insurance on investments mainly covers the risks of investors. It is used to make investments that private investors otherwise perceive to be too risky look more attractive. Investment insurance is being developed in various forms, mainly covering first losses by investors, and is often backed by government money. Offtake agreements (arrangements between a producer and a buyer to purchase/sell a portion of the producer's upcoming goods) are becoming more common in private-sector risk reducing arrangements. These agreements can be

7 These differ from previous approaches, the use of which surged during the past ten years in order to fill the financing gap (=add new funds on top of normal overseas development aid) to meet the SDGs and climate goals.

Box 1. Examples of financial instruments

Primarily for financial returns (and impacts, if by a Development Finance Institution)	Primarily but not exclusively for impacts
Debt-based instruments: <ul style="list-style-type: none"> • Short-, medium- and long-term loans • (Green) Bonds 	Grants
	Concessional loans*
Results-based instruments (payments) <ul style="list-style-type: none"> • For products or services • For ecosystem services 	Input and export subsidies
	Tax incentives or disincentives
Equity (purchase of a stake in an enterprise)	Enabling direct investments, for example for <ul style="list-style-type: none"> • Restoration • Green infrastructure • Market development
Risk-sharing mechanisms <ul style="list-style-type: none"> • Insurance (on production or on investment) • Guarantees • Offtake agreements • Public-private partnerships • Crowdfunding • Blended finance 	

Note: * concessional loans are loan that usually have more lenient conditions attached to them than conventional loans (i.e. longer pay-back period, lower interest rates, grace period)

Source: adapted from Shames et al. 2019

used as collateral in loans, or can form part of a loan agreement, where loan installments are paid in the form of products.

Box 1 classifies blended finance and crowdfunding as risk-sharing mechanisms, since in both cases risks are shared by a variety of investors. Each of these structures, however, can involve a mix of financial instruments. Both are discussed in more detail further in this document (sections 4.1 and 4.3 respectively).

Some instruments are used more by governments and philanthropic organizations, and others (non-concessional debt-based instruments, equity, payments) are more common to financial institutions and enterprises. The risk-sharing instruments used more commonly in development finance are guarantees, while those more common to commercial finance are insurance and offtake agreements. In an increasing number of cases, development finance and

commercial finance invest together (blended finance) to share the risks of the investments. In theory, these different sources of finance could be combined to meet the needs of landscape stakeholders by financing initiatives that support or expand sustainable practices. However, in practice, several barriers hamper finding the right mix of these sources and as a result there is a skewed flow of money, usually with little access for LFFPOs. In addition, such flows face conditions – inherent to the recipients of the flows and external to them – that reduce their potentially positive impacts.

2.3 The actors involved in inclusive finance and finance for sustainable landscapes

In financial flows there are basically three groups of actors: the sources that provide finance (funds), project developers and recipients. Often, there is another group of

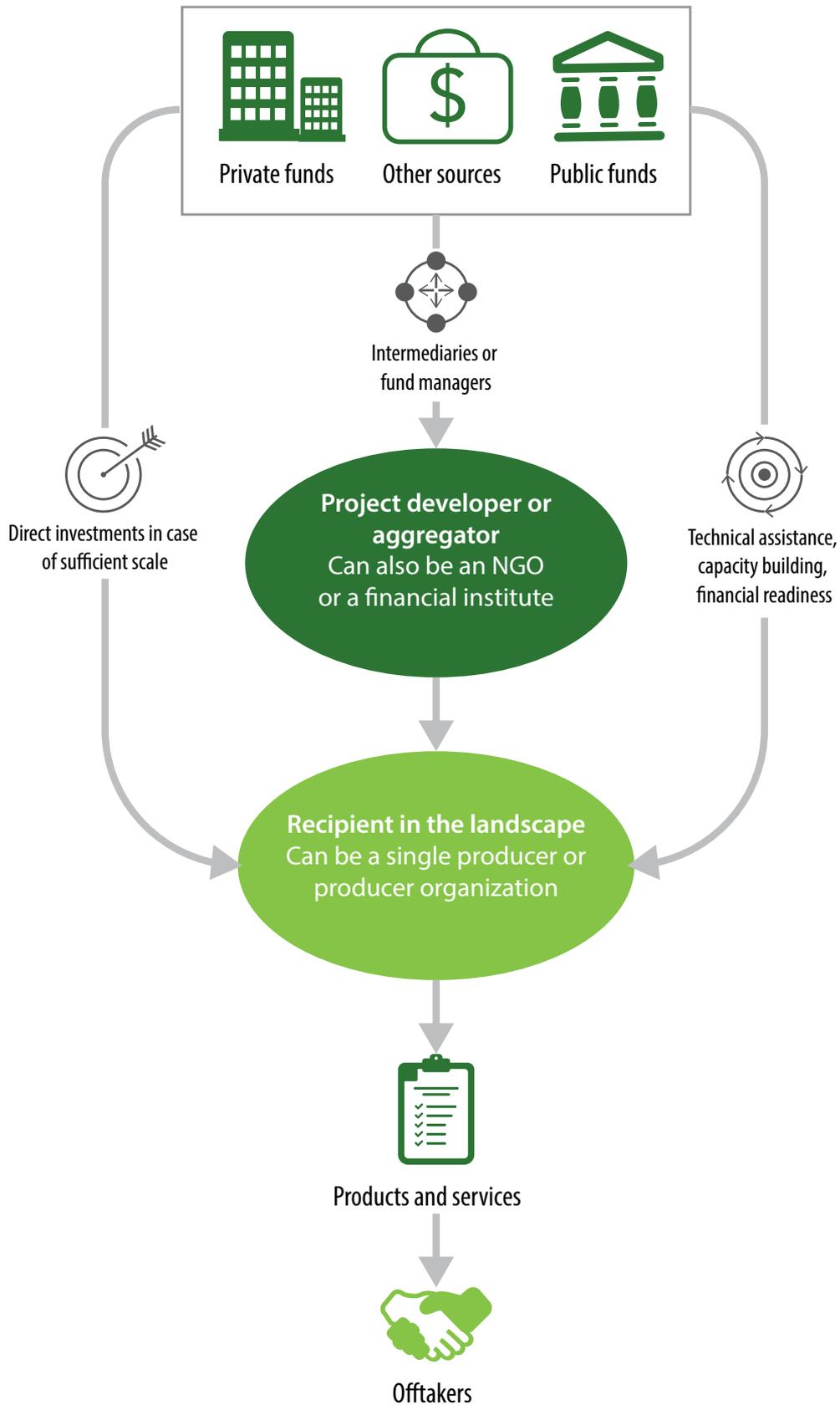


Figure 2. Main groups of actors within financial flows to landscapes

The blue arrows refer to financial flows; the blue ovals (sources and recipient) and green oval (intermediary) refer to actor groups; and the yellow ovals refer to non-financial flows produced by the actors.

Figure by J. Franco/Tropenbos International

actors between source and project developer: the intermediaries of fund managers (Figure 2). Sometimes, financial flows stop at project developers, who transform finance into specific actions that benefit the final recipients; for example, in the form of inputs or technical assistance. Sometimes, flows may be simple and direct, from the source to the recipient. In such cases flows are often local, or the recipient is a large national or international organization or company that makes the money flow to its local branches. Other flows may be complex, involving more than one fund manager and combining funds from other sources along the way before reaching the recipients.

Sources can be public, private, philanthropic or from family and friends, and may differ in objectives, according to the policies of the source. Public and private philanthropic sources may provide both development and commercial money. Private sources predominantly provide flows of money with the goal of earning financial returns (Box 1) using debt-based and equity-based instruments. Commercial money also flows into landscapes in the form of payments for goods and services (the offtakers in Figure 2). Pamerneckyte et al. (2020) and Rossanda et al. (2020) found that in the mosaic landscapes they studied, the flow of commercial money was many times greater than the flow of development money, although the exact amounts were difficult to measure. Much of that commercial money is related to investments that increase agricultural or forest production in order to increase trade. Commercial finance distinguishes itself from development and family finance in that it is more risk averse, seeks high returns within two to seven years and has long-term growth potential. For commercial finance, investments should preferably be large scale, with few actors and simple and transparent revenue streams in order to improve cost effectiveness and risk assessment.

There is usually no shortage of capital on the part of local or international investors. However, even if investors are ready to take risks and lower their expected rate of return to enter a new market, they find few bankable projects or projects led by LFFPOs that match their risk profiles. Unfamiliar territories or

countries, atypical development stages of the targeted sector, small scale, and weak regulatory regimes are major contributing factors. In such cases, the existence of local financial institutions, local banks, cooperatives, credit unions or other local entities that can collect and redistribute finance may be able to make an important contribution. They can address local finance needs with locally generated money, and at the same time contribute to creating a credit record for the stakeholders.

Many private sources and fund managers are recognizing the potential negative impacts that their investments may have on the environment and on local communities. Some of them have committed themselves to the implementation of responsible investment principles, or to safeguards established by international lending agencies, such as the International Finance Corporation (IFC 2019). These principles and safeguards are above all oriented to not increasing an investment's environmental and/or social footprint, or to not making this impact any bigger than necessary. At the same time, a limited number of investors and fund managers have joined the Global Impact Investing Network (GIIN). They propose to go a step further and seek more integrated investments, where achieving non-financial goals such as biodiversity conservation or inclusiveness is as important as meeting the financial goals of risk-adjusted rates of returns.

Fund managers are playing an increasingly larger role in blended finance. Typically, fund managers provide a platform to identify potential suitable investments and help project developers or aggregators develop proposals, process investments, manage their portfolio, mentor recipients, raise additional funds, provide advisory services and manage exits from recipients. Although this carries costs for investors, hiring an external fund manager is a relatively efficient way to delegate business development and asset management to a dedicated, fully specialized team.

Recipients in the landscape may be companies or local branches of national and international companies. The main interest of this study, however, is the LFFPO; within rural landscapes, these groups are more vulnerable than companies and have less access to finance.

3 Constraints for LFFPOs to access finance and contribute to sustainable landscapes



Photo 4. Reinvesting in degraded lands combining grey and green solutions in Venezuela

Photo by B. Louman/Tropenbos International

3.1 Access to finance

Access to financial services has been shown to strengthen capacity for economic growth and increase resilience to outside shocks (Demirgüç-Kunt et al. 2018). Access differs according to geographic area; there is less access to finance in Africa than in other continents (Demirgüç-Kunt et al. 2018). In addition, rural populations, women and poor people are less likely to have access to financial services than men and wealthier people (Demirgüç-Kunt et al. 2018). The drivers of access and lack of access to finance and markets for individuals are not fully known and may differ according

to local context. Some general drivers are not having sufficient money to use financial services, the costs of and distance from financial services, banking through a family member, lack of documentation, distrust, and religious concerns (Demirgüç-Kunt et al. 2018). Conversely, having a credit record, accumulated wealth or the right connections have positive effects on access to formal finance (de la Torre et al. 2017).

Many of the publications cited in this document refer to access to finance for operational and short-term loans and family savings for households and their members. Individuals and LFFPOs, however, have

different needs for finance and may therefore encounter different challenges in obtaining it. Other factors – such as lack of understanding of financial concepts, the nature of the financial instruments, the level of aggregation, and the difficulty of physically accessing financial services in remote locations – also affect the ability of LFFPOs to raise funds, not only to get or stay in business, but also to move to more sustainable land-use practices (Box 2). Access to financial services also requires the skills and experience to manage resources (i.e. earn an income, save, invest wisely); otherwise, this access will increase the risks associated with debt. These barriers are exacerbated because investors perceive that few projects meet their expectations or those of the fund managers.

The expectations of the investors may vary according to the type of investors, but often involve scale, risk and rate of return. LFFPOs often find it difficult to meet these expectations. Box 2 summarizes the major constraints to access to finance.

Increasing access to finance for LFFPOs through reducing these constraints will allow actors to strengthen their participation in the local economy and in decision making and implementation of local strategies for sustainable development of the landscapes they live in. Some factors are linked to each other, such as the characteristics of the instruments and the financial literacy of the beneficiaries (for example, people's perception of the ease of implementation, legitimacy and transparency of delivery may depend on their understanding of financial concepts). Some factors depend on the coherence of objectives of investors and recipients. Others are oriented to strengthening the business case of the recipients (through financial literacy, aggregation, access to digital mechanisms), or their capacity to achieve positive impacts through the proposed investments (organization, risk management, certification, knowledge and experience).

Box 2. Limitations to access to financial services for LFFPOs

A literature search and interviews revealed the following groups of barriers to finance for LFFPO:

- Scale and organization:
 - Aggregation needs to be more cost effective and reduce risks
 - Finance needs to produce results/impacts at scale
- Rate of return
- Risk management strategies
- Nature of financial instruments
 - Ease of implementation (process of application and documentary requirements, such as documented proof of land and forest use rights)
 - Legitimacy (considers reality of local money flows)
 - Transparency (of rules and regulations)
 - Coherence of investor objectives with stakeholder objectives
- Financial literacy
 - Being productive, generating an income, saving and spending wisely
 - Understanding key financial concepts
 - Ability to make decisions based on financial information
- Physical access
 - Distance from financial services
 - Ease of access; for example, through digital means
- Generating own capital, access to markets
- In addition, the level of constraint in each of these factors may differ according to gender, age and ethnic group

Their relevance for facilitating investments will differ according to the type of investor, type of receiver and local conditions. Some of the enabling conditions can be met by conventional **official development assistance** (ODA) and national government budgets, but investors need to consider the specific barriers that prevent smallholders from having access to financial mechanisms and instruments. Such barriers include the national policy and regulatory frameworks, the need to strengthen human capital (skills and knowledge), and the infrastructure needed for mobile finance.

Understanding and reducing the factors that limit access to financial services is an important step toward facilitating financial flows for sustainable and inclusive landscapes.

3.1.1 Scale and organization

The optimum scale for investments depends on the type and size of the investor, the objectives of the investments and the way the money flows. International banks and financial institutions tend to seek investments worth tens of millions of dollars in order to reduce transaction costs. They prefer to work through regional or national financial entities or fund managers who know the local conditions, have the local networks and can aggregate the local demand for finance. This is even more applicable in the case of landscapes. In the relatively sophisticated urban environments of developing countries, particularly in the finance/banking sector, fluency in financial skills and English is typically greater than in rural environments. In a rural environment, it is therefore of paramount importance for investors to be able to rely on local networks to obtain information, identify opportunities and risks, and simply know whom to talk to. This can usually be done through established players or local institutions such as local banks, national development entities or municipal/regional governments. It cannot be done remotely or if investors do not have access to people who speak local languages and are able to navigate local bureaucracies and local communities. Although inclusiveness may be a high priority for some large banks and other financial institutions, in order for them to

reach out to LFFPOs they will nearly always have to go through intermediaries, who will need to adhere to specific guidelines set by the investors.

Large companies can provide scale to these international banks and other financial institutions. Usually, through their scale and their operations, they have built local knowledge, employed nationals and gained credibility in the local marketplace. In addition, they usually have a track record of investments, and most of the time deal with assets that are well understood by the financial world: single crop plantations, for example. Involving large companies does not come without risks, though, as there can be issues related to their track-records and due diligence and background checks can only go so far in some jurisdictions.

Scale is often an important consideration for large banks and other financial institutions; the administrative and transaction costs to assess and execute investments are comparatively higher for smaller transactions. There is a minimum level of transaction costs that cannot be reduced, even for small rural transactions. Small rural transactions are even likely to have higher costs than those for typical urban transactions of a similar small scale. Costs such as transportation, due diligence, and hiring local resources to obtain information may end up adding substantial administration costs to the transaction, even before pricing in the financial risks. It may therefore make sense to use intermediaries who have easier local access and are more nimble. Micro-finance service providers are facilitating access to short-term operational finance in many countries and so are plantation companies that work through outgrower schemes.

Landscape approaches to rural development may allow for aggregation (Sayer et al. 2013), although of a different nature. Commonly, local stakeholders and agri-food businesses that provide a range of products and services organize themselves to address complex issues – such as water scarcity, climate change and deforestation – that cannot be solved by farmers or supply chain approaches alone (Scherr et al. 2017).



Photo 5. Cooperative brazil nut processor in Riberalta, Bolivia

Photo by B. Louman/Tropenbos International

Some promising experiences of landscape approaches have been documented. Most are process based, focus on governance issues, and have no clear measurable outputs in the short and medium term (Sayer et al. 2017). Because most financiers seek clear outputs that they can measure and receive a defined return for, very few financiers invest in this relatively unknown asset class. In addition, such investments are still relatively untested, and are therefore perceived to be risky. Also, few reliable cash flow data are available, and their time horizon usually goes beyond the preferred horizons of most investors. Landscape approaches, therefore, often face challenges in terms of sustainable finance (Hart et al. 2015).

The advantages of landscape approaches have received increasing recognition, though, particularly related to their risk mitigation potential in the context of climate change and extreme weather events. However, financing such approaches requires strong local institutions that are able to coordinate the range of land uses, facilitate access to the funds by local stakeholders, ensure that conflict resolution mechanisms are in place

and ensure transparency in the investment decisions and results obtained (Macqueen et al. 2020; Scherr et al. 2017).

Scale can also be achieved by aggregating LFFPOs in cooperatives or other forms of institutional collaboration. One of the advantage of aggregating local stakeholders, rather than working through intermediaries, is that they are located in the community or landscape, and therefore more likely to be committed to sustainable practices with medium- and long-term benefits for their socio-ecological environment (Macqueen et al. 2020). Even small investments in such practices will have a significant impact on the landscape. Macqueen et al. (2020) find in a review of 54 cases that organizational innovations can lead to successful aggregation for sustainable production, but they also recognize that, unfortunately, these examples are local and in many tropical landscapes such collaboration does not yet exist at the scale expected by investors, or does not yet show the capacity for people to organize themselves in a transparent way to produce, generate an income, and save and spend the earned money wisely (i.e. demonstrate financial literacy).

3.1.2 Rate of return

The expectations of the private sector are linked to their other investment opportunities and to their need or desire to diversify their investments. In a global context – of a relative abundance of private capital not finding enough bankable projects to invest in – the alternatives available to private investors can be somewhat constrained. Even a fully dedicated fund, with a very specific focus, can struggle to identify and execute more than a couple of investments in any given developing country. This is partly related to the investors' expectations. For example, investments in tropical land use have seen an increase since the 2008 food crisis, following expectations that the demand, and therefore possibly the price of food, would further increase in the future (Miller et al. 2010). Such price increases would increase the probability that investments would achieve the desired rates of return.

In general, however, land-use investments are expected to have lower rates of return than investments in other sectors (FAO 2017). In many cases, in particular at smaller scales or for innovative agricultural systems that are designed in response to climate change, project proponents find it hard to show what the expected rate of return is. This is because either they do not have the expertise to do the calculations, or, more often, because data on productivity and future prices are not available or not reliable. In addition, many beneficiaries in tropical landscapes find it difficult to respond to the expectations of investors because they are not organized well enough to produce the required quantity and quality of products or services at the right time. In addition, many local enterprises do not apply the rationality in the use of the earned income that is expected by most investors. This is partly due to a different understanding of financial concepts on the part of investors and recipients and partly due to difficulties in interpreting financial information. For example, rural SMEs and community enterprises may consider salaries to be a good form of income distribution, even at the cost of lower rates of return and lack of reinvestments in the long-term sustainability of their enterprises.

3.1.3 Risk

Risk management aims to devise mitigating strategies and manage risks during the investment life cycle (from execution to exit), based on a risk assessment. Risk assessment is the first step that investors take when looking at any potential investment. Obtaining information, gathering data, identifying risks and ranking them according to their likelihood and expected impacts will determine the risk/return profile of the investment opportunity. Once the risks are identified, the investors will prepare risk management strategies to monitor and mitigate them.

Land-use investments are perceived to be riskier than other investments (FAO 2017). This may be due to investors' lack of experience with such investments, and to the nature of the land use and to the presence or lack of certain enabling conditions. Lack of good governance, insecure land rights, poor infrastructure, and inadequate public services (health, education, agriculture and forestry extension) increase the risks of land-use investments (FAO 2017).

This perception of high risk is one of the major reasons that prevent investors from investing in tropical landscapes, and it is difficult to address by smallholders or communities by themselves. Reducing the risk for investors is, therefore, one of the drivers of blended finance structures, where development money is invested with a commitment to carry first losses should the need arise. Blended finance can complement private lending instruments with grants to provide specific technical assistance that enables the successful use of the borrowed money. It can be used as a guarantee for private lending instruments or simply to plug a financial gap to make the investment feasible for private investors.

A landscape approach can address at least some of the risks of land-use investments. For example, the Sustainable Trade Initiative (IDH) applies a landscape approach when preparing large investments, in order to reduce the risks of water depletion, deforestation or other land or resource management issues (IDH 2018). Despite

efforts such as these, for most mainstream investors these approaches remain too complex and lack easily identifiable quantitative results to be attractive. For that reason, IDH, as part of its approach, facilitates the creation of new financial instruments that take first loss and reduce the risks of landscape investments.

Insurance is also an important tool to reduce the risks of projects. Insuring for damage due to extreme weather conditions has been in place for several decades in developed countries (Changnong and Changnong 1990). From the perspective of farmers, such insurance becomes increasingly attractive with increasing climate uncertainty (Falco et al. 2014), in particular for farmers with low crop diversity. In tropical countries, however, such schemes are more recent and have been applied in relatively few countries (World Food Programme 2005). Notable examples of such schemes are the index-based crop insurance system in Malawi, where farmers obtain loans that are coupled to insurance. If pre-defined extreme weather events cause crop losses, farmers have to pay back only part of their loans, while the rest is covered by the insurance company (Linnerooth-Bayer and Mechler 2015). Although this mainly reduces the risks to banks and only indirectly supports the farmers, such schemes could also be developed to improve the cash flow of the farmers after crop losses caused by other factors; for example, extreme events. However, the costs of such insurance may be relatively high for poor farmers and LFFPOs and should be weighed against the costs of taking preventive measures, such as crop diversification in the case of agriculture or maintaining diverse and vigorous forests in the case of forest and tree plantations. In fact, most effective crop insurance systems are supported by public subsidies. In industrialized countries such as the U.S. and members of the European Union, insurance is in fact a form of subsidy. In addition, increased risks due to climate change may make this service less attractive for insurance companies, or, alternatively, may increase the cost of premiums to levels that are unaffordable for the average small-scale farmer in developing countries.

From an investor's point of view (for instance, in the case of a blended finance fund manager) or for a small local LFFPO, credit enhancement mechanisms may help increase the creditworthiness and mitigate the risks of a project. Products such as first loss guarantees (provided by institutions or development funds) or a simple letter of credit to cover any cash loss or inability to make a loan repayment can improve the risk profile of a project. Institutions such as the International Finance Corporation (IFC), for instance, offer partial credit guarantees, which are an irrevocable promise by IFC to pay the principal and/or interest up to a pre-determined amount.

Other risk-sharing financial instruments (Box 1) may help, but more attention should be paid to land-use systems that reduce the susceptibility of farmers to weather conditions. More diverse land-use systems (Altieri and Nicholls 2017; Verchot et al. 2007), landscape approaches that consider the value of local ecosystem services (Harvey et al. 2014a), and long-term soil improvement practices (Altieri and Nicholls 2017) all contribute to stabilizing farming systems, although the short-term productivity of the crops may be slightly less than the maximum potential under monocrop systems with high input applications. However, these diverse systems are not yet well known to most conventional investors, and therefore the application of these improvements has had little effect on investors' perception of the level of risk.

For impact investors, too, the food, agriculture and conservation sectors are still relatively little known and perceived to have relatively high risk. These investors put only 9% of their total investments into these sectors (GIIN 2018). In contrast, they invest more in the renewable energy sector, presumably because profits are quicker, easier to measure and less susceptible to land tenure issues, and therefore more predictable. In developing countries, where governance is usually fragile, investments in agriculture, forestry and other land uses (AFOLU) are considered to be relatively risky.



Photo 6. Tourism opportunities in Chiapas Mexico

Photo by B. Louman/Tropenbos International

In general, a number of factors make AFOLU investments in developing countries particularly risky for an investor: poor infrastructure to reach markets, lack of adequate storage facilities, inadequate offtake agreements, uncertain land delineation and ownership, lack of integrated landscape and supporting services (for scale), inadequate and uncertain regulatory environment, staffing issues, lack of access to trade finance or financial instruments that can be used to reduce investment risks, perception of land grabs by an outside investor, questions over acceptance by the local community, etc.

The importance of risk as criteria in decision-making is also reflected in the distribution of investments over the stages of business. Respondents to a survey of impact investors (GIIN 2018) indicated that they invest in start-ups (42%), venture stages (65%) and/or growth stages of businesses (81%); and of the invested funds, only 1% go to start-ups, 10% to venture stages, 35% to growth stages, and 53% to mature private or publicly traded companies. Apparently, investors prefer both lower risks (i.e. investing in relatively

developed businesses) and larger-scale operations (which means putting more funds in a single business, rather than funding many businesses with smaller amounts).

3.1.4 Nature of financial mechanisms and their instruments

Bird et al. (2013) identified four principles for successful implementation of finance policies: ease of implementation, legitimacy (matching local realities), transparency, and coherence of objectives. Although this publication deals with finance mechanisms and instruments and not policies, these same principles can apply, if success is considered as contributing to the sustainability and inclusiveness of landscapes while achieving an acceptable rate of return.

3.1.5 Ease of implementation

Ease of implementation refers to issues related to the administrative processes necessary to transfer funds through a particular mechanism. Such issues include the documentary requirements for access to financial services, such as proof of registered ownership of land. They may also include the

cost of the internal administrative processes of the financiers. In the case of development money, additional constraints may affect the ease of implementation; development agencies and international development institutions are generally risk averse and usually very careful when granting loans, giving grants or funding technical assistance. The use of donor funds and donors' ability to raise funds on international financial markets are carefully monitored. The decision-making process might therefore be slow, and potential investees or beneficiaries may be subject to constraints that can be onerous, such as extensive environmental and social due diligence, corporate governance issues, monitoring and reporting and proof of landownership as collateral. Indeed, in many tropical countries *de facto* land ownership may follow different rules than formal land ownership does. This makes it difficult for smallholders and communities to obtain legal proof of land ownership, which is often required as collateral to obtain loans from financial institutions. Similarly, LFFPOs may not be able to show sufficient assets or reliable income projections, which are needed to obtain loans, and often the transaction costs to obtain the required information are too high (Macqueen et al. 2018).

3.1.6 Legitimacy

Legitimacy refers to requirements and guidelines that **consider the realities of local financial flows**. In particular this relates to the terms of the commitments; for example, loans that follow the agricultural calendar; patient investments that allow for tree crops to mature before any benefit is received by the investors; and interest rates that consider the real risks and the local management strategies that reduce those risks. This requires that investors and fund managers become "asset literate": they should understand the financial needs, risks and possibilities of the sector that they invest in. Sustainable practices by LFFPOs in tropical landscapes are new forms of investment for many financial institutions and private financiers. It is important for these financial providers to learn more about the needs, opportunities and risks of sustainable tropical land uses in order to be able to develop

and provide legitimate financial products that combine financial results with positive impacts and thus increase the use of financial products in such landscapes.⁸

In the long term, collaboration with local stakeholders in the development of financial products will result in more successful implementation of the products than unilateral development will (Savenije et al. 2017). The importance of developing and maintaining a dialogue between local stakeholders and international providers of development/commercial finance cannot be overstated. National governments, local authorities and development platforms are critical to help bridge the gap between global goals and local implementation. In larger developing economies, local authorities can rely to some degree on bureaucracies and dedicated resources that are able to adjust requirements and local constraints to the appropriate forums. Although this still may be insufficient to bridge the local to global gap, this contributes to addressing inconsistencies and tailoring products that are better adapted to local constraints.

This is also where international/regional development institutions play an important role, particularly in smaller developing countries, as these institutions can maintain local offices and interact daily with local stakeholders. In the case of development finance, several national development agencies or philanthropic organizations who don't have a local presence are providing donor funds for the larger development institutions to manage (through, for example, trust funds). While the donors are setting up goals that are compliant with SDGs, the development institutions are trying to identify local projects that help achieve these goals.

3.1.7 Transparency

The complexity of many financial flows does not promote transparency. For example, although internationally criteria have been agreed on to make climate finance more

⁸ See for example <http://www.foreststreesagroforestry.org/news-article/moving-towards-a-more-integrated-view-on-finance-and-impact/>

transparent, they are mainly directed at public finance and at allowing third parties to follow the money from source to beneficiary. Private companies are considerably less capable of meeting such criteria due to the nature of their operations (Pauw et al. 2016). This is one of the issues, too, in evaluating the merits of blended finance structures; there are many options to blend and blending can occur in various segments of the financial flows to landscapes. In addition, once blended, the money can be used for a range of purposes through different mechanisms and by different actors. One of the great challenges therefore is to make sure that public money is used to provide public services and goods, rather than to merely support profit making by individual enterprises. To achieve this, transparency in transactions and decisions is necessary throughout the finance value chain.

Box 2, however, refers to a type of transparency that is related to the financial transactions to which local stakeholders have access. Local stakeholders often consider that there is a lack of transparency in such transactions, because for them it often is not clear why some people can and others cannot access finance.

The issue of transparency in financial transactions is by no means restricted to developing countries. More developed economies also face questions relating to the wider topic of transparency in the banking and financial sectors. Transparency in developing countries also refers to concerns about a lack of fairness and equal treatment, and to a high degree of subjectivity in the decision-making process. With financial instruments relying on more informal networks, risky assets and sparse information in rural environments, the risks of information not freely flowing or being captured by a few are likely to increase.

One of the reasons for this is the lack of transparency in establishing the rules and regulations for transactions. While this lack of transparency also has a basis in the often low financial literacy rates of the receiving stakeholders, little is done by financial product providers to better explain what the

rules and regulations are, and why these are as they are. As described in the section above on legitimacy, greater involvement by local stakeholders in the development of financial products could increase both understanding and transparency of the resulting products, which would help facilitate their implementation.

3.1.8 Coherence of objectives

The fourth principle for improved implementation of finance policies mentioned by Bird et al. (2013) is that of **coherence with objectives**. While this publication refers to coherence with national objectives, there is also a need to seek coherence among local, national and international objectives. Too often, sums of money are pledged to meet international objectives, such as climate action or nature conservation, but too little consideration is given to possible trade-offs between meeting these global objectives and the local or national objectives. This is one of the reasons why the performance of many results-based carbon finance initiatives lags expectations (Soanes et al. 2019). International development institutions, which often manage donor funds on behalf of philanthropic organizations and national development agencies, may provide a useful interface to bridge global and local objectives – which may possibly diverge – if they have a local presence or work with a strong local partner. In addition, because of the relatively realistic flexibility embedded in their partnership agreements, international development institutions can often tailor products and services to local requirements while complying with the broader SDG objectives set by the donors.

These actions are, however, insufficient to address the very large needs that exist. Fund managers and private-sector operators must also play a role in translating SDGs and other international initiatives into locally appropriate products. This is relevant, for example, when looking at finance for climate and for forests and other land uses. According to SDG 13, on climate action, the international community has agreed to provide USD 100 billion per year from 2020 on. As mentioned



Photo 7. Payment for environmental services as a means to link national goals to local needs in Chiapas Mexico

Photo by B. Louman/Tropenbos International

above, only a small proportion of this global climate finance is assigned to the AFOLU sector. If properly financed, such efforts could contribute to 20% of global mitigation potential and would be crucial for adaptation. In addition, most of the money assigned to AFOLU up to 2017 was pledged for mitigation purposes. This is relevant from a global perspective, but locally, adaptation is generally a higher priority. Where these objectives cannot be reconciled, implementing land-used-based mitigation projects is necessary, but these are falling behind expectations.

Although agriculture and forestry based mitigation options are sometimes considered to impose no net costs to society (Wetzelaer et al. 2007), in some cases such projects cause trade-offs with local development. This happens, for example, where large plantations are established on land that was previously used by other people and for other purposes and the full social and environmental costs of such change are not

considered. It also happens when climate resilience focuses on carbon absorption and storage rather than on diversity and water availability. This means that, in addition to involving local stakeholders in the design and implementation of appropriate financial instruments, involving them in setting the development objectives and implementation of the instruments would also contribute to their more widespread adoption.

In many countries, local financial entities exist. They include micro-finance institutions, cooperatives, agricultural banks and credit unions. In developing countries, however, these entities either are not common, are too small to reach a broad public, are not perceived to be reliable, and/or are not able to meet the documentary requirements for obtaining a loan as applied within the formal banking system. While this makes these local entities part of the limitations that LFFPOs encounter when seeking finance, they may also offer great opportunities to increase access. They have the necessary infrastructure to move money and could be

the key actors with whom to negotiate the terms and conditions of access to finance, in particular if this means an additional injection of capital by investors.

3.1.9 Financial literacy

Financial literacy is important, not just because it may affect the rate of return (as indicated earlier in this section), but also since some of the drivers of lack of access to financial services – such as perceived costs, distrust, and lack of documentation – also have to do with a lack of financial literacy. Often a lack of financial literacy influences a person’s ability to appreciate the benefits that financial services can provide. Globalization, which leads to more complex economies, combined with aggressive consumer marketing and readily available credit, has increased the need for financial literacy, but this has rarely been accompanied by increased attention to this subject in educational programs. For example, in the U.S., a very low savings rate was perceived to be an indicator of the difficulties faced by people, in particular young and economically disadvantaged people, in effectively managing their money. It was a reason to set up a national program for financial literacy (Remund 2010). Remund (2010, 284) defines financial literacy as:

..... a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions.

Besides financial literacy’s significant potential for improving LFFPO performance (Siekei et al. 2013) and people’s willingness to save (Murendo and Mutsonziwa 2017), thus reducing the risks of investments in LFFPOs, it also promotes the type of financial behavior (saving, budgeting, wise use of credit) that facilitates access to finance for families and LFFPOs (Kefela 2010; Korutaro Nkundabanyanga et al. 2014). In addition, where it leads to savings and access to insurance and pensions, it will contribute

to people’s greater well-being in the future. Financial literacy is not just related to an understanding of financial concepts. An important aspect of it is people’s or companies’ ability to create their own capital, identify additional sources of capital and link this access to finance to growth (Adomako et al. 2016). Usually financial literacy is thought of as a combination of being productive, generating an income and spending money wisely. This may sometimes require policies and regulations that strengthen the participation of smallholders, LFFPOs and communities in existing value chains and markets.

Notably, financial literacy affects access to financial services. Both literacy rates and access are significantly lower for women, youth, people in rural areas, people with a lower income, people from geographic and ethnic backgrounds that are different from those providing the services, and elderly people. Financial literacy rates affect the use of services such as retirement planning, and more sophisticated use of investment opportunities (Xu and Zia 2012).

Most studies reviewed by Xu and Zia (2012) were from developed countries, and more evidence on the impact of financial literacy on financial inclusiveness and sustainable landscapes needs to be gathered from developing countries.

In general, however, financial literacy programs that address issues such as money basics, budgeting, saving, borrowing, investing and risk management (Huston 2010), with each program adjusted to specific groups of beneficiaries, would increase the uptake of a range of financial services. These skills may be necessary to reach the scale of finance required to make the change from conventional to sustainable agricultural and forestry practices. A firm’s performance depends in large part on the financial literacy and other abilities of the individuals who work for it (Ye and Kulathunga 2019), and such programs would need to address the needs of LFFPOs led by various types of individuals: women and men, rural and urban people, age classes, ethnic groups and individuals with a range of income levels. A recent report (Financial Access 2020) provides guidance on how to

create a strategic framework to increase financial literacy among micro, small and medium enterprises in agricultural and forest value chains based in tropical landscapes.

Xu and Zia (2012) found that the social networks linked to participants in financial literacy programs often showed an increased uptake of financial concepts and financial services. Being part of social networks may help people obtain financial services if these networks are perceived to be reliable and to contribute to transparency and compliance (Uzzi 1999; Guiso et al. 2004). Such networks may go beyond the landscape, and may include partners along value chains, as well as partners with national economic and political influence. In China, under conditions of weak institutional frameworks, it was found that such social networks – meeting the right business people and representatives of the financial sector at social events – were replacing the need for fixed assets as collateral for external finance by SMEs in the manufacturing and mining sectors (Du et al. 2015). In this case, the personal relationships formed through such events helped the process of building trust, not only by people knowing each other personally, but also by receiving feedback from third parties about the (financial) behavior of each other. The same authors indicate, however, that if SMEs need to invest in the creation of such networks, this may well affect the financial performance of the SMEs. Therefore, building and strengthening social networks needs to be a process that balances the needs of the LFFPO for both social networks and financial performance.

Within specific landscapes, for example, facilitators such as CSOs or multistakeholder platforms could help increase the knowledge of current financial flows by understanding their drivers and impacts. This would help identify those flows and actors that may be willing to collaborate on the same objectives and investments. At the same time, it would help identify those financial flows and activities that may pose a risk to the sustainability of the landscape and threaten the success of investments. Such information will help to identify the scope of the social network that people may want to build locally.

3.1.10 Fintech and other technological innovations

Fintech has been defined as “a new financial industry that applies technology to improve financial activities” (Schueffel 2016, 45); others define it as a “technologically enabled financial innovation” (Schindler 2017, 2) or as “a combination of technology and financial services that’s transforming the way financial businesses operate, collaborate, and transact with their customers, their regulators, and others in the industry” (PwC 2019, 3). Such financial innovations include equity crowdfunding, blockchains and online marketplace lending. In developing countries, these also include automated teller machines, online banking services, and mobile payments. Mobile money services in sub-Saharan countries increased by 15% between 2017 and 2019, and more and more providers are offering digital savings and credit services (GSMA 2020). In these countries, the availability of such services may be crucial to increasing access to financial services in general (Demirgüç-Kunt et al. 2018). They reduce the costs of financial transactions for both customer (through easier access) and provider (for example, by reducing the costs of client risk assessment and by monitoring through the use of platforms such as LendXS).⁹ They also increase income earning capacities, savings, access to formal and informal lending facilities, and help women to shift from agricultural activities to business and trade.

Technological innovations have shown, therefore, that they can facilitate financial inclusion. On the other hand, this is possible only if reliable country-wide communication networks are available, if access to these networks is affordable for all people and if the networks are supported by effective policies and regulations. This is still a challenge in some developing countries, particularly for women, poorer men, people with less education and other disadvantaged groups (Demirgüç-Kunt et al. 2018). In 2017, for example, about 37% of India’s bankable population still did not have access to banking services (GSMA 2020).

⁹ <https://lendxs.com/>

Digitizing financial services may make most, if not all, of the financial instruments in Figure 1 more accessible to landscape stakeholders, and thus has the potential to increase financial inclusion. Governments may support this by improving the infrastructure needed for access to digital technology and communications. Technological innovation in finance in developing countries has often been seen as a means to speed up development efforts, circumventing existing, often inefficient financing systems, and indeed the use of mobile phones has made an impact on income and its distribution in Kenya and Tanzania (Arner et al. 2015). Digitizing financial services in itself, however, is not enough to achieve financial inclusion. Inclusion requires that the services offered are tailored to the needs of the local customers (Arner et al. 2015). Digitizing financial services also needs to be accompanied by financial literacy programs in order to help people make appropriate use of the services offered. It remains a challenge to adjust local regulatory systems to ensure that digital finance systems acquire the confidence of all actors involved while at the same time allowing for flexible access to these systems.

3.1.11 Capital

In general, having access to funds or to finance from local sources makes it easier to obtain additional financial resources. It is often seen as a sign of confidence in a positive result if people put up their own money, or can raise local finance from sources other than their own. In addition, potential investors see it is a form of risk sharing if they are not the only ones to invest in the initiative. Most investors (or banks) require that the investees contribute at least part of the finance themselves. In crowdfunding, being able to quickly show that one can raise an initial amount helps to raise more money. Initiatives that were able to raise money by making use of their social networks have had more success in completing their target amount than those that did not.

Raising capital is difficult, particularly in tropical landscapes. This is partly because local stakeholders are poor, and partly because their experiences with financial flows are limited and their financial literacy is low.

Access to markets also influences the capacity of farmers or farmer producer organizations to raise their own capital. Before worrying about how to access markets and natural resources, the first task for any commercial enterprise is to establish whether the resource base is there (this may take the form of an inventory, in the case of forests), and that markets exist for the products and services to be produced. The prospectus must also consider if the available markets have a demand for the products and services of the quality and quantity that the initiative proposes to produce.

Once the existence and appropriateness of the resource and market are confirmed, access entails physical aspects, human aspects (information, skills) and social aspects (legal and customary rights, equity). Physical access depends on infrastructure, means of transport, products sold or bought (quantity, individual size, perishability) and the need for storage. While road infrastructure is typically

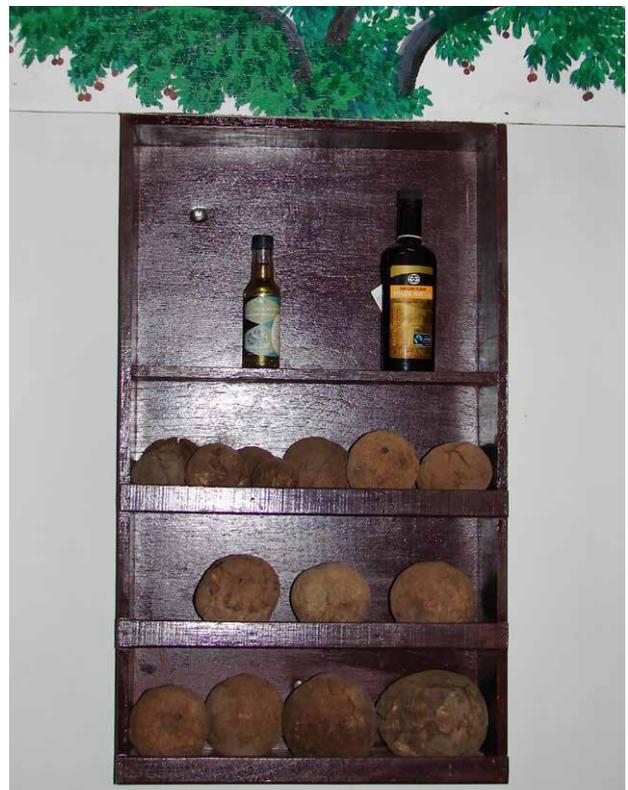


Photo 8. Marketable Brazil nut products Riberalta, Bolivia

Photo by B. Louman/Tropenbos International

a responsibility of the state, transport and storage of products are usually decided on by the individual businesses, seeking the best combination for their production capacity.

LFFPOs often depend on intermediaries for their access to markets. These intermediaries may be specialized in transport, storage, buying and selling, or any combination of these. Some also provide informal finance; for example, for operational costs for items such as seeds or machinery. If these intermediaries become much bigger than the investees, this may create an imbalance in trade relations, resulting in exploitation of the smaller actors. For many LFFPOs, intermediaries are the ones that determine access to markets and regulate prices, which limits the capacity of the LFFPOs to accumulate their own capital. In some cases, LFFPOs have therefore opted to organize themselves and jointly create their own service providers.

3.2 Challenges to achieving positive impacts on sustainability in the landscape

Smallholder marginalization is considered to be one of the reasons that in some landscapes, despite zero-deforestation or sustainable production initiatives implemented by agro-commodity value chains, deforestation is not fully halted. It is generally accepted that smallholders are marginalized because they do not have

the capital or knowledge to transform their operations, and therefore may not have access to the more profitable markets. Nor are they able to meet the basic requirements (such as secure land tenure) to obtain formal financial services. However, increasing their access to finance does not necessarily mean achieving greater sustainability in the landscape. Indeed, several cases indicate that the increased participation of smallholders in international agro-commodity value chains has had negative results; for example, increased deforestation due to smallholder oil palm producers in Indonesia (Jelsma et al. 2017), and expansion of cocoa production areas into the forests of West Africa (Kroeger et al. 2017). In spite of the fact that smallholders often want to sustain the resources on which their livelihoods depend, and lack of access to finance may be one factor that reduces their capacity to do so, a number of other factors need to be considered when enhancing smallholders' contribution to sustainable landscapes (Box 3).

3.2.1 Social networks and inter-stakeholder collaboration

Formal collaboration between local farm and forest producer organizations and other stakeholders (for example, producers of a particular crop, or practitioners along different segments of the same value chain) can facilitate access to finance (Macqueen et al. 2018). Both formal and informal collaborations,

Box 3. Factors that influence the degree of sustainable results that can be achieved by investments

Factors that can be influenced by investees include:

- social networks
- internal organization
- risk management
- knowledge and experience

Individual investees do not have much influence on tenure rights and access to natural resources. These are usually determined by national or local authorities.

Certification and standards influence sustainability of land use, where investees can contribute to comply with the standards. Setting the standards, however, is usually done by international or national bodies, on which individual investees have little influence.

such as local social networks, have the potential to positively influence the adoption rates of sustainable practices (Teklewold et al. 2013). Social networks can also be used for reflection and the co-creation of new meanings and practices (Moschitz et al. 2015). Such inter-stakeholder collaboration can occur at the level of landscapes, between like-minded local farm and forest producer organizations, and can also occur along value chains. In either case, it allows the participants to address issues (e.g. water depletion, deforestation) that go beyond the farm or management unit and that may threaten the sustainability of their operations.

3.2.2 Internal organization

The internal organization of local farm and forest producer organizations is also an important factor in achieving sustainability and inclusiveness objectives. It supports efficient use of resources. For example, some forest concession holders in Peru preparing for Forest Stewardship Certification indicated that improving their internal organization was one of the biggest benefits they received from the process: production losses after tree harvest decreased by about 10%.¹⁰ This reduced loss also meant that fewer trees needed to be cut for each cubic meter of sawn wood produced. Stronger operational management facilitates the adoption of standards (Gonzalez-Benito and Gonzalez-Benito 2008). Formal standards typically require businesses to adopt specific measures that are designed to reduce environmental and social harm and may be required by specific offtakers, project developers and fund managers.

3.2.3 Risk management

Bolin and Macqueen (2016) recognize six areas where risk may threaten the sustainability of smallholder forest enterprises: revenue flows, natural resources, business relationships, the operating environment, operating capacities and brand recognition. Although the operations of each farmer and farmer producer organization may be

quite different, the risks they face can be grouped together in a similar way. Based on an analysis of a set of case studies in which local forest businesses assessed their own risks using a toolkit prepared by Bolin et al. (2016), Bolin and Macqueen (2016) propose a series of strategies that could be adopted by these businesses to reduce their risks. Their framework proposes an integrated approach that translates nearly all management challenges into risks.

This section is mainly interested in the risks that affect the capacity of LFFPOs to implement sustainable farm and forest management practices; this is referred to as security of operational environment and operational capacity in the framework of Bolin and Macqueen (2016). The other relevant risks discussed here are management challenges and opportunities related to access to land and natural resources and to brand development (certification and standards). The challenges related to revenue flows are discussed in Section 3.1.

The degree of risk can be influenced by the macro-economic and market context, the institutional and legal frameworks, socio-cultural issues and natural resource management issues. A number of risks can be addressed by the LFFPOs themselves (e.g. by reducing inefficient exploitation of resources, preparing for the seasonality of harvests, preparing for extreme weather events or changing temperatures and rainfall patterns, increasing skills in resource management). Others can be addressed in collaboration with other stakeholders in the landscape (e.g. through resource allocation, power relations, law enforcement).

In South Africa, for example, farmers incorporated crop diversification, precautionary savings, and participation in social networks in their risk reduction strategies (Kisaka-Lwayo and Obi 2012). Crop diversification, if well managed, can address efficiency of resource use, seasonality of harvests and susceptibility to climatic conditions. Preparation for the latter two risks is further supported by the savings, while getting involved in social networks allows people to influence resource allocation,

10 Victor Espinoza, pers. comm. 2006 (president of Espinoza sawmill operations in Puerto Maldonado, Peru).

power relations and law enforcement and may also create a safety net in case of emergencies. However, changing the crop system often requires an initial investment, and saving money requires an incoming cash flow. Poor farmers and LFFPOs may not have access to these, thus creating a vicious circle: because of their small scale and type of operations and lack of access to markets they do not have an income and cannot get access to finance; and because they do not have access to finance, they cannot make their operations more sustainable. Harvey et al. (2014b) note, for example, that risk management strategies did not work for the poorest farmers in the context of climate change.

3.2.4 Tenure rights security and access to natural resources

Secure tenure rights help ensure access to the resources that fulfil the needs of local people, in particular indigenous people (Fa et al. 2020), and therefore facilitate the uptake of practices that sustain these resources. Secure tenure has been shown to reduce deforestation on forested lands (Fa et al. 2020; Robinson et al. 2014) and support the uptake of soil conservation practices on farmlands (Gebremedhin and Swinton 2003).

While tenure right security is usually a matter for national legislation, some landscape initiatives have been able to improve rights security using stakeholder collaboration. A first step is to collaborate with financial institutions and convince them that their clients should respect existing legal and customary land rights. The Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security were adopted by the UN Committee on World Food Security in 2012.¹¹ They are used as a reference by some banks, including ABN AMRO.¹² Some major companies have made

commitments to respect land and forest tenure rights,¹³ but this has not been sufficient to avoid disputes over land and forest rights in many tropical countries (IPMG 2019). Allocating and safeguarding tenure rights require strong governance. The participation of local stakeholders in defining tenure rights and in land-use planning based on those rights could further strengthen respect for legal and customary rights (Chigbu et al. 2017). It is one of the main strategies promoted by IDH in the application of its landscape approach when supporting companies that seek to achieve the sustainability of their value chain (IDH 2018).

Access to natural resources is often also linked to tenure. In many countries, land ownership does not automatically imply that the land owner has rights over the trees on the land. At the same time, producers may find that securing land tenure arrangements is needed to get access to the trees that they have acquired the rights to. Furthermore, in many societies men and women do not have equal rights to ownership of land or trees. As a result, access to resources may be subject to gender issues that need to be understood to be able to ensure that landscape approaches do not exclude female producers, or fail to consider their knowledge and experience.

3.2.5 Knowledge and experience

Strengthening the business administration capacities of LFFPOs is another essential element in strengthening LFFPOs. It increases their success in obtaining finance for the implementation of their ideas. Business incubators are increasingly used for this purpose. They strengthen the capacities of people in areas such as financial administration, marketing, seeking finance, and expanding their networks to include strategic partners. The success of such efforts, however, largely depends on the extent to which such services can be tailored to the local context, and on the resourcefulness and initiative of the start-ups (Lesakova 2012). Member villages of

11 <http://www.fao.org/3/i2801e/i2801e.pdf>

12 See for example the proposal for due diligence procedures by Solidaridad and ABN/AMRO at https://www.abnamro.com/en/images/Documents/040_Sustainable_banking/Publications/VGGT_Land_Rights_working_paper.pdf

13 <https://www.interlakengroup.org/annex/company-commitments>



Photo 9. Managing forests for both local and international environmental services in Desa Gema village forest, Indonesia

Photo by B. Louman/Tropenbos International

the forest village association ACOFOP in Guatemala, for example, initiated commercial forest concessions in 1997, but initially people had little knowledge of business administration and market requirements. Their expectations of the forest product business did not coincide with those of their buyers, often resulting in difficulties in the timing, quality and volumes of product delivery (De Pourcq et al. 2009). They survived mainly thanks to international development grants. It was not until the supporting agencies refocused their services – from technical assistance to strengthening local organizational and business management capacities – that the organization was able to create its commercial arm, FORECOM, and achieve more financial independence.

Knowledge and skills are also essential for the uptake of sustainable farming and forestry practices. While LFFPOs often can build on their experience in producing or processing specific crops and products, the rapidly changing policy, market and natural environments often require them to acquire new knowledge and learn new skills, while

sometimes even having to un-learn the old ones. Lack of knowledge and awareness, for example, hampered the adoption of water saving technology, even in a water scarce context in Spain (Alcon et al. 2014). It also was one of the factors affecting the adoption of sustainable agricultural practices in a study in Tanzania (Kassie et al. 2013). Kuehne et al. (2017) found that an awareness of financial and environmental benefits affected the rate of uptake of new practices by Australian farmers, but that ease of implementation and its relation to existing knowledge and skills had greater effects on uptake. This was particularly true for farmers involved in social networks and/or with access to advisory support. Increasing access to finance for LFFPOs in order to apply new sustainable agricultural and forestry practices will be more effective if it is accompanied by processes that strengthen the knowledge and skills of the members of these LFFPOs in the desired practices. In Syria, Yigezu et al. (2018) found that facilitating initial exposure and ease of access to new farm technologies speeded up adoption. Unfortunately, in many developing countries, governmental agriculture and

forestry extension services have been reduced over the past decades, leaving it up to projects and private initiatives to provide the training required.

3.2.6 Certification or other types of frameworks to guide and monitor practices and their impacts

Investors increasingly recognize the need for frameworks to guide and monitor the practices of their investees and the environmental and social impacts of these practices. The UN-supported Principles of Responsible Investment (PRI) is such a framework;¹⁴ it is signed by many organizations that are globally responsible for more than USD 89 trillion in assets (PRI Association 2020). The principles were developed by and for investors and commit the signatories to apply a set of environmental, social and governance (ESG) criteria. In a review of more than 2000 empirical studies of investments that applied ESG criteria, Friede et al. (2015) found that most cases showed a positive relation between the application of ESG criteria and corporate financial performance. Related to this framework, in 2014 the Committee on World Food Security (CFS) adopted Principles for Responsible Investment in Agriculture and Food Systems¹⁵ – known as RAI –. They are a set of ten principles that apply to all types and sizes of agricultural investment including fisheries, forests and livestock. They address all stakeholders and apply to all stages of the value chain. As a soft law instrument, they are globally applicable and include actions to address a range of environmental, social and economic issues. As the RAI principles were developed through a multi-stakeholder process, they already have wide buy-in opening opportunities for stakeholders to use them as a basis for joint activities.

Although ESG criteria have been employed since the 1970s, and multinational banks and financial institutions have increasingly incorporated them in their investment

decisions, their implementation in investments in the context of rural landscapes is relatively new. Little evidence exists of how effective they are in achieving environmental and social goals beyond seeking to reduce harm. In addition, when it comes to the relatively new concept of landscapes ('new' from an investment point of view) ESG-guided investments are not necessarily addressing the priorities of the landscape where the activities take place. One of the main reasons for this is that investments still are analyzed primarily in terms of their financial returns and risks.

Parallel to the PRI, many financial institutions and commercial lenders have adopted the Equator Principles (EPs). The Equator Principles are based on IFC's performance standards and are oriented to reducing the harm of proposed investments. These principles form a framework for determining, assessing and managing environmental and social risks in project finance. They are mainly intended to provide a minimum standard for due diligence to support responsible risk decision-making.

A recent review of the Principles of Responsible Investment recognizes that more is needed than applying ESG criteria to meaningfully contribute to achieving the SDGs (PRI Association 2020). Similarly, in practice, applying the Equator Principles does not appear to meet expectations (Hennig and Woersdoerfer 2015). Although the EPs have evolved over time, with the latest amendments made in 2019, the PRI Association has proposed more substantial change that incorporates guidance for an analysis of real-world needs and objectives, and outlines how collaboration could be sought with other organizations in order to make investments better contribute to fulfilling environmental needs and societal objectives.

Impact investors differ from conventional investors who apply ESG criteria in that in addition to seeking a return to their investments, they more explicitly seek positive environmental and social impacts (Bugg-Levine and Emerson 2011). These investors made investments of more than USD 500 billion by 2019 (GIIN 2019).

14 <https://www.unpri.org/pri/an-introduction-to-responsible-investment/what-are-the-principles-for-responsible-investment>

15 <http://www.fao.org/cfs/home/activities/rai/en/>



Photo 10. Independent oilpalm production in a mosaic of food cropping and secondary and primary forest in Indonesia

Photo by B. Louman/Tropenbos International

It is generally assumed that for impact investors, the ability to achieve positive environmental and social impacts may be sufficiently important for them to accept lower rates of returns and to venture into less well-known sectors, asset classes and innovative finance structures, mechanisms and instruments. Thus, impact investors may be more willing to invest in actions that promote the sustainability and inclusiveness of landscapes. Rode et al. (2019), however, found that impact investors approached for the Unlocking Forest Finance project they studied in Brazil and Peru expected to achieve social and environmental benefits without lowering their expectations for financial returns relative to business-as-usual investors.

The desire to achieve environmental and social impacts is seen in the adoption by GIIN of the Impact Reporting and Investment Standard (IRIS) that was developed by the Rockefeller Foundation and Acumen and B-Lab, two U.S.-based non-profit

organizations focused on impact investment.¹⁶ GIIN estimates that as of July 2018, about 41 self-declared impact investors applied IRIS or a similar framework to measure impacts.¹⁷ For investments in the agriculture, environment, land conservation and water sectors, one of IRIS's recommended metrics is products/services that are certified by a third party. Another metric is how much land is sustainably managed or under sustainable stewardship. Both metrics would be addressed if the investee could achieve third-party certification for both the land use and value chain (for example, FSC in the case of timber). Certification would therefore facilitate access to finance by a group of potential financiers.

Certification has other uses, too. An LFFPO can use certification requirements as a

¹⁶ https://s3.amazonaws.com/giin-web-assets/iris/assets/files/IRIS_2-Page.pdf

¹⁷ <https://iris.thegiin.org/about-iris> since 2019

set of guidelines to help it focus on those issues and practices that are important for achieving sustainability. As an example, the Roundtable on Sustainable Palm Oil (RSPO) has developed a set of environmental and social criteria that companies must comply with. When properly applied, these criteria can help to minimize the negative impact of palm oil cultivation on the environment and communities in palm oil-producing regions. Interestingly, the RSPO has developed a Smallholder Certification designed to address small-scale producers' needs and constraints. Based on that certification, a number of trading options can be offered to small-scale producers, allowing them to increase their revenue.

Certification is not easily achieved, however, and it requires investments in planning and training that go beyond the capacity of many LFFPOs. Several governments in developing countries are conducting initiatives to develop local certification schemes to support the competitiveness and sustainability of certain industries. As an example, the Government of Indonesia has introduced the Indonesia Sustainable Palm Oil (ISPO) certification. Even though it is somewhat less strict than the RSPO, it supports the Indonesian government's efforts to make palm oil be produced in a more environmentally sustainable manner. More importantly, for small-scale producers ISPO certification is fully funded by the government.

Elsewhere, some investors have realized that the difficulty for smallholders in becoming certified is a gap they can fill: for example, New Forest's tree crop plantations investment program in Asia¹⁸ has identified that support to small-scale producers to improve their management and achieve group certification is a possible response to the high costs of certification. In Latin America, such support has gone to indigenous and local communities, but is mainly provided by bilateral public financial resources. Processes with communities have been lengthy and the results have been

mixed. An example of one such process with positive results is Guatemala's Association of Forest Communities of Petén (ACOFOP). Communities manage forest concessions on the condition that their operations achieve and maintain forest certification. To support this, development cooperation assisted ACOFOP to set up its commercial services branch, Community enterprise for forest services (FORESCOM) in 2003 and strengthened its organizational, technical and administrative capacities for several more years. Now FORESCOM manages the certification process of the communities that are members of ACOFOP and guides their marketing while ACOFOP ensures that the benefits are distributed equally according to the needs of the communities and their enterprises. Similarly, individual forest owners in Costa Rica were supported by FUNDECOR, an NGO, to achieve forest certification. FUNDECOR's success lies less in certification in itself, but more in innovating the way it supports its members to do business, including advanced payment schemes for plantation timber and facilitating access to the national payment for environmental services scheme. Both of these approaches address the specific financial needs of the forest owners (Louman et al. 2005). See Box 9.

Evidence of the implementation of good practices may be required both by investors and by buyers of products and services. Linking investments, products and services to specific practices, however, may reduce the motivation for practitioners to innovate and adapt to changing local circumstances. Requiring producers to follow specific practices is still a common practice in certification schemes because it is easy to measure implementation. In the end, however, it is more important to reach the desired environmental and societal objectives. This requires that practitioners have the liberty to – and even be encouraged to – innovate and adapt as they learn from experience. Certification and standards schemes struggle to find the balance between process and outcome indicators.

18 M. Tollenaar 2018, personal comment.

4 Mobilizing actors and investments for sustainable and inclusive landscapes through innovative finance



Photo 11. Forested areas in Balai Berkuak, West Kalimantan, Indonesia

Photo by I. Lamago/Tropenbos International

There is global recognition of the importance of forests, including tropical forests, and other land uses for climate change mitigation and adaptation, and of the vast area of degraded landscapes and the threat this poses to realizing Sustainable Development Goals 1 (no poverty) and 2 (zero hunger). Despite this, impact investing, certification and the application of ESG standards have not yet made a difference in securing sufficient investments for landscapes that significantly contribute to the implementation of the

Paris Agreement on Climate Change and of Agenda 2030.

The Global Landscape Forum Investment event in New York in 2018 highlighted two innovative finance approaches:

- Blended finance (4.1) is an innovative financial structure that combines funding sources.
- Green bonds (4.2) are debt instruments that allow private and public finance to invest in medium- to long-term endeavors with sustainability objectives and relatively low risks.

Other mechanisms that may increase inclusive private sector finance that contribute to sustainable landscapes are national or local (landscape) funds and different types of crowdfunding. The latter is discussed in section 4.3.

Do these innovations provide what is needed to attract investors to contribute to sustainability and inclusiveness? Or do they fail to address the objectives of impact investors in such landscapes? Are additional innovations needed to scale up such investments?

4.1 Blended finance

The Blended Finance Taskforce (BFT) of the Business and Sustainable Development Commission (BFT 2018) defines blended finance as the strategic use of public or philanthropic development capital to mobilize additional external private commercial finance for SDG-related investments (BFT 2018). This is very similar to OECD-DAC's definition: "the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries" (OECD-DAC 2018, 4). Others have similar definitions; Rode et al. (2019, 7) define it as "financing models that combine commercial and other financial sources to stimulate investment with complementary risk and return appetites."

Blended finance is one way to obtain additional finance for sustainable landscape initiatives. Blended finance structures may implement a series of mechanisms and instruments to get the funds to the final beneficiaries. A core principle behind blended finance is "additionality" (DFI Working Group 2017). This is where the use of public capital results in new – additional – private-sector investments in projects, sectors, and/or locations that would otherwise not have been made and that will drive development impacts.

Because public and philanthropic financial institutions usually accept lower financial returns than private investors and can wait longer for the return on their investments,

blending the funds from these different sources could help reduce the risks of private investments and increase their risk-adjusted returns. This could be done through providing guarantees or finance technical assistance that accompany the financial instruments, thus increasing the after-risk rate of return to investments (Gommans et al. 2016). Public and philanthropic finance can also be used to address investors' concerns related to governance structures and institutions, policies and administrative procedures for investments, economic incentives, and information and communication technologies and knowledge management (Clark et al. 2018; IFC 2013). This is particularly relevant in the context of climate change, where the risks increase while data and information on climate, impacts, vulnerabilities and responses are limited. In such cases, blended finance structures can be used to channel public and philanthropic money to reduce risks and increase risk adjusted returns for investors while at the same time addressing general sustainable development concerns (Guarnaschelli et al. 2018).

Blended finance is on the rise, having doubled in volume in the last five years. Most of it is oriented to clean energy and infrastructure projects and involves medium- to large-scale, lower-risk investments (BFT 2018). Although relatively little private finance has been mobilized in the agriculture sector (OECD 2018), opportunities exist to support landscape initiatives through blended finance structures, in particular within the context of climate goals.

For blended finance to achieve positive impacts, public funds are often blended with private finance in so-called impact funds. An example is the Microfinance Initiative for Asia (MIFA) Debt Fund, where German public funds and IFC funds provide 50% of the total fund¹⁹ but are subordinate to private funds. This means that if investees have financial problems the public funders will be the last to receive repayment. The blended fund is managed by BlueOrchard, an impact investment manager. MIFA invests

19 <http://www.blueorchard.com/blended-finance-meets-impact-investing-oecd-showcases-blueorchard-managed-mifa-fund/>

in microfinance institutions, which provide mainly short-term loans to people in Asia in a variety of sectors, mostly trade (34.6%) and agriculture (26.5%) (BlueOrchard 2020). Although MIFA contributes to inclusiveness, the input of blended finance in general to inclusiveness and sustainability will depend on how these concepts are interpreted by the individual (local or national) microfinance institutions in their policies and strategies, and on the effectiveness of the instruments they create to implement these policies. For example, LOLC Plc (a public limited company) in Cambodia is a microfinance institution to which BlueOrchard is one of many investors. LOLC Plc provides loans to and takes deposits from rural people, of whom 70% are women and 25% are poor. Approximately 34% of its loans are for agriculture, and it continuously adjusts its financial products according to the needs of the growing economy (LOLC 2020). For example, it offers loans linked to the seasonal needs of farmers; and group loans and medium-term loans that allow for activity expansion (such as for SMEs and agricultural machinery). Although its emphasis is on social impacts, it recently incorporated environmental and social risk assessments in its evaluation criteria and annual performance reporting, and since 2019 it has offered green lending options that are monitored for their CO₂ emission reductions and energy savings.

The BlueOrchard case exemplifies that managers of blended finance are not that different from managers of more conventional forms of finance in terms of their financial expectations. They may encounter the same barriers to inclusiveness and sustainability as discussed in Section 3. In this case, LOLC Plc provides scale, taking on part of the risk and spreading the rest over many investors. It is the one that develops financial products that in the end need to meet the expected rate of financial return of the investors, and it must adjust its policies and strategies to meet the needs of both investors and clients.

Other examples of blended finance through fund managers are New Forests and Asia Debt Management (ADM) Capital. New

Forests set up the Tropical Asia Forest Fund (Box 4) for which large companies provide scale and are responsible for providing the desired environmental and social impact. ADM Capital is the fund manager of the Tropical Landscape Finance Facility (TLFF), which made its first investment in the Royal Lestari Utama rubber company (see Box 5).

Other major actors include development institutions such as the International Finance Corporation (IFC), a key provider of blended finance via mobilization and intermediation of concessional finance. The European Investment Bank, Inter-American Development Bank, Asian Infrastructure Investment Bank, African Development Bank and the Asian Development Bank are also important players in blended finance. These institutions may not only provide funds for the blending orchestrated by fund managers, but may have their own blended funds, which they manage themselves.

To reduce transaction costs, fund managers prefer to invest at scale, and therefore usually seek some form of aggregation at the landscape level. This can be done through project developers, microfinance organizations, and large companies that work with small producers (through, for example, outgrower schemes such as New Forests' partners in Laos; see Box 4), and also through other forms of organizations of local producers or investees. These aggregators distribute the funds to the final recipients or provide technical assistance and production inputs.

As seen in these examples, blending may often result in complex flows. It may occur at different points along the flow; development banks (for example, FMO or German KfW) may receive development and commercial money from governments, combine this with commercial private money, and invest in international or regional funds (for example, MIFA). In turn these funds may seek to increase their size with more commercial or development money and then look for investments at scale through local or national intermediaries, which then may apply various

financial instruments, such as the range of loans applied by LOLC. In other cases, project developers may combine blended money with additional commercial or development money for a project that provides finance and services to the final beneficiaries. An example of such a project developer is Ecotrust in Uganda,²⁰ which received blended finance from a fund manager, while also receiving development money through bilateral agreements. While such monies are not strictly blended, since they are received for different purposes, they are used within the same landscapes. The two funds complement each other in addressing the financial needs within the landscapes and having as a common goal the sustainable development of those landscapes.

Combining development finance with commercial finance into specific funds can facilitate the establishment of specific technical assistance programs linked to investments while addressing local issues. The TLFF is an example of this (Box 5), although it is still too soon to assess whether it is successful. Development funds received by the secretariat of the facility are used to provide technical assistance to potential beneficiaries of the commercial investments. Care should be taken that these new funds address the needs of all stakeholders active in the landscape and do not aim only for the easiest returns: big companies that are willing to follow international sustainability standards. These companies can achieve positive large-scale environmental impacts in the short term (for example, by reducing deforestation) but may not address the underlying drivers of such deforestation (such as governance gaps and lack of secure land tenure). They may also fail to tap into the potential contained in the knowledge of and resources for economic alternatives that small-scale producers may hold. While securing the easier investments is a good first step toward greater sustainability, this needs to be accompanied by parallel efforts to invest in projects that encompass the underlying drivers of unsustainable and exclusionary forest practices.

It should be noted that these examples are based mainly on information provided by the initiatives themselves. There are few independent assessments of blended finance initiatives in the AFOLU sector, and very few blended finance initiatives explicitly apply an integrated landscape approach. Of those that do, New Forests (Box 4) has clearly defined guidelines for its investees. TLFF (Box 5) invests in its first and only project in rubber plantations within specific jurisdictions, but it is not yet clear how the investments will affect other stakeholders in the target landscapes. In both cases, investors require their investees to consider the suitability of areas within the landscape for the agro-commodities they want to produce, but do not require them to assess how well agro-commodity production fits into the needs and aspirations of local inhabitants. This may lead to conversion of all suitable lands into agro-commodity production areas (often monocrops), which, despite measures to reduce the effect of fragmentation of local forests, reduce natural ecological processes and make local people more vulnerable to changes that affect that particular crop. Oil palm workers and smallholder oil palm producers in West Kalimantan, for example, were left without alternative income earning activities when the COVID-19 pandemic struck in early 2020.

The price of natural rubber is highly volatile in the international markets, making small producers who exclusively specialize in this crop more vulnerable than those who have diversified systems (Gitz et al. 2020). Natural rubber is also sensitive to changing weather conditions. Integrated landscape approaches are expected to address these considerations from the point of view of all stakeholders, not just from that of the investees.

Where blended finance is used to support micro-finance initiatives, such as in the case of MIFA, local stakeholders are being supported to achieve their goals, but to date little consideration has been given to how these initiatives cause trade-offs or have potential for synergies at the landscape level.

20 <http://ecotrust.or.ug/>

Box 4. New Forests' Tropical Asia Forest Fund

The Tropical Asia Forest Fund (TAFF) is a private equity fund managed by New Forests, an Australian fund manager that invests in forestry in Southeast Asia. The fund focuses on large-scale timber production companies that grow trees such as Acacia and Eucalyptus. The goal is to supply Asian markets with sustainable timber. TAFF seeks to improve investee production and support acquisition of FSC certification, where certification is not already in place. TAFF also aims to protect and improve existing forest ecosystems and to support stakeholder engagement and community development.

New Forests is anticipated to continue its investments in the region through a second-round fund, which will also include climate finance. New Forests has been able to improve risk-adjusted returns by blending different types of investments, thus increasing the interest of impact investors in sustainable forestry. This in turn may increase the attractiveness of the fund to other investors.

Blending

Blending is done at the fund level: TAFF raises the money from a variety of investors, each with different benefits that they want to pursue. Development funds come from public and philanthropic investors, who are prepared to receive lower financial returns if social and/or environmental benefits are delivered (Guarnaschelli et al. 2018). Among these investors are the Danish Investment Fund for Developing Countries, the Dutch Development Bank (FMO) and FinnFund, who contribute through equity investments or provide technical support to the investees (Guarnaschelli et al. 2018; New Forests 2018b). Private finance comes from institutional investors such as pension funds, and funds of funds in the form of subscribing to commingled funds that pursue various types of investments; for example, timber real estate investment trusts. Both private and public investors may apply conditions to their investments, such as requirements for internationally recognized forest certification, the existence of social and environmental management systems, and specific restrictions on activities (for example, those that involve practices on the European DFI exclusion list)^a or on geographic areas.

Whereas the major recipients of TAFF investments are large companies that produce timber or tree crops, New Forests recognizes the need to include other stakeholders in the landscape where these companies operate in order to achieve long-term production goals. In addition to seeking a return on its investments, TAFF aims to contribute to stable and attractive livelihoods for local stakeholders by supporting the development of local economically viable land-use activities and industries (Guarnaschelli et al. 2018). This support is provided in the form of investments in capacity building, provision of inputs, commitments to acquire future products, joint venture planting areas, and also by providing stable job opportunities. In addition, TAFF aims to achieve biological sustainability goals, which include conservation and promotion of high conservation value (HCV), production of renewable resources and research on priority wildlife species.

Landscape approach

In its management of TAFF, New Forests adheres to what it calls its Sustainable Landscape Investment (SLI) approach to fulfill its mission to create productive and sustainable landscapes through its investments (New Forests 2018a). Through this approach New Forests aims to achieve an integrated management of business, environmental and social performance (ibid.). It includes six core themes:

^a <https://www.edfi.eu/wp/wp-content/uploads/2017/10/EDFI-Exclusion-List.pdf>

Box 4. Continued

- appropriate land use and land-use planning
- improving both the biological and economic productivity of its assets
- ensuring that it supports the provision of ecosystem services such as carbon storage, clean water, and biodiversity conservation
- implementing good governance, including openness to new ideas, transparency, and accountability
- risk management and an emphasis on long-term outcomes rather than short-term gains
- promoting shared prosperity through business practices that support workers and local communities.

These themes guide New Forests' investment selection and also become criteria to measure the performance of its investments, on which it reports annually.

When investing in assets, New Forests considers the asset's role within the landscape and how the asset can contribute to increasing the landscape's sustainability. In cases of large single investments, land-use planning includes multiple land-use areas that contribute to landscape functions. For example, as manager of TAFF, New Forests invested in the existing large-scale rubber plantation Hutan Kalimantan Industri (HKI) in West Kalimantan, Indonesia, in 2015. This investment affected the landscape through the rubber plantation tripling its size. Guided by the SLI approach, the investment also includes conservation areas, requiring essential ecosystem services to be maintained and, in the old rubber plantation areas, enhanced (New Forests 2015).

Inclusiveness

New Forests considers consulting and engaging with stakeholders important for understanding the present and future needs related to land use (New Forests 2018b). As an investor, however, New Forests considers that it cannot directly engage with the local stakeholders of its investees. Its approach is to use rigorous due diligence that is informed by appropriate local experts and consultants. This helps the fund understand key local ecological and social issues and develop an action plan to guide engagement by the operators. One of the tools for social inclusion and legitimacy promoted by New Forests is Free, Prior and Informed Consent (FPIC) on the part of local stakeholders. FPIC should help to reduce future land-use conflicts and is important in recognizing and managing other production risks. Throughout its investment, the fund manager provides ongoing support for positive social outcomes for all stakeholders, including local communities (ibid.).

New Forests' investee in Laos carried out environmental and social assessments with the help of consultants. Their work included assessments of impacts that may have occurred during the land acquisition phase, which took place prior to New Forests' investment (ibid.). Based on these assessments the consultants proposed the revitalization of community development programs.

New Forests seeks to support the best site-appropriate models for including smallholders in sustainable timber production. One of those models is the outgrower scheme. In Laos, for example, New Forests invested in the revitalization of an existing but defunct scheme that involved as many as 5000 farmers (New Forests 2018b). It was designed to support smallholders by providing seedlings, trees, training and a secure market to sell the trees. New Forests is also considering whether to support the outgrowers to obtain certification (FSC and PEFC).

continued on next page

Box 4. Continued

Smallholders involved in the outgrower scheme own their resources, including the land, and are supported to improve their decision-making processes to increase the sustainable use of those resources. In addition, they increase their benefits from those resources. Also, by receiving the appropriate inputs, technical assistance and a secure market, their production risks are reduced.

Contribution to sustainability

The SLI approach is the basis of New Forests' proposal to improve the measurement and monitoring of its impacts on social and environmental issues (New Forests 2018a). Monitoring is performed over time and is meant to show that the management approach improves performance and is supported by appropriate risk management and governance. It is New Forests' policy to present the results of monitoring at the fund level, rather than at individual investment level. It can be expected that the explicit inclusion of conservation areas, as in the case of HKI in Kalimantan, will have positive impacts on the natural environment, while the planting and restoration of natural areas will contribute to the global carbon balance and create employment opportunities. Thus, it can be expected that New Forests' investments that follow the SLI principles will contribute to SDGs 8 (Decent work and economic growth), 12 (Responsible production and consumption), 13 (Climate action) and 15 (Life on land). In addition, all investments follow the IFC Performance Standard, which requires investors to ensure inclusiveness, both in general and particularly for women and vulnerable groups, thus contributing to SDGs 5 (Gender quality) and 10 (Reduced inequalities) as well.



Photo 12. Community's rubber plantation in Laman Satong Village, West Kalimantan, Indonesia

Photo by I. Lamago/Tropenbos International

Although evidence is still scarce, blended finance does seem to create opportunities to address the access issues of aggregation, network strengthening and technological innovations (Box 2) and thus to scale up finance for sustainable landscapes. In particular it can do this because by sharing risks and providing guarantees for first cover losses, it helps address the apprehension that many impact investors still have about landscape investments. In addition, some sources of development funds have an understanding of landscape issues, which could make investors feel more at ease with this new type of investment. Selecting the right partners to make the investments

would further contribute to successful implementation at a landscape level. Setting up reliable systems to monitor environmental and social impacts – and making the results readily accessible to local stakeholders and the general public – could provide an important way to learn from existing experiences. The opportunities for blended finance do exist, but more evidence is needed to be able to assess the true value of this approach in achieving greater sustainability and inclusiveness in tropical landscapes. Its impact will largely depend on the strength, policies and strategies of the final implementation agencies.

Box 5. The Tropical Landscapes Finance Facility (TLFF)

The TLFF was established by a multi-stakeholder group: UNEP, World Agroforestry Centre (ICRAF), investment manager ADM Capital and BNP Paribas. WWF is also a partner, supporting forest and wildlife conservation efforts of the investees. Its core objective is to provide affordable loans to smallholder farmers, improve their livelihoods, rehabilitate degraded lands and provide clean electricity in Indonesia (Guarnaschelli et al. 2018). Its secretariat, supported by ICRAF and UNEP, supports a lending platform managed by ADM Capital and BNP Paribas that arranges for a medium-term note (MTN) program that enables an issuing bank to offer debt securities on a regular and/or continuous basis to channel finance to the platform. The secretariat also supports a grant program managed by the United Nations Office for Project Services (UNOPS). TLFF aims to stimulate Indonesia's green growth by mobilizing international capital for long-term financing to projects and companies (sustainable agriculture, forest conservation, renewable energy) with financial, environmental and social returns (ibid.). Smallholder cooperatives are the focus investees in the sustainable agriculture sector (ibid.), although large companies may be used as intermediary investees in order to reach a scale that is attractive for investment.

The TLFF consists of a Grant Fund and a Lending Platform:

- The TLFF Grant Fund is capitalized by multilateral and bilateral entities and philanthropic donors/foundations, and focuses on enhancing capacities to generate greener livelihood opportunities, strengthen wildlife conservation, protect forest cover, create resilience to climate change and increase the availability of renewable energy for rural communities. The fund provides technical assistance, and co-funds early-stage development costs, with UNOPS serving as a fund trustee. This arrangement ensures that development funding is leveraged with significant investments through the TLFF (tlffindonesia.org, #grantfund).
- Through the Lending Platform, TLFF aims to mobilize international capital at a scale that will incentivize sustainable agriculture, renewable energy and deforestation-free supply chains in Indonesia through strict lending criteria. It aims to decrease the environmental damage that often accompanies business-as-usual investing and at the same time improve rural livelihoods. ADM Capital is the manager of the platform and a driving force, bringing long-term experience in private debt investment and innovative funding models. BNP Paribas arranges long-term commercially priced, long-tenor debt for individual projects (tlffindonesia.org, #lendingplatform).

continued on next page

Box 5. Continued

As of early 2019, TLFF had only one investee, Royal Lestari Utama,^a a joint venture of Michelin and PT Barito Pacific that aims to produce sustainable rubber. The investment is in three concession areas that together cover 88,000 ha, of which less than 50% will be planted with rubber; the remaining area will be left for conservation, restoration and community programs (TLFF 2018). This investment was facilitated with a partial guarantee provided by USAID. A second tranche is envisaged that would include finance for a community partnership programme, covering an area of approximately 7,000 ha.

a <https://www.rlu.co.id/>

4.2 Green bonds

A bond is a fixed income instrument that represents a loan made by an investor to a corporate or governmental borrower. Bonds are used by companies, municipalities, local governments and countries to finance projects and operations. According to the International Capital Market Association (ICMA), green, social and sustainability bonds are any type of bond instruments where the proceeds will be exclusively applied to eligible environmental and/or social projects. Looking more specifically at green bonds, there is no single definition of what ‘green’ really means, or how green a bond must be. According to the ICMA, there are four guiding principles to consider when classifying a bond as green:

- **Use of proceeds:** which should be designated for green projects as described in the bond’s legal documentation
- **Process for project evaluation and selection:** whereby issuers should provide transparency in the project’s sustainability objectives and process
- **Management of proceeds:** which should be held in a distinct sub-account and tracked throughout the life of the project, with a high level of transparency for investors
- **Reporting:** which should be kept up to date and readily available, describing the amounts allocated to the projects and the expected environmental impact.

The ICMA guidelines remain open to interpretation, however. Other institutions

such as the European Union (EU) and the Climate Bond Initiative (CBI) are developing their own criteria for qualifying green bonds.

Green bonds are innovative debt instruments that focus on financing climate and other environmental projects, such as agricultural and forestry practices that increase carbon sequestration and minimize carbon losses. The annual issuance of green bonds globally has grown enormously since their introduction in 2007. Green bonds accounted for only a small fraction (~1.4%) of the overall bond market in 2016 (Kuna-Marszalek and Marzalek 2017). Between 2016 and 2018, however, the value of new green bonds being issued more than doubled, from USD 81 billion²¹ to USD 167 billion (CBI 2019), most of that in the U.S., China and Europe. The geography of the green bond market is expanding and diversifying, but the market is still in an early stage in developing and emerging economies.

Green bonds are like conventional bonds in their structure, risks and returns. Where they differ is in their objective to secure environmental benefits. They can mobilize resources from domestic and international capital markets for a variety of environment-friendly projects, including for sustainable agriculture, land use, forestry and fisheries and for protection of biodiversity (ICMA 2018; UNDP 2016). The issues related to sustainable landscapes are broad and varied, and the bond markets – not only green, but

21 <https://www.climatebonds.net/resources/reports/green-bonds-highlights-2016>

also social and sustainability bonds – can contribute to sustainability by attracting private capital to finance landscape-related needs. In 2018 more than USD 500 billion of green bonds were issued globally, 62% of this in Europe and North America. Only 5% of these bonds were dedicated to the agriculture and forestry sectors (CBI 2019). The first wave of green bonds primarily targeted renewable energy and efficiency projects. Now an increasing number of such bonds are issued for the wider infrastructure sectors (e.g. water) and for the agriculture and food sectors.

One of the main advantages of green bonds is their simple structure in comparison to other green instruments. In addition, due to the guidelines for monitoring and reporting on the use of proceeds, green bonds are considered more transparent than other instruments in the fixed income market. Combined with low due diligence costs this makes them attractive to fixed-income investors that are already familiar with traditional bonds, e.g. pension fund investors (Mulder 2018). The commitments over monitoring, disclosure and reporting over the duration of the bonds, however, may deter some potential issuers.

The profile of issuers of green bonds is changing. While initially driven by international institutions such as the World Bank or the Asian Development Bank, the market is now dominated by private banks, funds and corporations. The profile and terms attached to green bonds vary too: from short-duration to longer-dated bonds to medium-term notes, from program-specific to project-specific to corporate green transition-focused, or from USD 2 billion straight bonds²² to carbon credit coupons. In 2018, the average bond size was about USD 100 million, and about 70% of the bonds issued that year were for periods of up to 10 years; only about 1% were for longer than 20 years (CBI 2019).

22 A straight bond is a bond that pays interest at regular intervals, and at maturity pays back the principal that was originally invested (from <https://www.investopedia.com/terms/s/straight-bond.asp>)

Third-party verification/certification is needed to determine whether a bond qualifies as green according to various principles, standards and initiatives. Examples involve the ICMA's Green Bond Principles and the Climate Bonds Initiative's (CBI's) Climate Bond Standards (UNDP 2016). CBI facilitated the definition of the latter standard by bringing together academics, investors and international agencies.

Although there is now a multiplicity of products, issuers, sectors of focus and objectives, the demand for green bonds still far outstrips the supply. Various issues – such as lack of adequate green projects to finance (size, risk and rate of return being the main barriers), failure to recognize the green credentials of an issuer, or inability to measure the direct benefit to the SDGs (due to insufficient data) – hamper the further acceleration of green bonds issuance. The mismatch between demand and supply could possibly increase the risks of a green bonds 'bubble.'

Green bonds that are specifically designed to tackle issues pertaining to sustainable landscapes in developing countries are difficult to structure. Cautious issuers and investors put a high premium on the risks associated with the rural environment in developing countries (as highlighted in Section 3) and at the same time there is still little concrete evidence of risk reduction through landscape approaches. In the universe of green bonds, sustainable landscapes/forest bonds are emerging only slowly.

The notes issued in 2018 by the Tropical Landscape Finance Facility (Box 5) were one of the few examples approximating green bonds issued for landscape initiatives. Approximately 11% of the total project value of USD 350 million was reserved for smallholder finance.²³ This is an interesting example and worth following to see how well it will meet sustainable and inclusive landscape objectives.

23 <http://tffindonesia.org/rлу-transaction/>

Other examples of landscape bonds are highlighted in Box 6. Green bonds offer good opportunities for sustainable landscape development, since the proceeds can be used for a variety of actions, as long as they qualify as green, and the initial investment does not have to be paid back until the bonds mature. Maturity age may vary from short (2–5 years) to long (>10 years). The advantages and disadvantages of each of these differ depending on whether someone is an issuer or a buyer. For the issuer, long-term bonds give greater security over the time the money can be used, but the buyer will very likely need to pay more for the use of the money (which will be reflected in higher interest rates). Many forest projects require maturity periods longer than 20 years, and green bonds have rarely been issued for such long

periods (CBI 2019). Long-term bonds can be useful, however, when planting fast-growing trees, where the costs are incurred at the beginning of the process and the benefits are reaped only at the first tree harvest (after 8–20 years, depending on the tree species planted and the local site conditions).

A bigger problem may be in identifying suitable projects and initiatives to invest in and generating appetite on the part of issuers, as there is a huge investor/buyer demand for green bonds. Thus far, green bonds in the land-use sector have focused on generating returns through government investments and carbon credits (as in the examples in Box 6). The sector is currently constrained by the lack of good quality and scalable projects to finance.

Box 6. Examples of landscape-oriented bonds

IFC Forests Bond (IFC 2018)

Since 2010 the International Finance Cooperation (IFC) has been a key player in the green bonds market, but only in 2016 did it issue a landscape/forest bond. IFC's Forests Bond was the first instrument (in fact, a five-year note program) aimed at forest conservation, offering full principal protection and targeting to raise ~USD 150 million. Ultimately the bond's proceeds aimed at supporting a conservation project in the Kasigau corridor in East Kenya. The project was globally the first registered REDD project with VCS compliant carbon credits. It provides income to the community and local land-owners for protecting their land instead of destroying it. The project was expected to reduce deforestation, protect endangered plant and animal species, and develop sustainable economic opportunities for communities in Kenya.

A key feature of the bond was the option for the noteholders to receive a cash coupon, with an option for the coupon to be partly or fully deliverable in Verified Carbon Units (VCUs) issued by the REDD project (IFC having purchased all the VCUs generated by the project). The noteholders had the ability to retire the VCUs to offset greenhouse emissions or sell them directly on the VCU market. Another interesting feature of this structure was a price support mechanism for the VCUs; Australian trading entity BHP Billiton deposited a cash amount in escrow equivalent to the value of all the VCUs to be generated throughout the project. BHP Billiton was given the ability to use any leftover cash on a yearly basis to buy VCUS for its own account.

For the second coupon payment, on November 5, 2018, the project delivered 469,984 eligible VCUs of vintage 2016 to IFC. No noteholder, however, selected the coupon in the form of VCUs; therefore, no eligible VCUs were delivered to the noteholders.

^a Durreen Shahnaz, CEO Impact Investment Exchange (IIX), personal comment.

Box 6. Continued

While the bond as such is considered to achieve its objectives, some caution should be taken in the application of the used financial structures. Due to the amount of money they make available for local development, and the often weak local governance, they may create parallel governance structures that may not contribute to strengthen local democracy. This was reportedly the case in Kenya (Chomba 2017). Whether this is a positive or negative result may depend on the stakeholder's perspective.

Haze and Clean Air bonds^a

The haze phenomenon is caused by peatland and forest fires in Indonesia every year, and it directly affects people across Southeast Asia, including in the financial hub of Singapore. It was a catalyst for increased interest in sustainable landscape bonds. A number of initiatives are being developed by fund managers to tackle restoration and conservation in concessions in Indonesia. The following examples are still in the development stage.

Haze-related example 1

An Asia-based fund manager is proposing to issue medium-term notes (MTNs) against a commitment of capital by a major donor. Bonds and MTNs (with medium- to long-term maturity) are broadly similar instruments. There are a few differences, including the more open-ended nature of the MTNs program and the ability of the program to issue for a relatively long period of time ('shelf'). The program is to be issued by the Government of Indonesia (GOI) and aims to support the reduction of GHG emissions and to ensure forest/peatland protection in Indonesia.

One-third of the fires occur within private-sector concessions, and the MTN program is based on private-sector companies investing in it (via GOI and a project management vehicle). The MTN program provides the capital and development funds to pay for restoration and conservation projects within the concessions of private companies in Indonesia. The major donor then provides the funds to GOI for repayments. Credits for reducing carbon emissions provide further resources to the initiative. If targets are exceeded, the major donor may adjust interest rates and performance-linked grants, making participation in the projects more attractive.

An interesting aspect of the program is that enforcement at the local level is ensured by the companies that own the concessions and is supported by GOI. GOI ultimately carries the risks and costs associated with any failure to reach milestones and objectives. If the targets are not met, then the donor would not fully provide for the notes' repayments, leaving GOI to fill the gap.

Haze-related example 2

An impact-focused organization is looking at putting together a Haze Mitigation Bond to directly address unsustainable practices in forest management, to be used by the main contributors (smallholder farmers and corporations) to Southeast Asia's haze problem. The initiative would aim at incentivizing smallholders and farmers to use alternative, less harmful practices. The target size of the haze bond would be USD 30 million. The Haze (or Clean Air) bond would raise funds from investors, with a special-purpose vehicle then using proceeds to lend money to corporations and LFFPOs (and the small farmers they work with) that are currently using unsustainable slash-and-burn methods. The borrowers would be selected based on their willingness to make the transition to more sustainable practices. A key feature of this initiative, as opposed to example 1, is its direct lending to corporations and LFFPOs, rather than going through a local government.

Assessing the usefulness of green bonds for land conservation, DuPont et al. (2015) found that matching scales is an ongoing challenge, with investors seeking bonds of far greater sizes than the conservation sector is willing to offer. The definition of 'green' is also still a challenge. DuPont et al. concluded that investors are still not ready for these debt-based instruments for financing conservation, nor have green bonds shown to be the best option for sustainable land-use projects, but they feel that may change. The main challenges to scaling up the use of green bonds for sustainable landscapes seems to lie in the complexity of landscape investments. This complexity requires strengthening the governance framework and establishing harmonized standards that allow for effective and efficient reporting on the impacts of the bonds (WWF 2016). Currently (2020) the UNEP finance initiative is coordinating a process for standardization of standards.²⁴

Creating the enabling conditions that allow green bonds to be issued for landscape-appropriate investments is another major challenge (Mulder 2018). In particular, a financial intermediary (an aggregator) with a strong balance sheet that can issue the bond and carry the risk will be an important element of such enabling conditions. In that case, the risk of the investor is against the issuer and not a portfolio of projects. (See also Box 2 for the elements that facilitate access to finance.) In the end, however, these enabling conditions need to be refined based on additional experience.

One recent innovation in this area shows some promise: the Rainforest Foundation UK has piloted an impact bond in the Peruvian Amazon. Together with a local NGO and local communities of the Ashaninka people the foundation identified the type of benefits that could foster greater conservation of the forests. Based on these discussions, they designed an "impact bond," linking results-based carbon payments with technical assistance for sustainable cocoa farming

and offtaking commitments for the cocoa produced. Although the pilot did not meet the expectations of reduced emissions, possibly due to an inaccurate base line,²⁵ further analysis may provide interesting lessons for the design of such bonds as generators of incentive packages for sustainable land use and conservation of forests and their ecosystem services.

4.3 Crowdfunding

Crowdfunding, or pooling of small amounts of capital from a potentially large pool of interested funders (Short et al. 2017), is not a new finance mechanism. Short et al. (2017) cite the case of the construction of the Statue of Liberty's pedestal, where a New York publisher used his newspaper to call on potential funders in 1885. What is new is that, while in the past the mechanism was accessible mainly to people who had the ability to reach a large public and use their communication channels to solicit funding for specific projects or actions (e.g. newspaper owners), it can now be used by a much wider number of entrepreneurs because of the advent of the internet and social media. The novelty of crowdfunding lies in its expanded use by individuals and small private enterprises, increasing its value creation rapidly from USD 2.8 billion in 2012 (Massolution 2013) to more than USD 16 billion in 2015²⁶ (The World Bank Group 2015). Crowdfunding differs from more traditional forms of funding in that entrepreneurs directly seek small investments from many investors without intermediation by formal financial institutions.

Four forms of crowdfunding exist: donation-based, rewards-based, equity-based and debt-based (Lehner and Harrer 2019). In donation-based crowdfunding, investors do not expect specific returns but donate to initiatives they feel contribute to their preferred goals. In rewards-based

24 <https://www.unenvironment.org/events/unep-event/standardising-environmental-and-social-impact-land-use-investment>

25 Aldo Soto, Rainforest Foundation UK, Nov-Dec 2019 GLF e-dialogue on inclusive finance and 19 December 2019, GLF on-line panel discussion.

26 Dietrich and Amrein (2017) estimate the 2015 value at USD 140 billion.

Box 7. Crowdfunding platform Kiva^a

The Kiva crowdfunding platform is a non-profit organization based in the U.S. It has a structure that allows it to scale up access to small loans. As of 20 April 2020, Kiva linked 1.9 million lenders to 3.5 million borrowers for a total worth of USD 1.4 billion. According to Kiva's own data, in 2020 87% of these borrowers were female, and nearly one million were farmers. It works in more than 80 countries with field partners (non-for-profit organizations, microfinance institutions, schools, social enterprises); they provide small loans to clients who usually are not able to obtain loans through formal financial channels. Clients include individuals, families and local groups that are active in a range of sectors. The local partners support vetting of the borrowers and facilitate repayment of the loans, for which they may charge interest (the rate of which is usually lower than in formal institutions). One of the innovations that Kiva has worked on is a special protocol to deal with verification of identity and credit history through a digital verification system using blockchain technology.^b Lenders invest in projects by paying amounts from USD 25 and up to the platform, which then channels the money to the partners; from there it goes to the borrowers. The repaid money is returned to the lender, or reinvested into the same or other projects, depending on the wishes of the lender. Lenders do not receive a financial return on their investments.

Kiva also supports small and growing enterprises that are too large for microfinance but too small or with too little business experience to qualify through formal channels.

One of the social enterprises supported by Kiva is the National Union of Coffee Agribusinesses and Farm Enterprises in Uganda. With a loan of USD 50,000 the union was able to improve its services to a group of 550 smallholders, helping them to maintain ownership of the coffee throughout the supply chain. This resulted in the stakeholders receiving a larger proportion of the value of their coffee.

In the agricultural sector, Kiva seeks to reduce access barriers by deploying flexible repayment periods, providing training in digitization and entrepreneurship, and linking clients to value chains. While increasing the inclusiveness of the agricultural sector, only a small proportion of the loans to this sector is also labelled as eco-friendly.

The platform is trying to expand its lending capacity by attracting impact investors.

^a <https://www.kiva.org/>

^b <https://www.devex.com/news/in-sierra-leone-new-kiva-protocol-uses-blockchain-to-benefit-unbanked-95490>

crowdfunding, investors receive benefits other than financial returns. This is a more common approach when funds are small. When larger amounts of funding are required, investors tend to give more importance to financial benefits from their contributions (Belleflamme et al. 2014). Financial benefits can be achieved through either equity- or debt-based crowdfunding. In equity-based crowdfunding, investors acquire a small stake in the new venture. In debt-based crowdfunding investors may receive a financial benefit, although in some cases they

expect only the original invested amount to be returned within a set period.

The success of crowdfunding in raising the required money is variable. It is affected by several circumstances (Short et al. 2017). More successful initiatives were able to build on their own peer communities: people who think alike and have reasonably good knowledge of the track record of the issuers of the crowdfunding call. They can often assess the risks involved better than formal credit raters can, and prefer funding



Photo 13. Well managed local tourism can combine biodiversity benefits with knowledge generation (scientific tourism) and local income

Photo by B. Louman/Tropenbos International

incremental innovations, rather than radical (and therefore riskier) changes. Third-party endorsements have a positive influence on the success rate of crowdfunding (Lehner and Harrer 2019). The Kiva crowdfunding platform, for example, requests loan applicants to show that they can receive support from a dozen or more people from their own community before they help them raise money from the general public²⁷ (Box 7). Using language that is context specific to the investment opportunities also may influence the success of crowdfunding efforts (Lehner and Harrer 2019). Preferences have been noted for funds that create opportunities to help others, in comparison to those that highlight business opportunities for the fund solicitors (Allison et al. 2015). This preference may differ, however, according to the type of crowdfunding. Internet accessibility and the increased trust in online payment methods also contribute to the success of crowdfunding (Stiver et al. 2015).

More recently a fifth form of crowdfunding has emerged as a means to fund initiatives funded or backed by government in response to the limited availability of government funds: civic crowdfunding. It is seen as having great potential to facilitate networking and collaboration between citizens and local government agencies (Stiver et al. 2015) and shows therefore potential for funding sustainable and inclusive landscapes initiatives. In addition, civic crowdfunding has been combined with in-kind contributions, such as volunteering time to help realize a project. In general, civic crowdfunding includes both donations and reward-based crowdfunding efforts. It emphasizes the non-financial benefits of the investments, usually including access to project benefits. It is a relatively new form of crowdfunding, and its focus in general is local, with communities having less online access than participants in other crowdfunding initiatives. Even less is known about its performance, impacts and sustainability than is known about the other forms of crowdfunding (Stiver et al. 2015). Questions include how effectiveness and impact can be increased; what the interaction is between civic

27 <https://www.kiva.org/businesscenter/crowdfunding-with-kiva>

crowdfunding and the local community; and how financial and non-financial benefits can be balanced in order to achieve sustainable initiatives.

One of the disadvantages of crowdfunding in general is its focus on starting up new projects. Where projects require further maintenance or management activities for longer periods of time, raising money through crowdfunding becomes more difficult. In addition, whereas crowdfunding links investors and recipients more directly and avoids many intermediary costs, its unregulated nature also poses greater risks in cases of failure to implement the projects or in the use of funds for purposes different than those previously announced. Building trust prior to publishing a request for funding is therefore a major issue for the fundraiser.

In 2015, only 2% of global investments in crowdfunding went to developing countries and much of that was used for improving living conditions through microloans rather than for expanding business opportunities (The World Bank Group 2015). In those countries, however, forms of informal crowdfunding often occur: local people may support members of their community by using their savings to help people set up new businesses. Saving and loan societies could be seen as a formalization of such relations. The novelty in those countries is not the concept, but the use of digital platforms to expand the use to a greater public.

An example of a crowdfunding platform based in a developed country that is used to raise funds for initiatives is the 1% Club. Interestingly, the Cheetah fund²⁸ stimulates the use of this platform by offering to top up funds to the required level, if the initiative is able to raise more than 30% of the needed funds within a month of initiating the request. This is an example of a financing structure that could link development funds (such as the Cheetah fund) to commercial funds (raised by crowdfunding). Standfortrees²⁹ is a platform

that is oriented toward including small investors, making it possible for individuals to contribute to REDD+ programs that normally are accessible only to large investors. The platform sells certificates that represent one less ton of carbon emitted or one more ton sequestered. The proceeds go to projects that also receive funds from impact investors that buy carbon credits. Another example of an international crowdfunding platform is Kiva. Kiva is oriented more toward providing small loans to new businesses in a range of sectors, building on its international network of micro-finance institutions to cheaply and rapidly provide and manage the loans. See Box 7. Both examples are taken from the crowdfunding organizations own information, since the authors of this publication did not find publicly available reports on their performance or impacts. This is an area that requires further studies.

According to The World Bank Group (2015), several factors contribute to the low rate of crowdfunding in developing countries:

- In developed countries, lending crowdfunding has shown much growth. However, this often required additional regulations to safeguard the interests of both investors and investees, as well as reducing the risk of whitewashing of capital (ECN 2017). In many developing countries, such additional regulation does not yet exist, while existing restrictions on raising private capital do not allow for lending or equity crowdfunding, thus limiting the scope of crowdfunding.
- In developing countries, access to mobile payment systems is still limited. Such systems form the basis for most crowdfunding exercises.
- Being part of social networks, whose members can contribute to the cause, increases the chance for successful crowdfunding (The World Bank Group 2015). In developing countries, people that can contribute are much fewer than in developed countries. Some successful cases reportedly were able to access international platforms, with or without the support of incubating agencies.

Of course, another key factor is available income, and the growth of the middle

28 <https://onepercentclub.com/en/projects?category=cheetah>

29 <https://standfortrees.org/>

class in many developing countries could provide additional opportunities if the factors mentioned above are addressed. Crowdfunding could increase and facilitate access to finance for small and medium entrepreneurs in tropical landscapes, thus contributing to greater financial inclusiveness. Whether it contributes to greater sustainability will depend on what the money is invested in, and on the intentions of the contributing “crowd.”

4.4 Synthesis

Table 1 summarizes the assessment of the three innovative finance structures discussed in the previous sections, based on the documents available. Case studies were used to showcase the different structures, although due to the high number of existing cases that are barely documented, the representativeness of the cases was not

always clear. To validate the results, an on-line stakeholder consultation and interviews of selected stakeholders along the financial value chain were carried out. Based on these exercises, these three innovative finance structures are considered to have the potential to contribute to sustainable landscapes if LFFPOs have access to the resources they need to fully participate and to improve their well-being.

In practice, however, the degree to which this potential is met depends very much on the strength, governance, policies and strategies of the implementing agencies. For example, matching the scale of specific financial needs with that of finance supply remains a problem for investors interested in blended finance or green bonds. This can be solved if local or national implementing agencies can aggregate stakeholders within the landscape. Green bonds, however, have been issued for specific sectors – mainly energy and transport – and not for geographic areas

Table 1. Synthesis of ability of three financial structures to address main barriers to smallholder inclusiveness and contribution to sustainability

Ability to address Y = yes, N = no	Blended finance	Green bonds	Crowdfunding
Limits to access to financial services for smallholders			
• Scale	N	N	Y
• Rate of return	Y	Y	Y / N
• Risk management strategies	Y	Y	Y
• Nature of financial mechanisms/instruments			
- Ease of implementation	Y	N	Y
- Legitimacy	Y / N	Y / N	Y
- Transparency	N	Y	Y
- Coherence with objectives	Y / N	Y / N	Y
• Financial literacy	Y	N	N
• Physical access through fintech	Y / N	N	Y
• Having one's own capital	N	Y / N	Y
Influencing positive impacts on the sustainability and inclusiveness of landscapes			
• Social networks and inter-stakeholder collaboration	Y	Y	Y
• Organization	Y	Y	Y / N
• Tenure right security	Y	Y / N	N
• Knowledge and experience	Y	Y	Y
• Certification or standards	Y	Y	N

Note: based on document review and on-line stakeholder consultation. For some criteria we found both positive (Y) and negative (N) examples as indicated by Y / N in the Table.

where several sectors interact. In some cases, local implementing agencies were able to link the proceeds of green bonds to other forms of finance, as was the case with Ecotrust in Uganda, and thus were able to offer financial and technical services that better matched the needs of the LFFPOs in the landscape.

In the cases that were documented, green bonds and blended finance were mainly initiated by donor agencies and investors. Although the principles and criteria being applied in these financial structures are continuously improving, the risks and lower rate of return of these structures make it harder for them to also address the other barriers to accessing finance encountered by LFFPOs. LFFPOs may, therefore, consider that the financial instruments used within the context of these structures are not legitimate or not able to address their objectives. Blended finance and green bonds seem to be particularly well suited to addressing the barriers to sustainability, although there, too, effectiveness will depend on the abilities of local implementing agencies to translate finance into adequate local governance and land tenure arrangements and into local capacities to meet international environmental standards.

Crowdfunding, on the other hand, seems to be able to match the scale and needs of LFFPOs. However, some crowdfunding is oriented more toward including small-scale contributors to the financial value chain than to including small-scale beneficiaries (for example, Standfortrees). This allows crowdfunding to raise more funds for existing projects that also capture funds from other sources, such as green bonds or development cooperation. Funds raised through crowdfunding, however, are insufficient to allow all LFFPOs access to them. The Kiva platform, therefore, seeks to address this by raising additional funding to support and expand the services provided.

It is unlikely that blended finance, green bonds and crowdfunding will address all constraints equally. A combination of the three approaches in any given landscape could bring substantial benefits.

The examples cited in this document were selected for their potential linkage to landscape approaches. There is no example of a green landscape bond, although green bonds have been used to contribute to landscape approaches by being combined with other forms of finance. This was the case, for example, with carbon or climate bonds, where proceeds from carbon were used to strengthen the sustainability of land uses in the same geographic area (e.g. Ecotrust, Rainforest Foundation UK).

Landscape approaches supported by blended finance focused on the sustainable supply of specific agro-commodities, rather than on an integrated landscape approach, where local stakeholders fully participate in defining ways to achieve sustainability in their landscape. While such a focus appears to have contributed greatly to making the production and trade of such agro-commodities more sustainable, it also has increased the dependency of local stakeholders' income and well-being on a few crops, making these individuals more vulnerable to outside events. In addition, value chain programs financed by blended finance exclude those LFFPOs that do not want to cultivate the specific crops linked to the value chain. Also, unless particular attention is paid to including women and youth, the programs threaten to strengthen existing gender and age inequalities inherent to the cultivation of the promoted crops.

4.5 Other innovations

All three innovations discussed above build on existing financial instruments. Their newness is related to the rules, regulations and objectives of the instruments they use. All three approaches have the potential to increase accessibility to finance for LFFPOs, although they generally require an intermediary organization that facilitates the acquisition, management and distribution of the money. In each approach, it is the objectives that allow for distribution to a greater number of people, for a greater variety of investment classes and with greater flexibility in return expectations. They therefore attract a greater variety of investors,

including people with the capacity to invest only a small amount. How much these approaches can really contribute to greater inclusiveness, however, will still depend very much on the state of the enabling conditions.

The evidence suggests that financial inclusion has been increased through another innovation in financial systems: not a new financial instrument, but a change in the communication channels used to link sources of funding and beneficiaries.

Digitizing financial services, allowing online and mobile money transactions,

has increased access to finance for the population in general and for women in particular (Box 8). It also facilitates the creation of platforms that allow for further innovations, such as blockchain technology, and accelerates the growth of crowdfunding. Achieving greater financial inclusion through digitizing financial services requires appropriate infrastructure and the availability of the devices through which the services are provided. It also requires adjustments in the regulatory framework and the organization of the financial entities that make use of such services. If it is not accompanied by financial

Box 8. Digital financial services

Digital financial services have been shown to increase the transparency of money transfers in comparison to cash payments (Demirgüç-Kunt et al. 2018). This has made possible the increase in new finance instruments such as crowdfunding but also informal forms of lending, such as peer-to-peer lending (Arner et al. 2015). Most of these services have addressed the financial inclusion of individual households, women and youth in the subsistence and operational loan section of the market. However, apart from helping to build up credit histories, these services have not yet been able to facilitate access by households, farmers or SMEs to commercial loans that help them expand the scale of their economic activities.

Digital financial services have the potential to reduce fraud in banking, facilitate remittance and cross-border payments, and create better and simpler banking experiences for rural communities. In the future they may also greatly contribute to verification of proof of payments, of business ownership and of income. In Vietnam, for example, an experiment with electronic payments to individual households and groups of households or cooperatives greatly facilitated the benefit sharing from payments for environmental services (World Bank 2019).

Blockchain, where all transactions are recorded on a public ledger and verified by a majority of participants of the system, has the potential to ensure transparency and overcome the lack of trust often felt by rural people in dealing with financial institutions, in particular state-owned entities (Le Sève et al. 2018; Arner et al. 2015). While blockchain technology still needs to be further developed, pilots are underway to look at its implications for sustainable development, by linking the tracking of the money flow to tracking the product's value chain (Le Sève et al. 2018). Blockchain shows promise to simplify the complexities of national regulations, international certification schemes and private standards. Yet it also faces challenges in ensuring the accuracy of the information entered (Nikolakis et al. 2018). This can be addressed by agreements between the participants. For agricultural and forest product and services value chains, it also could be reinforced by good governance in the landscape where the goods and services originate. Blockchain has the potential to both facilitate access to financial instruments and exert a positive influence on the sustainability of the investments made with the money obtained (Figure 1). But both the technology and its application still require more work to be able to be applied at scale (Roubini and Byrne 2018), to ensure the reliability of its records (Le Sève et al. 2018) and to protect sustainability outcomes.

Box 9. The community forest association ACOFOP in El Peten, Guatemala^a

Since 1993, several donors and NGOs have provided financial and technical assistance to communities residing in the Biosphere Reserve of the Mayan Forest. With their support, several communities founded the Association of Forest Communities of the Peten (ACOFOP) in 1997, to strengthen the position and user rights of communities in the Peten Mayan Biosphere Reserve, Guatemala. It now comprises 24 associated community organizations. Nine of these manage their forest under concessionary contracts covering more than 400,000 hectares. In 2003, ACOFOP members created a commercial community enterprise (FORESCOM) to provide drying and molding services, technical advice on commercialization, and financial services. This process was also supported by ODA involving several projects and a range of local and regional supporting agencies. The communities linked to FORESCOM now generate USD 5 million annually. Some of this is invested in social benefits such as local health and education services, some in protection and management of the forests and prevention and control of forest fires.

In spite of the fact that organizations always pay back their loans, the topic of forestry has still not been able to generate enough trust with banks regarding the administrative procedures needed to apply for operational loans. The banks continue to ask for collateral when the organizations work on state land. Also, loans are usually for one year, and the timing of disbursements and repayments is not adapted to natural harvesting cycles. In addition, the costs of borrowing are high – at 16 to 24% per year – although ACOFOP has been able to negotiate 12% in some cases. In general, loan negotiations are made more difficult because credit agents are not aware of the specific needs of forestry businesses.

Members of ACOFOP worked together to overcome several structural barriers. In 2004 FORESCOM began operating as a commercial company, contracting qualified personnel to provide technical support in forest management, business administration and marketing. Together, FORESCOM members have received international funding that allowed them to invest directly in community enterprises. More recently, FORESCOM – with the support of ACOFOP, community enterprises and the Centro Agronómico Tropical de Investigación y Enseñanza – set up a new finance mechanism to provide loans to member organizations at lower interest rates (9%) and with greater flexibility regarding documentation. In addition, these loans have a payback period of three years, instead of the usual one year from commercial bank loans, and they have more flexible guarantee requirements. For example, community management plans and their annual harvesting authorizations can form the basis for the loan applications. The fund is still small, but members hope to increase it during the coming years. ACOFOP and FORESCOM have also assisted their members in seeking partnerships for financing.

These financial innovations have come more from within local organizations, in response to the limited access of their members to private banks and other financial institutions. Local organizations felt the need to create their own fund that would allow their members to obtain loans more appropriate to their needs.

A second internal change implemented by FORESCOM was increasing financial literacy. In a third innovation, community enterprises were supported to formalize themselves as not-for-profit or for-profit organizations, the main difference between the two being the distribution

a Extracted from interview with ACOFOP and FORESCOM representatives 2019. <https://www.tropenbos.org/news/>

Box 9. Continued

of benefits. With both types of organizations, it was decided that 30% of net income should be reinvested in forest operations. For the not-for-profit enterprises, the rest is invested in social or productive projects that benefit communities. For the for-profit enterprises, most net income is invested in other projects (not necessarily within the community) or is distributed among the community owners of the enterprise.

See www.acofop.org.



Photo 14. Rowing orchids outside the forest is a specialist job but may generate interesting business opportunities if well regulated

Photo by B. Louman/Tropenbos International

literacy programs, however, it may also create the risk of increasing the debts of its users. For its potential to be realized, therefore, this innovation requires collaboration by a range of actors: national and local, public and private.

Looking only at finance channeled through blended structures, a range of instruments have been used to get the money to the end users. Where this has led to an increase in sustainability and inclusiveness in the landscape several factors have been

identified that facilitated these impacts (Box 2 and 3). Some linked SMEs to financial instruments (for example, intermediaries that aggregate local stakeholders and acquire funds from a range of sources); others helped blended finance contribute to inclusiveness and sustainability (for example, through monitoring and reporting requirements). The effective combination of sources, structures, mechanisms, instruments, facilitating factors, practices, influential factors and impacts seems to be site specific. Also, few studies look at the details of these combinations throughout the financial chain.

Savenije et al. (2017) discuss a series of key elements that can guide such combinations. These elements seek to create the most appropriate conditions for adjusting various existing financial mechanisms and instruments to local conditions, rather than designing new mechanisms and instruments. The example of ACOFOP and FORESCOM in Guatemala shows how clients' needs may differ from conventional banking products (Box 9). The lack of appropriate financial products was the driver for the community forest association to create its own fund for community forestry. Community groups can now borrow money at lower interest rates, with more flexibility in guarantees and different payment periods than in formal financial institutions. The fund was raised through seed money derived from an ODA-funded project. The fund increases the scale of the desired investments, spreads risks over 24 community groups that are members of the association, has lower rate-of-return expectations, and supports economic activities that are monitored in the framework of third-party forest certification.



Photo 15. Cocoa beans drying in the sun, Juaboso, Ghana

Photo by M. de Graaf/Tropenbos International

While no direct link was made between investors and investees (a large part of the fund was generated by the communities' forest operations), this shows what can be achieved when investors better understand and accommodate the constraints and needs of investees. The change in this case was that the intermediary (the fund) applied instruments that were better suited to the requirements of the users in terms of cost (lower interest rate), term (flexible to three years) and documentary requirements (peer references rather than formal documentation). Thus, a conventional instrument (loan) was converted into one that was easier to implement (requirements), considered to be legitimate (community owned), transparent (reports to general assembly) and set up to address local priorities.

The ACOFOP/FORESCOM case shows that the processes needed to achieve economic, social and ecological sustainability require long-term support and cannot be dealt with through short-term development projects. Current blended finance, green bond or

crowdfunding structures rarely provide finance for such long periods, and such structures can be successful only if they are supported by dedicated organizations, whether local, national or international. Local motivation and a long-term vision to seek a balance between the environment and well-being were key to the progress that the communities in Guatemala have made.

Similarly, in response to difficulties in obtaining long-term financial support that would meet the needs of the local communities, the Nature Conservation Research Centre (NCRC), an NGO in Ghana, used ODA to support communities to diversify their income and use part of these proceeds to set up a community trust fund.³⁰ Both Guatemala and Ghana show the potential of locally controlled funds if these are supported by processes that strengthen local capacities to address issues such as local governance,

³⁰ <https://partnershipsforforests.com/2020/08/03/finance-for-forest-landscapes-lessons-from-getting-sustainable-enterprises-off-the-ground-in-west-africa/>

business organization, financial literacy, technical capacities and ability to build social networks. Soanes et al. (2019) call this type of locally controlled initiative “frontier funds” and propose similar processes as those discussed above to ensure that climate finance reaches LFFPOs.

4.6 Scaling up innovations

Scaling up finance for sustainable and inclusive landscapes requires an integrated approach. Such an approach needs to include an analysis of the best combination of financial structures, mechanisms and instruments for the local conditions. It also needs to identify those prerequisites that, if addressed, would increase access to finance. In addition, increasing financial inclusion may require strengthening of those enabling conditions that influence the impacts of the practices financed. In comparison to conventional finance structures, mechanisms and instruments, blended finance and green bonds offer more opportunities for such an integrated approach, but to date few cases have been documented where integrated approaches have been successfully implemented.

One of the barriers to scaling up innovations is the lack of locally established and trusted frontier funds (Soanes et al. 2019) that support the needs of local economic activities and fit within local governance schemes that promote sustainability at the landscape level. ODA has played an important role in establishing the organizations and capacities needed to establish such funds in Guatemala and Ghana; the initial capital was provided from local savings from ODA-supported sustainable agriculture and forestry practices. In many landscapes large areas of land are managed by corporations with or without small-scale producer involvement. In such landscapes, frontier funds could complement the existing efforts of corporations to improve the sustainability of their value chains by providing more opportunities to the LFFPOs in the landscape to diversify their income and conserve those ecosystem services that are essential for their well-being.

The example from Guatemala indicates that setting up frontier funds is a long process, longer than most ODA or private investments currently support. While in Guatemala the process evolved over time with the evolving needs of the communities, the experience of NCRC in Ghana indicates that if the process is planned well from the start it can move more rapidly.

Raising substantial amounts of money may have to occur in stages – starting with financial literacy programs, reflection on local possibilities, building social networks, raising initial capital and maybe even piloting the proposed changes – before people commit themselves to raising the amount needed to achieve transformational change. During this process, other barriers to access to financial services may be found that need to be resolved before people are able to raise the amount necessary to expand the transformation of agricultural and forest SMEs to more sustainable and inclusive operations.

In some cases, small agriculture or forestry businesses have been able to achieve scale by aggregating large numbers of smallholders into an association or cooperative. In such cases, however, members may still find it problematic to obtain formal finance, because they may not be able to provide the risk-adjusted rate of return expected by banks and financial institutions. Komaza, based in Kenya, is an example of company that was set up as an SME with the aim of meeting the scale, return and risk expectations of commercial investors (Box 10). It took the company more than ten years to reach its current scale of operations and attract private investments. During that time, it was initially supported through grants, then through a mix of conditional loans and grants, before setting up the smallholder forest finance vehicle that will allow it to capture private money from a variety of sources. To make that evolution, though, it struggled to strengthen its business and technical capacities, and to gain the trust of smallholder forest farmers, the processing industry (as offtakers of the wood produced), and the potential financiers of the operations.

Box 10. Forest company Komaza^a

Komaza was founded in 2006. It started as an SME but is now a vertically integrated forest company; in other words, it owns or controls its suppliers, distributors and sale locations in order to control its supply chain. Komaza is involved in forest production, including tree nurseries, tree cultivation, harvesting and processing as well as selling to domestic and international customers. The company is based in Kifili, Kenya. It is different from other forestry companies in Africa that produce timber in large plantations; its production is based on thousands of small woodlots in partnership with many smallholder farmers. This fits well into the production model in Kenya, where more than 50% of the wood supply comes from such farmers. By aggregating the wood production of these small farmers, Komaza was able to link them to the traditional wood value chain.

Komaza faced four big challenges: the first three –attracting the right staff, choosing the right farmers to work with, and finding buyers – were straightforward difficulties that most businesses have to deal with. Staff members need to be motivated; farmers need to be willing to plant and maintain the plantations; and customers need to be willing to buy at the offered quality and price.

The fourth challenge, finding the finance to support operations, was the biggest. The company had to find investors that were prepared to take the risk to invest in Komaza's operations. This went beyond developing the right business models. It required the company to make investors familiar with the region and interest them in investing in the early stages of the business. Then Komaza had to convince them of three things: that it was worth investing in the company's activity (or asset class); that the company was able to manage the risks; and that its model had lower costs than traditional tree plantation models.

Komaza built itself up with grant money from social enterprises such as Ahoka, Barr Foundation, and Greater Impact Foundation. With that the company was able to obtain a combination of development and commercial money through convertible loans and equity investments, from entities including Novastar Ventures, Mulago, Conservation International and Hooge Raedt Social Venture as stakeholders (<http://www.komaza.com/investors>). Financiers invested in Komaza, helping it to build up its assets in trees and in a range of small- to medium-size processing facilities. After 14 years it is now a company with thousands of partners, worth more than USD 20 million and with expertise across the whole value chain. In 2020 it reached an equity finance agreement worth USD 28 million with FMO, the Dutch Development Bank. Much of its work was done through personal contacts, building up trust between Komaza and its potential financiers and between Komaza and its partners throughout the value chain. In addition, it is a people-centered company. This helps motivate both farmers and staff to work together in a cost-effective manner, while at the same time operating within a corporate structure that is credible to investors.

Farmers provide land and labor; the company provides technical assistance and the required inputs for tree farming. This helps keep costs down (in conventional plantations labor costs may be more than half of total costs), while the farmers can invest in the plantation without

a T. Howard, 2019. CEO of Komaza. Extracted from interview conceded to authors and published separately as <http://www.foreststreesagroforestry.org/news-article/linking-smallholders-to-existing-wood-value-chains-for-sustainable-supply/>

Box 10. Continued

getting into debt, converting their labor into assets (trees). Once trees have reached the appropriate size, the company harvests, transports and sells them, sharing the benefits of the sale with the farmers.

Subsistence farmers sometimes find it difficult to obtain documentation that supports their claim that they own their land or other assets, which they need to obtain commercial loans. In order to become a partner of KOMAZA, a farmer's ownership can be recognized by neighbours, chiefs and community leaders. This has the added advantage of lowering the risk of land right conflicts.

Finally, Komaza makes sure that the area planted with trees is in addition to the area needed for subsistence farming, in order to make sure that food provision is not endangered by wood production. In some cases, farmers also produce food between the trees during the first years of the plantation.

5 Concluding remarks



Photo 16. Aerial view of Cali hamlet in Gunung Tarak protection forest, Ketapang, West Kalimantan, Indonesia

Photo by I. Lamago/Tropenbos International

This preliminary analysis of financial instruments in support of sustainable and inclusive landscapes, including documentation on existing case studies, helps identify possible ways to increase the scale of such finance. To improve inclusiveness, such efforts need to start locally. Increasing scale would normally require years of development assistance. Crowdfunding may help to address this, by attracting some private money in the early stages to support local initiatives. Ideally, such assistance will allow stakeholders to generate an income, part of which can be reinvested into local frontier funds, which can be used for further upscaling of development and

conservation activities. This process can be facilitated by involving local banks, financial institutions or other local organizations with the capacity to capture and redistribute money into local financial flows, and by adjusting their financial instruments to the needs and conditions of local stakeholders. The process may further evolve to include blended finance mechanisms if scale can be achieved, either by aggregating many local stakeholders or linking up with existing value chains. In the latter case care needs to be taken that finance supports local needs in addition to the needs of the value chain, and that relevant ecosystem functions are being maintained.

To date, despite many promising cases, little evidence has been documented by independent parties and more data needs to be gathered to develop clearer guidelines for various local conditions. This could be achieved through additional detailed case studies that look at various aspects of the instruments. Such case studies could include an analysis of financial flows within landscapes, increasing the understanding of the drivers of existing flows, and the barriers that prevent financial flows from supporting more sustainable and inclusive practices within the landscape. They could also look at how risk and return are addressed in complex multi-stakeholder initiatives under a range of local conditions and could document examples where innovative forms of financing have brought a shift toward sustainable practices and to bringing these practices to scale.

Finance that takes a landscape approach is rare. Several cases have been documented where the local expert is a company dealing with international value chains of agro-commodities, seeking to achieve a sustainable resource area. While such examples are steps toward the sustainability of agro-commodity investments, they seem too focused on single commodities and may increase the dependency of local farmers, heightening their vulnerability to external shocks. Other cases have been documented of private money flowing into conservation areas in order to safeguard locally relevant ecosystem services (mainly related to capture and storage of CO₂ by trees). These efforts, too, may have secondary effects on land uses around conservation areas. Integrated landscape approaches need to start from the landscape, its inhabitants and its ecological setting, making sure to identify local needs and aspirations before seeking to balance these with the objectives of national or international investors.

Creating or strengthening a locally based financial infrastructure (bank, institution, union, association, etc.) that can raise money in a range of ways appears to be a way to bridge the gap between local or external investors and local smallholder investees who want to expand their economic activities. If

such infrastructure is based on agreements between, and supervision by, representatives of local stakeholder groups, it may be able to capture not only external finance through a range of different instruments, but also local money. This local money could, for example, take the form of contributions proportional to profits made by local stakeholders, as has been done at a national scale by coffee producers in several countries in Central America. Such proceeds can be used to reinvest in the landscape or to provide supportive services; this can in turn create better conditions for further investments, as was the case for ACOFOP in Guatemala.

Local financial infrastructure could initially be set up with the support of grant money, until local contributions and the financed economic activities are financially viable to allow the leveraging of external private finance. At the same time development money can play a role by supporting the part of the investment that relates to the generation of public goods such as ecosystem services (for example, water, carbon storage and pollination). At a later stage, once the financial infrastructure has proved to be strong and durable, local institutions may be able to issue notes or bonds with longer payback periods. These instruments could finance a range of landscape activities, which over time will generate the money required to pay back the debt.

Of the factors that affect the positive outcomes and sustainable development impacts of the financed practices, secure land tenure and effective risk management stand out. Both increase the motivation of LFFPOs to convert to sustainable practices by increasing the probability that they will reap the long-term benefits of doing so. In addition, these factors may facilitate access to finance. Financial entities, however, focus on conventional tenure arrangements, such as formal landownership, which may exclude many of the LFFPOs in the tropics. LFFPOs may have other, informal, types of tenure rights arrangements or may have no formal documentation of their tenure rights. In addition, few of these LFFPOs have a good understanding of local risk management strategies, and little information exists on

the effectiveness of such strategies. As a consequence, it is difficult for financial entities to get a good grip on the real risks that these farmers run with their specific crops under their specific local conditions. More research needs to be done on how various tenure rights and risk management strategies affect the financial and operational risks of LFFPOs. Local financial infrastructure may be better positioned to design financial instruments that are more suited to local conditions than national, regional or international banks or financial institutions are; or at least local institutions should operate together with larger institutions.

This publication identifies some knowledge gaps that could be covered by these proposed case studies in order to address the complexity of scaling up finance for sustainable and inclusive landscapes. There

is still a lack of documented evidence of viable financial pathways (risks, structures and instruments) that are applicable under various conditions. Above all, elements to consider in the design of programs oriented to mobilizing finance for sustainable and inclusive landscapes should stress the need to work on enabling conditions, both for increased access to finance and for ensuring the real sustainable impacts of the financed practices. If one strategy stands out for improving access to finance for LFFPOs, it is collaboration between local LFFPOs and national or international CSOs and financial entities. This collaboration will allow LFFPOs to create funds that can channel finance from a range of sources to local actors, using various financial instruments and applying locally appropriate criteria. This requires, however, a process with strong institutional support.

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This publication explores some of the barriers that hinder external finance from making greater contributions to the sustainability of landscapes in the global south. It provides insights into the potential of blended finance, green bonds and crowdfunding structures to contribute to bridging that gap. The document is meant for investors that are new to land-based investments in the global south and are particularly interested in achieving social and environmental impacts. It is also written for development organizations with little experience in leveraging private finance for local development and conservation and for future practitioners in this field. The authors identified several gaps in knowledge and experiences, and it is hoped that through this document the readers will be motivated to fill in those gaps in the near future, contributing to scaling up finance for sustainable and inclusive landscapes.

The CGIAR Research Program on Forests, Trees and Agroforestry (FTA) is the world's largest research for development program to enhance the role of forests, trees and agroforestry in sustainable development and food security and to address climate change. CIFOR leads FTA in partnership with Bioversity International, CATIE, CIRAD, ICRAF, INBAR and TBI.

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