Commercial investment in forests and sustainable land use - Appendices

On behalf of FMO July 2023



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This document should be read alongside the main report output from this project, entitled: Commercial investment in forests and sustainable land use recommendations for companies and funds

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The views expressed in this document are those of the Terranomics team. They do not necessarily represent those of FMO or the organisations referred to within.

Acronyms

| ACF | Althelia Climate Fund | MFF | Mobilising Finance for Forests |
|-------|--|-------|---|
| CSO | Chief Sustainability Officer | MRV | Monitoring, Reporting and Verification |
| DD | Due diligence | MNC | Multinational Corporation |
| DFI | Development Finance Institution | MoU | Memorandum of Understanding |
| E&S | Environmental & Social | NBS | Nature-based solutions |
| ESG | Environmental, Social and Governance | N-GEO | Nature-Based Global Emissions Offset |
| EU | European Union | NGO | Non-governmental agency |
| FMO | Netherlands Development Finance Company | NTFP | Non-timber forest products |
| FSC | Forest Stewardship Council | PPA | Power Purchase Agreement |
| FSLU | Forests and sustainable land use | RFP | Request for Proposal |
| GP | General Partner | ROI | Return on Investment |
| ICVM | Integrity Council for Voluntary Carbon Markets | SBTi | Science Based Targets Initiative |
| IFC | International Finance Corporation | SFDR | Sustainable Finance Disclosure Regulation |
| IFACC | Innovative Finance for the Amazon, Cerrado | TA | Technical Assistance |
| | and Chaco | TCFD | Task Force on Climate-related Financial Disclosures |
| IRR | Internal Rate of Return | USAID | United States Agency for International Development |
| KPI | Key Performance Indicator | USD | United States Dollar |
| LP | Limited partner | VCMI | Voluntary Carbon Markets Integrity Initiative |
| LDNF | Land Degradation Neutrality Fund | | |



Literature review

Aims

The literature review was used as a 'rapid evidence review' to identify some of the main barriers to commercial investment in FSLU, including those which may be within the control of funds and/or companies. The review aimed to reflect critically on verifying and adding to the barriers included in the Request for Proposal (RfP) issued by FMO for this project. It also aimed to support interview and case study phases by refining interview materials and interviewee selection, and by guiding the focus themes for the Althelia Climate Fund (ACF) case study.

Methodology

A set of initial hypotheses were developed before starting the review, for later reflection. 19 previously-identified and mostly public documents, plus a set of internal ACF files, were read with notes captured in a structured manner. We then reviewed these notes and looked across the entire set of documents to draw out prevalent barriers, case studies, and in some cases recommendations on overcoming these. We considered the 'weight of data' supporting the literature. We then drew overall conclusions on the extent to which findings concurred or not with Terranomics and WWF's previous report Nature Based Solutions – a review of current financing barriers and how to overcome these. After the review we considered implications and refinement opportunities for the later project phases.

Key findings

The quality of **evidence underpinning the review was variable**. Literature published within the last two years was mostly based on a combination of interviews and literature review. This positive trend may reflect increased market interest in nature-based solutions (NBS) and forests and sustainable land use (FSLU). Some of the literature reviewed was potentially unsubstantiated and based on views of the authors. In terms of our initial hypotheses, the findings concurred that:

- The literature does not typically include practical recommendations for overcoming the many barriers identified to FSLU investment.
- The literature was generally only helpful in flagging barriers, rather than identifying nuances between investor and FSLU project types

Two hypotheses were rejected:

- "Barriers would mostly lie outside the influence of funds/companies" in fact of 24 barriers identified, perhaps two thirds could theoretically be 'actionable'
- "Findings from the literature review would differ from Nature Based Solutions a review of current financing barriers and how to overcome these" although more barriers were identified, these were aligned with barriers identified previously. Sometimes the 'new' barriers were in fact 'sub-barriers', components of larger challenges. Those barriers most prevalent in the literature were also those ranked as priorities in the previous study (Nature Based Solutions a review of current financing barriers and how to overcome these) related to financial structures, gaps in data on returns and impacts and supply, and project-level risks and financial aspects.

Framework development: What did the literature review add to our understanding and approach?

Additional barriers were identified; however these were aligned with barriers identified in a Nature Based Solutions – a review of current financing barriers and how to overcome these

Significance

(citing in literature)

High - mentioned >5 times Medium - 3-4 times Low - 2 times

- No new barriers noted
- Funds/companies lack influence, not a core focus
- Additional barriers regarding some investors restricted mandates
- Incorporated various questions and prompts that are pertinent to funds/companies
- No new barriers noted
- Relevant for funds/companies. interviews will explore what companies can do to be investment ready

Barriers to investment in Nature Based Solutions





Portfolios and

fund managers

Capacity of finance sector @2

· Lack of skills and tools to assess risk

Standardisation and structures @5

Limited risk sharing and reduction mechanisms

· Few standards or guidelines to define NBS

· Low volume, and primarily small-scale deals

Weak bankability of deals that do exist

Projects and delivery – new and complex partnerships

· Effectiveness of pipeline acceleration efforts is unclear

Financing - novel deal structures

- Limited availability of training and knowledge products
- Novel asset class lacks products and instruments
- Misaligned internal rewards structure and business strategy

Laws and norms @=8

- High reputational risk
- TCFD requirements leave no bandwidth for nature
- Fiduciary duties

Information on returns and impact @11

- · Weak evidence base on returns and benefits
- No universal metrics on impacts and effectiveness · Weak existing monitoring data and capacity
- · Additionality, attribution, and permanence challenges

Intermediaries @=6

- New investment managers lack track record
- Investors lack local networks and knowledge Disconnect between project developers and financiers
- Stakeholders lack skills to structure partnerships

Project finances and risks 😭 = 3 · High up-front costs and long lead times High risk from negative social impacts Poor fundamentals – remote, risky, long-**Projects** term investments

Supply (1933)

Market failures क्व=6

- Hard to monetise benefits except for carbon
- Weak or unclear property rights
- Returns often low without 'stacking'
- Concessional finance expensive to access

Policy & regulatory frameworks (2=8)

- · Unclear long term policy support and use of public instruments
- Few relevant standards
- Poor coordination between public budgets and private financers

- No new barriers noted
- Fund/companies ack influence, not a core focus

- Additional barriers industry opacity. expensive monitoring, reporting and verification (MRV), benchmarking data
- Applicable to funds/companies
- Additional barriers lack of fund incountry capacity, fragmented value chains, misalignment with investors
- Relevant for funds/companies

· Literature focused on inconsistent sustainability standards/certifications · Not core focus

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Ranking

Interviewees were asked to identify 3-5 of the most important barriers. This ranking reflects the frequency of mentions for each barrier.



- Additional barriers illiquid/exit, currency risks, ticket sizes, transaction costs, due diligence (DD) issues
- Relevant for funds/companies and prompts incorporated
- Additional barriers land rights, legal status. ownership, track record, financial management
- Relevant for funds/companies

From an expanded conceptual framework to refined interview questions

An 'ESLU considerations' framework

- Literature findings generally aligned with the Nature Based Solutions – a review of current financing barriers and how to overcome these framework (hereafter referred to as the "WWF NBS Framework") but we developed a broader list of investor considerations - such as the costs of MRV systems, lack of land rights and unclear legal status of projects. Sometimes 'new' barriers identified were in fact 'sub-barriers', components of larger challenges, for example broader environmental, social & governance (ESG) issues.
- The broader list was converted into the framework shown opposite. This was screenshared as an interview aid in certain cases.

Refined interview questions and prompts

- The literature review also enabled us to develop more tailored interview auestionnaires. For example, for funds we adapted questions to gather perspectives on their investment-making. and their capital-raising experiences.
- We developed tailored sets of interviewer prompts. given the larger number of barriers/issues which the literature flagged, and a slightly improved understanding of how these might differ between stakeholder aroups.

Considerations and challenges when assessing FSLU-related funds and companies/projects

Investment readiness

opportunities

profile)

. Track record and maturity

· Scale, ticket size, diversification

Investment structure alignment

. Financial returns (IRR and income

COMPANY/PROJECT-LEVEL CONSIDERATIONS

Project design

- . Strategy and theory of change
- Landscape/jurisdictional approach Value chain partnerships
- · Project 'hallmarks' (third-party standards, endorsements)
- . ESG risk management env, social, tenure

Company characteristics

- . Capacity, team, track record
- Legal status, property rights and tenure

Assets and revenue model

- Crop and/or timber species characteristics
- Value added products
- * Tradable carbon, other environmental credits/units
- · Collateral and liquidity

- . Env. socio-economic benefits
- · Positive publicity and intangible values

FUND MANAGER-LEVEL CONSIDERATIONS

- Track record · Existing pipeline
- Access to concessional finance, tailored instruments
- · ESG systems

Capacity

Governance

- · Mission, vision, impact strategy
- · Leadership and leam
- Partnerships with investors
- In-country capacity

Country/sector-level considerations and data can cross-cut both fund manager and company/project-level considerations

Due diligence needs

COUNTRY/SECTOR-LEVEL CONSIDERATIONS

Investment challenges

- Currency risk . Lack of price transparency.
- inconsistent asset valuations
- . Tax and other (dis)incentives
- · Foreign investment constraints

- Broader risks Political uncertainties
- Social unrest
- Regulatory changes

DATA NEEDS

Market data

- Supply and demand projections (for crops, timber, NTFP products, carbon and other credits)
- · Land availability and scale up potential
- by project type
- · Pricing current/projected unit prices and volatility

- Project financial benchmarks . Input costs per hectare (CAPEX and
- . Yield, ROI and IRR for comparable projects
- . Opportunity costs

Verified impact metrics

- Carbon
- Biodiversity · Water and ecosystem services
- Inclusive livelihoods
- Socio-economic benefits
- . Project and regional-level reference datasets





Ranking of barriers to commercial investments in FSLU

| Category | Theme | Barrier | Overall rank | Investor rank |
|--------------------|-----------------------------|---|--------------|---------------|
| Financial | Investment fundamentals | Low risk-adjusted returns | 1 | 1 |
| Management | Team quality | Lack of proven and joint track record | 2 | 2 |
| Management | Team quality | Competency gaps (finance, technical) | 3 | 2 |
| Financial | Investment structures | Tenor mismatch | 4 | 2 |
| Financial | Investment structures | Liquidity challenges | 6 | 2 |
| Implementati on | ESG risk, impact management | Inadequate impact data and performance metrics | 5 | 6 |
| Implementati on | ESG risk, impact management | Lack of 'useable' external standards | 11 | 6 |
| Structural | Institutional fit | Risk appetite | 6 | 8 |
| Structural | Country risk | Political uncertainties | 8 | 8 |
| Management | Team quality | Capacity constraints (at local levels) | 11 | 10 |
| Management | Strategy and planning | Weak business plans | 11 | 11 |
| Implementati on | ESG risk, impact management | Impacts on local communities including land tenure and rights | 11 | 11 |
| Structural | Institutional fit | Lack of technical understanding | 16 | 11 |
| Implementati on | Carbon aspects | Market uncertainties and pricing challenges | 16 | 11 |
| Implementati on | Carbon aspects | Carbon integrity (permanence, additionality, ethics) | 18 | 11 |
| Financial | Costs | Due diligence costs | 22 | 11 |
| Financial | Costs | Benefit sharing obligations | 25 | 11 |
| Financial | Investment fundamentals | Weak credit profile / 'story' and/or collateral | 26 | 11 |
| Structural | Institutional fit | Minimum ticket size requirements | 8 | 19 |
| Structural | Country risk | Country and jurisdictional level risks (various) | 10 | 19 |
| Financial | Investment structures | Misalignment with equity or debt instrument needs | 11 | 19 |
| Structural | Institutional fit | Fit' - FSLU is a novel asset class | 18 | 19 |
| Implementati on | ESG risk, impact management | Broader reputational risk | 22 | 19 |
| Structural | Country risk | Currency risk | 29 | 19 |
| Financial | Investment structures | Lack of truly concessional finance | 18 | 25 |
| Financial | Costs | High fund management fees | 18 | 25 |
| Structural | Institutional fit | Regulatory barriers restrict allocations | 24 | 25 |
| Management | Strategy and planning | Poor data presentation | 26 | 25 |
| Management | Strategy and planning | Poorly developed financial modelling | 26 | 25 |

Key

Top 5 barriers for investors

Investor barrier, but not from company/fund perspective

Company/fund barrier, but not from investor perspective

Methodology for barrier identification, selection and ranking

Investment barriers were identified through 40 interviews with investors, companies and specialists in this field. Barriers were ranked according to the number of interviewees that mentioned a barrier. In addition to an overall ranking, we also ranked barriers based on the frequency of mention by investors, only.



Financial barriers - investment fundamentals: Low risk-adjusted returns

Relevance: funds /companies / both Rank = 1st among investors (1st overall)

Summary – Investors frequently stated that FSLU projects have low internal rate of returns (IRRs) and risk-adjusted returns compared to other asset classes. Even for timber concessions, likely returns of 4-5% do not match investor expectations of 10-12%. At a fund level this is less of an issue as funds adopt a portfolio approach to improve diversity and reduce risk. Responses typically centered around FSLU projects and companies, as opposed to funds. FSLU projects require substantial upfront investments and longer time horizons for returns compared with other asset classes due to the growth cycle of forests or length of time needed for regeneration of croplands and so on.

"Return is important – even with first loss, equity and debt the returns can be low. The returns from FSLU funds have not been great for the investors to date." [Fund]

"Returns are not a major issue as we are targeting pension funds and aligning with a real asset strategy" [Investor]

Lower-priority barriers related to investment fundamentals

Weak credit profile/story and/or lack of collateral

Relevance: funds /companies / both

Weak credit profiles or lack of collateral is a barrier for more debt-focused investors. This was unsurprising given these were commercial banks. Investors can view FSLU businesses as having 'project finance' models with challenging cash flows. It may be beneficial for companies to better understand internal bank processes and create a 'credit story' to give commercial investors more confidence. Currently, it appears that investors consider this more important than do funds (in both buy-side and sell-side roles) and companies.



Management barriers - team quality: Lack of proven and joint track record

Relevance: funds /companies / both Rank = joint 2nd among investors (2nd overall)

Summary – Investors consider lack of credible track records and established projects as a key barrier, particularly in regenerative agriculture, mixed-species and native forestry. Inability of funds to demonstrate previously executed deals and experience of full investment cycles is a significant barrier. Similarly, a history of returning money to investors through successful exits was desired. For companies, track record concerns their experience with carbon markets or pricing, along with FSLU experience in-country. Investors want assurance that companies have local knowledge and links for ensuring project success. These are less important concerns for more conventional business models or projects with more diverse income streams. A key barrier for both funds and companies is lack of track record working in a team. Specifically, investors lose confidence when either a company or fund feam has been working together for a short amount of time (e.g. less than two years). Both groups are limited when they lack a track record working in emerging markets.

"There are probably now more funds seeking capital than will get fully invested, because any investor worth their salt is going to look seriously at their track record, which will be very limited in this space." [Sector expert]



Management barriers - team quality: Competency gaps (finance, technical)

Relevance: funds /companies / both Rank = joint 2nd among investors (3rd overall)

Summary – There is a competency gap within companies and funds, both in terms of financial expertise and technical knowledge related to FSLU investments. Some key competency gaps for funds/Companies mentioned by interviewees were related to financial planning, reporting, and technical assumptions, as well as limited knowledge of regulations and the ability to effectively communicate the financial models and market dynamics to investors.

"A crucial factor is having a dedicated team of experts. The composition of the team is of utmost importance. What is needed are individuals who truly possess a deep understanding of the subject matter." [Investor]

Lower-priority related barriers related to team quality

Capacity constraints (at local levels) Relevance: funds /companies / both

Local capacity constraints for FSLU. This includes challenges in hiring qualified staff with relevant expertise, limited availability of skilled professionals, and difficulties in building a capable and diverse team to address the complexities of FSLU activities.



Financial barriers - investment structures: Tenor mismatch

Relevance: funds / companies / both Rank = joint 2nd among investors (4th overall)

Summary – Many FSLU projects have long investment horizons, while traditional financial instruments have shorter tenors. This mismatch in tenors creates barriers in securing financing that matches the lifespan of the project and the realization of its intended outcomes. Companies and projects are generally looking for 12-20 year investments, yet investors may be seeking tenors anywhere between 5-10 years, or even 3-12 years in some cases.

"Horizons don't match well. For forestry it is 12-20 years minimum, most funds want 10-12 years max." [Sector expert]

Lower-priority barriers related to investment structures

Lack of concessional finance Relevance: funds / companies / both

Interviews and the literature review noted a lack of concessional finance for FSLU projects. 'Concessional' was defined by interviewees as below prevailing market rates, with grace periods and long tenor features adapted to FSLU projects, and/or junior in position to commercial investors. The Innovative Finance for the Amazon, Cerrado and Chaco (IFACC) report (2022) discusses how sources of concessional finance are narrowing and hard to access. The interviews highlighted that concessional capital is limited even from Development Finance Institutions (DFIs), who tend not to want a junior position in a structure. More concessional finance is thus needed. Some interviewees mentioned concessional debt was available at rates of 1-3% but the provider often insists on being paid back first, which creates a barrier for commercial investors.

"Guarantees are effective tools for debt structures, while sub-junior tranches are preferred for equity and residual value investments." [Investor]



Financial barriers - investment structures: Liquidity challenges

Relevance: funds / companies / both Rank = joint 2nd among investors (6th overall)

Summary – Investors consider lack of liquidity in FSLU investments a key barrier. Investors broadly want assurance that they can exit a fund at a desired point. Investors will take liquidity into consideration and generally advocate for greater liquidity to increase the attractiveness of investments. However, compared with the barriers such as a suboptimal risk-return profile or lack of track record, it is not as clear whether investors have tangible rulesets for when lack of liquidity would rule out an investment.

"The main challenge is liquidity in forestry - you need to demonstrate proven cases which include exiting. Some partial exits are realised but we need to demonstrate a full cycle." [DFI]

Lower-priority barriers related to investment structures

Misalignment with equity or debt instrument needs Relevance: funds / companies / both

Investors consider this a less pertinent issue on its own, but likely bundle it with other related barriers such as weak credit profile. The long-term nature of FSLU projects make them more suitable for debt financing. However, the lack of collateral makes debt projects unsuitable for commercial banks to invest in. At the same time, venture capital funds and more adventurous investors could take on the higher risk of early stage FSLU projects, yet they require higher returns to compensate, and an exit route within reasonable timeframes.

"Investors only want a lock in of five years and then want to exit." [Fund]



Implementation barriers - ESG risk, impact management: Inadequate metrics and data

Relevance: funds / companies / both Rank = joint 6th among investors (5th overall)

Summary – This refers to the lack of sufficient impact data or metrics to effectively measure environmental and social performance in the context of FSLU projects. Investors commonly cite inadequate metrics and data as a barrier to investing in FSLU. Investors often lack the impact data they need to give them confidence in investing in higher-risk geographies. Investors broadly supported the idea that increased project impact data would be beneficial. The key divergences, however, were in how much importance should be attributed to this barrier. This closely links to the barrier of poor data presentation. Investors may perceive a lack of data, but this could partially be explained by poor presentation.

"There is not a lot of data in areas where we are looking for answers. Proof of impact is difficult to find and we are only starting to look at this as methodologies are developing" [Fund]

"Data linked to biodiversity is the most difficult to collect, along with carbon data. All DFIs want lots of co-benefits, but everyone has different methodologies on how they assess this. We need data for the whole value chain." [DFI]

Other <u>high-priority</u> barriers related to ESG risk, impact management

Lack of 'usable' external standards Relevance: funds / companies / both

The lack of relevant and affordable standards and certification schemes, along with the challenges in establishing robust Environmental and Social frameworks, pose barriers to investment in FSLU. Investors want frameworks that have a structured set of policies, procedures, guidelines, and practices that an organization adopts to identify, assess, and manage environmental and social risks and impacts associated with its activities. Most external standards have either high costs, or are not common enough in FSLU projects to incentivise investment. This was considered more of a barrier by investors and funds than by companies. Standardisation and structures were one of the top barriers in the WWF NBS framework which included a lack of standards on NBS. The Forest Stewardship Council (referring to the FSC certification for responsible forestry), IFC (International Finance Corporation), and SBTi (Science Based Targets initiative) were standards cited. The cost and infancy of certification schemes, especially in the agricultural sector, pose barriers. Some investors opt for working with academics to create an evidence base.

"We need an assurance process and a standard to develop a market for FSLU – a clear level playing field is needed" [Investor]



Structural barriers - institutional fit: Risk appetite

Relevance: funds / companies / both Rank = joint 8th among investors (6th overall)

Summary – Investors perceive FSLU projects as relatively new or unfamiliar, which could lead to hesitation in allocating capital to these projects. This risk stance may arise from concerns about the uncertainties and risks associated with FSLU. The unique characteristics of FSLU, such as the combination of agriculture, forestry, and supply chains, may present barriers for investors in understanding how this asset class fits within their existing portfolios and risk frameworks.

"A lot of institutions and investors do not want to invest in emerging markets. They do not have allocations for emerging markets. They need to get more comfortable with these risks" [Fund]

Lower-priority related barriers related to institutional fit

FSLU is a novel asset class Relevance: funds / companies / both

Investors view FSLU as a unique asset class that doesn't fit easily into traditional investment frameworks or strategies such as real assets, infrastructure, or real estate. This barrier undercuts several others as will be discussed in subsequent sections.

Regulatory barriers restrict allocations Relevance: funds / companies / both

Regulatory barriers, specifically the Basel requirements which were mentioned by investors, can pose challenges for investors and lenders involved in FSLU. Basel III regulations often require higher capital reserves for longer-term lending activities, which may create difficulties for those engaged in FSLU.

Lack of technical understanding Relevance: funds / companies / both

The technical understanding of FSLU among investors, particularly institutional investors, may be limited compared with other sectors. This is owing to the fact that they might have limited direct exposure to FSLU assets in their portfolio.



Structural barriers - country risk: Political uncertainties

Relevance: funds / companies / both Rank = joint 8th among investors (8th overall)

Summary – Investors expressed concerns about political stability and regulatory changes impacting FSLU projects. This encompasses factors such as changes in government, shifts in policy, political unrest, social tensions, and geopolitical dynamics. It is a pertinent issue as FSLU projects often involve land ownership and are long-term projects so are highly susceptible to political changes. A stable and predictable regulatory and investment environment will be more attractive for investors to provide investment to funds. Investors will avoid companies facing operational and strategic challenges that arise due to political instability. This barrier is closely linked to 'Country and jurisdictional level risks'. However, that barrier focuses on more specific factors such as the presence of local stakeholders and local risk assessment.

"Political uncertainty is a huge risk but people don't talk about it much... It's pretty scary, actually, from a banker perspective." [Investor]

Lower-priority related barriers related to country risk

Currency risk Relevance: funds / <u>companies</u> / both

Currency risk, and more specifically foreign exchange risk, was identified as a significant concern for some investors when investing in emerging markets. This is considered to be an issue inherent to any investment in emerging markets and is not unique to FSLU. Fluctuations in exchange rates can impact investment returns and add an additional layer of uncertainty. Lack of fund/company awareness of this issue could pose an additional barrier to investors investing in FLSU.



Management barriers - strategy and planning: Weak business plans

Relevance: funds / companies / both Rank = joint 11th among investors (joint 11th overall)

Summary – Weak company business plans are a major barrier to investors and sell-side funds, who frequently experience this issue when evaluating applications from companies. Often business plans emphasise the scientific aspects of the company or projects and neglect the financial or commercial aspects. Investors want companies to provide a strong initial business case (market analysis, supply chain mapping, revenue models, and value creation). Business plans are often not detailed or are too short and lack any supply chain mapping. This issue links closely with the financial fundamentals theme. Strong business plans can alleviate some of the investor concerns about low returns, ticket sizes, weak credit profiles and track record (although both investors and DFIs specified that forward projections alone are not enough to give investors confidence). While it is for companies to strengthen the financial aspects of a business plan, funds may be able to lend expertise to assist with this.

"We are comfortable if the financial aspect is missing from the business plan as we can provide this, but it still needs to have strong commercial characteristics." [Fund]

"There is real confidence in the operator and the financial management around the deal when you see properly put together financial models." [Investor]

Lower-priority barriers related to strategy and planning

Poorly developed financial modelling Relevance: funds / <u>companies</u> / both

Investors often require robust and long-term financial projections, but a significant number of investment proposals (over 90%) lack comprehensive and usable financial models with adequate scenario analysis and suitable time frames. Standardized metrics within company financial models are also lacking, which indicates a gap in understanding between investors and other funds and companies. While this barrier was highly significant in the literature review, it was not as commonly mentioned in the interview responses.

Poor data presentation Relevance: funds / <u>companies</u> / both

Companies may feel that they do not lack the data to provide attract investment from prospective investors. However, there is an acknowledgement from both companies and investors that companies do not present the data in a way that investors will easily understand. This barrier was discussed in the context of environmental & social (E&S) impacts but may be applicable to other data types.



Implementation barriers - ESG risk, impact management: Impacts on local communities including land tenure and rights

Relevance: funds / companies / both Rank = joint 11th among investors (joint 11th overall)

Summary – Taken together, impacts on local communities and land tenure/rights are a key barrier for all stakeholders including investors. Investors were particularly concerned with land tenure, which prevents many from investing in FSLU projects. These impacts are more of an issue in certain jurisdictions than in others. The main barrier was a lack of clear documentation. Lack of government or community endorsement of projects is also a barrier for investors.

"We need projects to create the right incentives for local communities – we need to get them involved in these projects." [Investor]

"Environmental regulation and land tenure - and which registry to use - are holding us back from investing further in FSLU." [Investor]

Lower-priority barriers related to ESG risk, impact management

Broader reputational risk

Relevance: funds / companies / both

For some impact-focused investors, reputational risks were enough to deter them even if commercial returns were possible. However, few purely finance-focused investors responded to this barrier. It is therefore unclear if this barrier is pertinent for such investors as opposed to impact-focused investors. Reputational risks can also be linked to other barriers such as track record and land tenure. If the latter were secured, this alleviates concerns of reputational risks to some extent. There may be a lack of awareness by funds of the significance of this barrier to investors. Funds may take on reputational risk and subsequently set management fees to reflect that risk (see the theme on costs discussed previously).

"We do not want to compromise impact if we get commercial returns. If we do not foresee environmental returns, we consider that a huge reputational risk." [Investor]



Implementation barriers - carbon aspects: Market uncertainties and pricing

Relevance: funds / companies / both Rank = joint 11th among investors (joint 16th overall)

Summary – With carbon credits playing a more prominent role in investor decisions, Interviews identified uncertainties around carbon markets as a further barrier. This depended on the stakeholder category. Investors indicated that price certainty is paramount. Investors want transparency and forward-looking price curves to reduce uncertainty around FSLU investing. No interviewees mentioned existing price indexes such as Nature-Based Global Emissions Offset (N-GEO). Interviews broadly suggested much of the appetite for carbon credits comes from the corporate sector.

"Investors are interested in carbon pricing data and identifiable future markets. This is what comes up again and again." [Investor]

Lower-priority barriers related to carbon aspects

Carbon integrity (permanence, additionality, ethics)

Relevance: funds / companies / both

One investor described a lack of robust carbon pricing or integrity of credits as a key barrier to investing in FSLU. Similarly, one investor warned of focusing too much on carbon. In contrast, another investor cautioned against excessive emphasis on carbon alone and instead saw greater potential in real assets, (such as tangible physical assets like land or infrastructure). Most interviewees discussing this barrier were investors and companies, with no funds mentioning this as an issue. Another investor raised the issue that if the validity or certification of carbon credits comes into question, the price will plummet. This may put investors off investing in projects with a considerable amount of carbon revenue.

"There is considerable risk for carbon credits in voluntary markets if no timber is associated with it. If the (carbon) certification scheme is found not to be credible then credits plummet." [Investor]



Structural barriers - institutional fit: Minimum ticket size requirements

Relevance: funds / companies / both Rank = joint 19th among investors (joint 8th overall)

Summary – Typically, FSLU funds and projects are considered too small to meet investor minimum ticket sizes and maximum concentration thresholds, which refers to the minimum investment amount required by investors to participate in a particular fund or project. The required ticket sizes varied among investors, with larger institutional investors seeking investments over USD 75 million and others typically targeting investments over USD 10 million. It was also observed that the lack of platforms and aggregation vehicles further compounds the issue of ticket size constraints.

"Minimum ticket size requirements, which we have in place, may be a challenge for smaller projects in the FSLU sector." [Investor]



Structural barriers - country risk: Country and jurisdictional level risks (various)

Relevance: funds / companies / both Rank = joint 19th among investors (10th overall)

Summary – This includes adverse events or conditions that could impact investments in a specific country or jurisdiction. For funds, the challenge lies in conducting comprehensive risk assessments, developing local expertise, forging strategic partnerships, and demonstrating a proven track record in effectively managing risks in emerging markets. Companies, on the other hand, must navigate the specific risks inherent to each jurisdiction, establish relationships with local stakeholders, and ensure compliance with local regulations and legal frameworks.

"Country risk and jurisdictional risk. Even if we can lend to certain countries we have a debt ceiling which minimises what we can do." [Investor]



Financial barriers - costs: High fund management fees

Relevance: <u>funds</u> / companies / both Rank = joint 25th among investors (joint 18th overall)

Summary – High fund management fees within impact funds were raised as a barrier by some interviewees. However, only two of these interviewees were from a investor, and they would be considered more general 'impact first' investors, not directly active in FSLU investing. There does seem to be an awareness issue here, funds who are inherently closer to the fee structure view this as a barrier to attracting investment, but it is not considered a prominent barrier by investors who are more focused on other factors in their investment decision-making process.

"Outcomes like manager fees and expenses end up being a really big drag on returns because in these sectors, it takes much longer to deploy the projects" [Investor]

"FMs often have high (4%) management fees, but that is there for a reason as they are taking on a lot of risk. We should accept high fees and transaction costs. It is such a specific sector, we should not treat it is a mainstream asset or project." [DFI]

Lower-priority barriers related to costs

Due diligence costsRelevance: funds / <u>companies</u> / both

To a lesser degree, interviewees discussed costs in the context of DD. DD is more costly in FSLU compared with other sectors. This barrier is compounded by the fact that some investment analysts are not as familiar with FSLU DD as with other sectors. This results not only in added DD costs, but increased uneasiness among investors to invest in FSLU.

Benefit sharing obligations Relevance: funds / companies / both

One investor noted a mismatch between investors and project developers on benefit sharing stating that investors do not appreciate the need for benefit sharing with communities, nor do they like the reduced IRRs they perceive this results in. This was not a barrier found in the literature review, nor was it a common barrier in interviews. Nonetheless, it may also link to the barriers of FSLU being a novel sector and a lack of technical expertise in FSLU, particularly among investors.

"Investors may question why there is a 50-60% revenue share without understanding that communities are your employees. Some investors taking early positions will know this but it is still very unique to NBS investors." [Investor]



Investor profile: Althelia Climate Fund (ACF)



Fund overview: Launched in 2013 with Conservation International it was one of the first FSLU funds, now managed by Mirova Natural Capital (Mirova).

Fund life: 8 years + 2x 1 year exit (closed in May 2023)

Track record: Fund has 10 years of track record, and Mirova has several other

impact funds
Taraet IRR: 9%

Risk mechanisms: 50% loan guarantee at the portfolio level from USAID

Management fees: 2% Target size: USD 101 million

Ticket size: Min: USD 1 million; Avg: USD 5 million

Target geographies: Developing regions (Latin America, Africa & South East Asia) LPs/Investors: AXA Investment Managers, Church of Sweden, Credit Suisse,

European Investment Bank, Finnfund, FMO

The ACF has successfully overcome some of the barriers to commercial investment in FSLU. Through its innovative strategies and partnerships, ACF attracted commercially-minded investors, mitigated risks, developed standardized structures, and accelerated pipeline development. The case study provides insights into key barriers faced by ACF and the strategies employed to address them. Some further learning points and implications are explored on the next slide.

| KEY - barriers these recommendations | Structural | Financial |
|--|------------|----------------|
| | Management | Implementation |
| i laraei - | | |

Country risk:

- Through utilizing traditional investment structures (a General Partner (GP)/Limited Partner (LP) structure which allows for diversification across countries) and regulations from the European Union (EU mandatory deforestation requirements), the ACF looked to align with established frameworks and tailor the fund structure to meet the requirements and preferences of LPs and target countries.
- ACF has established strategic partnerships with NGOs and other entities (e.g. Conservation International and the Netherlands Development Organization SNV) to enhance deal flow generation and provide on-the-ground capacitybuilding support.
- Althelia did not previously have a fund management track record, but the cofounders had significant expertise in carbon finance and the acquisition by Mirova brought solid fund management set up and experience

Strategy and planning:

- ACF successfully developed a business model that leverages carbon finance
 and the generation of carbon credits for early-stage funding. They developed a
 'payment for performance' approach in their investment strategy allocating
 less than 30% of the total investment upfront for initial costs, with the remaining
 balance disbursed gradually based on project performance, mitigating risks
 and ensuring investment alignment with expected outcomes.
- Carbon finance has the potential to offer market-rate returns of 9%

Investment structures:

It is a closed-end fund. ACF leveraged public guarantees to provide long term
financing to projects on the ground. As FSLU is a new asset class, the ACF
concept "was not to tailor the fund to commercial investors, but to try and
make it similar to more mainstream funds."

Investment fundamentals:

- ACF improved risk-return profiles by utilizing carbon as collateral and acquiring carbon credits early to sell at a higher price as the market developed.
- In the future, for other funds to improve fundamentals, Mirova have expressed that they would like to see standardized offtake agreements developed for land-based carbon projects with corporates, similar to Power Purchase Agreements (PPA) in renewable energy.

ESG risk, impact management:

 ACF developed an E&S management system based on the IFC Performance Standards, across 7 impact themes, and with 23 KPIs which they disclose as part of annual reporting

Investor profile: Althelia Climate Fund (ACF) (cont.)

Broader barriers and considerations for Mobilising Finance for Forests (MFF):

- Despite being part of Mirova, which is viewed as one of the largest players in the FSLU investment sector, the assets under management and fund sizes of ACF are still relatively small and boutique compared to more 'commercial' funds. Other Mirova funds are bigger in size (e.g. LDN Fund at US\$ 208m and Sustainable Ocean Fund at US\$ 132m) but the fundraising between 2017 and 2020 was lengthy and still below their original targets, which is indicative of the difficulties in capital raising for these types of bespoke Funds.
- ACF's growth has relied heavily on public funding and primarily has not come from investors, indicating that investors still view ACF as too high risk (even with USAID guarantees in place), or their structure/tenors makes it difficult to engage in. Equity investors may also be deterred by the USAID guarantees only covering debt financing.

Learning points for funds and companies from ACF experience:

- Carbon projects have been pretty resilient and successful compared to other FSLU business models, helping to provide income until some of these models mature (such as agroforestry and sustainable commodities).
- Blended finance, combining public and private capital, can help mitigate risks and enhance overall risk-adjusted returns. A portfolio guarantee can be particularly beneficial for novice fund managers in mitigating perceived risks.
- · Collaboration with corporates through green offtakes and commitments can enhance investment readiness and attract more funding.

Future actions to enhance investor interest, although some of these may beyond the direct control of funds and companies:

- Funds can develop standardized offtake agreements for land-based carbon projects, making FSLU investments more bankable.
- Funds should consider establishing a local presence and building expertise in emerging markets where investments are planned, allowing for better understanding and engagement with local stakeholders.
- Strengthen the carbon market governance and integrity funds and companies should align with initiatives like the Integrity Council for Voluntary Carbon Markets (ICVM) and Voluntary Carbon Markets Integrity Initiative (VCMI).
- More generally, funds and companies can advocate for EU mandatory DD and measures to prevent imported deforestation, aiming to provide clearer frameworks for investments, recognizing that the direct control over these measures may lie outside their jurisdiction.

Implications for the recommendations

These learning points and future actions could be important success factors for funds. These are reflected in the interim report through the following recommendations:

Funds

- Tailor fund vehicle to LPs and target countries ACF's understanding of investor preferences and needs and developing fund structures
 mainstream investors would understand
- NGO pipeline partnerships ACF's partnership with Conservation International and other NGOs
- Establish portfolio management systems The ACF E&S management system is included as an example

Companies

Secure strong offtakers – ACF is seeking to develop standardised offtake agreements for carbon

Both

- Diversify income streams to enhance returns and liquidity carbon is used by ACF as revenue to repay investors, and as collateral for loans
- Build complementary skill sets, deep experience despite lack of track record, ACF has an experienced team within carbon finance
- Secure concessional finance within the capital stack use of USAID guarantees for the fund with other concessional finance.



Important note: This section attempts to identify variations and nuances within the investor group we sampled. However care should be taken in making generalisations across the investor community as a whole. Further information on each of the barriers and recommendations noted in this section can be found in the main report and in the rest of this document.

Findings – Divergence in expectations between investors and funds/companies

Summary: Consultations showed that, broadly, companies and funds understand and share at some level the expectations of investors. However, that does not automatically equate to those expectations being met. Moreover, there are areas in which investors' concerns appear not to be fully recognised by companies and funds. Improving awareness of these gaps and closing them will be crucial for companies and funds aiming to access more private and commercial capital. Ultimately, investors prioritise financial factors that will drive returns, yet capital seeking companies and funds may underestimate this when considering a wider range of factors (especially ESG impact).

Key takeaways

As shown on in the table on page 9, investors, companies and funds are generally aligned in terms of the barriers they consider most relevant to FSLU. However, **investors prioritise factors that directly affect investment returns**, while companies and funds may have a broader set of considerations. Often, companies or funds focus on communicating the high impact of the project to investors. While investors do want impact and to avoid any reputational risk, this focus on impact may detract from the factors that investors want to see addressed. Companies and funds may recognise the importance investors place on risk-adjusted returns and team track record, for example, but the way they address these may be suboptimal if ESG impact takes priority.

The investment tenor represents another potential gap in expectations. In general, companies and funds are unlikely to raise capital from investors if they seek a loan longer than 10 years (and as little as five in some cases) with weak collateral. Yet companies often seek 12-20 year commitments, and are less focused on the strong credit profile and collateral this would require. The credit profile itself is an aspect some financiers feel companies should focus on to demonstrate strong financial characteristics. However, companies and funds did not acknowledge its importance. Similarly, DD costs, the impact of benefit-sharing obligations on returns, and currency risk were all barriers that investors expect to see addressed when making an investment, but are potentially neglected by companies and funds. On the other hand, companies and funds may expect investors to want lower management fees and bigger ticket sizes. However, these may be less of a concern for most investors.

The expectation gaps here suggest that **companies and funds are currently not aware of all important barriers for investors.** There could then be an additional gap in understanding how to tackle these barriers. Companies and funds should align their strategies and proposals with the specific priorities of investors, as shown in slide 9, to bridge this gap in understanding. The recommendations in the main report and supplementary recommendations on pages 31-34 of this appendix are intended to help achieve this. However, there is undoubtedly a wider range of actions that can be explored, unique to each company, fund or investor's circumstances, to fully meet investor expectations.

Findings – Commercial investors' willingness to invest in FSLU

Summary: Although this study draws conclusions about commercial investors as a whole, it is crucial to acknowledge that there can be variation between different types of investors. For example, the preferences and expectations of a commercial bank may differ from a pension fund. There can even be variation within these groups, with some investors simply having more existing exposure to FSLU than others for various reasons. Ultimately, investors differ in their appetite for FSLU investment. The various barriers discussed in this study may be actionable to a point where an investor is willing to invest. Other barriers may be 'no-go's' for investors. It is therefore imperative that companies and funds do their due research on investors they are hoping to approach.

Key takeaways:

Investors may be either not willing or not able to invest in FSLU due to a variety of reasons, including:

- Perceived competency gaps within companies and funds investors want to see fund and company teams with in-depth knowledge of the activities they are investing in. The need for strong technical competencies tends to be more clearly recognised by investors with experience in the FSLU sector who better appreciate its complexities.
- Risk appetites institutional investors broadly have a lower appetite for risk than impact investors or non-commercial investors such as DFIs. Pension funds and insurers, in particular, have a **low appetite for risks in emerging markets**. When attempting to raise capital from commercial investors, companies and funds should address **broader reputational risks** more so than if they were targeting non-commercial investors. Commercial investors may also be less willing to accept higher levels of country risks even when there are risk-sharing mechanisms in place.
- Low risk-adjusted returns offered by FSLU projects/funds pension funds may accept lower returns due to the longer-term nature of their investments, but not without strong risk management practices and alignment with their sector/country investment strategies. Government and community support are desirable risk mitigants. If assets and structures are considered appropriate in fiduciary terms (e.g. for pension funds), companies and funds offering lower returns may still appeal to investors.

Generally, the more commercial the investor, the more crucial the team track record/quality and financial fundamentals will be. Revenue diversification is also desirable for many investors. Impact investors are more flexible in the ticket sizes they can consider and show interest in high-impact projects and strong business models. Some investors advocated a highly focused portfolio strategy, others a level of risk-reducing diversification. Companies and funds are more likely to have success approaching investors if they can acknowledge investors' 'red list' FSLU types and countries through mitigating measures. Ultimately, this again can be brought about with upfront, clear and honest communication between companies/funds and investors. A clear demonstration of track record can also improve the chance of success. Regulatory barriers which restrict allocations are also discussed in the report. Not all commercial investors will be subject to the same regulatory restrictions as others. SFDR is applicable to all European investors (even those considering non-EU assets). Basel III regulations, for example, are applicable to banks. Funds should therefore be aware of the particular regulatory environment of the investors they intend to approach.

Findings – Types of FSLU preferred by commercial investors

Summary: In addition to investigating a willingness to invest in FSLU across different types of investors, it is crucial to also consider how this may be affected by the type of FSLU. Type of FSLU can mean the sub-sector of FSLU being practiced (for example timber forestry, mixed-species forestry or sustainable agriculture). It may also mean the form of revenue streams expected (for example revenue stemming from carbon credits). Lastly, it can also be taken to mean the geography where the fund or company will be active, which can highly influence investors' willingness to invest. Investors are not a homogenous group, as discussed on page 24. However, the analysis in this study noted a general interest in the additional returns achievable with carbon, and in jurisdictions with more developed markets and lower risks.

Key takeaways:

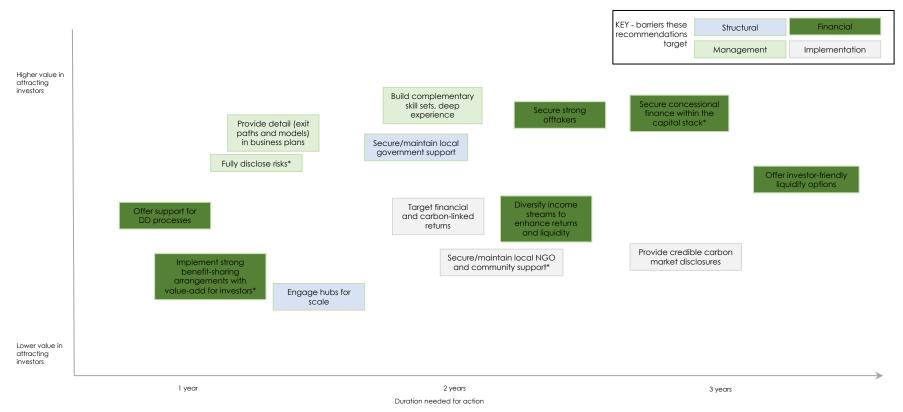
Companies and funds approaching investors with **combined carbon and timberland projects** (i.e. timber and carbon credit revenue) are more likely to attract commercial investment than other types of FSLU projects. 'Carbon kickers' (additional revenue through carbon credits) can improve the likelihood of success, particularly for funds targeting investors and corporate carbon offtakers. However, projections and pricing are scrutinised. Some investors, therefore, see greater potential in real assets (such as tangible physical assets like land or infrastructure), and most investors tend to avoid 100% carbon-backed projects.

Investors may express regional preferences. Some are **more likely to commit capital to projects in the Americas over those in Africa**. Similarly, they prefer jurisdictions with more straightforward routes to manage land tenure issues (e.g. land registries for certain states in Brazil). This has significant implications for FSLU fund strategies. A focus on and expertise in Latin American FSLU project may improve the likelihood of success in attracting certain investors. For funds not already active in these regions, this will require hiring staff and establishing a physical presence as part of carrying out some of the recommendations put forward in this study. However, it is clear that investment in FSLU is needed in Africa and elsewhere, and cannot be limited to the Americas. To compensate for the added barrier of being active in a less-preferred geography, funds and companies may need to implement a wider range of actions. This will likely mean leveraging more of the recommendations put forward in this study. Specifically, those tackling the barriers of country risk such as tailoring the fund vehicle to LPs and geographies. Building a track record and experience of companies and funds in navigating emerging markets will also be critical in attracting private investment.

More commercially-minded investors generally consider projects with high benefit-sharing ratios (payments to communities and local groups) as less attractive. Such projects tend to be those with a higher impact focus or FSLU types such as native forest restoration/conservation. However, funds and companies may be able to overcome this disinterest by fully illustrating to investors the upsides these benefit-sharing agreements bring. Specifically, such agreements solidify local support and can moreover lead to local government support, improving the risk-return profile of the project or company.



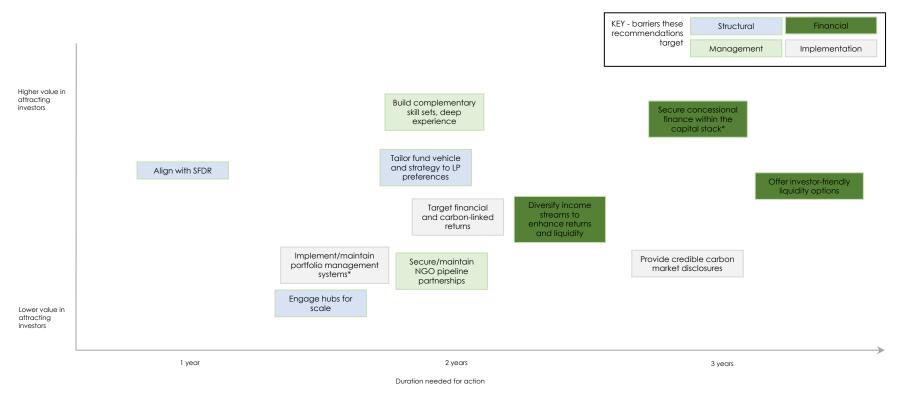
Recommendations for companies - overview and approximate timelines



Important notes

- Recommendations marked * indicate recommendations that have been merged with other closely linked recommendations in the full report.
- The horizontal axis indicates the number of years typically needed to implement a recommendation. The vertical axis indicates the expected value actioning a recommendation will have to investors.
- Positioning is very approximate and only indicative, based on many generalisations. To ease readability we spaced out recommendations which might otherwise be overlapping.
- A selection of these recommendations that target the most important barriers to investors are discussed in the full report. Those not selected are discussed in subsequent pages of this document.

Recommendations for funds - overview and approximate timelines



Important notes

See notes on previous slide



Recommendations applicable to companies

Implement strong benefit-sharing arrangements with value-add for investors

Barriers addressed: Benefit sharing obligations; impacts on local communities including land tenure and right; country and jurisdictional level risks



Theme: Costs

"Having an offtaker arrangement is key... For example, we would consider lumber sale contracts as part of an offtake agreement." [Investor]

Secure strong offtakers

Barrier addressed: Low risk-adjusted returns



Theme: Investment fundamentals

"Investors may question why there is a 50-60% revenue share without understanding that communities are your employees" [Investor]

Action – the extent of and mechanisms for benefit sharing that a company employs can influence investors' level of interest in a project. Companies should focus on maximising and explaining the value that benefit-sharing mechanisms add in improving risk-adjusted returns through:

- Helping to increase scale and ticket sizes by increasing the number of smallholders, communities
 and land areas involved in a project which has a meaninaful level of local benefit
- Reducing risks associated with the investment such as:
 - The risk of political support drying up this is less likely when projects deliver substantial benefits
 to the local economy and are politically advantageous to those officials linked to them
 - Project failure or underperformance due to community conflicts, lack of engagement and local labour supply
 - Reputational risks of association with a project which is at odds with local community interests
- Maximising positive project impacts directly (via increased income to local communities) and indirectly via stronger community involvement and incentives to achieve project objectives.

Why – often, investors view benefit sharing as detrimental to returns and may be less interested in projects with strong agreements in place. Articulating the value of these agreements can overcome investor reticence.

Viability and value – viable with consistent efforts, and impacts on returns to investors can be compensated for by improved risk profiles and better impact metrics. Even with designing these from the start, the processes involved can be lengthy to conclude.

Sources of further guidance and examples

 WCS Seima RFDD+ project is often held up as a good practice case study in community benefit sharina. Action – engage large multinational companies (MNCs) or other companies sourcing from the project region, to co-design offfake agreements for key materials/outputs being produced. MNCs with strong responsible sourcing strategies may make long-term commitments to the project on sustainable commercial terms.

Why – recognised MNC counterparts that investors will feel comfortable with can reduce perceived market risks and provide security of demand. Some offer TA and extension services. Market risk and price volatility are key concerns of investors. Long-term commitments with MNCs will reduce perceived risks and improve risk-adjusted returns.

Viability and value – the presence of a credible counterpart with long-term offtake commitments can be a game changer for investors. Although this can take a few years to nurture there are increasing numbers of MNCs looking for such partnerships and resources to support the search. This process is lengthy but intermediaries and responsible sourcing programmes may be able to accelerate the process.

Sources of further guidance and examples

- <u>IKEA</u>; <u>Michelin</u>; <u>BodvShop</u>; <u>Livelihoods Fund</u> Mars Inc / Franklin Baker Philippines, Mars Inc / Prova - Madagascar;
- The <u>Food Securities Fund invests</u> in farms and farmers who are part of the supply chain of large offtakers or traders

Recommendations applicable to companies

Fully disclose risks

Recommendations applicable to funds

Implement/maintain portfolio management systems

Barrier addressed: Weak business plans; poorly developed financial modelling; poor data presentation



Theme: Strategy and planning

"Companies can up their game. Be prepared to do your homework, don't be opportunistic and be transparent about the risk." [Company]

Barrier addressed: Inadequate impact metrics and data



Theme: ESG risk, impact management

"There is not a lot of data in areas where we are looking for answers. Proof of impact is difficult to find and we are only starting to look at this as methodologies are developing" [Fund]

Action – companies need to be upfront on all the risks facing project inception and implementation. Disclosures should be comprehensive and cover short, medium and long term. In particular, investors want to understand risks which could affect the timing of their repayments or exit. They also want to assess the extent to which companies understand and can manage the market risks relating to their products, target markets and price forecasts. This includes the volume and pricing of carbon assets. Scenario analyses which model the impact of negative events on financial models and on operational aspects are also desired.

Why – investors know that FSLU projects in emerging markets are inherently risky, but want to quantify risk levels and have mitigating measures in place. Feedback suggests investors are concerned that project risks are underreported or with optimistic bias.

Viability and value – as with developing business plans and financial models, costs are manageable and detailed risk registers and scenario analyses can be achieved within 3-6 months. Depending on prior work this can therefore be achieved relatively quickly. Detailed scenario analyses may need some external input.

Sources of further guidance and examples

 See this table for auidance on creating a risk register for projects to show to prospective investors (p.82) Action – portfolio-wide management systems can be used to manage risks and to gather credible impact data. These systems can vary greatly in sophistication and the extent to which they are tailored to specific sectors (e.g. commercial forestry), issues and outcomes (e.g. carbon sequestration, certification, traceability, sustainable sourcing), or metric sets and reporting standards (e.g. SDGs). There will be a degree of adaptation required of any 'off the shelf' systems used. Some funds have developed their own bespoke systems. Given the challenges around some external ESG-related standards (e.g. the costs and procedural burden of FSC certification for small forests) these systems can include 'step-wise' frameworks for assessing individual projects' progress towards international benchmarks. Key design principles are transparency and credibility. Investors want to interragate data, and eventually seek third-party opinions on it. Given the developing range of international standards for impact reporting it is also key to ensure reporting outputs can be mapped across to internationally recognised approaches as they gain traction over time.

Why – investors want to see robust management of potential risks particularly related to social, environmental and reputational risks. They also want confidence in any claimed positive impacts achieved.

Viability and value – these are desirable for investors and should be viable for all funds. Costs will vary depending on fund complexity and any bespoke features. The use of external auditors and evaluators will incur annual costs. Systems are developed in outline during fund design – this can be relatively quick if using existing tools and approaches. However actual processes need to be piloted during the fund's early years and it may be 1-2 years before the system fully matures, depending on the diversity of the investment strategy.

Sources of further guidance and examples

 Mirova-Althelia Impact KPIs, WBCSD Sustainable Forest Finance Toolkit, IUCN Global Standard for NBS

Recommendations applicable to both companies and funds

Provide credible carbon market disclosures

Engage hubs for scale

Barriers addressed: Market uncertainties and pricing challenges; carbon integrity (permanence, additionality, ethics)



Theme: Carbon aspects

"There is considerable risk for carbon credits in voluntary markets if no timber is associated with it. If the [carbon] certification scheme is found not to be credible then credits plummet." [Investor]

Barrier addressed: Minimum ticket size requirements

石芥六 Theme: Institutional fit

"Minimum ticket size requirements, which we have in place, may be a challenge for smaller projects in the FSLU sector." [Investor]

Action - Build knowledge in teams and through permanent staff with carbon market experience, if not through advisors. Ensure financial models and project sequestration forecasts:

- At the project finance level are based on up-to-date conservative analyses of current and future trends. Include scenario analyses, risk modelling and sensitivity analyses so investors can clearly see the impact of adverse events on project outcomes.
- At project levels transparency and realism based on the conservative timeframes required for sequestration, and the long-term removals components of removals projected

Implement clear policies and transparency on approaches to additionality and permanence aspects (will be of importance to investors targeting corporate net zero commitments). Maintain clarity on strategy for achieving meaningful carbon removals while balancing stakeholder interests in non-carbon outcomes (this responds to concerns over broader impacts of 'pure carbon' forestry projects. Acknowledge ethical issues in carbon markets such as destination / end-user of credits, community revenue sharing, and ecological/social trade-offs. This should also include a detailed narrative on the approach towards avoided emissions and inflated baseline risks.

Why - the energy crises and the Verra controversy have made investors nervous about volatility and integrity and projects and funds are under greater scrutiny. These actions address those concerns with realism and openness.

Viability and value - of broader value in demonstrating openness to investors and conservatism in general. Viable for all companies and funds but may impact IRR projections. This recommendation could be implemented rapidly assuming the team has required carbon markets experience in-house or can build this.

Sources of further guidance and examples

See Abatables 2022 report here.

Action – to increase the ticket size of investments (a key barrier to commercial investors) it is important to have a viable scale-up route. Some of the largest FSLU projects in the market in terms of land area and deal size work through a variety of 'hub' models to engage high numbers of smallholders and individual landholdings and farmers. These hubs vary greatly in nature. They can encompass unions of cooperatives with large member bases, microfinance providers with large existing customer bases. and international networks of public/private land restoration programmes.

Why – investors will consider small initial ticket sizes if they can see a clear route to scaling and that a project has capacity to absorb significant capital over time.

Viability and value - there are a range of proven examples of these models working in many countries. However they do require close partnerships between private, public and CSO actors, strong relationship building efforts and extensive groundwork. The most straightforward approaches may tend to be single-landscape/jurisdiction smallholder and cooperative models. The value of these approaches can be instrumental in engaging larger investors. In terms of timeline, unless this model is integral to a project design already it is likely to take several years to come to fruition.

Sources of further guidance and examples

- Climate Asset Management and Global Evergreening Alliance
- Climate Smart Lendina Platform
- Komaza investment model (for companies)

Recommendations applicable to both companies and funds

Secure concessional finance within the capital stack

Barrier addressed: Lack of concessional finance



Theme: Investment structures

"Guarantees are effective tools for debt structures, while sub-junior tranches are preferred for equity and residual value investments." [Investor]

Action – subordinated loans with below-market interest rates, long tenors, and grace periods are beneficial for projects without significant collateral or credit history. Impact-first equity investors can also assist by taking a junior position to improve risk-return profiles. However, there is a scarcity of truly concessional providers offering long tenors or first-loss positions, except for certain state-linked initiatives. DFIs can access concessional facilities based on project fundamentals and bankability requirements, emphasizing the importance of strong business plans and strategies. DFIs' guarantees can attract investors but may require a debt-oriented financing model.

Why – concessional finance instruments have frequently been cited as instrumental in unlocking access to commercial investors, reducing losses and improving risk-adjusted returns.

Viability and value – of clear and instrumental value in attracting investors but highly dependent on strong business plans and good fundamentals. This recommendation requires strong relationships with concessional providers, strong fundamentals, and in the case of guarantees, ongoing product fees. It is therefore not rapidly implementable.

Sources of further guidance and examples

- ACF's USAID guarantee operated at the fund level to provide flexibility but did require the conversion
 of equity positions to debt.
- Innovative Finance Facility for Climate In Asia USD3bn leveraged guarantee mechanism



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The Terranomics consultancy team included Chris Knight, Jim Stephenson, Chris Moore and Tom Chellew. Terranomics is a consultancy with 20 years of experience working on public and private sector approaches to environmental challenges. We are focused on scaling up private sector investment and action in nature-based solutions and conservation.

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