White Paper

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Financial solutions at scale: The Landscape Fund

This White Paper was produced by
Center for International Forestry Research (CIFOR); **The Munden Project** (TMP) **Systems**

Introduction

The Landscape Fund (TLF) is an investment system created by CIFOR and TMP Systems.[1] Its strategy is based on five interrelated hypotheses:

- **Sustainable land use (SLU) could generate returns at scale.**
  We think it is possible to create a diversified portfolio of SLU projects in emerging markets. These projects can be financed with long-maturity debt issued via a network of local lending intermediaries. The financing would provide land users with something they currently lack: risk capital that matches the needs of SLU for longer-term investments rather than short-term speculation.

- **Initial evidence points to a strong investment case.**
  TLF plans to bundle the projected loan repayment streams into securities, which our research suggests would have high risk-adjusted returns. If delivered in large amounts, these securities would match the timescale and return requirements of a number of large private investors, with the added incentive of allocating significant market capital toward sustainable outcomes.

- **This is good for people and the planet.**
  We expect to see four outcomes: increased productivity, reduced deforestation, lower greenhouse gas emissions and a better economic outcome for land users and small and medium enterprises that borrow money.

- **TLF is developing a cost-effective way of monitoring these benefits efficiently and reliably.**
  The four outcomes can be demonstrated consistently, efficiently and cost-effectively through the use of a scientific measurement, verification and reporting (MRV) system using open source software architecture and the application of statistical techniques that will ensure sustainability verification is scalable.

- **TLF mobilizes and ensures responsible use of seed funding for pilot operations.**
  Putting the hypotheses above into practice will require initial — and likely primarily public — financing. TLF will use such funding by adopting an approach that results in tangible and measurable public benefits. The risk exposure will reduce over time, as the case for private sector investment becomes more attractive.

We have presented this concept to asset managers, public institutions, local lenders, development banks, agricultural and forestry experts, political officials and ground-level operators. They all have expressed interest in these hypotheses and confirmed the need for additional field testing.

Much work lies ahead: a number of assertions need to be proven, risks need to be better understood and both institutional and operational practices need to be established. This will not only take time, but may also result in losses of investment capital. The only way to know this is to pilot the TLF approach and monitor progress.

We have identified four countries to start in: India, Peru, Philippines and Tanzania. We are conducting field work to identify specific pilot areas (and projects) in prioritized landscapes in each country, and to select aggregators.

TMP Systems will present an investment plan to CIFOR and a small group of interested parties covering these four countries in September 2015. After review, CIFOR will present an Initial Investment Plan (IIP) for public financing at the GLF in Paris on 5-6 December 2015

The purpose of this Global Landscapes Forum session on TLF is to inform participants in more detail of the key reasons we think it is a good idea, to highlight where we see risks that threaten the fund's viability and to outline future plans.

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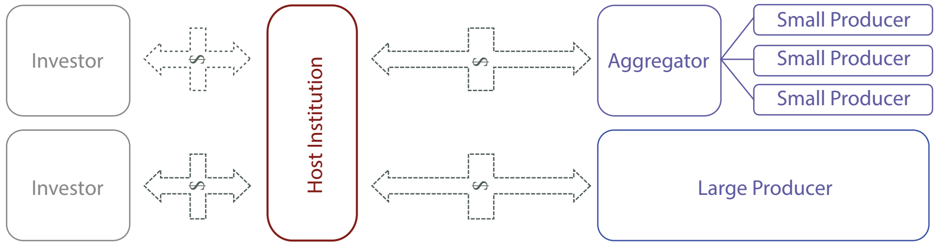
1 Formerly The Munden Project

How does TLF work?



TLF will function as a type of global "discount window" for sustainable land use, providing credit at longer maturities, lower interest rates and more flexible repayment schedules than is generally available for investment in emerging markets agriculture or forestry. The window will operate from within a host institution that is credible to investors as an issuer of bonds. The host institution will also need to be capable of executing a broad array of lending agreements with organizations that TLF refers to as "Aggregators".

Aggregators are in-country organizations with existing operations and relationships in land-use sectors and associated SMEs. They will be selected after rigorous due diligence by TLF, and become the entities through which TLF's lending will reach producers. Aggregators may include national or regional commercial banks with existing rural loan portfolios, farmer associations, producer organizations or applied research institutions with test plots.

Although diverse, they are bound by two common themes. First, they are already familiar with the landscapes in which they will be putting TLF's capital to work. Second, each has a compelling reason to participate in TLF: commercial banks want to expand their customer base; producer organizations want to show their members they can deliver valuable services; and research institutions need support to develop and test new ideas and technologies properly.

In this way, TLF aims to achieve maximum diversification by providing loans across a wide range of sustainable land uses and related operations of SMEs. This may include loans for restoration of degraded land, access to improved seeds, equipment to promote zero tillage and land intensification, as well as support for the development of storage facilities, processing facilities and improved access to new markets (e.g. through certification).

The fund is indifferent to the specifics. The only conditions for Aggregators to extend these loans using future capital from TLF are the reasonable prospects of achieving a return on the investment and sustainable outcomes.

TLF aims to ensure that different Aggregators will be active simultaneously across a number of countries and landscapes, with each producing a stream of repayments back to the fund that would be structured into optimally low-risk combinations. TLF's host institution will then sell these securities to investors in order to continue financing lending operations. Lending will be performance-based: each Aggregator will begin with a restricted level of access to the lending window, with expansion dependent on verification of financial viability and sustainability outcomes. Non-performance will result in the window closing.

How much public support will TLF need, and in what form?

CIFOR and TMP Systems are aware of the need to minimize public support, both immediately and in the future. As such, the system is designed to initially use public money to deal with uncertainty, but also to generate evidence that reduces uncertainty, thereby reducing the need for public funds as TLF is scaled up.

Support will, at first, be needed across three areas:

1. research and development to develop, test and refine the TLF system, including selecting the host institution and Aggregators in pilot countries
2. concessional loans or some other form of risk-friendly finance to initiate a portfolio of pilot loans
3. forms of insurance or credit guarantee to ensure that private sector investors are comfortable with the tail risk in case TLF does not work.

These will all reduce over time: the first disappearing completely, the second reduced to a *de minimis* number and the third in declining amounts over time.

However minimal, continued public investment to underwrite private investment can be justified because the money is being invested in a way that drives sustainable outcomes: non-performers assessed using the sustainability verification system can be cut off and TLF's ability and responsibility to do so, supported by public involvement, will help reinforce verification capacities at multiple levels.

The precise amounts of public funding required are still unclear, but are in the order of tens of millions USD. This will require a multi-donor commitment to help get TLF off the ground and lending operations started, once the IIP is finalized.

Why would TLF interest investors?

Early modeling results suggest that TLF could produce competitive returns at scale. CIFOR and TMP Systems looked at revenue and expense data for 17 different land-use practices in 11 different countries. Over a 10–15-year period, these practices were found to have internal rates of return in the range of 12% to 20%, most falling above 16%. This compared favorably to global listed equities and private equity buyout funds over the same period.

TLF securities would also represent a unique way of securing diverse exposure to emerging markets — increasingly attractive to investors as OECD yields fall — and agriculture/forestry production.

CIFOR and TMP Systems are conducting ground-level work in India, the Philippines and Tanzania to identify additional investable and sustainable land-use practices using data sourced. This additional modeling will be conducted and included in the initial investment plan.

The intermediate-term maturity (10-15 years) of TLF investments would also fill a significant gap in the market. There has been considerable innovation in the financial sector on short-term propositions; far less on compelling intermediate-term instruments. A large class of investors, primarily pension funds, has intermediate and long-term liabilities that need higher returns. These investors are consequently taking on more risk to achieve their goals.

TLF securities also offer a real way to mitigate regulatory risk: climate change is real and regulation will eventually place significant pressure on investors to change their capital allocations to investments with a lower carbon footprint. TLF offers just such an opportunity to complement ongoing efforts to decarbonize assets led by UNEP-Finance Initiative and others.

Finally, we anticipate that TLF will prove attractive to specialist responsible investors, with environmental, social or corporate governance (ESG) written into their charters or simply large institutions that have ESG investment targets or greenhouse gas reduction targets.

How will the sustainability verification system work?

TLF will use statistical sampling techniques to monitor financial viability and sustainable outcomes through a simple two-step process, ensuring lower transaction costs.

The first step sees TLF's loans divided into groups of similar type: area, categories of borrowers, countries, landscapes, crop or forest plantation types and/or combinations of these variables, which are referred to as "strata". The second step involves a small proportion (1%–3%) of loans within each stratum selected for verification. Thereafter, mobile field monitoring systems are used to collect additional data, and in a representative sample of cases, experts will conduct ground-truthing of farmers' fields, plantations etc.

TLF's verification approach is also built into the system of credit delivery. This is important from a development perspective, since many third-party verification systems effectively exclude smallholders due to high costs. TLF's approach helps reduce costs by making a single field visit pay off twice, as credit institutions use loan recipients' data to generate both a statistically representative sample and detailed information on farm-level inputs and outputs. This helps generate sustainability information and metrics for creditworthiness at the same time.

Why did TLF select these specific pilot countries?

CIFOR and TMP Systems developed a number of criteria to guide the selection of pilot countries. These included investor comfort and the need for a diverse initial sample in which non-correlated growth opportunities in SLU could be identified.

The experience base in India, owing to its comparatively developed rural finance infrastructure, is attractive; the Philippines stands out for its high population density and subsequent need for efficient land-use planning along with climate change challenges. Tanzania represents a more challenging investment proposition that should be included in the sample; it has witnessed strong GDP growth in recent years and made good progress compared to many sub-Saharan African countries with respect to land rights and transparency of land ownership. Peru has the benefits of trading and crop non-covariance with the other sample countries, along with significantly different sustainability and economic challenges.

Together, these four countries represent a suitably diverse sample for piloting TLF operations. They are all potentially attractive for investors, but still require some willingness to take risks. They also represent the kinds of contexts TLF will meet in the future as operations are scaled up in Latin America, sub-Saharan Africa and South/Southeast Asia.

What is TLF's implementation plan 2015/2016?

CIFOR and TMP Systems intend to pursue due diligence and enhanced due diligence to identify and contract a host institution and three types of Aggregators in each pilot country in 2015/2016, while developing an investment plan for pilot loans to be made for 2016–2018.

We anticipate the capitalization needed for the pilot phase of TLF to be near USD 30 million. This funding will allow for baseline studies in each pilot country and a systematic review of the findings during the pilot period, resulting in an open access SLU database of 100+ SLU investments..

Key questions for discussion

- What is TLF's implementation plan in 2016?
- What are some examples of ground-level projects?
- How would TLF finance processing, storage and other similar infrastructure?
- Who will bear the cost of sustainability verification?
- Can TLF be considered a kind of "green bond"?

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The Investment Case

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