



Partnerships for Forests

Case study 2020

The Climate Smart Lending Platform: driving resilience with data-driven technologies for climate-smart credit

Around the world, around 450 million farmers depend on small scale agriculture not only for food, but for their livelihoods. At the same time, unpredictable weather conditions and a changing climate are making agricultural production more difficult, especially for smallholders who have less access to the necessary tools and techniques for adapting their production methods.

The Climate Smart Lending Platform is a pioneer platform designed to enable financial institutions and tool providers to engage with smallholder farmers and catalyse investment into improving their resilience to climate change. The long-term goal of the Platform is to mainstream Climate-Smart Agriculture (CSA) metrics into the credit scoring systems of financial institutions without concessional backing in order to improve agricultural lending portfolio resilience to climate change, and to create strong incentives for farmers to adopt CSA practices and to harness the private finance necessary to do so.

The Climate Smart Lending Platform (CSLP) has been developed through a partnership of F3 Life, Financial Access, the International Union for the Conservation of Nature (IUCN) and the Climate Policy Initiative's Global Innovation Lab for Climate Finance, with support from GRAS, who each bring specific expertise and resources to the partnership. Partnerships for Forests has been supporting the CSLP partners in setting up a minimum viable product (MVP) that offers a solution that is replicable and scalable, aiming to enable access to climate smart finance for large numbers smallholders at low costs and manageable risk for loan providers.



The smallholder challenge for sustainable production

Small-scale agriculture is of critical importance for meeting the food security and livelihood needs of millions of people across developing countries, but it is being put increasingly at threat by the effects of a changing climate, which is resulting in reduced yields and failed harvests. In sub-Saharan Africa, economic loss associated with land degradation has been estimated at \$68 billion per annum¹. These losses arise as smallholders lack the necessary incentives – such as secure tenure, market access and financial credit – to maintain farm health with climate-smart practices, such as those that increase on-farm tree cover.

The productivity and income levels of many of the world's 450 million smallholder farmers could be improved with better access to finance, modern technologies and improved farming practices. However, although smallholder finance is growing in scale, a USD 150 billion financing gap remains². At the same time, both smallholders and lenders with smallholder lending portfolios, which currently account for about USD 50 billion globally, remain highly vulnerable to climate change impacts and are themselves disincentivised from providing the necessary finance due to a number of challenges in reaching smallholders (Box 1).

There is thus an opportunity to combine climate-smart credit and smallholder finance to provide farmers with the necessary tools and incentives to adapt their agricultural practices and combat land degradation, and to provide lending institutions with the monitoring platforms and guarantees needed to enable them to reach smallholders with their capital.

Box 1: Existing challenges to smallholder finance provision

Financial institutions (FIs) face a range of challenges in lending to smallholders that are preventing them from servicing what is in total a significant market opportunity. A survey of 1,800 FIs conducted by the Initiative for Smallholder Finance revealed that the total amount of debt financing supplied by FIs to smallholder farmers in the developing world is approximately USD9 billion compared to a total financial need of more than USD450 billion. Currently, only 16% of surveyed FIs provide smallholder farmer financing.



Capital Need

FIs in Kenya and Rwanda often face high cost of capital



High Credit Risk

FIs lack reliable data and agri analysis skills to make informed credit decisions, including related to environmental and climate risk



High Operational Cost

FIs experience high on-boarding costs to reach smallholders in rural areas



ESG Reporting

Difficult to estimate the impact of lending to smallholder farmers

¹ Montpellier Panel Report of December 2014; https://ag4impact.org/wp-content/uploads/2014/12/MP_0106_Soil_Report_LR1.pdf

² Inflection Point: Unlocking growth in the era of farmer finance. Dalberg 2016. https://www.rafflearning.org/sites/default/files/inflection_point_april_2016.pdf

The Climate Smart Lending Platform: an integrated solution for unlocking investment benefitting both lenders and smallholders

That opportunity has already generated one solution in the form of the Climate Smart Lending Platform (CSLP). A partnership between F3 Life, Financial Access, the International Union for the Conservation of Nature (IUCN) and the Climate Policy Initiative's Global Innovation Lab for Climate Finance, with additional expertise from , the CSLP aims to support agro-lenders to include climate metrics in their loan requirements and credit decisions so as to scale the provision of climate-smart credit to smallholder farmers around the world. By linking access to finance to an innovative climate smart credit scoring system that incorporates requirements for sustainable land-management, the CSLP also ensures farmers implement climate smart practices that mitigate land degradation and increase resilience. This in turn considerably reduces credit providers' climate-related default exposure due to increased farmer incomes and reduced losses in the event of unexpected climate events.

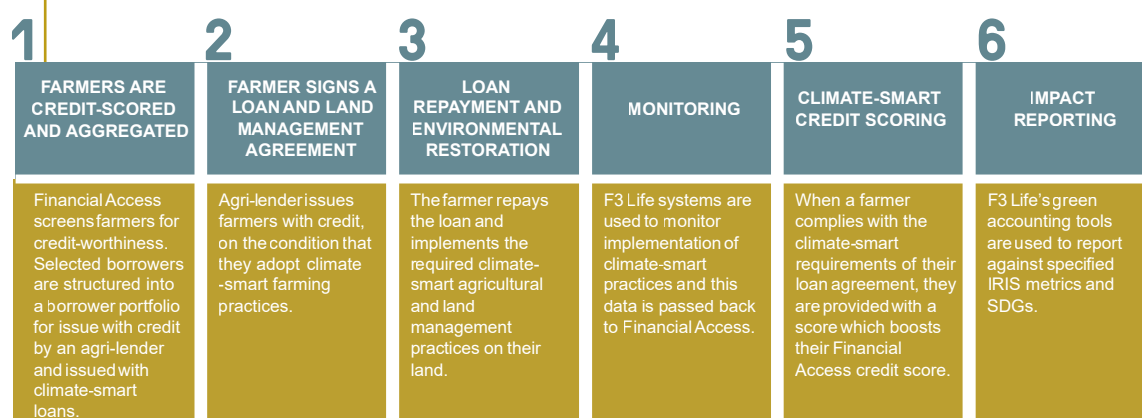
The CSLP consists of three key tools and approaches:

1. Climate-smart credit products and process designs. The Platform works with traditional and non-traditional lenders to develop climate-smart loan products for fixed assets, working capital, and social needs of aggregated groups of smallholders (cooperatives and farmer producer groups). Loan terms and conditions are set to incentivize farmers' uptake of climate-smart agricultural and land-management practices and may include preferential loan terms for women.

2. A climate-smart credit-scoring tool. While lending and technical assistance are the foundation of the Platform, its key value-add is the development of climate-smart credit risk scoring tools which enable lenders to make more informed decisions on their lending portfolio to reduce default and climate risk. This should help incentivize lenders to increase their lending portfolios to smallholder farmers. Climate-smart credit scoring combines detailed cash flow estimates with climate risk assessments and farm data to more comprehensively calculate the credit worthiness of individual farmers and their portfolios in the context of climate change risk.

3. A CSA compliance monitoring tool, using mobile technology, to monitor adoption of climate-smart farming in compliance with loan agreement requirements, which informs the credit-scoring tool. This is a critical component of the Platform that ensures that the finance deployed is having the intended sustainable land use management impacts.

The integrated package is thus designed both to transition smallholder farmers to more sustainable land-management practices and increase the absolute number of smallholder farmers capable of receiving loans on climate-smart terms, whilst also increasing financial returns for credit providers through lower operational costs, reduced credit defaults and an increased number of clients.



Box 2: The Climate Smart Lending Platform – how it works

A solution born of partnership

The bespoke CSLP solution has been made possible through the collaboration between the different partners in the initiative, who each bring specific expertise and resources necessary to the Platform's functioning and scaling (see Box 3).

The two key partners – F3 Life, a developer of tools which facilitate climate smart credit provision by agri-lenders, and Financial Access, a financial services firm – have combined their systems to create investment opportunities for impact investors in the agricultural sector with enhanced credit-screening and risk-management controls. The F3 Life system works with both Financial Access as a third-party smallholder farmer aggregation and credit-scoring service - and directly with financial institutions which do not outsource this function. An additional partnership with GRAS has further strengthened the monitoring element of the Platform to support impact measurement and climate-smart credit scoring.

The integration of the consortium's systems has the further benefit of allowing the platform to engage with a large population of farmers at low-cost by using the consortium's existing smallholder data. This helps mitigate against another key barrier to smallholder lending, which is the cost of new client on-boarding.

GCF winner working with F1 to lend to smallholders with design and implementation of climate-smart credit products

- Identifies crop-specific CSA practices which are integrated into lending terms
- Provides financial models which estimate improved farmer credit risk profiles and reduced lender default rates with credit clients adopting CSA practices
- Provides a low-cost CSA monitoring system that assigns ratings of farmer CSA practices to create climate-smart credit scores



Financial services firm focused exclusively on emerging markets and developing economies

- Advise and support financial institutions to improve operational efficiency
- Track landscape level changes in environmental quality, natural capital value, and ecosystem service provision
- Facilitate investments in challenging markets
- Deliver training to develop and improve financial, management and technical skills
- Design and execute financing for smallholder farmers

Remote-sensing for environmental management

- Remote-sensing to cost-effectively qualify farmers sitting in suitable areas for agricultural development
- Convert raw data from satellites and sensors to useful and actionable information
- Conduct big data processing and analytics by cooperating leading academic institutions

Box 2: The CSLP partners bring together complementary expertise and resources to support the functioning and reach of the platform.

Putting it to the test: the first Climate Smart Lending Product

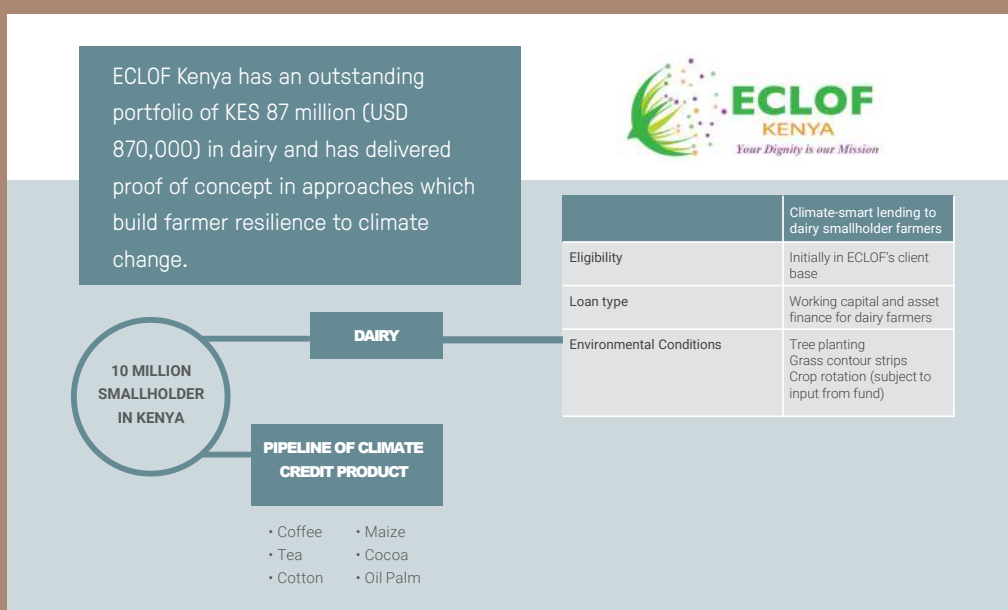
In 2019, CSLP was successful in attracting its first lender to the Platform. ECLOF Kenya, a Kenyan affiliate of ECLOF International, is a Micro Finance Company with a total portfolio in excess of KES 1 billion (USD 10 million) serving over 132,000 clients. ECLOF Kenya's main business is providing micro and small business loans, with agricultural lending an important priority area in their portfolio representing KES 270 million (USD 2.7 million).

Up until now ECLOF Kenya had not been providing loans to farmers tied against any climate smart agricultural practices on their farms. However, in collaboration with CSLP they will now extend a climate smart credit product to their portfolio of dairy farmers (worth KES 887 million – USD 870,000), with potential to develop additional climate smart credit lines covering other commodities should this be successful (see Box 4). The partnership between the CSLP and ECLOF to embed climate smart practices into loan agreements with farmers is an important innovation in the Kenyan context.

The creation of this pilot product and on-boarding of ECLOF Kenya is a major achievement for CSLP, demonstrating that reputable, financially strong smallholder lenders see value in the CSLP approach and the climate smart lending solutions developed by the project. The hope is that this in turn will provide confidence to the financial services sector that the CSLP approach could be a potential game-changer in attracting, financing, and retaining long-term smallholder farmers as clients.

Box 4: ECLOF Kenya Pilot Climate Smart Credit Product for dairy farmers.

Pilot Climate Smart Credit Product



How Partnerships for Forests has helped

The support from Partnerships for Forests has gone towards financing the development of a minimum viable product (MVP) for the CSLP. The MVP is used to create a proof of concept that can increase lender appetite to work with smallholders by addressing the high operational costs and lack of data normally associated with climate-smart lending, and has been instrumental in attracting ECLOF Kenya as the first client to the Platform.

The MVP supported by Partnerships for Forests addressed key challenges that micro-finance institutions face related to lending to smallholder farmers and in transitioning them to climate-smart farming practices, including planting of trees:

Lack of knowledge and tools: Although financial institutions are under increasing pressure to both contribute to climate-change goals and mitigate climate risks, they lack both knowledge and tools to achieve this, particularly in the land-use sector. Support from Partnership for Forests has facilitated the development of knowledge tools, designed to help agri-lenders adopt processes which transition their clients to climate-smart farming practices, and IT tools, which help them integrate verifiable information relevant to climate-risk into their existing credit-scoring systems and report against sustainability standards.

Low-risk appetite: The platform has been able to de-risk smallholder investments by reducing information asymmetries. The MVP also enabled lending institutions to on-board new systems to integrate new credit products, train staff on general Micro, Small & Medium Enterprise (MSME) lending and support with documentation design for climate-smart smallholder finance.

High operational costs: The MVP reduces transaction costs by streamlining credit decision processes. It also uses the consortium's credit-risk assessment tool to assess farmer credit worthiness, thereby minimising the need for additional software or new ways of working. The use of geo-data further facilitates selection of eligible areas according to land suitability criteria and distance to infrastructure.

Lack of data: The MVP platform enabled financial institutions the opportunity to engage with large population of farmers at low-cost using the consortium's existing data. Financial Access has extensive experience with developing innovative finance solutions in agricultural supply chains and as such have extensive data on large population of farmers available at low-cost. This will support the further expansion of the CSLP programme of credit and environmental risk profiling and scoring of smallholders across targeted supply chains in Rwanda and Kenya.

The MVP developed through Partnerships for Forests funding will allow for the mobilisation of climate-smart loans to 5,000 previously 'banked' farmers in Rwanda and a further 5,000 in Kenya, as well as allowing the credit-scoring of another 5,000 farmers in Kenya. It offers a solution that is both replicable and scalable, aiming to enable access to climate smart finance for millions of smallholders around the world at low costs and with manageable risk for loan providers.



Photo: CIFOR/Patrick Shephard

Forward Look

The CSLP has made important progress since it was first launched. From an initial pilot of 75 farmers in Nyandarua country in Kenya, the CSLP partners are now planning scale-ups across a number of countries in sub-Saharan Africa, with the aim of issuing climate-smart loans to 45,000 farmers, covering approximately 67,500 hectares and leveraging GBP 20 million by the end of 2020.

To date, in addition to the dairy pilot with ECLOF Kenya, the partners have created climate smart products for coffee, tea, cotton, and potato. Beyond 2020, the consortium of partners have ambitious targets for further scaling. They plan to reach up to one million farmers by 2026 and in West Africa are targeting palm oil and cocoa to address the key commodities and drivers of deforestation in the region.

Moreover, the CSLP model has great potential for sharing learning. The Platform will gather evidence for sustainable financing of climate-smart agricultural practices and will provide learning for both financial institutions and smallholders on the right combination of incentives to encourage farmers to adopt climate smart activities. Illustrative modelling suggests that farmers who adopt climate-smart practices could achieve two to four times higher profits under adverse weather conditions, on average, compared to less resilient farmers, resulting in significant wellbeing and livelihood gains. Demonstrating these important downstream impacts will be a key objective for the next phase of the CSLP.



Photo: CIFOR/Patrick Shepherd



Photo: The Lab



CSLP & ECLOF: A global micro-finance institution working with smallholders to provide climate-smart loans and help generate demand and market development for climate smart lending in Africa

In December 2019, ECLOF, a global microfinance institution, decided to pilot the Climate Smart Lending Platform (CSLP) in its Kenya branch. P4F team interviewed Esther Moyi, Head of Marketing at ECLOF Kenya and Veerle Haagh, Regional Representative East Africa at Financial Access, to understand the rationale behind this decision and share lessons from the pilot.

About the Institute

The Ecumenical Church Loan Fund (ECLOF), a not-for-profit foundation from Switzerland, leads a network of socially driven microfinance institutions that provide financial and non-financial services to micro entrepreneurs and smallholder farmers globally. ECLOF has a central hub in Geneva but also has 13 independently governed and operated branches across Africa, Asia and Latin America that includes ECLOF Kenya. Established in 1994, the Kenyan branch provides financial and non-financial services to small and medium entrepreneurs in the country. It has the largest portfolio of all ECLOF branches globally with around 65,000 customers of which 97% is based on group lending with around 2 bn KSh in assets. Around 24% of its portfolio (340,000 m KSh) relates to agriculture-related financing. It has 46 branch offices in Kenya and has a diverse portfolio mainly targeting rural areas. In Kenya ECLOF clients are primarily women (56%) and youth (48%) that work on agriculture. The loans they took out previously with ECLOF however did not provide them with any incentives to move towards climate smart agricultural practices. Therefore monitoring their impact on nearby forests and sustainable land use management was not possible

Rationale for adopting CSLP

The CSLP integrated package (products, scoring tool and monitoring) is designed to both improve more sustainable land-management practices as well as improve the number of farmers able to receive loans on climate-smart terms. From a micro-finance perspective, creating a climate smart credit product was an optimal way to support ECLOF's business and social and environmental impact. It also came at an optimal time for the fund. As Ms Moyi mentioned to P4F the rationale to pilot the CSLP was twofold:

- **Improved data collection efficiency:** Traditionally loan officers used a lengthy paper form to fill out customers' data which was incredibly time consuming and burdensome if people needed to dig out details about clients' backgrounds. With CSLP however loan officers can use electronic, user-friendly tablets to gather data on the ground. While ECLOF previously had its own MIS system for data storage, it had limited information on clients, prioritising know-your-customer (KYC) data. The CSLP platform therefore enabled the team to collect richer datasets that can be easily retrieved either by loan officers or management when needed.
- **Objective CSA scoring methodology for improved decision-making:** ECLOF had started working on a climate smart agriculture product back in 2015. While this showed some promising results, CSLP offered the fund an opportunity to adopt its objective scoring methodology that would allow them to standardise their criteria for selection of clients and size of loans across their branches.

Results of the pilot

ECLOF's pilot of the CSLP launched in early 2020. It is based on the minimum viable product (MVP) that was created with support from P4F to address the challenges faced by micro-finance institutes lending to smallholder farmers. Below we have summarised some of the results as mentioned by Ms. Moyi.

- 1. Ease of doing business.** Loan officers found the CSLP user-friendly and cut down the time needed to collect information from clients. The officers have also been able to demonstrate to clients in real-time where they started and their progress since becoming clients of ECLOF. Management has also been able to easily access the story behind the client which exceeds the basic data that the MIS system previously collected.
- 2. Enhanced impact assessment tool.** In allowing the marketing team to access more data more easily, the CSLP has helped capture the success of climate-smart agriculture by augmenting the story-telling capacities of the team. The company foresees using the data to better demonstrate the impact of the loans on customers to provide cheaper loans for some in the future. This will help the fund improve their social impacts in the long-run. The use of CSLP therefore distinguishes ECLOF from other microfinance institutes given its ability to share social and environmental impact stories.
- 3. An unexpected result.** A pleasant surprise for ECLOF has been the lack of resistance by field officers to using the app and electronic tablet. Their young, tech savvy field officers were very excited to use the tool that was unexpected when the pilot started.

Areas for improvement before scaling CSLP to other branches

Following the pilot, ECLOF has planned to roll out CSLP to all of its branches across Kenya. Before this can be done however, ECLOF needs to be assured a smooth integration of the platform with its internal systems, particularly regarding their security standards. Since ECLOF uses multiple other tools for their programming, they will need to work with CSLP to incorporate these and create a bespoke platform to better service ECLOF's needs. For example, repayment was not something that CLSP previously tracked but adding this feature was vital for helping improve data and decision making for future loans. This should be relatively straightforward since the platform already had in place the necessary foundations to integrate such an element (e.g. open API system). Another lesson from the pilot was the need to budget sufficient time for digitizing a company's practices.

Way forward

Based on the findings from the pilot, CSLP has helped ECLOF improve on a number of areas from customer satisfaction to external investments. ECLOF is currently making plans to apply CSLP across all its branches, not only to make the current programming more efficient but to expand its current customer base through the digital platform. The ambition is that ECLOF will be able to distinguish itself from other microfinance institutions by providing climate-smart incentives and attracting more customers as a result.



Photo: ECLOF

