

# Greening Agriculture

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Sustainable Agricultural Finance Expansion Programme -  
a collaboration between Hivos, Enclude and  
Triodos Investment management





Zeist, The Netherlands

Date: May 2016

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## Foreword

Smallholder farmers are the fundament of our food system. In most regions, they provide for over 70 percent of the food that is being consumed. And like any other entrepreneur, they need access to finance to grow their business. But while the global community heavily relies on them to ensure future food security for a growing population, investors are reluctant to provide the necessary finance. Agriculture and especially smallholder agriculture is considered by many financial institutions as risky. And yes, agriculture is highly risky given the volatility of both markets and more extreme weather conditions as a result of climate change.

Hivos has been working for over 20 years at the forefront of supporting smallholders, sustainable agriculture, sustainable value chains and inclusive financial services. We have been an active player in the emergence of the organic movement, the development and promotion of sustainability standards at national and global level and have supported the growth of microfinance institutions through our collaboration with Triodos Bank. Together with our network of civil society organisations and research partners, we have learned that agriculture systems, including those of smallholders, can be designed in such a way that they become more productive and resilient and less vulnerable to climate and market changes, thereby seriously reducing the perceived risks. We belief that green entrepreneurship, including in agriculture, is feasible and is the way to go. The challenge is to bring financial institutions on board.

In the period 2013-2015, Hivos, Enclude and Triodos Investment Management launched the Sustainable Agricultural Finance Expansion Programme. The ambition was to enhance access to finance of smallholder farmers, producer organisations and rural SMEs involved in sustainable agriculture. The idea was to support a selected number of MFIs, from Hivos own or the Hivos Triodos Fund network, to scale up green agricultural finance. Green agricultural finance supports, among others, farmers applying Good Agricultural Practices, organic farming or climate smart coffee production. It excludes agricultural activities harming the environment, thereby affecting current and future generations. As key partner in this programme, Enclude provided technical assistance to the selected MFIs.

The lessons of this three year programme are presented in this publication, on the basis of in-depth descriptions of six case studies of MFIs from various continents. The programme provides interesting results and lessons learned for future interventions:

- The programme approached many MFIs, but only a few appeared to be committed towards greening finance. Many MFIs are not yet aware of the relevance of green (agricultural) finance or do not know how to integrate this into their core business of poverty alleviation or enhancing financial inclusion. This growing insight encouraged Hivos and Enclude to develop the Green Performance Agenda, an interactive digital toolkit which helps MFI senior management to become aware of the relevance of environmental sustainability and to formulate a green agenda for their business. We are currently actively promoting the tool to enhance a broader awareness in the MFI sector for environmental sustainability.

- For those MFIs that showed interest, market opportunities and environmental threats affecting agricultural portfolios appeared to be key drivers to engage in green finance. Aldea Global in Nicaragua is a typical example of a farmer organisation engaged in sustainable coffee and suffering from climate change. Its future depends on climate change adaptation and mitigation measures and it is therefore seriously interested to integrate green in all its services, including financial services. The farmers-clients from Komida in Indonesia are increasingly suffering from unreliable raining patterns. To overcome this Komida's agronomists support farmers to adjust their farming techniques as much as possible. ProEmpresa in Peru is an example of a larger MFI which needs to compete in a mature microfinance market. They have chosen (green) agricultural finance as a unique selling point to distinguish themselves from competing MFIs.
- The programme was highly effective in strengthening the capacity of the selected MFIs to offer agricultural finance to smallholders. Some of the assisted MFIs, including Aldea Global, Komida and ProEmpresa are now in the position to scale up financing green agricultural activities. In a number of cases, this could only be achieved by strengthening internal capacity on sustainable agriculture / finance. A number of MFIs brought agronomist into their financial institution to support loan officers in assessing and monitoring agricultural loans or to directly provide technical advice on sustainable agriculture to clients. In the case of ProEmpresa, an Intelligence Unit was set up to build internal capacity to continuously update its agricultural finance strategy to account for market trends. In the case of Encot the notion of environmental sustainability had to be introduced parallel to working on the agricultural finance product but could not yet be included in the loan product. This shows the importance of having a solid awareness and buy-in from senior management on environmental sustainability, before being able to develop green agriculture finance products.
- Expanding green agricultural finance often also means working on institutional and financial sustainability issues, a prerequisite for any green financial product's viability. For instance, in the case of Aldea Global it was necessary to diversify their portfolio and develop and offer loans for non-farm activities. At Encot there was a need to improve the MFI's management information system first.

The relevance of MFIs for our global food security is undoubted; in many parts of the world, MFIs are the first point of access to financial services for many smallholder farmers. Ensuring that MFIs not only provide sufficient financial services to these farmers, but also do so in a way that promotes instead of destroys the environmental sustainability of our food system is extremely important.

The Sustainable Agricultural Finance Expansion Programme shows what it takes to deal with both smallholder inclusion and environmental sustainability. But it also shows that there is still a long way to go for the MFI sector to truly become a key player in shaping our future food system.

I would like to thank especially Willem Enklaar (Triodos Impact Investment), Celine van Soest (Enclude) and Leo Soldaat and Ben Leusink (Hivos) as well as the MFIs that actively engaged in this initiative for their commitment to make this programme into a success. Hivos and Enclude are committed to continue to work towards the further greening of the sector by building on the experiences of both the awareness raising potential of the Green Performance Agenda tool and the green financial product development component of the Sustainable Agricultural Finance Expansion Programme. You are most welcome to join us in achieving this ambition!

Carol Gribnau

Programme Director Green Society  
Hivos

## Greening Agriculture

Agriculture is about food provision. Smallholder farmers, who run 85 percent of the world's farms, have a crucial role to play to not only feed themselves but also their communities. Given the widespread poverty in rural areas and the labour intensive nature of agricultural production, growth in agriculture will do more to reduce poverty and hunger than growth in any other sector of the economy. In particular, improving the productivity of small-scale farmers, and connecting them to the market, is largely considered to have the highest potential for increasing food production and supply. It could significantly increase the income of the poor. The flow of investment into agriculture – both from private and from public sources – is definitely more generous today than in the past. Still, access to capital and financial services is among the most prominent bottlenecks for small-scale farmers and processors.

There is no doubt that food production, in general, must grow significantly in the next decades. FAO estimates that a 70 percent rise in agricultural output is needed by 2050. Others state that the global supply of food is largely sufficient to feed the world's seven billion people and that agricultural production has been able to cope with our exponential demographic growth thus far. However, the success story called “the green revolution” has its price. Turning more and more land into soil will have severe environmental consequences, including water shortages, the concentration of toxic elements, deforestation, loss of biodiversity, erosion, and more. Moreover, these negative trends will be aggravated by climate change. Another fundamental issue is the accessibility of available food – both in physical (transport, storage) and in economic (purchasing power of the poor) terms. A promising way to limit the growth of agricultural production required to feed the world is the reduction of post-harvest losses. In view of these developments, the importance of the agricultural sector to achieve sustainable development is clear. Agriculture is crucial to reduce poverty, achieve food security and is necessary to improve work and economic growth. All the while, the agricultural sector must consider responsible consumption and production, climate action, and life below water and on land as defined in the UN Sustainable Development Goals.

In this context, the term *greening agriculture* has arisen, understood as the introduction of better agricultural practices, energy-efficient technology, institutional innovations to improve sustainable food systems, and access to energy in emerging countries. Sustainable agriculture taps into the triple bottom line of sustainability: people, profit, and planet. Sustainable agriculture brings many benefits to smallholders, increasing their resilience to shocks and improving their environmentally- friendly techniques. Sustainable agriculture also ensures higher supply of sustainable and organic food along the value chain, reaching the end client. There is a strong increase in awareness on the need to consume more organic food. Adjusting their farming techniques, farmers can access that market and sell their product at a fair price.

Despite the many positive benefits of sustainable agriculture, it remains extremely difficult to engage social-oriented financial institutions to move towards sustainable agriculture finance. The reason is simple: agriculture finance (sustainable or not) is already extremely challenging with many embedded risks to overcome. Risks that financial institutions' directors are not yet ready to accept, or do not know how to overcome due to lack of agricultural experience, lack of tailored products, and inadequate collateral and instruments to mitigate agriculture-related risks.

### **Preparing institutions for agriculture finance**

Enclude has 30+ years of experience working with financial institutions, helping them overcome barriers towards financing agriculture activities. Enclude considers itself as part of a larger system linking the right actors in the value chain, encouraging them to move towards green agriculture. Enclude adapts its solution to the profile and priorities of each financial institution, ensuring alignment with its mission and strategy and commitment from management and staff. The overall goal is to ensure that financial institutions improve their sustainability levels when serving higher-risk sectors such as agriculture; their returns are significant enough to continue serving that sector overtime.

Preparing organisations for agricultural finance requires certain key steps for its success. The institution must have the right policies and processes in place, as well as a certain level of flexibility among its financial products and services, so they can be easily adapted to the value chains (in terms of loan size, tenor, collaterals required). The financial institution also needs in-depth agricultural knowledge to understand the value chain and the related environmental and social risks, to be able to address them adequately. Often, we are talking about small steps, one at a time. However, if a proper framework is in place, the potential is enormous demonstrated by financial institutions that are part of the Global Alliance for Banking on Values. Sustainable and green finance is part of their DNA and has proven to be profitable.

### **The Sustainable Agricultural Finance Expansion Programme**

In the period 2013-2015 Hivos, Enclude and Triodos Investment Management implemented the Sustainable Agricultural Finance Expansion Programme. The programme goal was to enhance access to finance of small producers involved in agriculture, producer organisations and agricultural SMEs. By building the capacity of Hivos and Triodos Investment Management partner microfinance institutions, they were able to expand their services to small producer target groups. Eight microfinance institutions were identified in close coordination with Hivos and Triodos Investment Management, based on an initial due diligence of these institutions' interest and readiness for agricultural finance. Enclude provided technical assistance to enhance their sustainability in agriculture finance. The projects were customised as per their structure, needs and priorities. A total of eight teams, composed of local and international Enclude consultants, implemented the projects on the ground. The team members included agronomists, sustainable green finance experts and digital financial services experts. Six case studies were selected to present here, highlighting the *three pillars of greening agriculture*: institutional, financial and environmental sustainability.

*Institutional sustainability:* Scaling up of green agricultural finance requires a strong institutional basis of product and agriculture knowledge at management and staff levels. Under this programme, technical assistance interventions focused on strengthening the institutional basis were primarily used to ensure financial and environmental sustainability in the long term. Institution building efforts included strategy development, process design, product development and staff training. Training included on-the-job training, development of training manuals, train the trainers courses, and exchange visits. The latter yielded effective results regarding staff and management buy-in. People often have not seen agricultural finance functioning which can be an extremely powerful tool in and of itself to encourage further use of agricultural finance.

*Environmental sustainability:* Products that are appropriately tailored to the agricultural target group enhance environmental sustainability. A specific agricultural loan product with seasonal loan repayment instead of monthly repayment helps smallholder farmers adopt healthy agricultural practices. Seasonal loan repayment offers farmers more financial opportunities to utilise their land flexibly, rotate crops to protect soil ecosystems and minimise pest infestation, and implement sustainable land use practices. To encourage sustainable agriculture among clients, the participating MFIs developed and communicated good agricultural practices to their clients. In some cases, agronomists supported branch staff while, in other cases, a web-based good agricultural practices (GAP) tool or client communication via SMS was used.

*Financial sustainability:* The development of new products laid a strong basis for growth and diversification for participating financial institutions while improving the financial sustainability of the organisations. Additionally, the improvement of processes and procedures reduced costs and enhanced the organisations' financial performance. Finally, a focus on environmental sustainability further enhanced financial sustainability as it created a sustainable basis to move forward. This was achieved by mitigating business challenges thereby decreasing credit risks that can be created by borrowers' otherwise unsustainable farming practices.

### **Lessons learnt when implementing greening agriculture finance projects**

The *Sustainable Agricultural Finance Expansion Programme* has provided numerous lessons to be kept in mind when implementing green agriculture finance projects with financial institutions. The most outstanding lessons are the following:



The *regulatory framework*, particularly one which leaves many areas unclear, can be a limiting factor for access to agricultural finance. Reviewing, interpreting, and assessing implications of regulatory framework changes are time-consuming processes for organisations originating new products. Fear of regulatory risks, especially those that might not be fully appreciated at the time of product launch, can stifle product innovation or even stop new initiatives before they get off the ground.

Before financial inclusion players consider rural expansion, it is important to complete a thorough *internal diagnostic* and ensure that strong, transparent operating processes and management information systems (MIS) are in place. Operating policies, MIS, and business processes should be reviewed for gaps in proper controls, monitoring ability and oversight, as well as for costs and efficiencies. If these issues are not addressed prior to expansion, the MFI risks being swamped in uncontrolled transactions.

A technical assistance intervention should not be an isolated operation and should *be embedded in a wider institutional perspective*, for example a strategic plan. Because it is more difficult to build a rural portfolio than an urban one, MFIs with a rural focus need management that firmly believes in that market and is willing to invest in learning. Ideally, agri-finance activities should be aligned with the institution's overall strategy and activities in order to ensure the level of commitment needed for success. In addition, during the implementation process of a new loan product, it is of utmost importance to have the commitment and participation of senior management, especially if the product is aimed to serve a high-risk sector such as agriculture. A new agricultural loan product needs not only solid support from top management, but also from loan officers, who are closer to the clients and realities of daily operations. Hence, any new product development should incorporate feedback from both head office staff and field staff. Lastly, failure is likely if a small team is appointed to develop an agriculture loan without having much influence across the organisation.

While some *understanding of the local reality* can be obtained through conversations with management and analysis of written information at the head office, it is necessary to spend time at the branch and client (farmer) level. This allows for a better understanding of client needs and daily challenges faced by loan officers, all critical to product design, particularly when targeting rural communities. Agronomists can provide significant insight when introducing agricultural lending and can help avoid costly mistakes related to technical and practical risks inherent to the agricultural sector. However, enthusiasm and flexibility are required since integrating the involvement of agronomists into an MFI's culture can be a challenge because of different mind sets and risk perspectives between the agronomists, loans officers, and managers.

*Product design* is a slow but crucial process, which is why timing for development and implementation cannot be taken lightly. Agricultural finance products should be responsive to the local situation, farmers' specific needs, and cash flow. Furthermore, there should be some flexibility to adjust for seasonal fluctuations. A customer-centric design approach with a deep understanding of the value chains can ensure products fulfil these criteria, thereby, enhancing the potential impact. Starting a pilot and disbursing sufficient loans to make decisions for further implementation is a multi-month effort. However, if done well, it can result in a sustainable agriculture loan product. Product design involves

multiple steps over time to allow for market study, client assessment, prototype development and pilot testing. Planting and harvest times differ for various crops and locations, so piloting should be aligned with the agricultural season. Planning and implementation should begin at least four months before the start of a pilot test. Sometimes, interesting lessons can be drawn from the existing client base. Although not implemented in one of the eight projects, there is also potential to green agriculture through financing of equipment in partnerships between financial institutions and equipment suppliers. Such financial products provide, for example, access to packaging and storage equipment with the potential to reduce post-harvest losses.

The use of *digital financial services and data* can be an integral part of the product design phase. Electronic loan appraisal enables financial institutions to make the appraisal processes uniform, incorporate the assessment of good agricultural practices, and provide them with a wealth of data that can be used to improve their appraisal process in future. Going a step further, loan disbursements and repayments can be done through the use of mobile phones.



# Engineering a new product to better serve clients

## Achieving green financing in collaboration with Annapurna Microfinance (AMPL)

***“For all stakeholders involved, sustainability was the common driving force”***

### Project Overview

AMPL, Annapurna Microfinance, is a microfinance institution based in India, operating since 2007. By October 2015, AMPL had just over 480,000 clients and its loan portfolio valued approximately USD 90 million. AMPL partnered with Enclude and a local agricultural university in the period January-September 2015 with the aim to increase its local impact through its agricultural credit product offering. Implementing and enhancing green financing served as the main motivation behind this project as *environmental sustainability* was the common driving force for all stakeholders. The advisory services provided by Enclude were designed to enhance access to finance for agricultural smallholder farmers by developing AMPL’s capacity to offer credit products suiting farmers’ needs and cash flows. Prior to this project, AMPL only offered group loans, which were not suited to farmers’ needs and imperatives. Enclude consultants stepped in, providing guidance and vision to help AMPL design a new joint liability group based lending product for smallholder farmers while building the capacity of AMPL’s organisation and staff to implement the new loan product.

#### Outputs

Number of management and staff trained: 126  
Number of agronomists hired: 2  
Number of branches participated in pilot: 9  
Number of clients reached during pilot phase: 80 by October 2015  
Percentage of Women as agricultural clients: 87.5%  
Loan product designed: Group based 12 month loan with flexible repayment options, disbursement 1 week before the start of sowing season and possible grace period up to 3 months



**1. Market Study** - The most important part of enhancing sustainability throughout the whole financial value chain is to ensure that loan products are perfectly aligned to local needs. An Enclude-conducted qualitative market research did just that: understanding previous challenges faced by smallholder farmers, confirming that the generic group loans offered by MFIs were not aligned with their cash flow.



**2. Building Additional Data** - To complement the market research, Enclude consultants leveraged data and other resources from a local agricultural university who geographically mapped the districts within the state of Odisha in search of new high business potential areas for AMPL. Different crops and crop cycles were studied to identify appropriate crops for the pilot project, including costs.



**3. AMPL On-site Tour** - To further amplify the impact of the new product, AMPL's managers took part in a study tour to visit agricultural lenders in Cambodia and learn from their experiences. The visits improved AMPL's senior management understanding of the importance of having a separate loan products for farmers along with the need to perform a thorough cash flow analysis of farmers before approving new loans.



**4. Loan Product and Process Designing** - Conceptualisation of an agricultural loan product prototype is based on the two previous steps' findings and elaboration of refreshed product features, pricing, people involved and processes. Refined through pilot testing, the new product is well-suited for smallholder farmers' needs: farmers can avail up to INR 25,000 (US\$ 400) as a loan, varying from crop to crop, which becomes available one week before the sowing season. The loan has flexible repayment options, interest on reducing balance and can be repaid in 12 months with an option of prepayment. Enclude also developed AMPL's operations manual and conducted process mapping for the new agricultural loan processes.



**5. Capacity Building** - Enclude's consultancy is primarily based on people. A new and improved product or process would mean nothing without proper HR activation. To ensure for a maximum impact surrounding the project on the long term, Enclude and AMPL invested intensively on people through the following ways:

- Hired and trained two local agronomists.
- Trained trainers of trainers, who later delivered training on agricultural lending products and processes to 126 AMPL staff members.

## Enhancing Sustainability and Impact



### Enhanced Institutional Sustainability

AMPL is growing exponentially in terms of number of clients and portfolio since its inception. The new agricultural loan product is a good diversification of their loan portfolio. Agricultural lending capacity was increased from management to all credit officers through an exposure visit and a train the trainers program. As a result, AMPL now has the capacity to serve agricultural smallholder farmers as an integral part of their organisation and fine-tune products according to the needs of different value chains. Unfortunately, management was recently forced to put the crop loan product on hold as government requested temporary stopping of farmer repayment from all banks and MFIs. Despite the challenges, repayment for existing loans is still 100% and AMPL is keen to relaunch the agricultural loan product as soon as possible.



### Enhanced Financial Sustainability

AMPL's client portfolio features a large percentage of clients using basic group-based loans for agricultural purposes. However, the loan product features do not match their requirements and cash flows specifics. Offering market-conform agricultural loan products and having in-house capacity to develop new products using the expert knowledge of AMPL's agricultural partner university for specific value chains will enable AMPL to grow and broaden its portfolio with tailored green finance products.



### Enhanced Environmental Sustainability

A specific agricultural loan product, including a seasonal loan repayment feature, instead of generic repayment options, helps smallholder farmers to adopt healthy agricultural practices. Farmers will have more financial opportunities to utilise their land flexibly and change crops and land-use regularly. Within this project, environmental vision was further stimulated by the input of the agronomists who guided farmers in targeting ideal cropping cycles and patterns and provided advice on how to manage their crops better.



### Project Impact

The Technical Assistance helped AMPL to diversify its product portfolio and matching their offerings to what client were truly expecting. By going down that road, AMPL can upscale its outreach to the agricultural sector. Furthermore, the new product will result in positive impact on smallholder farmers' income due to their easier access to agricultural credit and enhanced knowledge regarding better agricultural practices. So far, clients are showing satisfaction towards the new product: *"All MFIs are providing loans for commercial activities. Only AMPL is providing agriculture loans. This loan helps me in cultivating more land and meeting agricultural input requirements"*.



# Improving readiness for growth

## Achieving green financing in collaboration with Aldea Global

***“The goal was simple: to grow Aldea Global’s customer base from less than 1,000 loan clients in 2012 to 4,000 loan clients by the end of 2017”***

### Project Overview

Since its inception in 1992, Aldea Global, a producer association acting in Northern Nicaragua, aims to help reduce environmental deterioration through the implementation of sustainable practices and the production of organic coffee. Farmers applying for an Aldea Global agricultural loan are systematically encouraged to implement environmentally-friendly farming practices and are offered sales support on all organic products. The loan products include short to medium term loans for planting and loans for coffee growers backed by an agreement with Aldea Global to buyg their produce. In the period September 2013 – July 2015, Aldea Global teamed up with Enclude to enhance the local outreach of its loan portfolio and integrate sustainable agricultural practices. The goal was to grow Aldea Global’s customer base from less than 1,000 loan clients in 2012 to 4,000 loan clients by the end of 2017. An introductory hands-on assessment of Aldea Global’s operations was performed and the analysis exposed structural weaknesses requiring attention. With support from Enclude, Aldea Global managed to reach more farmers using sustainable agricultural practices cost-effectively. This significant environmental and social impact illustrates the potential of green finance.

#### Outputs

Number of management and staff trained: 15  
Number of hired agricultural staff: 6 loan officers replaced, 4 new loan officers hired  
Portfolio at risk: From 4.6% to 1.4% in two years  
Loans per officer: From 188 to 202 in two years  
Growth of agricultural portfolio: more than 50% in two years  
Growth in the customer base: from 1,000 in 2013 to 2,400 in 2015

### ***Initial statement***

### ***Result achieved***

Complacent  
"traditional" targets  
per loan officer.



#### **Reassessing productivity models**

Introduction of challenging KPIs, stimulating portfolio growth.

Outdated mileage-  
based bonus system.



#### **Reassessing bonus allocation models**

Introduction of true business performance rewarding  
bonus system.  
Improved cost-efficiency.

Low client density per  
loan officer and per  
area.



#### **Maximising loan officer efficiency**

Introduction and training to increase client density  
per geographical zone.  
Increased client density.

Loan officers resigned  
as they resisted push  
for increased  
productivity and  
changed bonus system.



#### **Human Resources restructuring**

Fresh new team hired by Aldea Global and trained by  
Enclude. Tailor made training program designed based  
on needs assessment that is also used for all new loan  
officers. Training program covers: client recruitment,  
financial products offered, credit management, and  
loan assessment and processing.

Time consuming and  
costly centralised loan  
appraisal processes.



#### **Remodelling the loan appraisal processes**

Increased involvement of middle-management,  
resulting in a streamlined loan underwriting process  
and reduced operational costs.

### Creation and training of a Risk Committee

Portfolio at risk in September 2013: 4.6%.



Portfolio at risk in September 2015: 1.4%. Improved portfolio health achieved through a new structural approach to risk management.

### Portfolio Growth

1000 loans at a value of USD 1.7 million in September 2013.



2,400 loans at a value of USD 13.8 million in September 2015.

### Portfolio Diversification

Low client density resulting in high operational costs.



Expanded portfolio by also offering loans for trade. This enables Aldea to have a geographically more dense focus which reduces their operational costs. At the same time it enables farmers to diversify their income.

### Opening of a new Branch

All operations managed from central offices, limited radius of influence.



Facilitated prospecting in a high potential area around La Dalia and coached the new branch manager.

## Enhancing Sustainability and Impact



### **Enhanced Institutional Sustainability**

The consultancy has contributed to Aldea Global's institutional sustainability in different ways. It structured processes and introduced or improved several tools and manuals. The contributions to the institution's formal infrastructure include the introduction of a revised credit analysis manual, the introduction of a revised risk policy and the creation of a Risk Committee. Another achievement is the introduction of a revised solidarity group credit policy allowing to streamline the loan underwriting process.



### **Enhanced Financial Sustainability**

The remodelled loan appraisal process and bonus structure considerably improved Aldea Global's efficiency and enabled growth. Between September 2013 and 2015, Aldea Global's portfolio grew from USD 1.7 to USD 3.8 million. 40% of this growth was generated from agriculture and cattle lending, the rest from microcredit to commerce, showing that the diversification of the portfolio has become part of Aldea Global's strategy.



### **Enhanced Environmental Sustainability**

One of the guiding principles of Aldea Global is "Harmony with the environment", aiming at improving the productive and sustainable use of natural resources. The purpose is to help reduce the environmental deterioration through the implementation of sustainable practices including agroforestry and the production of organic coffee. Offering loans and access to knowledge increases the ability of producers to undertake technical changes leading to increased productivity, higher incomes and lower environmental degradation. Farmers applying for an agricultural loan are encouraged to apply environmentally-friendly farming practices through the payment of a premium price for organically-produced beans.



### **Project Impact**

Aldea Global's value chain finance business model is characterised by a combination of providing finance to coffee growers and buying their produce. The coffee farmers commit their coffee harvest to pay back the loan. The technical assistance has allowed a substantial increase in the number of loan clients, thereby generating the potential to achieve impact in thousands of formerly financially-excluded or underserved families. Further impact could be achieved by applying the value chain model to other agricultural sectors.



# MIS as the backbone to agricultural lending

## Achieving green financing in collaboration with Encot

*“Enabling change, preparing for growth”*

### Project Overview

Based in Uganda, Encot is a rural community development NGO beginning operations in 2006. Enclude’s advisory services provided to Encot supported an effective and sustainable expansion of its lending activities with a focus on its agricultural finance portfolio. In addition to adding focused agricultural finance products and strengthening its operational capacity, the engagement also worked on decreasing Encot’s portfolio risk by increasing insight into client repayment risks and ensuring that the newly developed focused agricultural finance products are aligned with clients’ repayment capacity. Finally, the intervention enabled Encot to start with mobile payments in order to reach remote areas cost-effectively and preparing them for a quicker and wider roll-out of the newly developed agricultural lending products tailored to specific value chains.

#### Outputs

Number of management and staff trained: 32

Number of hired agricultural staff: 4

Percentage growth portfolio: 13% from December 2014 to September 2015

Percentage of women as agricultural clients: 70%

Portfolio at risk: from 6.3% to 6.1% in 8 months

Loan product designed: 3 month working capital loan with weekly or bi-monthly repayment, no grace period and 12 month investment loan with bi-monthly or monthly repayment, possible grace period up to 3 months, possibility of partial bullet repayment at the end.

## Activity

## Lesson Learned

### Assimilating the clientele needs

Enclude provided a series of practical staff training to Encot's credit and field staff on preparing, assessing and handling agricultural finance clients.



The practical training made Encot's team members realise that agricultural lending clients need more time to consider their options and to check the advantages and disadvantages of agricultural lending.

### Designing a relevant loan product

To respond to true local demand, a cattle fattening loan product was designed. An internal development workgroup was formed to define the agriculture product parameters. Together with local consultants, the workgroup carried out market research, prepared the product proposals and organised a pilot to test the new product. The refined end product meets the needs of the cattle farmers in Encot's area of operation.



The product design was inspired by an exchange visit to Jaudi Kilimo in Kenya, an MFI working in rural areas. The exposure to an agricultural lending product that is working was extremely helpful. Agricultural products need to be flexible to cater to seasonal fluctuations. Encot loans can now be repaid with a flexible repayment model, depending on the repayment capacity of the potential client. Two loan products were developed: a three month working capital loan and a twelve month investment loan.

### Internalising results through training

Enclude paid special attention to staff training during all activities implemented. The new training manager was trained and coached to provide bi-annual agricultural finance follow-up trainings to Encot's staff members and a participatory product development approach was followed to enhance Encot staff skills to develop additional market product prototypes for the agriculture sector in the future.



Knowledge is power. By involving staff members in the design of new products and processes and enabling them to carry out those activities themselves, agricultural lending is now embedded in Encot's organisation and enables them to expand their products and further grow the agricultural lending portfolio.

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### Streamlining Procedures and controls

Procedures were redesigned to simplify the administrative control process and better manage the credit approval processes. This task greatly diminished procedure overlap, clarified control gaps and key control parameters resulting in a more efficient loan appraisal process.



More control steps can sometimes be counter-productive. It might lead to less overall control and an increased risk of fraud due to diminished oversight and lack of clarity on the financial responsibility. It is crucial to have a clear transaction trail and be able to link all transaction or approval steps to one employee.

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### MIS Assessment

Enclude's all-angles approach included a full MIS audit. The analysis translated into two elements: i) assessment of the back office's capacity to handle the expected client load efficiently and ii) assessment of the system requirements to introduce mobile payments within Encot.



Moving to a new system to solve current administrative weaknesses does not necessarily lead to a better approach. Consequently, updating the current system and focusing on having a proper administrative follow-up proves to be a more stable and cost effective approach.

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### Mobile payments

Enclude designed mechanisms to allow Encot to perform (receive and send) mobile payments, including transaction procedures, controls, and software development. The first automated mobile payment transactions have already been recorded and executed. These payments help Encot and its clients perform transactions remotely, a big step up operations-wise which at the same time enhances client convenience.



Enabling mobile payments has proven to be fairly easy to implement and can be helpful in performing transactions in rural areas. However, mobile payment systems should be based on a secure administrative set-up to avoid transaction risk.

## Enhancing Sustainability and Impact



### **Enhanced Institutional Sustainability**

Improving Encot's institutional sustainability proved to be the core of the collaboration. A significant amount of progress has been made with streamlining Encot's procedures and controls. In addition, staff and trainers have been trained, enabling Encot to further grow its portfolio through developing new and monitoring existing agricultural finance products.



### **Enhanced Financial Sustainability**

To achieve financially sustainable rural expansion, it is important for financial inclusion players to have sound operating processes and a properly set-up MIS in place. The consultancy helped Encot to realise this. Furthermore, rural expansion by means of branchless banking is a cost-effective strategy to reach more customers in remote areas. However, due to the set-up and maintenance of a branchless banking system, this can only be done in a financially sustainable way if large numbers of transactions can be processed. Enclude's assistance in both agricultural finance products and product development formed a strong basis to grow its portfolio and create the transaction volume required to operate a financially sustainable mobile payments system.



### **Enhanced Environmental Sustainability**

Encot's mission is to develop rural communities. Agriculture is the backbone of those communities. The cattle loan product enables farmers to diversify and increase total farm production and income, provides year-round employment, and disperses risk. This, together with Encot's capacity to develop new agricultural lending products, enabled Encot to further grow its agricultural lending portfolio. Enclude sees a high level of potential in exploring green financing options which could be boosted by the mobile payments solution that Encot recently introduced.



### **Project Impact**

In addition to the operational and financial issues that were resolved, Enclude's intervention helped Encot prepare itself for the planned expansion in number of clients and additional outlets in rural areas. Encot's management reported that the changes allowed to fully prepare for proper growth. These changes regard specifically their ability to: Develop specific agri-products; Avoid high-risk unsustainable agriculture; Train staff on handling agri-clients; Control internal administrative mechanisms; and Perform mobile payments.



# Investing for the future in Indonesia

## Achieving green financing in collaboration with Komida

*“Becoming an agricultural finance provider was a no-brainer for Komida: it had to be achieved”*

### Project Overview

Acting as a cooperative for more than a decade in Indonesia, Komida is a well-known local institution, with 230,000 clients and a loan portfolio size of EUR 42,000. With 24% of Komida’s portfolio existing of agricultural loans, becoming an agricultural finance provider was a no-brainer for Komida: it had to be achieved. To successfully service its clients, Komida needed loan products meeting the needs of clients and at the same time limiting Komida’s financial risk. The institution’s prior experience in agricultural lending exposed them to the fact that agriculture is a risky business, vulnerable to a wide array of natural disasters, including drought and flood, and market oversupply during harvest time. In this context, Enclude advised Komida, in the period August 2014 - December 2015, on developing profitable, client-oriented agricultural finance products and lending strategies. A pilot period was planned to allow Komida to evaluate their clients’ compliance with the new farming requirements as well as their understanding of loan terms. Enclude assessed Komida’s capacity to screen clients, underwrite loans, design appropriate agriculture loan structures and monitor loans. Komida’s product, supervisory, credit staff and agronomists were trained in the agricultural lending process addressing identified capacity gaps.

#### Outputs

Number of management and staff trained: 30 in phase 1 (West Java Province) and 16 in phase 2 (Central Java Province, East Java Province)  
Number of hired agronomists: 2  
Growth in agricultural portfolio: From 0 to 287 loans in phase 1 and increased to 335 in phase 2  
Number of branches participated in pilot: 6 and increased to 12 branches in phase 2  
Agricultural portfolio at risk: 4.5%  
Loan product designed: loan amount IDR 500,000-5,000,000, interest 3% per month, duration 25 weeks with 17 week grace period, one repayment after harvest



### **Step 1 – Planting a seed: Market Assessment**

A thorough study of the marketplace helped gain insight into Komida's competitive positioning and local farming risks. Based on these insights, key product features and eligibility and exclusion criteria were defined for the new agricultural loan product. To mitigate risks, it was decided to only finance farmers who grow short-term crops harvested in less than four months, in which they already have experience and which are planted on land with irrigation possibilities for two crop cycles. Loans are 25 weeks with a grace period of 17 weeks. Furthermore, farmers are not allowed to take other loans during the agricultural loan period and have to save a certain percentage to cover risks.



### **Step 2 – Letting it grow: Procedures Designing**

New guidelines regarding client selection, risk management, loan disbursement and monitoring processes were drafted and validated in order to convey a sound background to Komida's operations. Enclude's vast experience in elevating agricultural financing turned into the biggest impact factor and obstacles were overcome one by one.



### **Step 3 – Fructifying work: Capacity Building**

Following the conceptualisation of Komida's new offer, a workforce was set-up to successfully expand Komida's agricultural finance portfolio. Branch managers, loan officers and key regional officers were trained in the concepts of agriculture lending, loan products, and loan and risk management policies. In addition, two agronomists were recruited to work together with branch managers and loan officers to identify prospective clients, explain the loan product and terms, verify land ownership and conditions, select clients, and monitor loan repayment. The agronomists provide general and technical agriculture expertise and recommend mitigation strategies when agriculture-specific risks occur, such as pest attacks or drought. The presence of agronomists helps branch managers and loan officers understand the technical aspects of agriculture.



#### **Step 4 – Reaping the rewards: Pilot Project**

A pilot project was initially launched in six branches, each agronomist overseeing three branches. Based on bi-monthly meetings with the head office, management adjustments were made. Key changes included: allowing clients who have a Komida loan to take an additional agricultural loan leading to expansion of interest by more clients for the agricultural loan product; dealing with PAR calculations at branch levels to account for clients using the agricultural loan for the next planting season without fully repaying their outstanding loan; developing a special saving scheme to cover risks of late repayment after harvest; and more clearly discussing the targets and incentives with branch staff.

During the first phase of the pilot project, Komida decided to extend the pilot to other regional offices in Central and East Java. Different geographical areas were chosen as clients in West Java tended to focus on accessing loans and were not interested in agricultural training and loan meetings. In the second phase branches, clients and loan officers appeared more interested in agriculture training.

The risks of agricultural lending were again emphasised as extreme drought slowed down the pilot. In addition, it was not possible to incorporate two planting seasons in the pilot. However, this did not stop Komida from finding a way to offer agricultural loans to their clients. The agronomists played a key role in advising when to disburse loans, for which crops, and which areas were selected based on land irrigation access. Agriculture training was planned for loan clients. When the chosen classroom approach was not successful, the agronomists provided on-site training which ultimately proved to be a more successful method because the farmers were already accustomed to receiving training from the government's extension staff.

## Enhancing Sustainability and Impact



### Enhanced Institutional Sustainability

A participatory approach was followed involving loan officers and branch managers to ensure alignment between the new agricultural loan product, procedures and policies, and Komida's existing operating systems. Based on the new introductions and changes, Komida's MIS was adjusted to ensure efficiency and management control. The bi-monthly meetings were used to further improve procedures and MIS, thereby ensuring institutional sustainability. The mid-way introduced second phase of the pilot shows Komida's high interest in integrating agriculture lending in its business. Continuation is dependent on the evaluation of the still ongoing second phase.



### Enhanced Financial Sustainability

Risk management has been a major focus during the product design phase and piloting period to ensure maintenance of low delinquency levels. Nevertheless, the 4-5% portfolio-at-risk for the agriculture loan portfolio is still high compared to Komida's overall portfolio-at-risk of around 1%. The high PAR is mainly due to late payments from clients using harvest revenues for next season planting rather than failed harvests. In the second phase of the pilot, the timing of loan disbursement is planned more carefully to account for these challenges. In addition, great consideration is given to land verification and harvest monitoring to further ensure on-time repayment of loans and lower portfolio-at-risk ensuring agricultural lending remains profitable.



### Enhanced Environmental Sustainability

Farmers applying for agricultural loans at Komida are encouraged to learn good agricultural practices and pay attention to environmentally friendly farming practices. The key role of the agronomists is to support clients in this learning process. To convince the farmer to adjust agricultural practices, the involvement of the borrower's husband proved to be important. This approach, which evolved during the pilot, enabled Komida to strengthen its social performance both on the issue of environmental sustainability and gender. The drought highlighted the effects of climate change and the need to green the agricultural sector.



### Project Impact

The collaboration between Enclude and Komida has been the planting of a seed, slowly cultivating that seed into an agricultural lending methodology that works for both the farmer and the environment. Patience, perseverance and continuous learning by all stakeholders were key in this process. To mitigate the effects of climate change on agricultural production, a continuation of the project should occur.



# Developing instruments of sustainability

## Achieving green financing in collaboration with ProEmpresa

*“Management estimated that designing sector-specific tools could reveal solid sustainability potential behind an elevated focus in agricultural financing”*

### Project Overview

ProEmpresa has 20 years of experience as a deposit-taking financial institution and close to 52,000 loan clients and a loan portfolio size valued at 85 million USD, 12% of which was in agriculture in 2015. Enclude’s advisory services that were provided to ProEmpresa aimed to enable ProEmpresa to cost-effectively upscale its agricultural finance activities. Historically, ProEmpresa’s main focus was to become more competitive within the peri-urban and rural commercial and industrial MSME target market. The organisation never emphasised providing financial services to agri-businesses. As a result, ProEmpresa’s agricultural portfolio accounts for only a small portion of its overall portfolio. Management wanted to increase this by designing agricultural sector-specific tools. Despite ProEmpresa’s proven and successful cash-flow methodology, growing its agricultural loan portfolio turned out to be expensive due to intense loan appraisal and monitoring by agricultural specialised loan officers. Enclude advised ProEmpresa on the development of new agriculturally-focused loan tools compatible with the institution’s loan origination methodology, combined with data collection and mining procedures to facilitate and economise Pro Empresa’s agricultural loan portfolio.

#### Outputs

Number of trainers trained: 6  
Number of hired agricultural staff: 1  
Tools developed: Web-based loan appraisal tool, GAP assessment tool, 11 Fact sheets & plant guides  
Organisational units set up: Central Intelligence Unit empowered



Step 1 - Diagnostic of ProEmpresa's agricultural loan product and credit process, identifying opportunities for improving the institution's capacity to provide sustainable agricultural finance and grow its agribusiness lending portfolio.



Step 2 - Design a segmentation strategy to identify and quantify clients with agricultural activities that are currently being served through ProEmpresa's regular loan product offering as clients in peri-urban and rural areas are using non-agricultural loan products to finance their agricultural activities. Mapping these clients allows ProEmpresa to improve its service delivery for this group of clients and design an agricultural strategy based on sector and portfolio data trends and customers' risk profiles.



Step 3 - Technical input from Enclude to develop eleven fact sheets and plant guides for the most important crops currently financed by ProEmpresa. Those documents describe Good Agricultural Practices (GAPs) and are fine-tuned specifically for the Peruvian agribusiness environment. In addition, an assessment tool was designed to benchmarks GAPs' application among clients, in order for ProEmpresa to be able to be an active impact player on the environment.



Step 4 - Develop a loan appraisal tool, including a risk assessment scoring method, to improve client assessment, reduce risks and homogenise qualitative data gathered on agribusinesses.



Step 5 - Design an interactive web-based interface of the loan appraisal and GAP assessment tools, facilitating data collection for analysis by loan officers. The web-based interfaces can automatically calculate the cash flow of potential customers, based on the fact sheets and plant guides.



Step 6 - Create a centralised Intelligence Unit within ProEmpresa. This unit, supported by the resources and data collected from steps 1 through 5, is responsible for monitoring agricultural trends within ProEmpresa's coverage area, controlling its agricultural loan portfolio, and ensuring that ProEmpresa's agricultural finance strategy, products and assessment tool incorporates these developments.

## Enhancing Sustainability and Impact



### **Enhanced Institutional Sustainability**

ProEmpresa's unique loan origination methodology, based on cash flow analysis, can now be successfully applied to its agricultural clients. Any of ProEmpresa's loan officers, regardless of their background and agricultural knowledge, can make use of both the assessment tool and web-based interface to automatically calculate the expected cash flow of customer's agricultural activities. Furthermore, the establishment of the Intelligence Unit allows ProEmpresa to continuously monitor agricultural trends and has considerably strengthened ProEmpresa's institutional capacity in green agricultural finance.



### **Enhanced Financial Sustainability**

ProEmpresa's loan and GAP assessment tools significantly improved ProEmpresa's operational efficiencies which in turn allowed for increased revenues and decreased transaction costs. Furthermore, as the amount of data gathered increases, ProEmpresa will be able to leverage this by refining existing and developing new products that better serve the needs of its customers while managing risks as well as improving ProEmpresa's lending processes and procedures. Both factors are likely to lead to increased revenues and efficiency ratios for agricultural lending.



### **Enhanced Environmental Sustainability**

ProEmpresa now has the tools to use its knowledge of good agricultural practices to not only provide finance to the agricultural sector but also green the agricultural sector. Clients are at the same time supported with relevant loan products as well as improved agricultural methods.



### **Project Impact**

Enclude's consulting team managed to build internal capacity within ProEmpresa to not only draft a sustainable and scalable agricultural finance strategy, but also to develop internal data analysis skills in order to continuously update its strategy to account for market trends. Despite the early stage and relative newness of these processes, ProEmpresa's senior management believes they are better positioned than ever to target the agricultural sector. Indeed, with its refreshed and innovative methodologies and tool, unique in Peru, ProEmpresa already benefits from a significantly amplified outreach to green agricultural finance.



# From loan appraisal tool to interactive app

## Achieving green financing in collaboration with Ugafode

*“This project is a major step-forward enabling Ugafode’s clients to experience the benefits of agricultural financing”*

### Project Overview

Established in 1994, Ugafode is one of Uganda’s most active agricultural MFIs. In 2014, the institution decided it was time to complement its vast experience and knowledge with updated tools, loan products and processes. Enclude’s consultancy services provided to Ugafode initially focused on refining the existing agricultural loan product. Based on Enclude’s analysis, the loan product was adapted to meet the particularities and needs of financing agricultural and animal husbandry production activities. The results of market research and client assessment, along with the institutional diagnostic of Ugafode, were subsequently used to design a refined credit prototype for pilot testing. The engagement provided training to Ugafode staff to understand agricultural and animal husbandry production cycles and norms, as well as training on an automated creditworthiness loan appraisal methodology created specifically for agricultural and animal husbandry lending.

#### Outputs

Number of management and staff trained: 16

Number of hired agricultural staff: 2

Growth in agricultural portfolio: 77% increase in value and 54% in number of agricultural loans from December 2014 to September 2015

Number of branches participated in pilot: 4 plus rollout manual for other branches

Number of clients reached: 4,031

Loan product designed: Agricultural and animal husbandry loan with payment schedules based on client cash-flow and activity cycles for instalments and admin fees. Loan period is up to 12 months unless the nature of the particular activity cycle warrants a longer period. Repayments are made based on cash-flow estimates and can be monthly, quarterly, or a bullet payment. Interest rates are set by the board and vary with time. Currently, interest rate calculation is based on the flat method; however, at Enclude's suggestion, the Ugafode Board is considering changing this to the declining method. Grace periods of up to 6 months are allowed, based on the need of the activity cycle.

## A new digital tool at the centre of Ugafode's agricultural lending

Ugafode's revised agricultural lending is built around a new interactive application: Capacity-based Loan Appraisal Module (CLAM). By using the new CLAM app in its client assessment process, Ugafode's loan officers are able to align their decision making with standardised, company-wide criteria. CLAM is a thorough and instinctive excel-based tool, forged on hard data, compiled from Ugafode's history, new diagnostic and future goals, and allows local loan officers to circumvent the detected flaws in loan appraisal, empowering them to make the right decisions at the right time for the right people. CLAM is a significant step forward, enabling effective risk-management for Ugafode and illustrates that technology upgrading holds strong sustainability potential. CLAM was stepwise developed, from conceptualisation, to technical development, all the way to post implementation support:



**Step 1** - A thorough market research conducted by Enclude, uncovered the need for a loan product that was more responsive to the particularities of agricultural and animal husbandry production, marketing cycles and agrarian-based cash-flows.

**Step 2** - Enclude designed a cash-flow based loan assessment tool called CLAM adapted to Ugafode operational and loan policy particularities. CLAM is a combination of a score-card and cash-flow analysis tool that is excel based. Inspired by the CLAM tool, Ugafode hired an IT company to design an App for the newly designed appraisal tool for easy use by its loan officers.

**Step 3** - Incorporation of the refined loan product and appraisal tool into Ugafode's IT system, ensuring the integration of CLAM in Ugafode's operations.

***“The training in agricultural lending and appraisal was invaluable in professionalising Ugafode staff skills in this area, paving the way for Ugafode to become a premier institution in serving the agricultural market segment.”***

**Step 4** - Post-implementation support and follow-up phase, in which Enclude:

- Trained staff in agricultural lending and creditworthiness appraisal, significantly increasing insight into risk-mitigation techniques of agricultural lending. The training also served to introduce the effective, user-friendly, and agricultural-specific loan appraisal CLAM tool.
- Provided support during pilot testing at four branches. Each pilot branch was visited mid-term through the pilot phase to review progress on targets set and troubleshoot any issues related to use of the CLAM by credit officers. It was then already evident that credit officers were applying the knowledge they gained from the training in approaching and appraising new agricultural credit applications.
- Designed the roll-out and training manual to guide implementation of the refined loan product in other branches.

## Enhancing Sustainability and Impact



### **Enhanced Institutional Sustainability**

The Board of Directors' decision to integrate the refined agricultural loan product into the Ugafode IT system has ensured the product is sustainably manageable from an administrative and operational stand point. Furthermore, the agricultural specific training and new appraisal methodology has given credit officers deeper and more professional knowledge to apply towards lending to the sector.



### **Enhanced Financial Sustainability**

The refined product was modified with features that should facilitate and increase up-take by farmers. In fact, this up-take is already evident during the pilot test period, which saw a 54% increase in number of agricultural loans as compared to before the pilot. This assists Ugafode to reduce costs and improve its profitability.



### **Enhanced Environmental Sustainability**

Since Ugafode management has declared it intends to prioritise green investments and credit officers are now much better equipped to understand and evaluate the viability of agriculturally related activities, clients seeking finance for green activities will find an 'open ear' at Ugafode that before the engagement did not really exist.



### **Project Impact**

Ugafode's loan product is now adapted to agricultural and animal husbandry production and marketing cycles as well as capacity realities of smallholder farmers. This allows clients to more adequately manage their investments, leading to more reliable returns and ability to diversify sources of income. Access to finance has been made more conducive, as has already been observed by the increase in the agricultural portfolio (77%) and increase in number of agricultural loans (54%) over the pilot phase.



