**SCBF 2013-03** **28 April 2016**

# ACCESS TO WATER AND ENERGY THROUGH MICROFINANCE

PRIDE RFW, Tanzania

## 1. Development relevance

**Country and financial sector context:** Tanzania has one of the lowest financial inclusion ratios in sub-Saharan Africa. According to the World Bank Global Findex, in 2014 only 19% of the population was reported to have an account at a bank or other financial institution. This rate drops as far as 14.4% for rural populations and 11.3% for the poorest 40% of the Tanzanian people. According to the Global Findex, in 2014 only 6.5% of the population aged 15 and over had access to credit from a financial institution.

| Table 1: Population and economic indicators[1] | |
|---|---|
| **Population** (2014) | **51.82 m** |
| **GDP growth** (2014)[1] | **7%** |
| **Inflation** (2014)[1] | **6.1%** |
| **Economic Freedom Index** (2016) (Rank among 185 countries)[2] | **100** |

| Table 2: Poverty indicators | |
|---|---|
| **GDP per capita** (current USD) (2014)[1] | 955.1 |
| **Gini index** (0= equality 100= inequality) (2011)[1] | 37.8 |
| **International poverty rate** (2011; USD 1.25 /day) | 46.6% |
| **National poverty rate** (2011) | 28.2% |
| **National rural poverty headcount rate** (2011) | 33.3% |

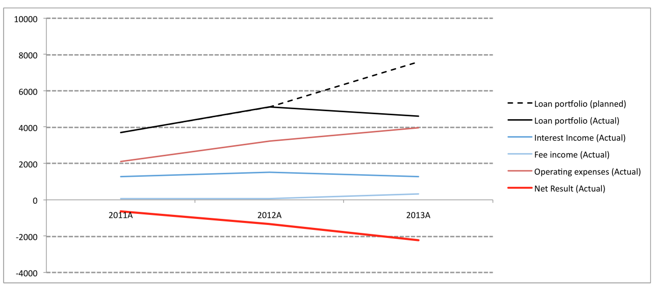
However, the FinScope Tanzania survey for 2013 found that the number of people who are financially excluded fell significantly in 2013. Around 11.7 million people were financially excluded in 2009, but by 2013 this number had almost halved. This is mainly due to a rise in the use of mobile financial services. Around 99% of the Tanzanian adult population is aware of mobile money and 45% actively uses it.

| Table 3: Governance indicators (2014)[1] | |
|---|---|
| **Voice and accountability** | -0.17 |
| **Political stability/absence of violence** | -0.54 |
| **Government effectiveness** | -0.64 |
| **Regulatory quality** | -0.34 |
| **Rule of law** | -0.41 |
| **Control of corruption** | -0.80 |

The principal providers of financial services to poor and low-income households in the rural and urban areas of Tanzania are licensed commercial banks, regional and rural unit banks, savings and credit cooperative societies, and several NGOs whose microcredit delivery operations are funded and supported by international donors.

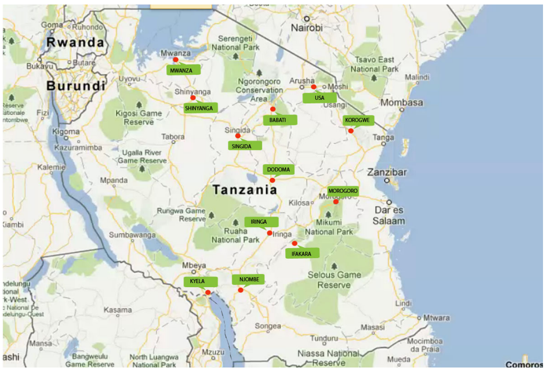
The Bank of Tanzania (BOT) is the central bank of Tanzania. Its primary objective is to formulate, define, and implement monetary policy. It is responsible for regulating and supervising financial institutions, restructuring state-owned financial institutions, and allowing private banks to enter the market. Tanzania's financial sector has 20 licensed banks and 11 non-bank financial institutions. Most bank branches are concentrated in Dar es Salaam, and only a few have a countrywide network that could be linked to the provision of microfinance services. The BOT has taken the lead in developing a National Financial Inclusion Framework (NFIF) that emphasises the role of mobile money as a key enabler of financial inclusion.

**Partner financial institution:** The partner financial institution in the intervention was PRIDE RFW in Tanzania. PRIDE RFW (Rural Finance Window) is a spin-off from PRIDE Tanzania, one of the largest-outreach MFIs in the country. It was created in 2007, when the CIDR (Centre International de Développement et de Recherche, a French-registered development NGO) transferred the pilot programme that it had been implementing in the Iringa region over the previous four years to PRIDE Tanzania, the aim being to deepen rural outreach on a sustainable basis. PRIDE RFW was thus set up as a specific microfinance entity dedicated to providing financial services in rural areas, with a focus on financing smallholder agricultural producers and agricultural value chains. Within the Tanzanian microfinance sector, PRIDE RFW ventured into areas that conventional MFIs had shied away from. At the beginning of the SCBF project, it had a total of 12 branches across Tanzania, reaching out to over 30,800 rural clients, 40% of whom were women.




[1] Data World Bank, http://data.worldbank.org
[2] Heritage Foundation, 2016 Index of Economic Freedom, http://www.heritage.org/index/ranking

Pride RFW had been making a loss since its incorporation in 2007, and its operational sustainability ratio was well below 100%. It was agreed that these initial losses would be covered by the Financial Sector Deepening Trust (FSDT). Breakeven was planned for 2015, with a forecast loan portfolio of TZS 12 billion (approximately EUR 6 million). As illustrated in the chart on the previous page, planned portfolio growth stalled, as did the related income, whereas operating expenses kept rising, thus increasing the accumulated losses.




*PRIDE RFW branch network map (2013)*

There were many reasons for this situation, in particular:

- **Expansion in rural areas was too fast.** The bad financial results are partly the result of poorly managed growth. Pride RFW has developed significantly over the past three years in terms of number of clients and branches. However, the institution has not been able to manage its human resources and operational expenses accordingly. Internal controlling has not been efficient, with inexperienced auditors and a high turnover, and major cases of fraud have been detected at several branches. At the same time, the institution's operational expenses have increased faster than the size of the portfolio.
- **Lack of financing to fuel the growth of the portfolio as planned**. Pride RFW has faced major difficulties in raising funds and financing the growth of its loan portfolio. As a non-deposit-taking institution, it was highly dependent on loans and donations from its funders to grow. Local funders have been reluctant to increase their exposure to Pride RFW without a corresponding guarantee from the parent company. Pride RFW has therefore faced increasing difficulties in raising funds owing to this lack of guarantee, and to its own poor performance, itself partly generated by its inability to grow as planned.
- **Operating expenses continued to grow**. Pride RFW has been unable to increase its loan portfolio as planned in its business plan, but has still incurred the corresponding operating expenses. This has led to a major loss and the total erosion of its capital base.

In early 2015, Pride Tanzania, the parent company, finally decided to re-integrate Pride RFW and completely restructure its objectives and operations. **Today (2016), the Rural Finance Window no longer exists as a separate entity.** Its portfolio of clients, branches and some of its staff have been absorbed by the parent company Pride Tanzania, and its objectives, target groups, strategy and procedures have been redefined.

## 2. Intervention approach

**Capacity-building needs:** PRIDE RFW already had strong experience in providing client-led financial services in rural areas, where access to electricity is still extremely limited (99% of clients appeared not to be connected to the grid). During field visits, PRIDE RFW realised that poor rural populations were asking for its assistance to gain access to clean energy solutions. Providing adapted products for such solutions differs considerably from the traditional microcredit business, however, and required the development of innovative partnerships and processes. PRIDE RFW therefore asked for technical support in identifying needs, designing adapted solutions, building partnerships with technology providers, developing awareness and marketing tools, training staff, and following up on the pilot implementation.

**Main activity areas and outputs:** The purpose of the project was to assist PRIDE RFW in developing adapted financial products and services to facilitate access to clean water and energy solutions for poor rural populations in Tanzania. To this end, six main activity areas were proposed and were implemented as detailed below.

In comparison with the activities and ouputs that were initially planned:

- Almost all planned activities and outputs linked to needs assessment, partnership development, financial product design and the development of awareness-raising materials were achieved.
- Most of the planned activities and outputs linked to staff training and pilot implementation were achieved to only a limited extent, if at all.

The partial implementation of the planned activities and outputs is due primarily to factors external to the project itself. Indeed, because of its serious financial situation, Pride RFW was not in a position to fully allocate the necessary human and financial resources to the development of innovative financial products. The progress of the 'Access to Water and Energy through Microfinance' project was thus significantly hindered throughout 2014. The Board of Directors of PRIDE RFW had a meeting in November 2014 to define the turnaround strategy to help PRIDE RFW overcome its difficulties. As part of the strategy, it was decided to stop implementing pilots and focus on core business areas. As the evolution of PRIDE RFW situation did not allow key financial and technical issues to be addressed satisfactorily, the **project was terminated prematurely, with SCBF funding suspended from 22 September 2014**.

Details of each activity and output that were achieved/not achieved are presented below:

**ACTIVITY 1 – Identify clients' water and energy needs, and the adapted solutions to meet them**

- ✓ **Energy and financial needs were assessed** through a survey conducted with 118 clients, focus groups with a total of 87 participants, and energy audits of 28 MSEs. Results confirmed the high demand for off-grid clean and affordable energy solutions in rural areas for households and MSEs.
- ✓ **A study of the irrigation needs of small-scale farmers was conducted** in partnership with Sokoine University of Agriculture and Arusha Technical College. The study confirmed that access to irrigation is still limited for small-scale farmers and that facilitating access to solar-powered water pumps could be promising in particular for onion and tomato farming.

| PLANNED OUTPUTS | Achieved? | ACTUAL OUTPUTS |
|---|---|---|
| 1 questionnaire developed for households' needs assessment | YES | 1 questionnaire developed for the needs assessment in May 2013 |
| 12 loan officers trained in data collection | YES | 20 loan officers trained in data collection in 2013 |
| 1 complete database for the household market study | YES | A complete database (Excel) is available |
| At least 120 households surveyed in 6 branches | YES | 118 households surveyed in 2013 in 6 branches |
| 1 household market study report | YES | 1 household market study report available |
| 1 interview guideline developed for MSMEs | YES | 1 interview guideline for MSMEs' energy needs<br>+ 1 questionnaire for irrigation needs |
| At least 110 MSMEs surveyed | PARTIALLY | 28 MSMEs surveyed in October 2013<br>+ 21 farms surveyed on irrigation needs in July 2014 |
| At least 9 technical/financial fact sheets for MSMEs' solutions | PARTIALLY | 4 technical/financial fact sheets for MSMEs' solutions: for barber shops, video clubs, bars/restaurants/grocery stores (refrigerator use), and mobile phone charging stations |

**ACTIVITY 2 – Set up partnerships with technology providers and distributors**

- ✓ **Partnerships were set up** between one MFI (PRIDE RFW) and a solar solution provider (Schneider Electric and its local distributor PTL).
- ✓ **A business model for Energy Entrepreneurs was drawn up.** Building on recommendations from the experience-sharing workshop and pilot evaluation (Activity 6), the Tanzanian partners decided that it was important, in their context, to **develop a network of locally-based technicians** who could be in charge of marketing, installation and after-sales service for solar solutions. A model was thus drawn up to create such a last-mile agent network.

| PLANNED OUTPUTS | Achieved? | ACTUAL OUTPUTS |
|---|---|---|
| 1 partnership agreement signed | YES | 1 MoU signed between PRIDE RFW and Power Technics Ltd (distributor of Schneider solutions) |
| 1 document with the adapted procedures | YES | 2 procedures memos were developed and annexed to the MoU: 1 memo for household solutions, and 1 memo for MSME solutions. |
| At least 2 maintenance service providers present in the area of each pilot branch | NO | A business model to set up locally-based technicians was in the early stages of development. In view of the suspension of the project, it was never finalised or implemented. |

**ACTIVITY 3 – Design adapted financial products**

- ✓ **Specific financial products were designed: the 'Mwangaza'** ('lighting' in Swahili) loan to facilitate investment in a solar solution for lighting and mobile phone charging, **and the 'Nishati'** ('energy' in Swahili) loan for MSMEs' energy needs. Adapted procedures manuals and the related tools were developed (loan application forms, financial analysis tool, impact tracking survey, etc.).

| PLANNED OUTPUTS | Achieved? | ACTUAL OUTPUTS |
|---|---|---|
| 1 participative workshop on financial product design | YES | 1 participatory workshop was organised with selected managers to design the solar loan products (Mwangaza + Nishati loans) |
| 1 adapted procedures manual for household solar loans | YES | 1 adapted procedures manual for Mwangaza loans |
| 1 document with financial projections for household loans | YES | 1 financial projection toolkit, filled in with projections for Mwangaza loans |
| 1 adapted procedures manual for MSME water and energy loans | YES | 1 adapted procedures manual for Nishati loans |
| 1 document with financial projections for MSME water and energy loans | PARTIALLY | The toolkit for financial projection exists, but was never filled in with projections for Nishati loans owing to the suspension of the project. |

**ACTIVITY 4 – Develop awareness-raising materials**

- ✓ **Awareness and marketing tools were developed** in Swahili (posters, user guides, warranty cards, etc.).

| PLANNED OUTPUTS | Achieved? | ACTUAL OUTPUTS |
|---|---|---|
| 1 awareness-raising module on solar water and energy solutions | YES | 1 guideline module for a session demonstrating solar solutions and solar loans |
| 1 flyer on good practices linked to household solutions | YES | 2 user guides were developed: 1 for two-lamp kits and 1 for four-lamp kits – in Kiswahili |
| 1 guarantee document for household solutions | YES | 1 informative warranty card developed – in Kiswahili |
| 1 flyer on good practices linked to MSME solutions | YES | 1 user guide was developed for solar home systems – in Kiswahili |
| 1 guarantee document for MSME solutions | YES | 1 informative warranty card developed – in Kiswahili |

**ACTIVITY 5 – Strengthen PRIDE RFW capacity**

- ✓ **The MFI's staff were trained on solar energy and on the new financial product,** with a total of 22 managers and loan officers from head office and four pilot branches attending courses. Technical training on solar energy was conducted by a Tanzanian training centre, KIITEC (Kilimanjaro International Institute of Technologies, Electronics and Communication).

| PLANNED OUTPUTS | Achieved? | ACTUAL OUTPUTS |
|---|---|---|
| 1 training course on financial product design and risk management | YES | Done as part of the participative workshop on financial product design |
| 2 technical training courses on solar solutions | YES | 2 training courses on solar solutions (1 for the Babati and Shinyanga branches in 2013, and 1 for the Usa River and Dodoma branches in 2014) |
| 2 training courses for trainers on the awareness campaign | YES | 2 training courses on awareness campaigns (1 for the Babati and Shinyanga branches in 2013, and 1 for the Usa River and Dodoma branches in 2014) |
| 2 training courses for loan officers on household solar loans | YES | 2 training courses on solar loans (1 for the Babati and Shinyanga branches in 2013, and 1 for the Usa River and Dodoma branches in 2014) |
| 2 operations managers + 54 field staff trained on solar solutions, awareness campaigns and household solar loans | PARTIALLY | 22 managers and field officers trained in total (14 in 2013 + 8 in 2014). *Owing to the suspension of the project, additional training courses for other branches could not be implemented as initially planned.* |

| | | |
|---|---|---|
| 1 training course for loan officers on MSME water and energy loans | NO | *Owing to the suspension of the project, this activity was not implemented.* |
| 6 loan officers and branch managers trained on MSME solar loans | NO | *Owing to the suspension of the project, this activity was not implemented.* |
| 1 training course for trainers on financial education | NO | *Owing to the turnaround strategy adopted by PRIDE RFW, this activity was not implemented.* |
| 2 operations managers and 12 loan officers trained in financial education | NO | *Owing to the turnaround strategy adopted by PRIDE RFW, this activity was not implemented.* |

**ACTIVITY 6 – Implement a pilot, evaluate it, and share lessons learned**

- ✓ **The pilot was implemented in two pilot branches** (Babati and Shinyanga) **and extended to two additional branches** (Usa River and Dodoma).
- ✓ **Over 850 rural clients learned more about solar energy** through demonstration sessions conducted jointly in around 37 villages by PRIDE RFW, PTL and KIITEC.
- ✓ **A full evaluation of the pilot phase was conducted in August 2014.** It confirmed the need for a local technical actor to make the link between the solar solution distributor and the end users in rural areas.

| PLANNED OUTPUTS | Achieved? | ACTUAL OUTPUTS |
|---|---|---|
| At least 45 villages visited for awareness-raising campaigns | PARTIALLY | 37 villages visited for awareness-raising campaigns (20 in 2013 + 17 in 2014) |
| 2,600 loans provided to households for access to energy | NO | 58 Mwangaza loans provided to rural households only.<br>*This activity ceased after November 2014, owing to the PRIDE RFW turnaround strategy.* |
| 80 loans provided to MSMEs to improve access to water or energy | NO | *Owing to the suspension of the project and the turnaround strategy adopted by PRIDE RFW, this activity was not implemented. Although the financial product (the Nishati loan) had been designed, it was never launched by PRIDE RFW.* |
| Quarterly reports on the portfolio of water and energy loans | PARTIALLY | Quarterly reports on the solar loan portfolio were duly submitted until the project stopped. |
| At least 80 clients trained in financial education | NO | *Owing to the turnaround strategy adopted by PRIDE RFW, this activity was not implemented.* |
| 2 evaluation missions | YES | 1 preliminary evaluation mission in November 2013<br>+ 1 full evaluation mission in August 2014 |
| At least 6 focus groups with microfinance clients | YES/ PARTIALLY | 6 focus groups with microfinance clients, although 4 of them were linked to needs assessment (April 2013) and 2 of them to pilot evaluation (Nov. 2013 and Aug. 2014). |
| 1 document on methodology and indicators for the impact monitoring study | YES | Procedures and indicators for impact tracking included in PRIDE RFW Mwangaza and Nishati loan procedures manuals |
| 1 training course for loan officers on data collection | YES | Training on solar loan impact tracking included in loan officers' training on solar loans |
| 1 database for the impact study | NO | *Owing to the suspension of the project, this activity was not implemented.* |
| 1 impact study report | NO | *Owing to the suspension of the project, this activity was not implemented.* |
| 1 publication on lessons learned | NO | 2 forthcoming publications (for July 2016) on lessons learned, but building more on lessons from other countries where similar projects have been implemented (Ethiopia, Cameroon and Kenya): Allet M. (2016), 'Access to energy through microfinance in Africa: a partnership approach', FACTS Report ; and Allet M. (2016), 'Energy Entrepreneurs: an innovative model to reach the last mile', FACTS Report |

All operational activities were co-funded by UNCDF CleanStart.

## 3. Results achieved and not achieved

**Client level:** During the pilot phase, a total of **58 Mwangaza loans** were disbursed by PRIDE RFW, allowing 58 rural households access to a solar solution for lighting and mobile phone charging.

Owing to the difficulties faced by PRIDE RFW and the turnaround strategy decided by the Board of PRIDE RFW, the MFI stopped disbursing Mwangaza loans for household solutions from November 2014, and never launched the Nishati loan product for MSME solutions, even though all of the necessary manuals and tools had been developed for it. As a consequence, it was not possible to reach the expected results of 2,680 solar solutions distributed by the end of 2014 (2,600 for households + 80 for MSMEs).

Owing to the premature end of the project, it was not possible to conduct the client satisfaction survey and impact study initially planned.

The early termination of the project also meant that we did not have the opportunity to go back and visit some of the 58 Mwangaza loan clients in order to collect feedback and testimonies.

We can only share with SCBF the pictures below, which were taken with some clients at the time their solar solutions were installed. *(all copyrights PAMIGA)*

**Partner financial institution level:** Thanks to the technical assistance provided by PAMIGA, top managers of PRIDE RFW improved their understanding of the specific risks linked to energy lending, as well as adapted strategies to mitigate these risks. PAMIGA also provided the MFI with all of the manuals, tools and materials needed to offer solar loans (procedures manuals, financial projection toolkit, loan appraisal form, procedures memo, model of MoU to be signed with solar solution providers, awareness-raising guidelines, etc.). Although PRIDE's Rural Finance Window no longer exists as such, PRIDE Tanzania (the parent company) could always re-use and build on this existing material if it decides to (re)-launch a solar loan product in the future.

**Financial sector level:** Thanks to lessons learned from the project and similar experience in Ethiopia, Cameroon and Kenya, PAMIGA has been able to adjust its methodology for solar loan development and replicate the model in various countries, with the following results up to March 2016:

- ✓ **8 MFIs within the PAMIGA network are currently offering financial products for access to clean energy** (4 in Cameroon, 2 in Ethiopia, 1 in Kenya and 1 in Senegal), **and 3 additional MFIs are currently launching clean energy lending products** (1 in Burkina Faso, 2 in Benin, and 1 new partner MFI in Tanzania).
- ✓ **A total of 4,877 rural households have been able to invest in a solar solution** (2,538 in Cameroon; 1,257 in Ethiopia; 945 in Kenya, and 137 in Senegal).

The project implemented in Tanzania and Ethiopia, as well as in other countries, also enabled PAMIGA to capitalise on and disseminate key lessons learned and recommendations within the microfinance and clean energy sectors, through various communications and publications, in particular:

- ✓ **Organisation of a joint PAMIGA Expert Meeting and UNCDF CleanStart Connect Event** in Addis Ababa, Ethiopia, on 30/31 October 2014. The event successfully gathered over 100 participants, representing 80 different organisations from 23 countries. The SDC was represented by Mr Manfred Kaufmann, Water Policy Advisor Africa. During the first day, PAMIGA's Expert Meeting built on the practical experience gained by PAMIGA and its partners in sub-Saharan Africa to share good practices and lessons learned in facilitating access to clean water and energy via microfinance, through various case studies, debates, and methodological insights. During the second day, UNCDF's CleanStart Connect Event widened the debate with other initiatives and stakeholders from Africa and Asia, in order to discuss different approaches to increase access to clean energy for low-income populations. More details are available in the full *Expert Meeting Report*.

- ✓ **Development of a methodological toolkit.** To capitalise on its experience, PAMIGA developed a methodological toolkit that can be used by MFIs interested in offering financial products for access to clean water or energy. The toolkit presents the different steps (12 in total) needed to develop such products and services. Each step is set out in detail (objectives, involved stakeholders, methodology, outputs, time needed), including tips and support documents. The toolkit was distributed to all participants in PAMIGA's Expert Meeting and could thus be used by other actors to implement similar projects in other countries.
- ✓ **Course on Rural Finance & Energy (Boulder Institute of Microfinance)**. Marion Allet of PAMIGA conducted an 8-hour course on 'Rural Finance & Energy' in August 2015 as part of the Rural and Agricultural Finance Programme (RAFP) at Boulder Institute of Microfinance. Building on lessons learned from specific experience (including that of PAMIGA and others), the course aimed to explore the role that rural finance can play in fostering access to clean, reliable, safe and affordable energy solutions for poor rural populations.
- ✓ **Publication of two articles in a peer-reviewed journal** (in English and in French):
  - Allet M. (forthcoming – July 2016), 'Access to energy through microfinance in Africa: a partnership approach', *FACTS Reports*;
  - Allet M. (forthcoming – July 2016), 'Energy Entrepreneurs: an innovative model to reach the last mile', *FACTS Reports*.

All of these communications and publications are expected to contribute positively to ongoing reflections on access to clean energy through microfinance within the financial and energy sectors.

## 4. Recommendations for other similar interventions

Given that the main reason for the suspension of the pilot on solar loans was actually external to the project itself (the turnaround decision made by the financial institution, which has its own governing body), it is difficult to draw clear lessons based exclusively on our experience in Tanzania.

However, PAMIGA has also implemented similar projects in other countries, such as Ethiopia (also financed by SCBF), Cameroon and Kenya, without facing the same major external difficulties as in Tanzania.

Some of the key lessons that have emerged from our various experiences are the following:

- **Adaptation of solar solutions to local needs is a key success factor.** Solutions that had proved successful in Asia did not automatically generate the same uptake in Tanzania and other African countries. For instance, in areas where people have extremely limited experience with electrical devices, some solutions – initially thought to be user-friendly – were still too complex to be handled by target clients alone. To address the slow uptake of the solution, partners identified the need to develop an installation service for clients who did not feel comfortable with the solar solution at first. This implies a slight adjustment in the pricing of the solution to include the cost of this additional service.
- **There is a constant need to adapt to the solar technologies market, which is evolving rapidly.** Frequent changes and upgrades in solar technologies have their own effects on pricing, quality, and the management of client relationships. MFIs need to develop internal capacities to monitor technological change and offer the most up-to-date quality solutions to their clients.
- **It is essential to facilitate synergies between the worlds of microfinance and energy.**
  - Building strong local partnerships between MFIs and distributors of solar solutions is essential for the successful roll-out of such a model. The first months of operation showed that **it is important not to underestimate the time needed to build understanding and trust between the different actors**. MFIs and solar solution providers come from two different sectors that are not used to working together. They may decide to collaborate to achieve similar objectives (improving access to clean energy solutions for low-income populations), but they each have their own vision, procedures and technical language. For instance, local distributors seek to maximise sales of solar solutions, and thus push demand as much as possible. Meanwhile, MFIs want to achieve high outreach, but also have to manage good client relationships and credit risk. MFIs need to go through a learning curve

and integrate new products and practices, in addition to careful appraisal processes. This may appear overly lengthy and inefficient in the eyes of distributors.
  - Furthermore, MFIs and local distributors do not understand very well the constraints that may be faced by each partner, such as minimum delivery volumes for distributors, or the seasonality of loan applications in rural areas for MFIs. These differences in expectations and misunderstandings of each other's constraints have sometimes led to tensions between the partners. The pilot showed that for the two sectors to understand each other, communicate and work together effectively, it is essential to have an organisation that can act as a facilitator during the startup phase, to ease the tensions and progressively encourage better understand between the partners through regular workshops, exchange visits, adjustments of detailed procedures, moderation, etc.. Such a two-handed model cannot be expected to be fully functional and sustainable right from the start, however: **building partnerships between MFIs and solar solution providers remains a learning process that requires strong motivation, commitment, patience and perseverance from all partners**.

- **Motivating MFI field staff is instrumental in achieving good results.**
  - Loan officers often perceive solar loans as complex and time-consuming. Managing these products requires greater involvement from field staff, in particular to coordinate purchase orders and deliveries, support clients with the installation of their kits, and educate them in the proper use of the solutions. At times, loan officers even had to act as facilitators for after-sales service. The risk then is that loan officers prioritise more conventional solutions at the expense of solar loans. The pilot made it clear that it was essential to communicate to the teams clearly about the financial and strategic benefits expected for their institution. An adapted incentive system – financial or otherwise, dedicated to solar loans while at the same time fully integrated in the overall incentive scheme of the MFI – was also found to be important. There should also be an adjustment to the allocation of roles between MFIs and local distributors.

- **It is crucial to strengthen the solar solution supply chain.**
  - In addition to providing support to MFIs in developing adapted financial products for access to clean energy, it is also critical to strengthen the solar solution supply chain. Solar solution distributors, historically located in urban areas, often tend to regard MFIs as similar to retailers, expecting them to be actively promoting the solar solutions and distributing them on their behalf. In many instances, contrary to what is usually agreed initially with the partner providers, the MFI's field staff end up assuming a variety of additional activities, ranging from delivery of the kits to educating clients on the use of the solar solution, and managing after-sales service. However, **MFIs alone cannot do it all**: they are not in a position to act as a retailer and handle all technical services (i.e. marketing, delivery, installation, client education, after-sales services). Loan officers cannot become sales agents, earning commission on each solar unit sold. Such positioning would actually represent a mission drift which could put the whole institution at risk.

To bridge the gap between urban-based solar solution distributors and rural target clients, it is thus crucial to **set up networks of last-mile agents** located in the villages. These entrepreneurs are responsible for promoting solar solutions and offering high-quality local services to clients, covering delivery, installation, and after-sales service.