



Embassy of the
Kingdom of the Netherlands



SNV

**INCLUSIVE FINANCE
AND BUSINESS STRATEGIES**
FOR FARMER-LED IRRIGATION
DEVELOPMENT

Citation:

Florence Kariuki, David Makongo, Lauren Wessel. (2020). Inclusive Finance and Business Strategies for Farmer-Led Irrigation Development. Smart Water for Agriculture (SWA), Kenya, SNV Netherlands Development Organization, Nairobi.

The writers of this publication reserve the rights to the same. However, readers are encouraged to copy and circulate the information in the publication to others, especially relevant stakeholders in irrigated agriculture, and to translate it into other languages, as long as this is not done for commercial purposes and as long as the source is acknowledged.

If you plan to reproduce or translate all or part of this publication for wide distribution, being notified at the following address will be appreciated:

Available from the Smart Water for Agriculture in Kenya Project

SNV Netherlands Development Organisation,

Ngong Lane, Off Ngong Road,
Nairobi, Kenya

Email:

kenya@snv.org
+254 724 463 355

Contact authors:

Florence Kariuki
fkariuki@snv.org

David Makongo
makongodm@gmail.com

Lauren Wessel
lauren.wessel@wur.nl

Peer review:

Gert Jan Veldwisch:
gertjan.veldwisch@wur.nl

Veldhuizen, Laurens van
l.veldhuizen@kit.nl

Sebastian Oggema:
soggema@snv.org

Design & Layout:

Blue Antelope Limited:
hello@blueantelope.co.ke

**SNV**

Table of Contents

01. Introduction

- 05 1.1 The case for smallholder inclusive business and finance
- 1.2 Key elements of inclusive business and finance strategies
- 1.3 The promises and challenges of SWS
- 1.4 This publication

02. Mechanisms for promoting business and finance strategies

- 11 2.1 **The Innovation and Investment Fund**
 - 2.1.1 Building on existing farmer-led irrigation initiatives
 - 2.1.2 Farmers at the forefront of learning and exchange
 - 2.1.3 Support from technical, financial and market actors needed for scaling
 - 2.1.4 Continuous learning and adjustment needed to stay tuned

- 13 2.2 **Irrigation Acceleration Platform**
Customized business support
Farmer capacity building and Local Capacity Builders

- 13 2.3 **Kenyan and Dutch exchange visit**

- 2.4 **Customized capacity building and business support**

03. Emerging business and finance approaches for FLID

- 17 3.1 **Business process reengineering:** Leveraging on established distribution networks
- 19 3.2 **Integrated services provision for FLID**
- 3.3 **Product differentiation:** In-house lending approaches for inclusive financing
- 22 3.4 **Customer lock-in:** Embedding SWS in Savings and Credit Cooperatives (SACCOs)
- 23 3.5 **Network marketing:** Agency and Microfinance
- 24 3.6 **Insurance hedging:** De-risking FLID
- 26 3.7 **Forward-market based investment pooling:** Anchoring SWS through a buyer

04. Scaling the business approaches

05. Overall lessons learned and way forward

- 31 1. **Fund management**
- 31 2. **Partnership management**
- 32 3. **Access to finance**
- 32 4. **Communication**
- 33 5. **Stakeholder engagement**

References

Table of Tables

- 4 **Box 1.** Farm-Led Irrigation Development
- 5 **Box 2.** Inclusive Development
- 8 **Box 3.** Smart Water for Agriculture
- 9 **Box 4.** SF2 Solar Pump
- 13 **Box 5.** Stakeholder engagement
- 17 **Box 6.** Future Pump -Sf2 Solar Pump
- 19 **Box 7.** ThirdEye Flying sensors
- 20 **Box 8.** Sunculture and Amiran
- 22 **Box 9.** KUSCCO
- 24 **Box 10.** Juhudi Kilimo and Musoni
- 25 **Box 11.** De-risking FLID investments
- 27 **Box 12.** Frigoken

- 10 **Table 1.** Interventions areas of the investment and innovation fund
- 11 **Table 2.** SWA investment and innovation fund business cases
- 14 **Table 3.** Kenyan companies participating in the trade mission

01

INTRODUCTION BUSINESS AND ACCESS TO FINANCE IN FARMER-LED IRRIGATION DEVELOPMENT

1.1 The case for smallholder inclusive business and finance

Farmers increasingly take the initiative to actively invest in irrigated agriculture and irrigation technologies, a process called Farmer-led Irrigation Development or FLID (see Box 1). This is also the case in Kenya.

Farmers invest in irrigation out of economic logic, making profit from intensive and off-season production, contributing to increase in income and food security. In developing their irrigation businesses farmers interact with a variety of private sector actors, including agro-dealers, irrigation technology providers, finance institutions and output markets.

As in Kenya FLID largely emerges in interaction between private sector actors, the crafting and operationalising of inclusive business and financial strategies can hugely benefit the improvement and expansion of irrigation by farmers willing to invest.



FARMER-LED IRRIGATION DEVELOPMENT

Farmers' irrigation initiatives are widespread and rapidly growing throughout sub-Saharan Africa (SSA). In many parts of Africa, unnoticed by many, small- and medium-scale farmers are making substantial investments in irrigation development, which, when combined, cover thousands of hectares.

In these cases, farmers have assumed a driving role in developing or improving their water use for agriculture. In the process, they rely on and influence other farmers, private sector companies – such as agro-dealers and traders – extension agents, irrigation engineers and others.

This is what is called farmer-led irrigation development (FLID). The farming practices associated with FLID processes are highly diverse in terms of scale, crops, irrigation technologies, market orientation, agro-ecological context, etc.

These include practices as diverse as backyard cultivation of vegetables using watering cans, rice cultivation in partially water managed wetlands and highly intensive emergent farming using solar pumps and micro sprinklers.

Most of these initiatives are market oriented and driven by substantial profits. Successful development also requires a combination of conducive circumstances including useable land and water resources, suitable irrigation technologies and knowledge, functional institutions for addressing distribution issues and access to funds to invest.

Increasingly, governments and development organizations in Africa seek to effectively engage with these farmer-led processes, both to regulate them and to stimulate expansion and improvement of sustainable irrigation.

Although farmers are highly motivated to invest in irrigation and are capable of developing their irrigated enterprises, they also encounter major constraints, amongst which:

- **Access to technologies:** Smallholders are not always aware of the different technologies, or the proximity of a relevant distributor or quality seller, even when they have received relevant trainings on these technologies. New irrigation technologies are becoming available at an unprecedented pace, but are often poorly accessible for farmers. Efficient distribution through qualified sellers takes time to develop and while proper after-sale services are often lacking. Additionally, farmers have difficulties in assessing the quality of irrigation technologies, suitability for their circumstances and the implications for their farming practices if implemented. Consequently, as both the benefits and risks are difficult to assess, farmers are hesitant to adopt new technologies.
- **Access to finance:** Farmers are further constrained in their capacity to invest in SWS due to limited access to finance. Often, access to finance is compounded by the reluctance of commercial banks to extend lines of credit to smallholder farmers. When farm enterprises have modest returns and scarce resources, they often do not have appropriate financial credibility or collateral. For women and youth, the issue of land-ownership even further constrains providing collateral. Farmers are also reluctant to take formal credits for fear of harsh implications when failing to timely settle debts. As a result, irrigation farmers mostly rely on private loans with very high interest rates and also on limited own savings.
- **Access to output markets:** For farmers to invest in irrigation techniques, commercializing and selling products at a profitable price is required. There are various issues that hamper farmers to benefits optimally from marketing their produce, including unforeseen price fluctuations due to flooded markets, low volumes in relation to off-takers limits, and quality requirements. Improving the ways in which farmers' access output markets would not only increase farm generated income, but could in some cases also serve as collateral to credit providers -through contractual relationships, farmer produce, especially high value crops can act as risk-reducing forward collateral to credit providers. The availability of markets and the capacity to market products is an important condition that could determine the capacity of farmers to earn back the investments made in irrigation.

It is in this context that inclusive approaches (Box 2) by businesses and financial institutions that address the challenges are critical in accelerating FLID in Kenya.

INCLUSIVE DEVELOPMENT

We define inclusivity as the ability to systematically harness all portions of the SWS value chain toward sustained sector growth. By including all segments, farmers, their suppliers, organizations, extension service providers, access to finance service providers and other knowledge institutions are or all considered essential to the growth of irrigated agriculture" (SNV, 2019).

Box 2



1.2 Key elements of inclusive business and finance strategies

To accelerate and scale FLID private sector investment thus need to be encouraged as technology and financial providers respond to issues of demand and supply while creating and positioning their products. In putting in place effective and inclusive strategies to this end a number of elements should be considered:

First of all it is important to arrive at systematic **segmentation of irrigation technologies and practices to allow incremental adoption**. Segmentation distinguishes irrigation technologies and practices from storage, abstraction conveyance, application and soil moisture conservation (Figure 1). To address the whole irrigation system, technology providers should try to have a long-term solution vision and break this down to arrive at the most efficient implementation process.

Businesses should also try to work in alliances of companies complementing each other to be able to offer a comprehensive package and to avoid mismatches and structural errors that are costly for farmers when implementing different components of their irrigation system.

Secondly, the provision of **affordable and sustainable support services** needs to be ensured. Most irrigation technologies and systems need good maintenance for optimal efficiency some of which can be done by farmers but some may require support from specialists. FLID requires the embedment of support structures that are affordable and efficient for farmers, especially after sales support.

A third critical element to be considered is **supporting market system development**. Investment in irrigation would in most cases lead to an increase and more evenly distribution of production throughout the seasons. In some cases farmers will change to new, more profitable crops to earn back their investment. All this has implications for marketing and market analysis and development is thus a key consideration to anyone designing irrigation development support.

To realise increased production and to effectively grow more profitable crops, farmers also often need coaching **support to learn and use new agricultural practices** especially on agronomic aspects and pest and disease control. The irrigation investment may prove not to be a worthwhile venture if some of the critical support systems are lacking. FLID strategies should thus endeavour to include provision of advisory services on relevant agricultural practices to prevent that well designed irrigation system failing due to non-irrigation related issues.

To increase reach, one would consider **targeting organized farmers groups and farmer leaders**. The organization and coordination capacity of farmer groups enable bringing together and reaching out to larger groups of interested farmers. Committed and capable farmers among those can help ensure that the business is successful. Leveraging the networks and experiences of farmers that are already an example in their community can be beneficial for farmers to learn from one another.

Finally, as mentioned before, **access to finance** is a critical element too. Investment in and effective use of irrigation systems is only possibly with sufficient funding either from own sources or from other, external, sources. Having affordable and accessible funding options is thus crucial to the success of efforts to accelerate FLID.



Water Pan installation in Machakos County by a Women Group

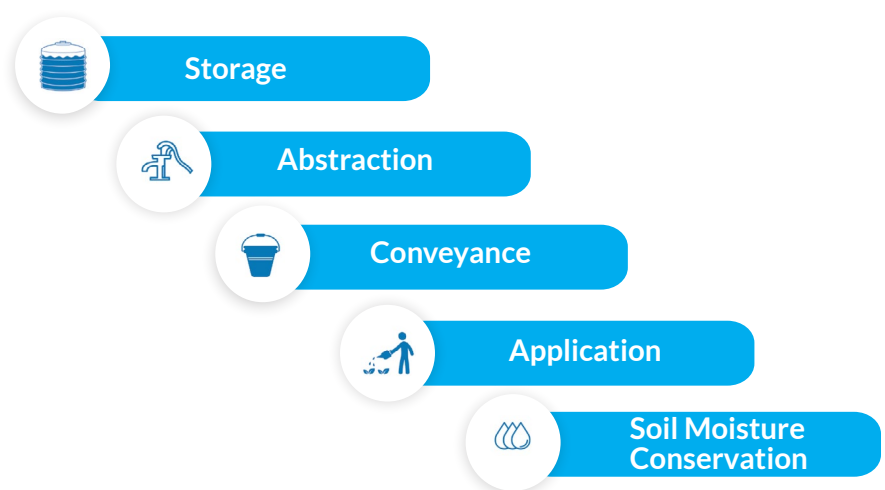


Figure 1: Irrigation Spectrum

1.3 The Smart Water for Agriculture in Kenya project

The Smart Water for Agriculture in Kenya project (SWA, see Box 3 and 4) started in 2016 with the explicit aim to accelerate FLID in the country and the mandate to look into and address issues across the whole sector and promote and sustain inclusive business and finance strategies of FLID.

Its approach was to link supply and demand and develop new approaches and services where needed.

SWA promoted a holistic approach that included building awareness, developing effective and responsive financing mechanisms, connecting entrepreneurial farmers to input and output markets, embracing digital platforms for transactions as well as developing sustainable business partnerships between financial service providers, input suppliers, technology providers and buyers.

The ambition was to create well-matched, efficient supply of loans and financial packages by financial institutions to farmers and SWS companies. Creating these inclusive business and finance strategies was thought to be essential to create impact at scale.



THE SMART WATER FOR AGRICULTURE PROJECT

The Dutch government funded Smart Water for Agriculture in Kenya (SWA) project focuses on the needs and opportunities of Kenyan farmers that have started irrigating under FLID processes. Farmers and their agricultural practices are highly diverse, with irrigated areas as little as 0.1-5 ha, commercialized to a smaller or larger extent, and often growing high-value crops. SWA aims to realize improved income and livelihoods for at least 20,000 smallholder farmers, while improving water use practices. The project is to encourage and accelerate FLID by identifying, promoting and upscaling Smart Water Solutions (SWS), where SMART can be understood as Simple, Market-based, Affordable, Replicable and Technically feasible.

The project's design is unique in targeting the entire FLID 'sector', and not only farmers. This approach allows the project to identify and address systemic constraints and opportunities at all levels of SWS value chains. The main components of the project are thus quite diverse – from the development of irrigation technologies and strengthening their supply chains, to the set-up of innovative irrigation financing mechanisms and addressing market and policy constraints.

To support this the project contributes to strengthening collaboration between diverse actors involved in FLID by establishing multi-stakeholder platforms specifically on irrigation, both at county-level and nationally.

Box 3

THE PROJECT'S MAIN FEATURES

Time Frame	2016 -2019
Budget	5.97 million Euro
Coordination	SNV Kenya
Core partners	MetaMeta, Practica Foundation, Aqua for All, Royal Tropical Institute KIT and the Wageningen University in associate role
Targeting	<ul style="list-style-type: none"> • Small and medium entrepreneurial (SME) farmers with 0.1-5 ha of irrigated land, often growing high-value crops • Private sector supplying or financing smart water products and services • Non-governmental organizations (NGOs) and county governments supporting FLID
Key targets	<ul style="list-style-type: none"> • 20,000 farmers to adopt SWS, at least 50% women • 200 SWS providers – for and not-for-profit – strengthened for improved service delivery to farmers • Access to finance for SWS for 12,500 farmers, from at least 5 providers • Five counties with a sustainable irrigation acceleration platform (IAP), and one national level IAP • Ten Dutch companies and more Kenyan ones supported to invest in SWS • Seven early stage/start-up entrepreneurs enter the sector to pilot innovative concepts
Development investor	Embassy of the Kingdom of the Netherlands in Nairobi.

Box 4

For developing and promoting FLID supportive business and finance strategies SWA used basically four instruments: The innovation and investment fund, Irrigation Acceleration Platforms at county and national level, a trade mission and customized capacity building and business support as detailed in the next chapter.

1.4 This publication

This publication summarises what was done and achieved by SWA in supporting inclusive business and finance strategies for FLID. The paper is based on a review project documents complemented by field visits and interviews with stakeholders and enriched during a 'Write shop' with the SWA core team and NL based advisors. The publication should be of interest to those involved in creating effective finance and business strategies in FLID, whether working in the private sector or supporting this from a government or development sector background.

This publication describes and analyses SWA's mechanisms for promoting inclusive finance and business strategies for FLID. The emerging effective business and finance approaches for FLID and their strength and weaknesses are presented reviewed while finally issues around scaling and lessons learnt are discussed. Main lessons relate to fund management, partnership management, access to finance, communication and stakeholder management.

The SWA fund was very effective in supporting the businesses test and/or scale their innovations while managing partnership amongst the teams was quite challenging. Access to finance to smallholder farmers remains to be a challenge but there are emerging lessons that could be useful in overcoming this hurdle.

02

MECHANISMS FOR PROMOTING BUSINESS AND FINANCE STRATEGIES

2.1 The Innovation and Investment Fund

The main mechanism to facilitate and support inclusive business and finance approaches was the SWA Innovation and Investment fund (IIF) amounting to EUR 750,000. The IIF had two components, one supporting innovation and innovative approaches (total amount EUR 300,000) and one supporting investment to achieve upscaling of proven approaches (EUR 450,000).

The fund was designed to speed up introduction and/or development of technologies/services/business approaches and best/good practices covering different parts of the business development cycle (Table 1). The fund was a co-investment, meaning the applicants had to cover 50% of the costs of the proposed work from own resources. SWA's contribution to individual business cases ranged from EUR 50,000 to EUR 90,000. In the end, 15 business cases received support (Table 2).



Investment fund	Innovation fund
Market penetration	Incubation
Market expansion	New product development
Product expansion	Pilots and demonstrations
Inclusive business arrangements	Evaluating commercial potential
Inclusive business development	Market development and access

Table 1: Interventions areas of the investment and innovation fund

Applicant	Facility Type	Product/ Service
Acre Africa (Kenyan)	Innovation	alternative risk profiling through micro-insurance
aQysta (Dutch)	Innovation	Water conveyance solutions
Koppert (Kenyan/Dutch)	Innovation	Vitex – soil and water retention/ transfer additive.
Future Waters (Dutch)	Innovation and investment fund	Flying Sensor – ICT enabled fee-for service extension service
Juhudi Kilimo(Kenyan)	Investment	Access to Finance: Water storage credit
Water Resource User's Association (WRUA) – Meru	Investment	Water Storage and distribution
Producer Group – Mulot	Investment	Water Storage and delivery system
Musoni (Kenyan)	Investment	Access to finance – branchless banking
Sunculture (Kenyan)	Investment	Technology with credit payment options
Frigoken (Kenyan)	Investment	Irrigation infrastructure improvement
Laikipia Nature Conservancy (Kenyan)	Investment	Supporting establishment of avocado out grower scheme in water constrained conditions
Future Pump Inc. (Kenyan/ Dutch technology)	Investment	Market development and distribution system improvement for the SF1 – Solar Energy Driven Pump
KUSCCO(Kenyan)	Investment	Access to finance via SACCOs for 'tied' SWS products
Sweet Stevia Africa*	Investment	Plastic mulching and drip for Stevia production

*The Sweet Stevia Africa business case was approved, but could not continue as the export market for stevia collapsed.

Table 2: SWA investment and innovation fund business cases

2.1.1 The Innovation and investment Funding process

The implementation of the IIF required SWA to develop and put in place a systematic and transparent process and system to identify and screen applications in line with the objectives of the fund and facilitate and monitor implementation of each approved application (Figure 2).

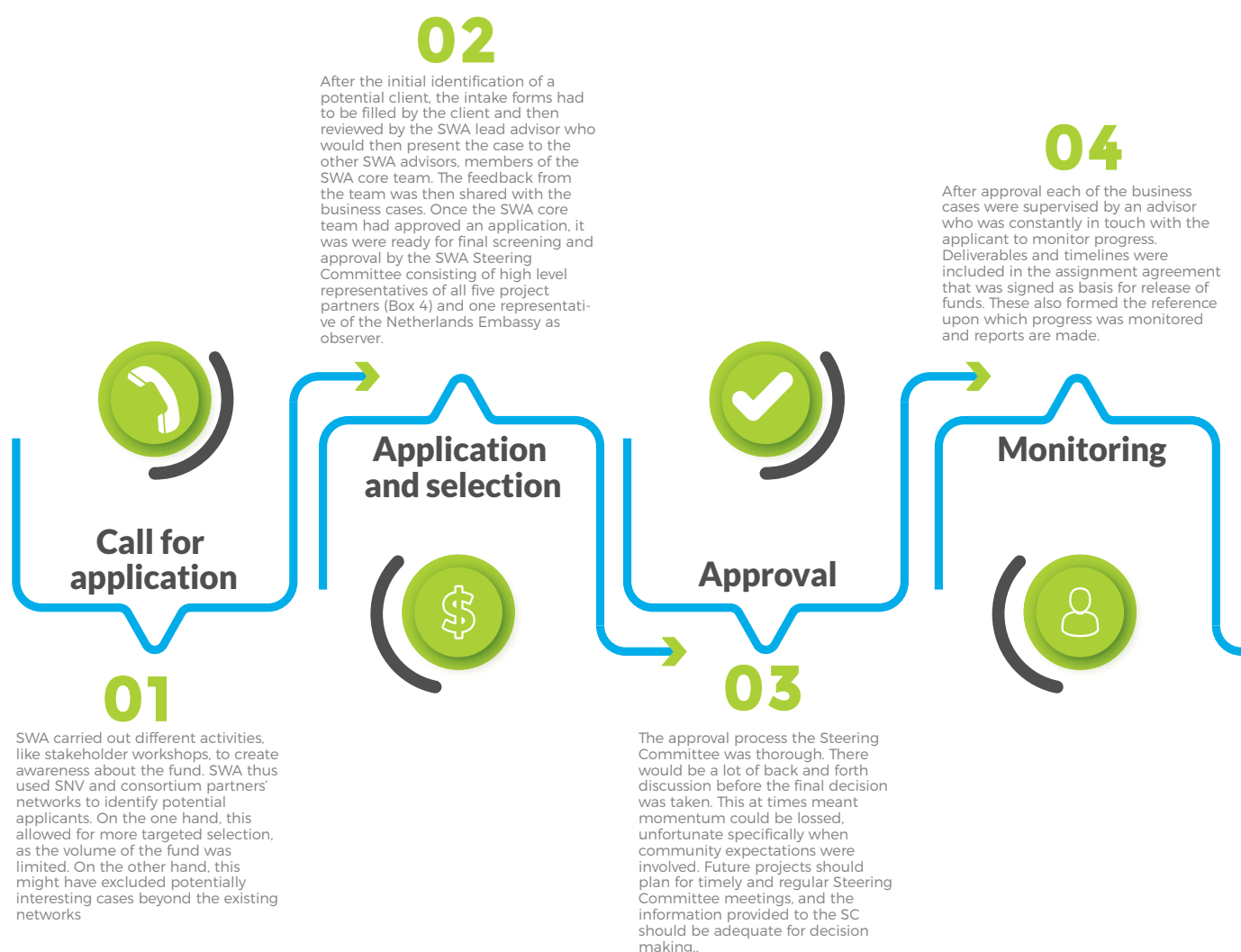


Figure 2: Main steps in the Innovation and Investment Fund process

THE CASE FOR CO-INVESTMENT: Return on investment of Juhudi Kilimo

To ensure that business cases took this, and to increase the potential for scaling, the investment & innovation fund was a co-investment required a 50% co-investment. As some cases are still piloting or finishing up the funds, a general ROI cannot yet be determined, although the indications are it will be positive.

Together with consultancy Mak5, Juhudi Kilimo has piloted the Agency Network Model. It is a loyalty programme where they recruit influential and loyal customers and coined them their “Balozis” (ambassadors) to recruit new groups of clients on a commission basis.

In total, 3339 agents were trained, and 653 loan granted for smart water products. They were able to recruit 432 groups using the agents (Balozis) during the SWA sponsored trainings.

These groups have a combined 7,284 memberships. Furthermore, the project served as an income generating mechanism sending cash incentives to the Balozis.

Direct impacts:

- Granted by SWA: Eur 89.490
- Total leverages by Juhudi: Eur 207.025
- Return on Investment: 2.3x
- 3339 agents trained, and 653 loans granted for SWS

Indirect impacts:

- Kes. 802,800 cash incentives to agents (Balozis) creating an income of hundreds of agents in rural areas
- The project employed 6 full-time staff to perform marketing and loan assessment
- The indirect impact was the introduction of other products through the agency model e.g. they loan 3415 clients for LPG gas through the agency model
- The agency model is now part of the Juhudi Kilimo client acquisition strategy

Box 5

2.2 Irrigation Acceleration Platform

Irrigation Acceleration Platforms (IAPs) are SWA initiated multi-stakeholder platforms, where stakeholders involved in irrigation development meet and interact, to initiate, support and scale Smart Water Solutions (SWS).

IAPs were designed a/o to stimulate private sector driven, market-led innovation and business collaboration. They were to create opportunities where supply and demand could meet and interact and where innovation was supported to more adequately satisfy the needs of entrepreneurial farmers.

The IAPs were and are active at national as well as county level. At county level they therefore served as main entry points for businesses and the project for work at the local level. Another SWA publication (Thottoli et al.) explains the IAP work and how this facilitated private sector interactions in more detail.

2.3 Kenyan and Dutch exchange visit

In order to increase linkages and collaboration between Dutch and Kenyan businesses active in the FLID sector one trade mission was organized in April 2019. This was an outgoing mission in which Kenyan companies visited the Netherlands.

The trade mission was to allow the Kenyan and Dutch companies to discuss distributorship, agency, joint venture options, collaboration in marketing and other business partnerships. Priority for joining the event was given to Kenyan companies that were part of and active in the SWA project.

A few other companies that partnered with SNV in other projects but with high potential for assisting in scaling SWS were invited too. In preparation for the mission, a survey of Dutch companies active in water for agriculture was done to ascertain interest in participating in the trade mission. Subsequently, a meeting of interested companies was organised in the Netherlands to help in structuring the visit as well as prioritize the type of businesses they hoped to meet from Kenya.

During the trade mission twenty five Dutch Companies met with the twelve Kenyan companies that formed the mission (Table 3). Jointly they identified fifty-five opportunities for Dutch-Kenyan partnership. A few of these are now in different stages of operationalization. For example, two Memoranda of Understanding (MoUs) on distributorship and blended learning have been signed.

An unexpected outcome was also the formation of Kenyan-Kenyan and Dutch-Dutch business partnerships. An incoming mission had been planned for November 2019, but was later canceled due time and budget constraints.

Table 1: Kenyan companies participating in the trade mission

Technology Providers	Financial Institutions	Agribusiness
• Future pump	• Juhudi Kilimo	• Macefoods
• SunCulture	• ACRE	• Wamu
• Liquid Lever	• ECLOF	• Transu Ltd.
• Greenserve Agrisolutions	• KUSCCO	

2.4 Customized capacity building and business support

2.4.1 Customized business support

Selected business cases supported by SWA under the IIF received customized business support that would help towards investment mobilisation. Support was thus given to review and improve the company's business plan, to help identify investors and financiers and to explore and identify production opportunities and marketing channels for both Kenyan and Dutch entrepreneurs.

The support was often given on a one-on-one basis, "long-distance" by experts based in the Netherlands. But it also included some face-to-face interaction during visits of the experts to Kenya. While an experienced business advisor provided most of above support, two Venture Capital investors also provided feedback to the selected entrepreneurs to increase their understanding of available investment options and help prepare them towards up-scaling.

The experts also acted as sparring partner for companies on funding processes from a pure business perspective as part of the application and screening process for the investment and innovation fund.

Generally, providing 'customised business support' by SWA next to technical and financial support created opportunities to assist businesses to prepare for going to scale beyond the SWA program timeline.

2.4.2 Farmer capacity building and Local Capacity Builders

SWA also catered for capacity building of farmers, both directly and indirectly. Directly, by working with selected farmer organizations and lead farmers to promote SWS. Indirectly, through the businesses and the mobilization of so-called Local Capacity Builders (LCBs).

It was SWA's explicit strategy to work with LCBs to build capacities of farmers and, if needed, other stakeholders in the irrigated agriculture value chain in Kenya. LCBs are existing Kenyan organizations, mostly companies, or individuals that provide on a regular basis a significant volume of quality non-financial capacity development support to organizations at different levels.

The main role of the LCBs was to train the farmers on markets, businesses and agronomic practices. They also supported business development service by connecting farmers to different companies and support sector technical knowledge. SWA has thus worked with Tymax, AgriChains, and Jospa Business Solution in the focus counties.

In working with LCBs SWA realised that though the most capable ones were located in or around Nairobi it was more effective to work with LCBs with a strong presence and interest at county level. For them it is relatively easy to provide follow-up to farmers trained even after project closure. Linking the LCBs into the IAPs also proved to be a good strategy to embed the capacity building in the wider FLID support in the county.

03

EMERGING BUSINESS AND FINANCE APPROACHES FOR FLID

To foster inclusive business and financial models for SWA, the programme has supported businesses that have emerged in support of FLID. The information in this chapter is based on the interviews of the business cases that benefited from the innovation and investment fund to find out the experiences and draw out lessons learnt in implementing the project. .

A workshop was organized to share experiences between the beneficiaries of the innovation and investment fund.

The 8 approaches discussed below emerged as SWS promotion strategies by various businesses and have the potential to scale. While these mechanisms were not proposed at the design or implementation stages, they emerged from our understanding of the farmers' challenges on working with the variety of businesses in the sector. We discuss each of the approaches making use of one business example for each approach.

- Business process reengineering: Leveraging on established distribution networks
- Integrated services provision for FLID
- Product differentiation: In-house lending approaches for inclusive financing
- Customer lock-in: Embedding SWS in Savings and Credit Cooperatives (SACCOs)
- Network marketing: Agency and Microfinance
- Insurance hedging: De-risking FLID
- Forward-market based investment pooling: Anchoring SWS through a buyer.

3.1 Business process reengineering:

3.1.1 Leveraging on established distribution networks

Irrigation technologies and commercial products targeted to entrepreneurial farmers need well established distribution channels to ensure farmer have effective access. SWS products are fairly of high value and technical in nature and therefore require elaborate marketing schemes especially the distribution network.

Establishing an elaborate distribution system takes time and can be costly, especially at the initial stages.

This is particularly the case with new technical products requiring intensive promotional campaigns backed up with practical trainings and demonstrations. Some technology supplying companies opt to partner with already established distributors to introduce their new products allowing quick introduction of the product in the market.

Such distributors however, may have products that are direct competition for the partner business while others may be complimentary. It is therefore upon the supplying company to take charge of the marketing role to ensure their products take the desired position within the distributor's outlets.

Most of the manufacturers of agricultural inputs and products in Kenya use agro-dealer outlets, commonly known as 'agrovets'.

These are general agriculture and livestock outlets independently owned and therefore lack uniformity in structures and standards.

Established distributor networks have the advantage of being centrally controlled, are well structured, use established brands and conform to set standards.

FUTURE PUMP -SF2 SOLAR PUMP

Future Pump is the manufacturer of the SF2 solar pump. To scale-out its operation it has leveraged its distribution network with Davis & Shirtliff - a leading supplier of water related equipment in East Africa. Future Pump applied for and received investment co-funding from SWA to assist in setting up demonstration plots, showcase solar irrigation, provide agronomical support to farmers and improve its social media marketing. The collaboration with SWA also allowed Future Pump to experiment with various strategies on how best to market their product while working with an established distributor. Davis & Shirtliff has 35 branches in Kenya and a broad customer base. According to Future Pump, the partnership

with Davis & Shirtliff as well as with SWA was a big advantage. As a result of this, early 2018 their corresponding sales had more than doubled as compared to the previous years.

Overall, Future Pump is very satisfied in leveraging the distribution network of Davis and Shirtliff. It feels it was useful as it “limited their headaches” in achieving their sales targets. Having Davis & Shirtliff as a partner allowed them to focus on what was key to them: having a well-functioning product with good promotion strategies. Working through Davis and Shirtliff Future Pump was able to sell and distribute 260 pumps at relatively limited costs.

Mode of advertising	The people reached
1. Demos/Farmers	15,430 people
2. TV Advertising This was done by UTUGI TV for two weeks	The TV station has an audience of over 200,000 farmers. Sales representatives spoke to over 100 people who called to enquire having heard the radio advert
3. Social Media	8,099 responses 1,244,425 people reached
4. Email Communication	15,623 emails sent
5. Sales	4 new Distributors 67 sold in the 5 counties 260 pumps sold nationwide 1,170 pumps imported into Kenya

Table 2: Future Pump Sales Report

Lessons Learned:

- Businesses can really make impact when they focus on their core business - their product, rather than try to set up an own complete supply chain. Future projects may advise partners to make use of the distributor networks to leverage on reach and put more focus on other key project activities.
- Working through a distributor implies having to jointly market your product. Therefore, the company that follows this approach has to take an active role in ensuring their products are being marketed and displayed correctly at events. This requires continuous staff training for their staff and those of the distributor.
- “Low-cost strategies”, such as digital marketing through internet - social media and radio are equally or more effective in terms of triggering sales than field days and demonstrations. This differed from one region to another. Trusted agricultural extension agents proved again also to be instrumental in creating awareness of the products.
- Also in this case access to finance and working with financial institutions was and is an issue. Both finance and technology providers need to make concessions in order to effectively reach out to smallholder farmers. In the words of Future Pump staff: “After knowing the product, we had to understand how to work with distributors. We want the same from financial institutions.” Access to finance and working with financial institutions remains a problem for Futurepump. Both the finance and technology providers need to make concessions in order to effectively reach out to smallholder farmers.



3.2 Integrated service provision for FLID

Detecting and attending to symptoms of crop stress is critical in averting huge economic losses in farming, particularly in irrigated agriculture. But knowledge of crop stress is not enough.

Equally important is to know the source of the stress. Smallholder farmers would very much benefit from comprehensive solution providers who help them address agronomic, crop health and even marketing challenges for their crops. Some SWS providers have attempted to offer integrated services either by themselves or by partnering with other services providers with complimentary services. Such integrated support services need to be well coordinated so that the farmer receives seamless wholesome attention without obvious distinction of the different service providers.

A well-integrated service should have an integrated payment system so that the farmer pays at one point for all the services received. An example of integrated service provision is a company offering early detection of crop stress is partnering with other companies to also identify the source of the stress.

THIRDEYE FLYING SENSORS

Future Water is a Netherlands based organization and SWA supported them to set up business in Kenya where they now operate as ThirdEye Flying Sensors. ThirdEye uses remote sensing through drones to generate for farmers detailed real-time agronomic information on an agricultural area of up to 100 ha.

The flying sensor report will show crop areas that are experiencing stress. This information helps farmers to take decisions regarding application of often limited resources such as water, seeds, fertilizer and labour. This enables farmers to optimize their crop production and simultaneously minimize resource application. SWA worked with Future Waters to pilot its product in Kenya and explore ways to make it commercially attractive and sustainable.

ThirdEye has partnered with other organizations to compliment expertise of its own agronomist and offer a more holistic service to the farmers. One partnership has been with Agrocures to offer soil-testing services. Adding soil data to the sensor report helps the farmer

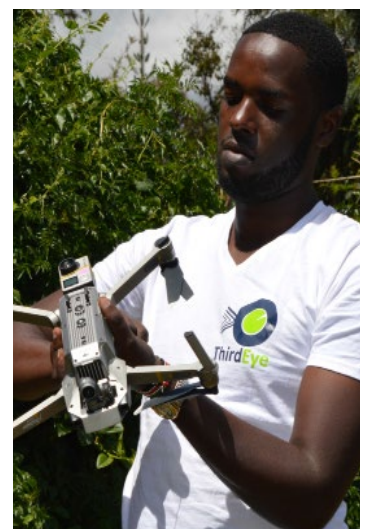
to better understand the source of the stress, inadequate water, deficiency in soil nutrients or pest & diseases. Integrating soil testing with sensor services ideally reduces the costs of these services. Currently the integrated service seems very affordable to farmers.

The starting price for the service has been set at 150 KES per acre, with a minimum of 300 KES. Field surveys with farmers suggest the willingness to pay for the service at this cost. The operator suggest that this price is a good start-up price, perhaps on the low side of the extension service spectrum, and could be increased in the future as the service becomes more popular.

“To make the project in Kenya equally (or even more) successful as Mozambique, we believe face-to-face sales and management training to our operators and local representative is key. By giving them the tools to engage in a problem-led sales conversation, the project will turn into a sustainable service provider in Kenya”, believes Martijn de Klerk – Project Manager FutureWater.

Box 7

ThirdEye uses remote sensing through drones to generate for farmers detailed real-time agronomic information on an agricultural area of up to 100 ha.



Lessons Learned:

- Integrating supporting services as an approach to accelerate FLID requires significant attention. The support would best also include attention to more traditional ways of increasing water productivity like use of drip irrigation, rather than focusing only on early detection of water stress on crops.
- Within the SWA project, greater diversity in technologies such as Third Eye would have been beneficial to leverage the opportunities of these cases more and create relevant partnerships. Within projects, it is important that supporting services are not merely used as “another” technology that needs to be promoted – its value should be used in combination with other technologies and partners.
- It is very important to turn an innovation – however interesting - into a good business case. This business of course needs to be profitable and this is only possible when enough sales volume is generated. This requires sales and logistics to be put in place. The issue of commercialization should already be part of the piloting process.

3.3 Product differentiation:

3.3.1 In-house lending approaches for inclusive financing

Given that access to finance through regular financial institutions remains a key challenge in scaling farmer investments in FLID, several companies supplying smart water solutions like solar water pumps and agricultural inputs are experimenting with the provision of in-house credit facilities.

SWA collaborated with two companies, Sunculture and Amiran, to further develop this approach (Box 8).

In-house credit helps to circumvent the reluctance of financing institutions to take on the complex range of risks often associated with smallholder irrigated agriculture.

SUN CULTURE AND AMIRAN

SunCulture applied to the SWA innovation fund to extend the pilot of its smallholder asset financing platform, known as Pay-As-You-Grow or PAYGrow, supporting sales of its solar pump. SunCulture had earlier received some support to identify areas of attention in commercialization of the PAYGrow platform. With help from SWA, SunCulture moved the platform from pilot to proof of concept as a basis for raising commercial credit. Customers can pay SunCulture remotely, i.e. by Mobile Phone, with small, regular increments. Through mobile connection SunCulture can remotely switch off the pump until the customer has made their next payment. With SWA Sunculture expanded the coverage and uptake of PAYGrow users to learn how it would work at scale.

The project also worked with Amiran, a larger company selling agriculture technologies and inputs throughout the country through a one-stop-shop approach to farmers, in piloting its “Project Madaraka”. This is a newly developed internal credit facility for small growing farmers and SME Agribusiness, both of which are underserved segments the company is looking to grow its footprint with. Project Madaraka offers packages of different Amiran products on cash flow linked terms. This means that the payment plans are structured in such a way that the revenue generated by the package is sufficient to meet repayments. Products provided on credit included input packages for a growing season and irrigation solutions for farms below 5 hectares. Amiran’s holistic approach is focused on both technology and agronomic support. This combination is essential in providing a comprehensive solution to the farmer and manage operational agronomic risk. Although the package is more expensive to the farmer than business as usual (purchasing a limited number of individual products on cash), the complete package solution approach ensures the farmer achieves higher yields and positive ROI, whilst providing credit ensures that the farmer is not financially excluded from being able to access the full product range.

Box 8

SWA learned several lessons again from working with partners to implement this approach. These include the following:

- In-house credit helps to involve the farmers in the product design since the farmers' cash flow situation needs to be thought through carefully. Having a comprehensive credit option is often more beneficial than having several disintegrated options provided by different parties. Also in other SWA cases farmers show considerable interest in receiving in-house credit from distributors.
- Offering in-house credit brings along risks for the technology provider. One way to de-risk is to work closely with committed off-taker, a company taking responsibility for purchasing farmer products. This proved to be a key success factor for the in-house credit strategy. Amiran went as far as working with several larger off takers in jointly designing the credit package.
- The credit system needs to be designed by the technology provider, the above off-taker and farmers. They all have a stake in this as farmers can increase their yields and profits, technology-cum-credit providers increase their pay-back rates and the off-takers increase their traded volumes. Special attention needs to be given to capacity building of the off-takers, so that they get an incentive to put resources towards the project.

Another important lesson learnt from the above collaboration is:

- The importance of increasing physical presence of the technology provider on the ground. Demos in-house are a good outreach method rather than working through field days hosted by others. These demos in-house serve as a distribution point where after sales concerns can be addressed too.



3.4 Customer lock-in:

3.4.1 Embedding SWS in Savings and Credit Cooperatives (SACCOs)

Savings and Credit Cooperatives (SACCOs) are widespread in Kenya and have amassed a wide customer database with about 40% of Kenyans belonging to one or more. Although SACCOs are very much akin to the banking business and share similar processes, procedures and working frameworks, they have the added advantage of being viewed as a friendly, non-constrictive option for the people. SWA worked with:

KUSCCO

The Kenya Union of Savings and Credit Cooperatives (KUSCCO), an umbrella organization for Kenya's vast network SACCOs. They have co-created a Smart Water Loan product for affiliated SACCOs. Through its Central Finance Fund, KUSCCO provides low-cost loans to SACCOs, leveraging members' deposits to provide credit for activities ranging from housing and education to small business and agricultural loans.

KUSCCO applied for the innovations fund to support product development and sensitization for a Smart Water. In a previous project, KUSCCO had focused to provide access to low cost finance to acquire cook stoves and believed this model could be up scaled for smart water solutions. To select technology suppliers, KUSCCO placed a call for Expressions of Interest in the local dailies, to which 9 businesses applied. On basis of elaborate criteria, KUSCCO selected SunCulture and Davis & Shirliff/Future pump.

Since the SWS were new products to KUSCCO, capacity-building exercises had to be carried out to the KUSCCO marketing staff, board members, respective SACCO staff and clients. In total 101 SACCOs were reached through the sensitization workshops, 13 SACCOs were trained and three SACCOs were loaned a total of KES 4,500,000.

Box 9

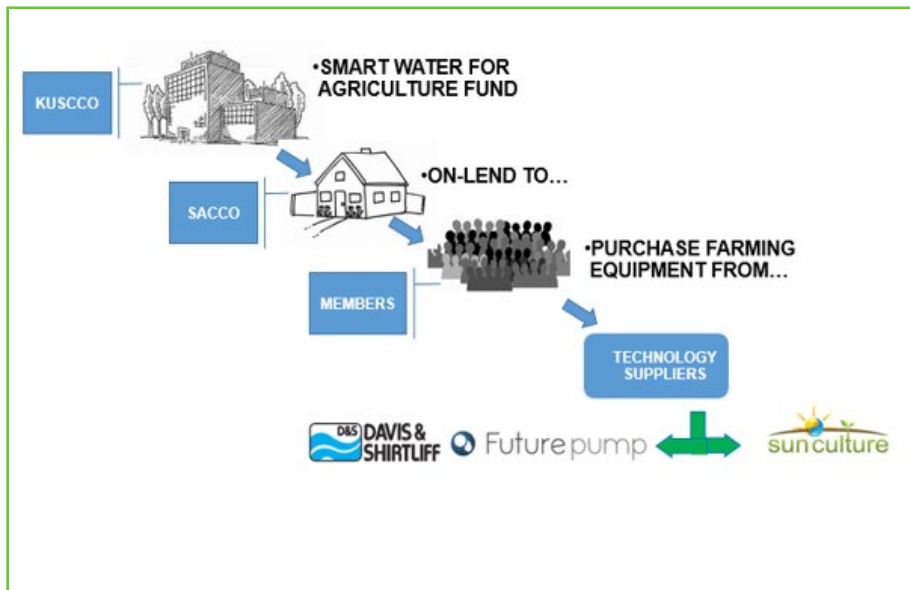
**KUSCCO LTD.**
Kenya Union of Savings & Credit Co-operatives Ltd.
SWA LOAN

10%
REDUCING
BALANCE

12 MONTHS
REPAYMENT
PERIOD

APPLY NOW





KUSCCO LTD.
RURAL FINANCIAL SERVICES & CREDIT FOR RURAL KENYANS

SMART WATER FOR AGRICULTURE

GET A

A SMART WATER LOAN

WITH INTEREST RATE **FROM 10% P.A.**

A MULTIPLIER OF THREE TIMES SAVINGS

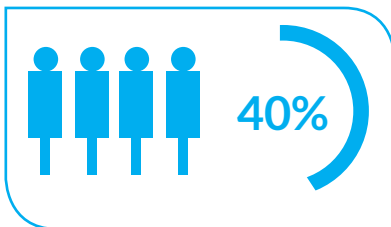
UP TO 12 MONTHS REPAYMENT PERIOD

For funding call KUSCCO on 020 2730191 | 0722799390

Process flow for KUSCCO project execution

Lessons Learned

- KUSCCO experienced initial low uptake and adoption due to barriers like sceptical technology uptake and indebtedness. Farmers do not immediately trust the product and struggle to pay of other loans hence the need for constant sensitization of all stakeholders.
- The capacity building process needs sufficient time and resources. In this case capacity building was done at three levels. The KUSCCO marketing staffs in the selected regions were trained. After the training, they needed to select SACCOs within their regions that would be interested in the product and organise trainings for the board members and select staff of the SACCO. The board members need to be trained to obtain buy-in, catalyse adoption, and act as influencers. After the training the SACCOs then make applications to KUSCCO for loans to on lend to their members.
- There is large potential for SACCOs to integrate SWS in FLID. Their membership-base is usually quite large and local, which would also increase member-to-member learning for irrigation.



Kenyans belonging to one or more SACCOs

3.5 Network marketing:

Agency and Microfinance

Whereas bank officers' strength lies in selling monetary products (loans), technology providers are comfortable with selling technology products. However, farmers need both the loan and the product.

To bridge this gap, Mak5 Business Hub, a private company specialized in financial solutions, invented an Agency Network model (ANM) to promote the sales of water tanks for two Micro Finance Institutions- Juhudi Kilimo and Musoni . The agency network model (ANM) is an innovative approach to promote the adoption of SWS for Micro Finance Institutions (MFIs). The model is used to serve clients of MFIs, through recruited agents (existing MFI clients) who are influential and enterprising, based in the very remote places where the suppliers and the MFIs may not be present.

These agents assist in marketing and promotions, consolidation of orders and loan requests, delivery of product logistics, information dissemination, and collecting feedback from the end users to the financial institutions or technology providers.

JUHUDI KILIMO AND MUSONI

Juhudi Kilimo and Musoni are microfinance institutions (MFIs) that have various products for smallholder farmers. Both MFIs applied the ANM in different ways. Musoni incorporated the product agents into their already existing "Friends of Musoni" (FOM) network. Juhudi Kilimo coined their grassroots agents "Balozi" meaning "ambassadors" of Juhudi Kilimo. Together with Mak5, the parties worked on developing and refining their marketing models so that group leaders could take up the role of promoting and educating members in various smart water technologies.

Process:

1. First, it is essential to target the right agents. It is desirable that MFI agents have a good record with the financial institutions and are opinion leaders in their areas and that are trusted by the community.
2. Trainings: agents are not just trained on the technical aspects and advantages of the technologies; they also receive trainings on networking and outreach, financial literacy, and market dynamics. The physical tank is often the starting point, since that is tangible.
3. Agents can easily channel feedback of challenges on the ground to their local branch. The closeness of the agent to the community also reduces the intensity for vetting the loan applicants by financial institutions; reducing the default even more. The default rate of Juhudi Kilimo was close to zero.
4. Rather than merely using the agents as sales agents, they are also used as a source of information about the product for trouble shooting and basic repairs with the technology companies, increasing customer service. The, MFIs are experimenting with ways that agents can get a commission based on recovery rather than on closure, to incentivize that agents are critical in their selection of clients

Box 10

Lessons Learned:

- It has been useful to pilot the ANM directly with farmers and financial institutions to prove its success in a bottom up approach critical in adoption of SWS. Since on boarding Mak5, the MFIs have at least doubled - if not tripled - their sales of the loan products
- Incentivizing the sales for the agents was a value addition – the commission based sales incentives motivated the agents to recruit many groups and clients for the MFIs
- Branding of the tank also seems to be successful in terms of uptakes for loans. Both MFIs would have their names on the tanks, so farmers would immediately see whose products they were buying
- Management of the agents in terms of training, and keeping them motivated calls for substantial financial and time investment.



Co-branding of a water tank between the manufacturer & financier for the agency strategy

3.6 Insurance hedging:

De-risking FLID

In a business context to de-risk means to reduce/avoid risk or less likely to involve a financial loss. In the loaning process many financial institutions demand collateral from the borrower as a fall back in case the loan is not paid up. This is often a barrier to accessing finance because certain target groups, mainly women and youth, lack collateral. Sometimes the collateral, even when present, is not sufficient because financiers will require a collateral coverage ratio of 1.5.

The project has worked with ACRE Africa to undertake a study with the hope of piloting a multi-risk micro-insurance as an access to finance service to de-risk the acquisition of loans by farmers for smart water solutions.



DE-RISKING FLID INVESTMENTS: THE CASE OF ACRE AFRICA

SWA worked with and co-funded ACRE Africa in developing a product that insures farmers for yields realised as well insures the equipment. Insurance products for smallholders have to be affordable, understandable, and within the farmers reach, which is quite a challenge. In developing a micro-insurance product for irrigation, one needs to collect data on the correlations between irrigation and yield and all the different risks to crop failure.

With SWA support, ACRE Africa undertook a baseline-study, developed the insurance product and piloted it. The strategy was to work in this with farmer groups linked to a buyer that would allow them to sell their produce. Finding a buyer that was willing to share required data (needed to design the product) on their farmers proved challenging, but eventually a partner was found in Flamingo Horticulture which allowed the data collection and analysis to take place. This still was a lengthy process, as ACRE Africa did not have direct access to the data. After the study, ACRE Africa started piloting the product with four partners: **Off-taker**- Flamingo Horticulture, **Re-insurer** - Swiss Re Group, **Input/Credit provider** – Amiran and **Insurer**- Heritage . The crop insurance product is bundled with credit provision, extension service and a curriculum developed to support the insurance trainings. The bundling is essential for the farmers to see the direct relevance to the product.

Box 11

With SWA support, ACRE Africa undertook a baseline-study, developed the insurance product and piloted it.

Lessons learned

- Access to and making use of insurance happens at the individual level. Farmer data is important in structuring the products. Access to this farmers' data need to be thought through in the design process to allow for smooth implementation.
 - It proved challenging to find partners that were willing to share the data that are required in developing ag-insurance products. In this case, a lot of hard-copy records from farmer groups available at the buyer centre had to be digitized. Future projects should be aware of this. In practice, off-takers do not share their data easily.
 - Capacity building is key. Agricultural insurance products are highly complex. These products thus need a lot of "sensitization" at all levels. Farmers should receive consistent trainings. This should not only include training on the insurance, but also include financial literacy, agronomy and the irrigation technology.
 - Different stakeholders (insurance company, technology provider and/ or MFI, farmers, off-takers) have to be convinced of the added benefit of the insurance and willing to put skin in the game. This thus requires multi-stakeholder collaboration and related sensitization which takes time.
 - Development of insurance products and their introduction with related trainings are costly and therefore require some form of co-funding.
-

3.7 Forward-market based investment pooling: Anchoring SWS through a buyer

Buyers (often called off takers) are organizations that enter into agreement with producers in which arrangements are made to purchase all or portions of the produce once ready. This is also commonly referred to as contract farming.

Such buyer agreements are particularly useful to smallholders, as they not only guarantee market but also ascertain minimum prices. The buyer is equally guaranteed supply and can also make delivery commitments to the clients who are mainly retail outlets in case of horticultural products. To ensure consistency in quality and quantity supplied, the buyer organization supports the producers in capacity building, linking with service providers and quite often in guaranteeing payments for services from third parties.

SWA has worked with Frigoken, a fresh produce exporter who sources from farmers to co-invest in improving the irrigation infrastructure. Frigoken is interested in improving the consistency and volumes of produce delivered by the farmers and thus their motivation to invest in the Project. SWA supported Frigoken to increase the farmers' efficiency in irrigation.



Lessons learned:

- A buyer provides stability in the value chain thereby giving the other partners confidence to invest in the value chain. This was further boosted by the presence of SWA and government agents. The complementary knowledge of technical knowhow brought in by the project to the farmers was useful and the government was involved to ensure the regulations were observed in addition to supporting farmer mobilisation. Frigoken's local team that has close ties and knowledge of the community plays the major role of buying the produce. The cost sharing of the project budget with the allowed for empowerment and ownership of the project. As a buyer, Frigoken wishes to limit the dependence of the farmers. The SWA programme will leave, but Frigoken is there to stay.
- The community could not contribute funds, but did in-kind contributions through digging the relevant trenches for the laying of the piping after having received the technical trainings by SNV. This way, they determined the routing of the pipes to ensure equitable access of water to the target community.
- Community engagement also comes with its challenges. In the process, community expectation management is key. Once the community is convinced, they want to move forward. Technical hitches caused delays in the project. This was a risk to the community engagement – the project could have lost its momentum. Delays should be avoided as much as possible and clear communication to the community is key. Alternatively, the feasibility study could have been more thorough to either foresee delays, or the project should have created the contingency to leave enough space.
- While as a buyer Frigoken in the strict sense did not introduce or incorporate a new SWS, they played a critical role in making irrigation water accessible to more smallholder farmers. In this way off-takers can indeed be used in many beneficial ways to support smallholder farmers. Yet, other projects might still experiment with off-takers that incorporate SWS in a systematic way.



FRIGOKEN

Frigoken is export-oriented vegetable processing company, with a main focus on French beans. Frigoken worked with two farmers groups in Nakuru-Kirurumo with the Kirurumo Dam Irrigation Project and Kirinyaga-Ngekenye with Ngekenye Water Project to improve on their water infrastructure to increase productivity of French beans for these groups.

To Frigoken, irrigation is one of the key areas they would like to co-invest in, since irrigation will mean more consistent and bigger volumes from their farmers. Frigoken partnered with the project to increase access to water for their farmers through the rehabilitation of irrigation infrastructure for two of their farmer groups.

The project, Frigoken and farmers shared the costs of putting up this infrastructure. The farmers mainly provided labour while the project and Frigoken contributed knowledge and expertise in designing the infrastructure, and materials.

The project also trained the farmers on installation and operations and maintenance of the infrastructure. The project was able to reach 700 households, and increased production units (averaging 100sqm) from 433 to 2000+.

Box 12

04

SCALING THE BUSINESS APPROACHES

The overarching objective of the business and financial models scaling strategy is to see how to achieve higher impact. This is done by ensuring that a larger number of entrepreneurial farmers have more productive and inclusive farms enterprises; have improved access to and can put to use SWS that have proved to be effective - at affordable level of investment in the long run.

Scaling could therefore mean increasing business for the private sector and reaching more impact for the public sector. But scaling is also associated with getting beyond pilots and leveraging budgets and efforts in an efficient way. In business and finance strategies, scaling may mean reaching more people (beneficiaries or clients), entering new markets - expansion, increasing sales turnover and size of operations among others.

This chapter focuses on the scaling ambition, the pathways and key drivers to scale of the different organisations at the end of this project.



Business and financial models scaling strategy is to see how to achieve higher impact



Future pump

Future pump will continue partnering with Davis & Shirtliff but will invest in more marketing activities to increase sales from these outlets. Futurepump will also explore possibilities of partnering with more financial providers to make the SF2 pump more accessible. Futurepump will also partner with other small distributors to supplement the Davis & Shirtliff outlets network. The strategy is to make their product readily available to their target clients – smallholder farmers.

After the project, the farmers/community are in charge of the operation & management. It is a bottom-up approach rather than a top-down approach, and therefore it is now upon the community to make sure they use the water to irrigate their crops. The farmers are treated as businessmen and women, not as beneficiaries, and it is therefore expected that they are responsible to reap the benefits from the project. Through the trainings, farmers should now have sufficient knowledge themselves on how to use this. It is too early to discuss any of the results, but is foreseen that this partnership will increase farming activities, increase income, and therefore spill overs will be seen, but Frigoken did not see an active role for themselves in scaling. They feel like scaling should happen across the board. They feel other NGOs and governments should work with the private sector to create similar partnerships.



SunCulture will keep expanding their physical presence and look for relevant partners to work with to foster sustainable relationship. With help from SWA, SunCulture moved the platform from pilot to proof of concept as a basis for raising commercial credit. The goal is to integrate PAYGrow as a sustainable product offering with positive ROI and well thought funding.

KUSCCO is interested in rolling out the smart water loan offering to all its 5 regions. Blended finance will make it possible to expand the trainings to more SACCOs in these regions. This may still require additional funding to enable the loan product reach to scale for self-sustenance.



KUSCCO LTD.
Kenya Union of Savings & Credit Co-operatives Ltd.

-The SACCO Family Union-



The project also worked with Amiran, a larger company selling agriculture technologies and inputs throughout the country through a one-stop-shop approach to farmers, in piloting its "Project Madaraka". This is a newly developed internal credit facility for small growing farmers and SME Agribusiness, both of which are underserved segments the company is looking to grow its footprint with. Project Madaraka offers packages of different Amiran products on cash flow linked terms. This means that the payment plans are structured in such a way that the revenue generated by the package is sufficient to meet repayments. Products provided on credit included input packages for a growing season and irrigation solutions for farms below 5 hectares. Amiran's holistic approach is focused on both technology and agronomic support. This combination is essential in providing a comprehensive solution to the farmer and manage operational agronomic risk. Although the package is more expensive to the farmer than business as usual (purchasing a limited number of individual products on cash), the complete package solution approach ensures the farmer achieves higher yields and positive ROI, whilst providing credit ensures that the farmer is not financially excluded from being able to access the full product range

ThirdEye is reaching out to different partners to enhance their product offering. They are exploring different strategies of reducing operational costs as they commercialize their service. The requirement of flying licence per county is a major barrier to scaling. This is especially so as this is a new technology to most county governments.



The model has been very successful and thereby sustainable; both financial institutions (Juhudi Kilimo and Musoni) have included the products in their portfolio. Juhudi Kilimo is using the agency network for other products, and is continuing the trainings of staff and more agents. It is in the operational interest for both FIs to institutionalise the Agency model to their business and operations strategy. They are also experimenting with digitalizing and professionalizing the registration processes, and other methods to ensure that the ANW is working correctly. To support the already existing agents and new ones, Mak5 is looking at ways how they can identify "managers" of the Product agents to support them more proactively.



ACRE Africa is planning to continue the pilot. They will do continuous engagement with farmers and do fundraising to ensure continuous capacity building for farmers. They will also identify more value chains to adapt the product for upscale. ACRE Africa is exploring a more effective strategy to effectively engage the smallholder farmers whose main challenge is their disaggregation and therefore difficult to apply uniform treatment.

05

CONCLUSION AND LESSONS LEARNED



This publication has provided an overview of what the project has been able to do with regards to finance and business strategies to promote FLID. Efforts have been towards the promotion and adoption of SWS, but it cannot stop there. FLID is still a process that is on-going and requires active attention and investment by farmers. Even after this project, there are still challenges to be overcome.

Generally, the farmers, businesses and other actors involved have appreciated the initiatives of the project. As shown from the case studies above, specific business approaches have different learnings and experiences.

We drew a number of conclusions on a project- or even sector-level to promote and implement inclusive business and finance models.

Generally, the farmers, businesses and other actors involved have appreciated the initiatives of the project.

1. Fund management

The IFF has been one of the main drivers of promoting inclusive business and finance in the project. The lessons learned are crucial for any programme or business interested in this fund as a donor or beneficiary.

Parties working with and IFF should ensure ownership of the fund. In SWA, Ownership and freedom of implementation by the businesses was found to be the most successful factor in the IFF. Deliverables were clearly defined beforehand, but got freedom in the implementation. This ensured that the different businesses have really committed and therefore also had more potential to scale. “The SWA programme will leave, but the private sector is here to stay. SWA very much respected this.” – Nushin Ghassmi, PSI Kenya.

- The co-investment also ensured that a lot of businesses could ensure buy-in from top management. Product development is costly. Through the co-investment, the businesses could prove a particular model attracts commercial capital and therefore put a case forward to scale.
- Most businesses found the one year-duration too short. The amount of money was sufficient there was little time to spend it. “New technologies need some handholding” – Mak5. Due to hesitance about investing in new technologies of farmers that they haven’t seen the evidence of adoption by farmers is sometimes slow. Flexibility in timing of the fund provides opportunities to the different businesses to plan their trainings in the relevant seasons i.e. for water harvesting, it might be desirable to do trainings before the rainy season. Still, some businesses appreciated that the fund was flexible enough to give them extensions should unexpected challenges have come up. Therefore, this might have been more of a communication problem rather than an issue in designing the fund.
- When designing an IFF, careful attention has to be paid to the application and selection process. In the project, due to the rigorous process, expectations of all parties were very clear. However, the process was too lengthy and poorly communicated. The approving committee would take very long to review cases. Sometimes, specifically when community or third party expectations were involved, this resulted in loss of

momentum. Future projects should either ensure frequent meetings of the approving committee, or find alternative structures and ways of communication in which to provide feedback on different businesses. The donor should also not be involved in decision-making on selection of the cases but maybe offer an overall guidance role. This is because the donor opinions carry a lot of weight and other committee members may feel uncomfortable expressing contrary opinions.

- There has to be timely achievement of deliverables on the beneficiaries’ side, and timely disbursement on the organization’s side when working with an IFF. In SWA, delays in the disbursement of funding proved to be challenging. Sometimes, disbursements were delayed because partners had not yet achieved their deliverables. Other times, delays would be caused by internal organizational procedures. The business cases involved in the project had enough resources to advance the money so that events did not have to be cancelled, but if this would not have been the case this could have caused serious implementation issue. When designing the fund, it is important to realize realistic timelines.
- Scouting different businesses to work with can be done in different ways. After the fund was disbursed, different inclusive business and finance approaches emerged. These were approaches were identified in hindsight, but not used as a selection mechanism to scout different businesses. Other businesses could identify these approaches prior to the fund was disbursed, and use it to scout businesses that could suit this approach.

2. Partnership management

Managing partnerships is a delicate process requiring commitment and trust from both parties to reap maximum benefit from the relationship.

- Both the Project partners and the project advisors feel partnership management has been a major challenge. Creating partnerships between financial institutions and technology suppliers was not easy. Major financial institutions were sometimes rigid, and the technology suppliers felt that SWA could have done more to train these institutions on their inflexibilities and ‘blind spots’ – i.e. monthly repayments, extensive recordkeeping, and collateral requirements. Managing a partnership is also a

complex process that required a lot of commitment from both parties. Sometimes, cases of no-show on events or radio-silence during discussion of potential partnerships. At times, partners had disagreements with partners on which farmers would be relevant to train and which would not. Clearly formalizing the audience and other agreements in MoU's is therefore essential. Though most of these things were beyond the Project reach, partners felt that SWA could have provided a 'push' in the right direction of some partners.

- Partners have expressed the need for more synergy between the different business cases. Some of the products offered are quite complicated and require in-depth trainings and partners need more time investment to realistically comprehend how they can be engaged in a partnership. This required more capacity building from the SWA's side and thus reduce the outreach costs for partners that wished to collaborate. Furthermore, more learning events would be a good opportunity for sharing experiences and challenges. Future projects should attempt to create more opportunities for sharing.
- For some business cases, especially those working with third parties, the sensitization process was difficult and lengthy. It takes time to get the right partners on board and therefore future projects should take that into account and allow for adequate time.
- There is need to do more mobilization and synergy between the different businesses throughout the project. For example, Future Pump said though the trade mission had been a great opportunity for this, there are other occasions needed to sit down and talk about the solar pump sector. The sector is struggling with 'image' issue – solar pumps are viewed as unreliable. There are 'Shrewd entrepreneurs' – technology suppliers that are looking for a quick one time sale but do not provide quality products and after sales backup. This generally erodes the gains being made in promoting solar technology in the market. There is need for some sort of 'sector-check' about what is being offered in the market - issues that can be discussed in the IAPs. The National Irrigation Platform (NIAP) in particular can effectively play the role of supporting policies that regulator this sub-sector.

3. Access to finance

Access to finance is always considered a major hurdle for smallholders to take up and invest in SWS as financial institutions consider them to be risky borrowers often without collateral. This remained the case even when new farmer clients were introduced through SWA partners.

- There is generally more openness and flexibility at the side of micro finance institutions to engage in SWS linked product development as compared to the major the banks. This may be caused by recent Kenyan regulations capping interest rates in Kenya which affect banks but not MFIs. Interest rate capping has led banks to lock-out SMEs and other "high risk" borrowers like smallholder farmers from accessing credit.
- In practice many farmers manage to self-finance their irrigation developments, in some way. This is positive. It also allows for farmer-to-farmer learning. Farmers serving as examples in their communities have to be able to advise other farmers in accessing irrigation equipment, and knowhow, a promising pathway.
- Focused farmer financial training and awareness creation is a way to help prepare farmers for interaction with financiers. While a project can fund this for the short term it remain a question which actor would be able to provide for this in the long-run.

4. Communication

Effective and timely communication is crucial in working closely with such a large and diverse network of partners. A number of lessons have been learned in this across the cases.

- Rather than relying only on direct SWA-partner communications an information and knowledge portal accessible to all partners can play an important role. This would allow all to upload information on progress and, particularly, announce relevant events hosted by them. Such portal would increase transparency amongst different business approaches and make information available to all. For companies the events are important as they provide opportunities to engage with farmers, their clients.

- In communication with partners one should be aware of the different levels and parts of the organisation and how internal communication functions and act pro-actively on it. For example, mis- or lack of communication between headquarters and local branches in some partners that SWA was not alert off proved to be problematic.

5. Stakeholder engagement

The success of a project like SWA depends fully on effective engagement with exactly the relevant partners.

- Generally, the involvement of so-called off-taking companies, including exporters, has been relatively limited. This in spite of their direct linkages with farmers ensuring them market access and thus de-risking investments such as in SWS. Connecting farmers to off-takers is thus potentially a good alternative to searches for collateral. The limited involvement of off-takers is perhaps partly due to SWA's choice – caused by the limited volume of funds available - working mostly with partners from other SNV linked projects. While farmer training included attention to access to markets, more would be needed in terms of understanding contract farmer and farmer group organization to reach volumes, for them to effectively link-up with off-takers.

- Choosing a limited number of priority counties does not always work well in the collaboration with business and finance partners having own priorities. Typically, e.g., MFIs cannot discriminate across their branches and therefore need to plan for train all branches and not just those in the project counties. Flexibility in choice of geographical areas to work in thus creates more avenues for collaboration.

In conclusion, there is huge untapped potential for engagement by the promoter of FLID. For inclusive finance and business strategies for FLID to succeed there should be innovative ways to make the technologies accessible and affordable. Promoters of FLID need to engage to understand their roles and the overall benefits of promoting FLID.

Investments are required for FLID to buy down the risk, to catalyse/blend additional investments, to test the innovations for proof of concepts and for technical assistance. Flexibility by funders to the different businesses is encouraged to allow business implementers explore different mechanisms that enhance their business.

References

1. Muturi J, Oggema S, van Veldhuizen L, Mehari A & Veldwisch GJ. (2019). Accelerating Farmer-led Irrigation Development: Theory and practice of the Smart Water for Agriculture in Kenya project. SWA Kenya, SNV Netherlands Development Organisation, Nairobi.
2. Veldwisch, G. J., Venot, J. P., Woodhouse, P., Komakech, H. C., & Brockington, D. (2019). Re-introducing politics in African farmer-led irrigation development: Introduction to a special issue. *Water Alternatives*, 12(1), 1-12.
3. Woodhouse, P., Veldwisch, G., Venot, J., Brockington, D., Komakech, H. and Manjichi, Â. (2016). African farmer-led irrigation development: re-framing agricultural policy and investment?. *The Journal of Peasant Studies*, 44(1), pp.213-233.



SNV Kenya Development Organisation / Ngong Lane, Off Ngong Road
P.O. Box 30776-00100 Nairobi / Kenya +254 724 463 355 / +254 0734 425 466 kenya@snv.org
www.snv.org