InovAgro's Voyage of Learning and Adaptation for Market Systems Development in Northern Mozambique

December 2021

William Grant, DAI
Technical Director, InovAgro

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

COWI

DAI
Shaping a more livable world.

Foreword and acknowledgements

This synthesis report reflects the evolution and learning from the InovAgro project over 11.5 years. The report captures the journey of Mozambique's first market systems development (MSD) project and how it led systemic change in the agricultural input, output marketing and access to finance market systems. Starting from very weak market systems, it was not an easy journey. There were a number of interventions which did not yield the expected results, but from which we learned and adapted. There were also many winners that proved impactful and were adopted, adapted and scaled by the private firms and various lessons drawn and shared. The report covers the three phases of the project, the evolution of the major interventions and an assessment of the systemic change driven by InovAgro. It concludes with insights into factors supporting successful MSD programming and some recommendations for donors funding MSD projects. There is a comprehensive executive summary, followed by a much more detailed report.

As with any project lasting 11.5 years, the success has been a team effort. Many people from many organizations played critical roles in its evolution, from the SDC and its advisors, the InovAgro staff to the DAI and COWI home office support teams.

From within the SDC, Michel Evequoz was the visionary driver of InovAgro's design, getting if off the ground, and adding the orientation towards the seed sector. Pierre Strauss supported the formative middle four years of the project when it went through the major internal learning and strategic adaptation phases. Horacio Morgado started as the project officer then graduated to economic growth team lead and was instrumental in InovAgro's progress over six years of the project's life. Fauna Ibramogy has been the project officer for the past four years helping to guide us during transitions at SDC. Lukas Ruttiman and Steven Geiger have helped to close out the final years.

The project and the SDC had steady guidance from external strategic advisory committees (SAC) which included years of input primarily from Gavin Anderson, Monty Hunter, Jane Grob, and Sydney Zharare. Their advice provided SDC with a grounding in the realities of MSD in the Mozambican environment.

Highest recognition must go to the three Team Leaders of InovAgro, who shaped and led the actual delivery. Chibs Nyalugwe built very strong relationships with government and many private companies while becoming the architect of the seed platform for dialogue (APROSE) during his three and a half years. Nephas Munyeche inherited a challenging situation and led the strategic redesign of the project in 2015. He launched most of the decisive interventions over his four and a half year tenure; his work with the seed companies, identifying the commodity aggregator traders (CATs) and building up the Fundo Agricolá were the anchors of InovAgro's success. Morgen Gomo had to manage during the most turbulent external times during the final three years, when he successfully navigated reponses to the two cyclones and the COVID pandemic. He was able to liaise and engage with our private sector and government partners to ensure the graduation and exit from a number of our interventions. These team leaders were supported by many quality technical and support staff from start to finish, too many to mention.

COWI were steadfast partners during implementation, led by Rui Ribeiro. Rui was engaged with InovAgro from the first days of the design phase and was an invaluable sounding board on policy issues and government relations. His insights into the Mozambican agricultural development space and respected position in relation to government leaders were fundamental to the project.

From within DAI, both in Johnnesburg which initiated the project and DAI/Europe, many people contributed to the success. Sydney Zharare led the design phase in 2010 and was the first Project Director from DAI Johannesburg. Gregg Ravenscroft and Ingrid Kelling succeeded me as the Project Directors at DAI/Europe and were ably supported by Bhairav Raja, Daniela Armoni, Elena Belitto, Rebecca Gross and Nicole Bushayija.

William Grant,
Technical Director, 2010-21.

Contents

TABLE OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

A2F	Access to finance
ACAM	African Century Agribusiness Mozambique
ACL	African Century Lioma (also ACAM)
AGRA	Alliance for a Green Revolution in Africa
APROSE	Association for the Promotion of the Seed Sector
BEAM	Building Effectiveness and Accessible Markets
BOM	Banque Opportunidade Mozambique
CAT	Commodity aggregator trader
CSO	Civil society organization
DCED	Donor Committee on Enterprise Development
DFID	UK Department for International Development
DUAT	Formal Registered Land Leasehold
DPIC	Provincial Departments of Industry and Commerce
DMC	District Management Committee (of the FA)
e+i	employment and income (SDC network)
ETG	Export Trading Group (also known as Export Marketing Group)
FA	Fundo Agricola
FAO	UN Food and Agriculture Organization
FCDO	UK Foreign Commonwealth and Development Office
FDA	Agricultural development fund
FIP	Financial investment plan
FSD	Financial Sector Deepening
GOM	Government of Mozambique
ICM	Cereals Marketing Board
ICT	Information communication technology
IFPRI	International Food Policy Research Institute
IIAM	Mozambique Institute of Agricultural Research

IMAPEG	Instituto Médio Agro-pecuário de Gurué
KAP	Knowledge Attitudes and Practices
KYC	Know your client
M4P	Making markets work for the poor (now referred to as MSD)
MADER	Ministry of Agriculture and Rural Development
MDA	Ministry, Departments and Agencies
MIC	Ministry of Industry and Commerce
MINAG	Ministry of Agriculture
MSD	Market Systems Development
MSD N	MSD Network Mozambique
Mt	metric ton
NDA	National Department of Agriculture
NGO	Non-governmental organization
NSA	National Seed Authority
NUIT	tax registration
PPDP	Public private development partnerships
PSSI	Private sector Seed Inspectors
SAC	Strategic Advisory Committee
SAT	Sustainable Agriculture Technology
SDAE	Serviço Distrital de Actividades Económicas
SDC	Swiss Agency for Development and Cooperation
SEAG	Serviço de Extensão e Aconselhamento Técnico de Gurué
SHF	Smallholder farmer
SMEs	Small and medium enterprises
VC	Value chain
VSLA	Village Savings and Loan Association

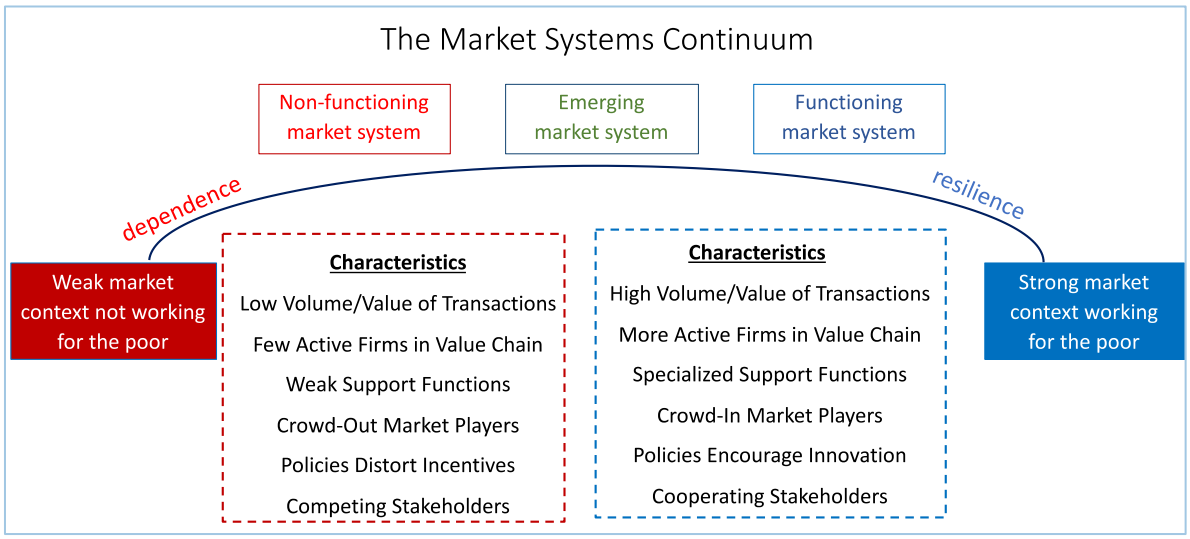
Executive Summary

BACKGROUND

In 2010, the Swiss Agency for Development and Cooperation (SDC) contracted DAI and COWI to implement the Private Sector Led Development of Agricultural Sectors (later renamed Innovations in Agribusiness – InovAgro) project to address poverty in Northern Mozambique. The project proposed to create linkages between larger private companies in Northern Mozambique and female and male smallholder farmers (SHF), with the purpose of increasing economic involvement of the poor in agricultural sectors in Northern Mozambique to reduce economic vulnerability and poverty.

InovAgro was the first project in Mozambique to apply a market systems development (MSD) approach to transform the underlying supporting environment for SHF, providing them with access to commercially driven services that endure beyond the end of the project. When it began, basic market systems essential for smallholder farmers to increase their productivity and incomes such as access to inputs and information, access to output markets, and access to finance were not servicing smallholder farmers. This made the challenge for InovAgro even greater as it sought to transform a weak market context not working for the poor into one that was servicing the needs of poor smallholder farmers. Figure 1 lays out some of the characteristics of the focal market systems (on the left) that InovAgro sought to transform into better functioning markets (on the right).

Figure 1: Market Systems Continuum



THE JOURNEY

InovAgro was designed as a three-phase project to be implemented over 10 years. InovAgro was applying a new more sustainable approach to development and needed time to experiment and test different interventions to gain traction with the private sector in the various market systems it was addressing. The journey was one of starts and stops, traction and slippage, and engagement with a wide array of private and government partners. The relationships and the probes into different approaches contributed to steady learning and adaptation by both the project and its public and private sector partners. This learning and adaptation helped provide the traction where the private sector and their SHF clients took the driver's seat and are turning non-functioning market systems into emerging market systems. By the end of the 11 years, InovAgro had reached more than 37,700 SHF (47% women) in the 11 target districts through market led initiatives, leading to increased incomes for 25,300 SHF, and total net income increase for the farmers of $34 million.

InovAgro was a learning journey for the SDC, the InovAgro implementing team, and the many government and private market actors with whom it partnered. During its first phase, InovAgro worked with large lead firms to test contract growing models to drive increased farmer productivity and access

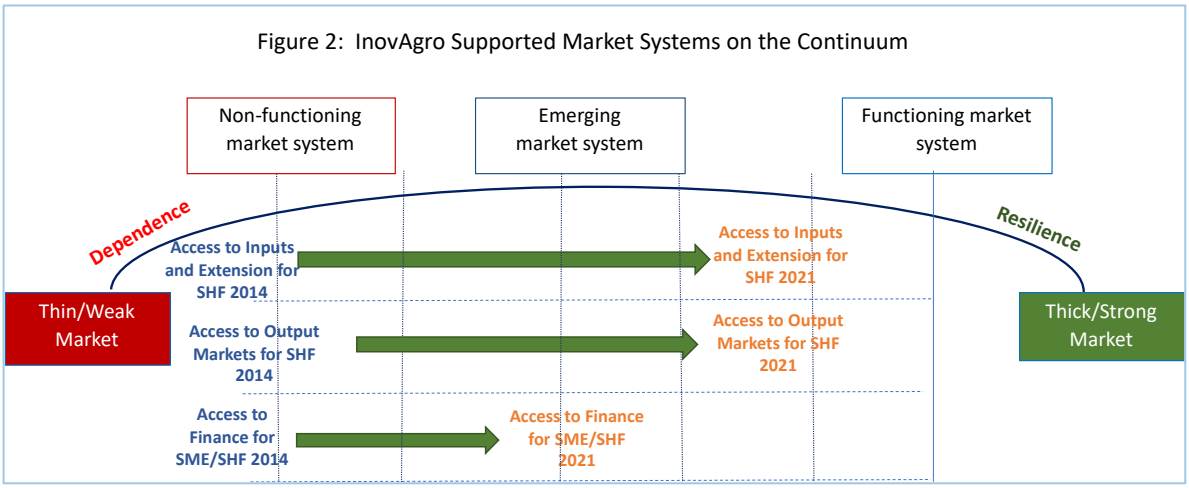
to markets within high growth potential value chains. The barriers to overcome were too great, and the initial lead firms proved to not be committed to the journey.

Building off the learning around private sector engagement from the first 3.5 years and the good traction InovAgro had gained in conjunction with government and the seed sector, InovAgro re-engineered its strategy in late 2014 and early 2015. It shifted from a value chain centric approach using lead output purchasing firms to an approach focusing on markets for agricultural inputs and extension, markets for output marketing, and access to finance, which cut across all value chains. The new strategy focused on finding the right points of entry in the market systems, working through the private sector, civil society, and government, and then adapting the tactics of engagement with the partners as the market systems evolved.

MARKET SYSTEMS TRANSFORMATION

InovAgro's engagement with its partners led to substantial transformation of the functioning of the market systems to be responsive to the poor in its 11 target districts, as well as significant spillover effects into neighboring districts and at a national level. Applying the characteristics laid out in figure 1, the figure 2 below indicates the evolution of the target market systems since the change in strategy. Access to inputs moved from a non-functioning system to an emerging system, as did Output marketing. Access to finance was much more difficult, but still substantial progress was made.

Figure 2: Market System Evolution



The strengthened resilience of the market systems was reflected in their ability to keep functioning growing and deepening during 2020 and 2021, when COVID restrictions and overall economic growth was slowing nationally.

Agricultural Inputs and Extension

In 2014, InovAgro switched its strategy to focus on engaging with seed companies to get them to enter the North and establish a permanent presence for the first time and to drive the sale of seed to SHF using demand creation activities (demonstration plots and field days) that would build awareness of the benefits and value proposition to SHF to purchase inputs but would also teach them good agricultural practices and how to use the inputs. The commercial supply of seed and extension services to SHF in the target districts increased significantly growing from no seed companies targeting SHF directly to 10 national and multinational seed companies actively targeting SHF. While the outreach to SHF broadened it was strengthened by a deepening of the delivery channels as the seed companies strengthened many agro-retailers, and new distributors entered the market. This allowed for more specialization and more resilient systems. Bolstered by increased awareness, increased demand, and better distribution channels reaching the last mile consumer, annual sales of certified seed to SHF increased rapidly from 2016-2019. While sales slowed during the pandemic, seed companies adjusted

their strategies to continue growing. They were able to rely on the stronger relationships developed with distributors, agro-dealers, agro-retailers, village- based agents and lead farmers to continue delivering demonstrations and growing sales to SHF. Seed companies and distributors expanded their operations on a broader geographic basis, applying techniques developed with InovAgro support into neighboring provinces and districts for greater systemic impact.

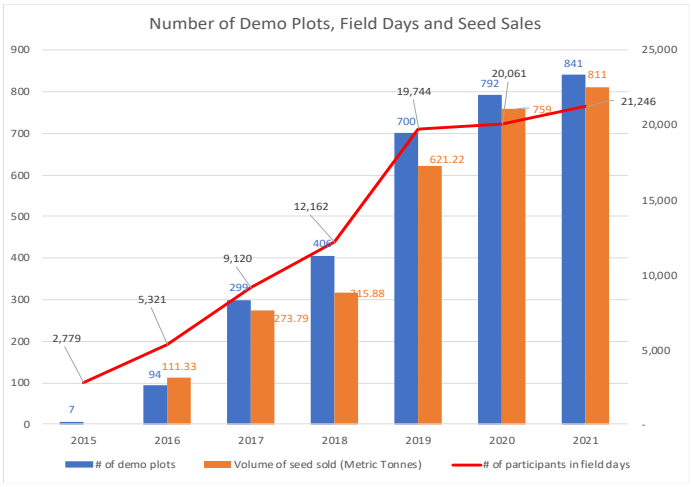


Figure 3: Demo Plots, Field Day Participants, and Seed Sales

By 2021, a presence has been fully established by seed companies (including five international) in the project regions and beyond. They have in turn distributed through 85 retail outlets and many village-based agents and lead farmers. The distribution infrastructure has allowed other projects such as FAO and CLUSA, to use the distribution networks initiated by InovAgro. Demand creation initiatives have been continued by partners who InovAgro stopped supporting after 2019, while new players such as EASI Seeds and PROMA have quickly established using models developed by older InovAgro partners, with slight modifications from lessons learnt.

InovAgro's work at the national level through the creation of a seed platform for dialogue including government, private seed companies, donors, and farmers and its engagement with the Ministry of Agriculture and the National Seed Authority (NSA) to develop the private sector seed inspector (PSSI) initiative led to changes which benefited the seed industry at a national level. In the PSSI, while InovAgro led the model development and formalization of the regulation and first PSSI training in 2018, in 2021, five partners took different roles in supporting the PSSI training (FAO, Seed Trade, SEMEAR, ADZV and InovAgro). The big seed companies paid at least 70% of the training costs while the smaller seed companies co-financed with development agents. This crowding in of donor support and willingness of private sector to invest, will ensure that the initiative will continue.

Output Marketing

While InovAgro had worked with some of the big buyers, by 2015 there had been little systemic transformation; the big buyers continued to rely on their agent systems, which promoted win-lose tactics that did not enhance relationships needed for systemic growth. InovAgro identified an emerging class of Mozambican commodity aggregator traders (CATs) based in district /market towns as a new point of entry. As fixtures in their communities, they had incentives to create win-win relationships. By establishing buying points closer to the SHF fields – for first mile supply – they could build stronger relationships and encourage more sales. More than 30 CATs adopted the buying point model and were steadily investing in them so that

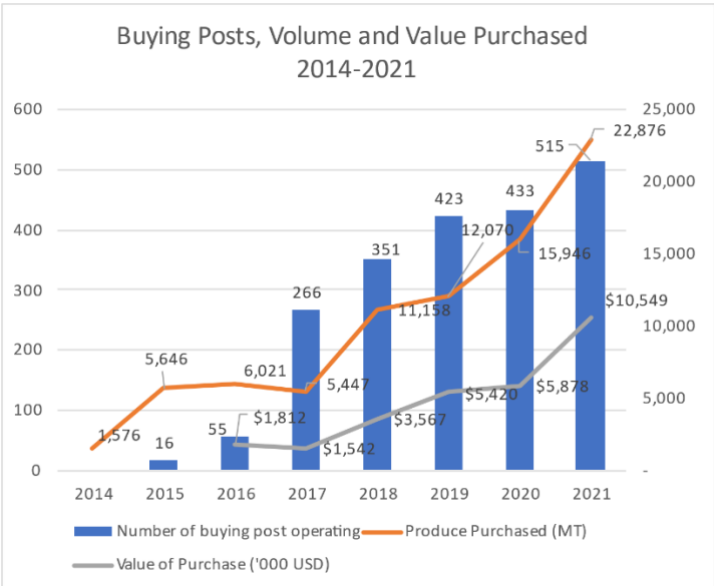


Figure 4: Buying posts, volumes, and value of purchases

by 2021 they were operating 515 posts deeper in rural areas. Their purchases continued to grow and during the pandemic, their proximity enhanced their ability to engage with the SHF leading to substantial increases in both volume and value of purchases. In conjunction with the buying post model, InovAgro supported improved relationships between the CATs, big buyers and financial institutions, improving their access to end markets and access to working capital.

The increasing formal relations established between the CATs and big buyers and the CATs and financial institutions have led to a massive increase in CAT purchases in 2021 to over USD 10 million and over 22,000 tonnes. CATs have expanded the fixed buying model, increasing buying points by 19% in 2021 without InovAgro support. A number of the CATs have expanded to neighbouring districts. The CATs in some districts are self-organizing to facilitate joint learning and addressing constraints they face.

InovAgro also supported the provincial departments of Industry and Commerce (DPIC) to roll out new regulations (*Cadernetas do Comercializiçao*) simplifying trading regulations to reduce transactions costs for registered traders. This provided an incentive for the CATs to get licensed in order to register for the Cadernetas, leading to greater formalization of the sector. The new regulations have led the government to access more accurate trade information. This has also improved their ability to engage with financial institutions to access commercial finance.

Access to Finance

During the first few years, InovAgro attempted to improve SHF access to embedded finance through contract growing schemes or financial institutions to lend directly to SHF. It gained little traction, so in 2015, InovAgro introduced a new approach to leverage the large numbers of village savings and loan associations (VSLA) to develop special savings windows dedicated to the purchase of certified seeds and other inputs – the *Fundo Agricolá (*FA). Uptake of the FA by the VSLA members as they were exposed to it was strong. Several of the civil society organizations promoting the approach also began to mainstream it into their other activities and by 2020 more than 19,000 SHF were using it. Annual savings exceeded $258,000 and per person savings were increasing steadily. The FA members had organized district management committees (DMCs) that were able to negotiate with seed companies to purchase seeds at lower prices and gain additional services such as demonstrations and after sales service. The success of the FA model is also attracting commercial financial institutions to roll out the Agency Banking model with the VSLAs as first-mover sources of savings and points of outreach to SHF.

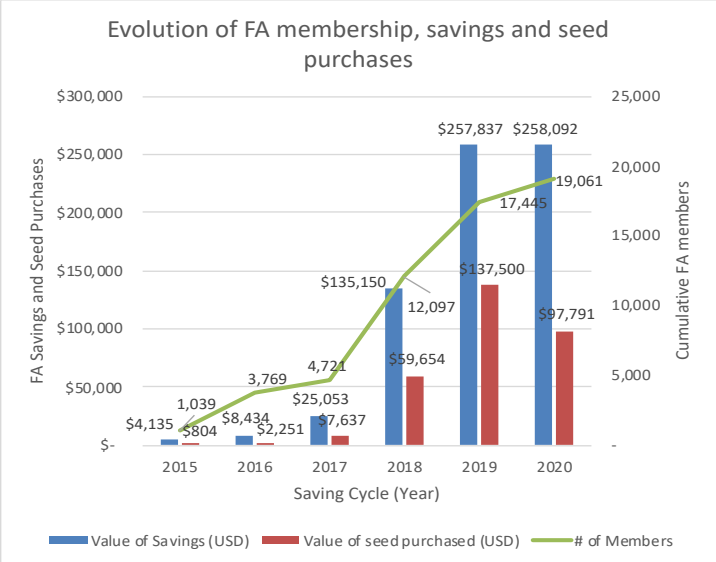


Figure 5: Evolution of the Fundo Agricola 2015-20

In the Fundo Agricola best practices that sustain the model have been adopted across all districts. Paying of animators, buying necessary equipment, decentralizing and working directly with agro-dealers will ensure sustainability if the FA. In districts where InovAgro stopped support in 2019, FA savings continued with the more committed members increasing their average savings. This is evidence that the FA model will self-sustain.

IMPACT OF INOVAGRO MARKET SYSTEM INTERVENTIONS

As part of SDC's learning process for market systems development, it contracted with the International Food Policy Research Institute (IFPRI) to carry out a four-year longitudinal impact assessment of the InovAgro project interventions using a modified Randomized Control Trial (RCT) methodology. The impact assessment found that InovAgro interventions increase farmers' use of yield-enhancing agricultural inputs, access to market information, and productivity. It also found that a more intense, combination approach of using all three modalities (agro-dealers, lead farmers and demonstration plots) appeared to be necessary to achieve long-term positive effects on the overall welfare of households[1].

Systemic and Sustainability effects

IFPRI's survey methodology applied a unique spatial identification approach allowing for comparison between InovAgro modalities for interventions and the modalities of other donor interventions in the control and beneficiary populations. IFPRI also held focus group discussions and key informant interviews with the agro-dealers, seed companies and lead farmers to assess the sustainability on their activities. This allowed IFPRI to examine and document the following market level effects[2]:

- *Systemic effects*: IFPRI found evidence in support of the project's having a systemic market effect, that the market actors were changing their behaviors based on work with InovAgro.
- *Sustainability effects*: The InovAgro MSD program has more sustainable impact than non-MSD programs. Farmers who had benefited from access to the InovAgro intervention changed their behavior more than those benefitting from direct delivery programs applied by other donors in the region.
- *Large-scale (spillover) effects*: The InovAgro project benefited large numbers of smallholder farmers beyond the project's direct sphere of influence and intended beneficiaries. Due to the systemic nature of the intervention, many more farmers were reached and benefited from the intervention.
- *Unintended effects:* The InovAgro MSD program and other non-MSD programs have an unintended effect on reducing households' crop diversification. Because households were earning more money from the crops being promoted by the seed companies and agrodealers, they tended to invest more time and money in those crops, reducing their cultivation of less profitable crops, reducing the diversity of their production.

INSIGHTS INTO MARKET SYSTEMS TRANSFORMATION

The experiences in the three market systems analyzed above, point to lessons about the use of lead firms, engagement with smallholder farmers, engagement with other projects, and government.

Large technically competent lead firms with strong will, good management, and solid financial resources can lead more rapid transformation to a sector **if the right value proposition for them** is there. With strong firms setting the standards, other firms wishing to compete will adopt the same approaches and principles more rapidly. But large companies can change strategies, therefore to ensure steady change, a broad portfolio of partners should be promoted. The **will** of the lead firms to engage and invest will dictate how fast change can happen. Getting the incentives right within lead firms can lead them to improve their coordination and to expand their engagement, build solid win-win relationships to expand their outreach and drive market system transformation.

Creating a foundation for smallholder engagement can serve as a strong magnet for investment by lead firms, which can speed innovations and introductions of new products. The investments in the Fundo

[1] Amare, Mulubrhan; Ghebru, Hosaena; Smart, Jenny; and Zavale, Helder. 2021. Impacts of MSD programs: The case of InovAgro. INOVAGRO Impact Assessment Policy Brief 2. Washington, DC: International Food Policy Research Institute (IFPRI).

[2] Amare, Mulubrhan; Zavale, Helder and Smart, Jenny. December 2, 2021. Impact Evaluation of The Innovation for Agribusiness (InovAgro) Project in Northern Mozambique

Agricolá prove that there is demand for savings to purchase inputs, while also creating a large enough pool of savings to attract the interest of financial institutions to see how to engage more proactively with the SHF. The introduction of agent banking to leverage the Fundo Agricolá, may be an innovation that will create a synergistic effect to stimulate increased financial sector activity targeting SHF.

Creating a pool of strong intermediaries, who are closely linked to their clients (either as buyers or as suppliers) is good for enhancing coordination within the market systems. As the sectors mature, companies become more specialized and create stronger relationships at the level of the last mile (CATs for purchasing and agrodealers for selling inputs) and speed up the transformation of the sector. Promoting **good competition** between firms carrying out similar functions those firms will lead to more innovation and crowding-in, which is good for the SHF.

Knowledge sharing speeds and deepens market systems transformation. InovAgro made a conscientious effort to share information with market actors and other development practitioners to deepen system transformation. Information sharing workshops between market actors (CATs, Seed Companies, FA members, etc.) improved relationships and generated new market opportunities. Many partners felt this was the source of their greatest learning. Overtly sharing successful methodologies to crowd-in other development projects created synergies and stimulated the adoption of improved approaches by other projects, speeding the development/transformation of a market system.

ADAPTIVE MANAGEMENT

Market systems are complex. The agricultural sector in northern Mozambique was faced with many external and internal shocks which could derail progress and required proactive responses by the project and its business partners. The business environment was constantly changing as new firms entered and competed. Constant monitoring and learning guided the project in its tactics, but also to stimulated adaptation by private partners and government. A donor that allows for annual reviews and flexibility with the log frame, would greatly facilitate this ability to adapt.

Mozambique encountered many externalities including natural disasters (floods, cyclones, changing climate), civil strife (civil war between leading political parties and insurrection in the north), foreign government policies (India's internal strategy to promote pigeon peas, significant shifts in exchange rates, political elections, and a pandemic (COVID 19). In each case, the InovAgro team looked at the potential effects of the externality on the market systems and coordinated with partners to adapt to mitigate the negative effects, or in some cases to leverage the effects to open new markets or innovative and more efficient ways of doing business. As a result, the externalities may have created temporary decreases or slowdowns, but did not derail the growth.

Evolving Tactics

Starting with its major shift in strategic approach in 2015, InovAgro adapted its tactics to meet the evolving conditions of the market systems. While the specific tactics within each market system –seed companies to drive inputs, CATs to drive output marketing, and the FA for access to finance - evolved as the systems matured, InovAgro applied several major cross cutting tactics in private sector partnering, engagement with government, and knowledge management.

InovAgro partnered with all firms interested in working to address constraints to improve the functioning of the system, if they met criteria of their will to engage and the skill/capacity to engage. InovAgro adopted an explicit approach to defining partnerships through deal notes which established open and transparent agreements, where benefits to the system were as important as the benefits to the partner firms, and the roles of InovAgro and the partners were explicit. Engagements were lighter and smaller scale to probe and test possible solutions.

Stimulating knowledge sharing to reduce information asymmetries within the market systems and between donor projects and government was an overarching tactic on the project. Expanded knowledge sharing between market actors promoted cross-learning and created synergies within the market systems. Firms learned how their competitors addressed similar problems, identified opportunities for

synergies, and built relationships with supporting service providers. Regular meetings were organized between market actors across market systems as well.

To promote information sharing across projects, donors and government, InovAgro revamped and re-energized the Mozambique MSD Network which organized regular webinars on key development topics. Increasing the flow of knowledge between practitioners, donors, and government is a long-term investment needed to change behaviors by these key players. The supply and demand for market systems development services can be treated as a market system of its own. With government and donors supplying funding to projects doing the implementing good information on the most effective MSD approaches will stimulate more effective programming.

The final broad set of tactics focused on leveraging government by supporting ministries, departments and agencies (MDAs) to drive change. By supporting MDAs to perform their mandated functions, assisting them to develop innovative solutions (such as the PSSI) and then roll them out, or test and then roll out of new regulations (such as the Cadernetas). InovAgro's emphasis was on being a learning partner who could help them develop solutions to fill their mandates, solve problems that they were encountering, and facilitate their adoption of new approaches.

LESSONS LEARNED FOR FUTURE PROGRAMMING

InovAgro's successes and failures have provided a lot of learning for future MSD programming.

Lessons on Engaging with Private Sector Partners

Encouraging many partners to try innovative approaches through probes and pilots to address identified systemic constraints will provide the project with choice, fallback options, and will stimulate healthy competition between all partners to drive innovation. Establishing a clear value proposition for partners, while at the same time having a clear vision for how partner engagement will lead to a better functioning market system needs to be transparent.

Institute continuous monitoring and evaluation of partners and interventions to understand what is happening on the interventions in real time and the political economy issues that need to be addressed. In this way, the project can be proactive and work in partnership with market actors to identify and fix issues. Understanding the trends will inform the project of changes in value propositions and likely changes in partner behavior.

Be creative, adaptive, and flexible. If an intervention or a partner is not delivering the desired results, first understand why not and adapt the intervention or the relationship. If that does not work, then be flexible enough to cancel the partnership and move onto trying a new idea. A corollary to this is that, as partners' corporate strategies shift, projects need to understand why they are shifting and be able to pivot with them quickly to continue to influence them on inclusive policies or else pull back support completely.

Lessons on Engaging with Government

Getting buy-in and collaboration from government can speed system change at scale. Projects need to work at the right levels and build the right relationships, especially with government. One of InovAgro's major successes was its ability to work with government. InovAgro effectively engaged with many government agencies (National Director of Agriculture, the National Seed Authority, the Ministry of Industry and Commerce (MIC), etc.) who perceived InovAgro to be a trusted partner supporting them, not just a source of funding. This has provided InovAgro with a seat at the table as government is developing policy.

Lessons on Staffing for an MSD Project

Effective market systems development requires a variety of skillsets that must be reflected in the overall team: analytical capacity, effective facilitation skills, strong communications skills, and internal learning and adaptation. The team needs capacity and commitment to carry out good analysis to get at the underlying root causes of market failures and be able to think through possible solutions and the

best points of leverage for driving behavior change among the key market actors. It is critical for the team to have the skills to collect the appropriate information in a timely manner, to drive learning from that information, and make the necessary strategic and management adaptations. Above all, systems change and long-term sustainability require the market actors to own the change process, so the team should be able to facilitate the delivery of solutions by the stakeholders. With these skills, an MSD project will facilitate good solutions, learn what works, and adapt the delivery to ensure sustainability.

Timeframe for Systemic Change

Systemic change takes time, especially when the market systems are weak and require a heavier investment to jump start them. More time is needed to build relationships and determine the right points of entry. Weak market systems are also fragile, and major shocks can set them back significantly. But as they strengthen, a virtuous cycle is created, they will deepen more rapidly and become more resilient. SDC's emphasis on projects with a longer timeframe, running across two or three phases between 8-10 years is ideally suited to running a systems' change project. It allows for building many relationships, generating lots of learning and opportunities to adapt.

Introduction

BACKGROUND

In 2009, Mozambique was classed as one of the poorest countries in the world, ranked 172nd out of 182 countries in the 2009 UNDP Human Development Index. 54% of the population lived under the national poverty line while 90% lived on less than US$2 a day and 75% under US$1.25 a day. Life expectancy was critically low at 42 years. Northern Mozambique had the highest levels of poverty in the country.[3] The Government of Mozambique (GoM) has been supported by the Swiss Development and Cooperation (SDC) in its fight against poverty and its immediate goals to reduce national poverty levels to below 45%.

In 2010, SDC developed the Private Sector Led Development of Agricultural Sectors in Northern Mozambique (later renamed Innovations in Agribusiness – InovAgro) project. The project proposed to create synergies between larger private companies in Northern Mozambique and female and male smallholder farmers (SHF), with the purpose of increasing economic involvement of the poor in agricultural sectors in Northern Mozambique to reduce economic vulnerability and poverty. The project applies a market systems development (MSD) approach to transform the underlying supporting environment for SHF, providing them with access to services that endure beyond the end of the project.

The initial scoping study (September 2009) highlighted the extent of SHF exclusion from formal markets, largely due to the absence of supporting service markets. Recognizing the need for a catalyst to stimulate the creation of those supporting service markets, initial design focused on establishing Private-Public Development Partnerships (PPDPs) with larger private companies, with the intention of jump starting the inclusion of SHF into formal markets by providing new market opportunities and bringing access to embedded services. This was in synch with the government's priority to:

'Stimulate the structural transformation of agriculture, which involves increasing that sector's productivity and integrating it into the rural sector, the rest of the economy and competition on world markets'[4]

INOVAGRO OBJECTIVES AND STRATEGY

The direct projected objectives of the program in 2010 were:

1) Increase markets and sales opportunities for SHF and Small and Medium-Sized Enterprises (SMEs) within selected agricultural value chains in Northern Mozambique.
2) Embedded services to SHF and SMEs within agricultural value chains are expanded and improved.
3) Commercial supporting services and inputs that are essential to agricultural sector stability and growth are established, expanded, and improved.

Transforming the structure of agriculture in Northern Mozambique could never be a short-term initiative and the SDC planned a 10-year program divided into an initial design/inception phase to research opportunities more fully, and three implementation phases of three, four and three years respectively. The first phase was intended to provide proof of concept; the second to allow for expansion; and the third for consolidation of the market systems. An 11th year was added as a consequence of the COVID-19 pandemic.

InovAgro was the first MSD project in Mozambique and part of the first wave of MSD projects as they entered the mainstream of development programming from the Department for International Development (DFID, now the Foreign and Commonwealth Development Office-FCDO) and SDC. InovAgro's experience reflected this learning period and has been an important contributor to the

3 SDC, Private Sector Led Growth, Project Document, 2010

4 PARPA II, Government of Mozambique, 2006.

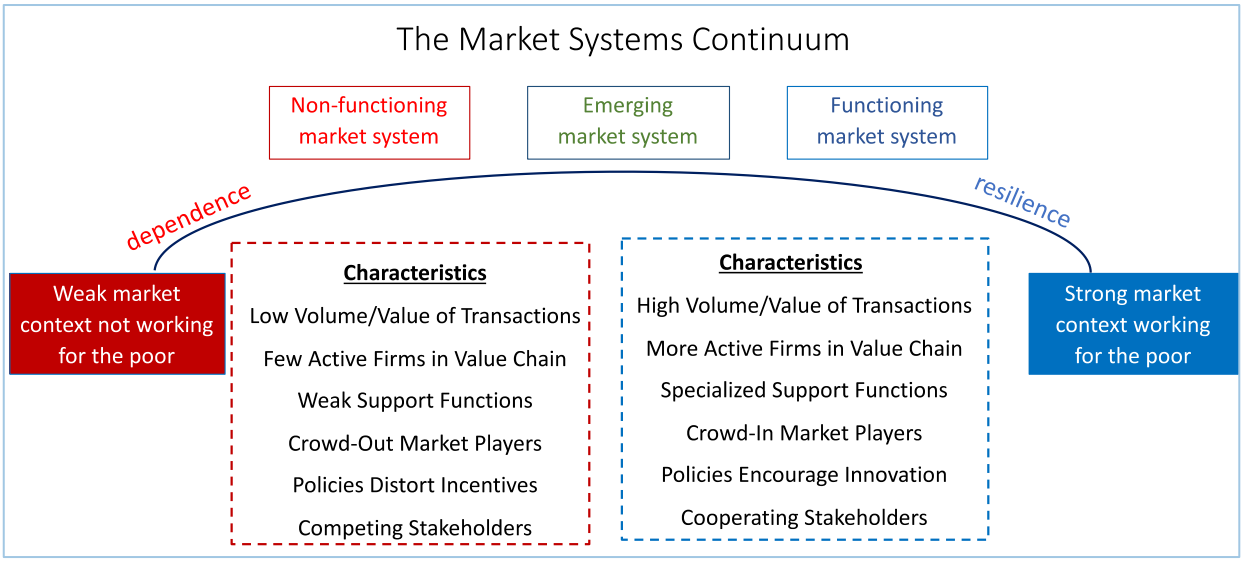
understanding of the methodology globally. As MSD implementation has expanded globally since 2010, numerous other donors are now also adopting some forms of MSD[5] as a sustainable development approach. Consequently, InovAgro's experience should help inform other development initiatives and shorten the learning curve.

The initial Project Document (ProDoc) laid out the Market Systems Continuum (Figure 1) which reflects the status and characteristics of the market systems. Figure 6 highlights the characteristics that define a dynamic, inclusive market system that is serving SHF more effectively. Thick/strong markets are characterized by a high volume and value of transactions, often segmented by market leaders and surrounded by niche market followers. As demand grows and differentiates along both price and quality dimensions, more firms are likely to compete for market share which, in turn, encourages crowding-in by those firms performing specialised market system functions (e.g. finance, ICT, consultants). An enabling policy/regulatory environment encourages further investment in innovation while also encouraging a high degree of stakeholder cooperation to take advantage of opportunities and counter competitive threats to market growth. When these characteristics are present, they tend to correlate with an effectively functioning market system.

Thin/weak markets are characterized by a low volume of transactions with few active firms who are often beneficiaries of a policy environment that does not enable competition and innovation. Low demand discourages critical support from entering the market. When public and private sector stakeholder interests are mis-aligned it creates competition between stakeholders instead of cooperation, which is vital to market system growth. When these characteristics are present, they tend to correlate with a non-functioning market system.

The strength (or weakness) of a market system is also reflected in its resilience. Weak market systems lack resilience and the market actors within those systems are often dependent on outside services, leading to failure in the event of an external shock. As the market system deepens and strengthens it becomes more resilient, able to withstand external shocks and able to continue delivering services to the target beneficiaries within the system – smallholder farmers.

Figure 6: The Market Systems Continuum



5 Some projects have an increased focus on promoting market linkages with heavy handed facilitation, but do not follow all the principles of MSD

THE INOVAGRO TIMELINE AND EVOLUTION: A MODEL OF ADAPTATION

This document provides a summary of InovAgro's 11-year journey towards building sustainable market systems in Northern Mozambique, the various initiatives undertaken, how they evolved, and how the project and the private and government partners adapted the interventions over time. Each phase of the project had its own project document, which was built based on previous phases and lessons learned. There was significant adaptation by the project, both as it moved across the three phases, but also within the phases, if interventions did not deliver as anticipated. For instance, in the middle of Phase II the project significantly adapted its strategy and realigned its interventions based on learnings and relationships from the first four years, as well as learnings by the implementer from running Making Markets Work for the Poor (M4P) projects in other countries. The flexibility to accept changes in strategy over time was a critical element in the success of the project. In 2019, at the SDC's quadrennial "Face to Face" meeting of their private sector officers, InovAgro was voted the most adaptive project within the SDC's portfolio.

The chart on the following page (Figure 7) highlights the strategic changes by the project and the range of interventions delivered by the project, when they started and how they evolved. It is clear from the chart that the initial range of interventions failed to deliver the anticipated systemic results, so were ended or adapted. However, they had identified the key problems to address and generated learning, enabling the adaptation of project activities. As the project laid out its strategy in each of the main intervention areas (seed and inputs, output marketing, and access to finance), tactics were adapted over time, as each of the market systems began to mature and new elements were required to strengthen the market systems and to deliver sustainable results driven by the private sector and government.

By the end of the project InovAgro had worked in 11 districts, leaving behind sustainable market systems for seed and input supply, output marketing, and access to finance. In seeds, 9 seed companies are actively marketing certified seeds and sold more than 811 mt of certified seed in 2021 through 84 retail outlets. In output marketing, 30 commodity aggregator traders bought more than 22,000 mt of crops through 515 buying points which they established. In addition, nearly 20,000 farmers had saved over USD 750,000 for the purchase of certified seeds, labor, and other inputs at planting time. Overall, the project reached more than 37,700 farmers (47% women) through commercially driven activities with 25,300 increasing their incomes resulting in net income increase of $34 million.

On the regulatory side, an institutional platform for dialogue (APROSE) between seed companies, the government, donors, and farmers was established and lead to regulatory dialogue. A new regulatory framework had been put in place for accrediting private sector seed inspectors (PSSI) and six companies had 10 accredited PSSI working for them, trained by the National Seed Authority. InovAgro assisted the government to introduce new marketing regulations to facilitate the trade of local commodities to increase efficiency and reduce transaction costs, which have now been adopted in all the InovAgro districts.

This report reviews each phase and the progression of the interventions from that phase into the next phase. It will highlight the lessons learned in each phase and how those lessons were incorporated into the following one. The section on market system transformation captures the evolution of the three main market systems over a seven-year period and their progress towards developing more mature market systems and levels of resilience. The document also captures many lessons for how the perceptions of MSD have evolved over time (globally) and become more refined.

Reflecting on what we have learned about how to effect systemic change over the last decade, we would have changed a number of aspects of our delivery in the early years. The power of this report is to follow the evolution of best practice worldwide, how it was incorporated into InovAgro, and how InovAgro's approaches have affected the operations of other donor programs, both within Mozambique as well as other countries. The document concludes with an examination of the overall evolution of the changes in the focal market systems, lessons learned and implications for future development programming.

Figure 7: InovAgro Timeline 2010-2021 – Strategic Evolution and Evolution of Interventions

Strategic Changes	**Inception phase**	**Phase I - Contract Growing and Seed Policy**			**Phase II - Shift to Input Supplier, Strong Seed Policy, Locally driven Output marketing, Decentralized financial Services (Fundo Agricola) and land tenure**				**Phase III - Expand and Deepen Phase II, Knowledge management**			**Extension Year**
Major Initiatives	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Geography (# of districts		1	1	4	6	8	11	11	11	11	11	11
CERTIFIED SEED SUPPLY (Inputs)												
Government engagement: Seed Platform for Dialogue, Information sharing			Seed sector VC analysis, first seed conference	Regional workshops	Seed Conference - Seed Platform for dialogue	APROSE Registered	---------->	---------->	---------->	---------->	APROSE at 60% sustainability	---------->
Private Sector Seed Inspection (PSSI)					Agree with Government	International learning visits	draft regulations	Regulations Passed by Cabinet	1st training 6 PS Seed Inspectors	4 Active PSSI re-approved by NSA	Training postponed due to COVID-19	6 new PSSI certified (10 total) + 5 University faculty
Seed Companies extension and distribution					2 seed companies	7 seed companies	12 seed companies and Agrodealesr (AD	7 seed companies and 9 ADs	8 seed companies and 11 ADs	8 seed companies and 19 ADs	8 Seed companies and 21 ADs (total 55 retail outlets)	9 Seed Companies, 21 ADs (total 84 retail outlets)
Demonstration plots							94	299	406	700	792	841
Certified seed sold (mt)							111	279	316	625	759	811
# farmers adopting technologies								10,500	15,000	19,744	21,074	TBD
OUTPUT MARKETING												
Contract Farming		--------->	--------->	---------I								
Beneficiaries		844	784	1364								
Output Marketing Partners		1	2	2	---------->	----------> 5	----------I 7					

Commodity Aggregator Traders (CATs)						Model designed; first 5 CAT partners	12 CAT partners	19 CAT partners	22 CAT partners	33 CAT Partners	33 CAT partners	33 CAT partners
Buying points						16	136	266	351	423	433	515
Volume purchased (mt)						5,606	6,011	5,447	11,158	12,070	15,946	22,876
# of beneficiaries with CATs								7,350	7,420	13,583	28,223	TBD
ACCESS TO FINANCE FOR SMALL FARMERS												
Small farmer lending initiatives (BOM)		800 clients	200 clients	---------->	---------->	---------->	--------->	---------->	964 clients	BOM stopped small farmer lending		
Fundo Agricola members						1,039	3,769	4,721	12,097	17,447	19,154	Still counting
FA Savings for Agricultural inputs (USD)						$4,135	$8,434	$25,053	$135,150	$257,837	$258,092	Still counting
LAND TENURE SECURITY												
Community Delimitation to Individual DUAT						Analysis	Delimit 2 communities	Delimit 4 communities and services Introduced	DUAT registration 1000 farmers	358 DUATs delivered, 750 DUATs in contention	1,447 Duats delivered, 750 DUATS in contention	NA - initiative completed
Major Externalities = Negative = Positive			Land grabs by large companies. Preferential DUATs threaten SHF	Government stops buying seed for distribution	Corporate Partners switch strategies	InovAgro strategy redesign	Devaluation of the Metical	India disrupts pigeon pea market	No major externalities	Cyclones Idai (Beira Corridor) and Kenneth (Cabo Delgado)	COVID-19 restricts activities	COVID-19 restricts activities, SUSTENTA initiates seed distribution

The Inception Phase

DAI Johannesburg was awarded the original Private Sector Led Development of Agricultural Sectors in Northern Mozambique which became Innovations in Agribusiness (InovAgro) project in June 2010 as a *Design and Implement* program. InovAgro began its six-month inception/design phase in July 2010 with the task of developing a full ProDoc for submission to the SDC in Bern for financing, beginning in 2011. Given the very weak status of supporting market systems, the project was initially conceived to partner with larger private companies for whom their commercial business objectives would overlap with SDC's development objectives and establish PPDPs.

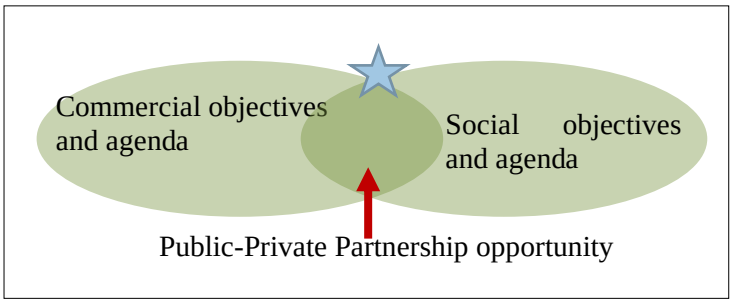


Figure 8: Defining a PPDP Opportunity

Target Sectors and Partners

Given that the program would be working with private operators to help them develop their supply-based initiatives, selection criteria were geared towards maximizing the impact of the program's interventions, given a longer-term growth perspective. They included choosing sectors with the most potential for unblocking key constraints, overall growth and replication from other private actors. All three selection categories below were critical elements and a poor score on any one of them led to their exclusion from the project.

i) Competitiveness of the sub-sector

Which sectors have the most potential for **sustained** growth?

- Domestic and export market growth potential (demand for service or product)
- Structure and organization/governance of the value chain to compete
- Potential for increase in productivity

ii) Development impact

Which sectors have the highest potential to benefit a **broad base** of the population (pro-poor)?

- Poverty reduction: number households/ employment involved with sector
- Geographic distribution of benefits
- Multiplier effect – forward, backward and sideways linkages
- Potential for positive impact on gender disparity and youth
- Potential to increase household income

iii) Feasibility for implementation within the project

Which sectors can we work with and see results within the project timeframe?

- Governance structures conducive to behavior change
- Ability to produce results within project desired timeframe
- Conducive enabling environment
- Dynamic market actors and potential partners with whom to interact
- Comparative advantage for M4P

It is important to note that each sector must score high in all three of the criteria for it to be considered. A negative result in any of the three categories could eliminate a sector from consideration. Table 1 shows the short list of target sectors.

Table 1: Short List of Target Sectors

Poultry (including eggs)	Cashew	Sesame	Groundnut	Oilseeds (sunflower)	Rice
Agriculture input supply	Soya	Small Livestock	Pulses	Artisanal fisheries	Tea

The initial scoping study identified 16 possible leading private sector businesses with whom partnerships could be pursued (presented in Annex 1). The inception phase engaged with them and explored the areas of overlap in interests and possible joint activities that would positively influence the target beneficiaries.

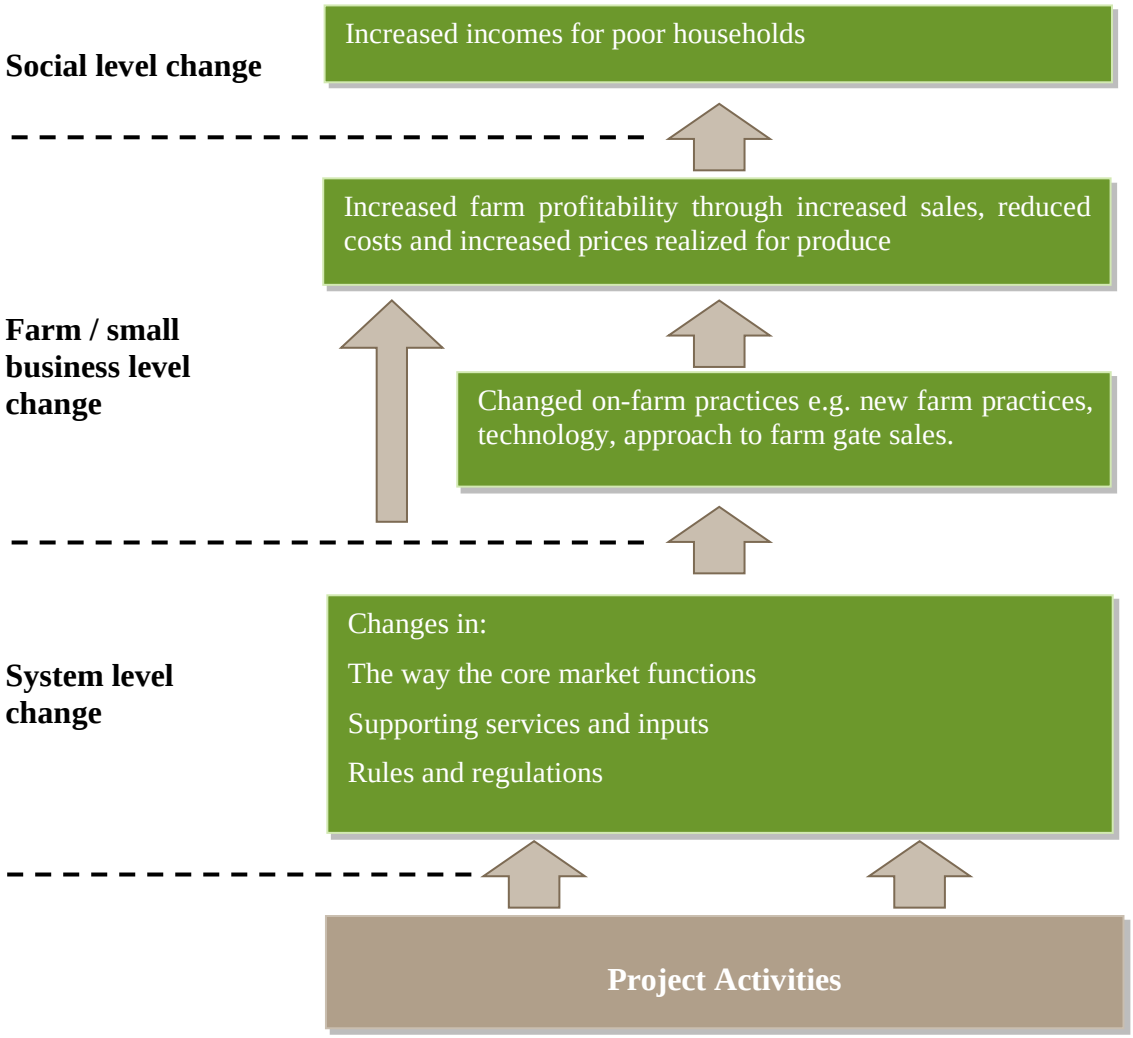
Effective PPDPs adhere to clear criteria that ensure that they are effective developmental tools:

- **Poverty/social benefit**: Activities will have a clear and direct benefit to smaller farmers (see GETT sub-project which shows an impact logic for a possible PPDP that illustrates the pro-poor focus of the intervention);
- **Additionality:** Activities will not support existing commercial activities (business as usual) but will test new models and open up new markets that benefit smaller producers (business unusual);
- **Leverage**: Activities will not fund the formal private sector but leverage investment from commercial partners into testing and adopting new business approaches that benefit smaller farmers;
- **Commercial**: Activities will not exert pressure on the formal private sector to undertake activities that are not in their commercial interest but will work within the overlap between social and commercial objectives; and
- **Replicability**: Ideally activities will have the potential to be adopted more widely within the private sector without jeopardizing the success of the initial private sector partner.

From the list of 16 possible partnerships, the inception phase laid out the process for developing financial investment plans (FIPs) by identifying, understanding, refining, and building partner buy-in for proposed investments to present to the SDC Strategic Advisory Committee (SAC) for approval. By meeting the selection criteria above, the investments would deliver a set of changes to the way the market system operated leading to changes at the farmer small business level. Four possible partners made the short list for Phase I engagement – GETT Lda (King Frango), Export Trading Group, Matanuska-Corridor Agro, and New Horizons poultry farm.

The program expected to deliver on the following impact framework (Figure 9): through project activities working with partners, InovAgro would drive system level changes in the way that the core market functions, the supporting systems and the rules and regulations. These would, in turn, drive smallholder farmer and SME level changes in terms of their practices, leading to increased profitability through increased sales and better prices.

Figure 9: The Overall Impact Framework for the Program



Phase I (January 2011 – December 2013)

FOCUS SECTORS, ACTIVITIES AND PARTNERS

In the first year of Phase 1, InovAgro identified the soya bean market and the pigeon pea market system as viable targets for project interventions. It finalized its partnership with the private sector firm GETT Lda, one of the largest poultry companies in Mozambique. In pigeon pea, Export Marketing was identified as the private sector partner and InovAgro began negotiations with them. Export Marketing is one of the largest grain trading/exporting companies in Mozambique. In both cases, the companies' desire to develop sustainable, commercially oriented relationships with small farmers was based on a clear win-win approach.

Soya Interventions

The soya bean sub-project was approved by SAC in September 2011 with a total budget of USD 867,425 contributed by InovAgro and GETT Lda to develop an out-grower program. InovAgro provided analytic support to GETT to develop a deeper understanding of SHF behavior and the requirements to increase productivity which laid out issues around the quality of seed, farmer knowledge on good planting practices, issues with land preparation and issues with post-harvest handling. GETT Lda invested the out-grower system to provide extension services to the out-growers by hiring a manager and extension staff to engage with the farmers. A comprehensive plan was established between GETT and InovAgro to address challenges of access to certified seed, knowledge, purchasing power of farmers to buy the seed, and access to farm mechanization, where appropriate, to address issues of land preparation and post-harvest handling:

- Contracts were drawn up between GETT Lda and the SHF which would guarantee them a premium on the open market price.
- To address the absence of certified soya seed in Mozambique, InovAgro facilitated the importation of 80 mt tons of certified seed from Zimbabwe which would be purchased by SHF through GETT.
- Farmer extension was delivered by the out-grower team managed by GETT.
- The access to finance was addressed by working with RCRN, a local microfinance institution, which loaned USD 88,000 to 487 SHF to purchase the seed (with a guarantee from InovAgro) and farm mechanization services if needed. Banc Opportunidade Mozambique (BOM) engaged with SHF in Year 1 but did not make any loans.
- GETT Lda purchased one tractor and InovAgro provided two tractors (owned by the project) to sell land preparation services to the SHF which could aggregate sufficient land to make plowing viable; these services were paid for in cash by the farmers to GETT.

Overall, GETT Lda committed to investing USD 1,580,000 (including the USD 1.2 million for silos) and InovAgro committed to investing USD 548,000 in the out-grower scheme, cost sharing the extension staff, and including the purchase of two tractors and harvesting equipment that would remain the property of InovAgro.

The intervention led to a significant (50-80%) increase in farmer production and profitability in both the first and second years. However, there were challenges with the smooth functioning of the purchase of soya by GETT as they were acquired by African Century Lioma (ACL) in 2012 and had cashflow constraints at harvest time, preventing them from purchasing the soya from the farmers. This prevented GETT from collecting the credit repayments for the RCRN, leading to a significant default by many of the borrowers who sold their harvest to local traders. InovAgro assisted RCRN with the credit collection, but in total around 30% of the farmers defaulted.

In the second year, InovAgro facilitated Phoenix Seeds to deliver certified seed to the smallholder farmers, against a repayment by ACL when they purchased the soya from the farmers. In year two 784 farmers participated[6] and InovAgro provided USD 135,000 of supplier finance to 647 SHF.

Again, ACL encountered problems and the repayments floundered once more. Despite their investments of more than USD 1 million in silos and the out-grower extension team, ACL elected to terminate its attempt to develop a source of supply from SHF and to open a 2,000 ha farm in Niassa where they would grow all of their soya requirements.

Pigeon Pea Interventions

The pigeon pea sub project with Export Trading Group (ETG) advanced to development and agreement of a FIP, which was approved by the SAC in February 2012. The sub-project focused on improving quality and bulking product to access higher prices by small farmers, as well as increasing productivity through better inputs and good agricultural practice. In Year 1, 500 farmers were enrolled in an out-grower program managed by Export Marketing. To support the supply of improved seed, InovAgro facilitated the importation of foundation seed and worked with private seed companies to multiply this seed and sell certified seed to small farmers. It was envisaged that 8,000 farmers would be reached over a 2-year period.

ETG assigned one of its core staff as the manager of the out-grower system; unfortunately, he passed away in 2013, removing the major capacity that ETG needed to drive the system. As a result, ETG only reached 580 SHF with its out-grower scheme before deciding to revert to its former models of purchasing.

Seed Sector Interventions (Value chain (VC) Analysis, Conference 2012, Regional Meetings 2013)

The work in soya bean and pigeon pea highlighted the importance of high-quality seed and knowledge of how to use seed to increase productivity. However, no certified seeds were available on the market. In the work with soya and pigeon pea, InovAgro facilitated access to basic seed by local seed companies for soya and pigeon pea in Year 2, to multiply into certified seeds for sale in Mozambique. It soon became apparent that the challenges were much deeper and systemic. As a result, in 2012 InovAgro launched an in-depth value chain assessment of the seed market system in Mozambique. InovAgro established close working relationships with the National Department of Agriculture (NDA) and the National Seed Authority at the Ministry of Agriculture to carry out the study. The study included i) an analysis of the market for seeds in Mozambique ii) an analysis of the seed sector supply chain from foundation seed to certified seed iii) a review of the seed research and policy framework governing the seed sector in Mozambique iv) a review of all of the donor funded organizations and NGOs that were multiplying seed and giving it away to SHF (hence crowding out commercial providers), and v) a review of regional donor funded seed projects in Southern Africa.

In September 2012, InovAgro and the Ministry of Agriculture organized a workshop with all the key development partners, each of whom presented their various initiatives (USAID, GOM, the Food and Agriculture Organization of the United Nations (FAO), and SDC) to 37 key stakeholders from government, the donors, and the private seed industry. The concept of a platform for dialogue between all the key stakeholders was promoted. The Government and the seed industry requested that the findings from the various presentations be presented in local workshops in key cities in the country to build greater buy-in.

At the same time, InovAgro and the NDA began to explore capacity constraints on the government side that prevented the effective development of the sector, in particular an effective means for disseminating

[6] The actual number of farmers who benefited was over 1,430, but only 178 of the farmers from year 1 were continued with the scheme, the rest dropping due to issues of non-repayment of their loans in year 1 or showing no interest to purchase more seed since they kept their second generation for replanting.

information about the seed sector from the National Seed Authority through a government managed website.

Extension Services

In late 2013, InovAgro began a partnership with a privately-run local Agricultural College to explore possibilities for establishing an independent commercially viable extension service that could sell its services to output marketing buyers, input suppliers or other clients.

The Serviço de Extensão e Aconselhamento Técnico de Gurué (SEAG) was established towards the end of 2013 with a partnership between the Instituto Médio Agro-pecuário de Gurué (IMAPEG), the Serviço Distrital de Actividades Económicas (SDAE) de Gurué and Sustainable Agriculture Technology (SAT – a Zimbabwe based extension NGO). SEAG was to be managed by IMAPEG and succeeded in putting 14 extension officers into the field in 2 Districts – Gurué and Mocuba, to assist a total of 3,357 farmers growing pigeon peas, soya beans and maize. The 14 extension officers were supported by 10 extension officers from SAT from Zimbabwe with significant experience in agriculture and extension service provision. The bulk of the services were to be performed under Phase II.

Research for Phase II on Groundnuts, Sesame, and Radio Programming

While implementing the interventions, InovAgro continued to explore new value chains and support market systems for expansion in Phase II. Value chain analyses of the groundnut and sesame sectors identified key areas for support, while an assessment of the feasibility of generating commercially viable radio programming determined that there were few opportunities at that time.

TEAM STRUCTURE

The initial design had been primarily focused on identifying lead firms to engage with, negotiating agreements (joint investments) with them and then supporting them during implementation. In a more developed country, this may have been possible, but in Mozambique, the lead firms needed significant handholding which required the InovAgro team to expand with more technical support staff beyond the Team Leader and the Deputy Team Leader, who had been the only technical staff originally programmed.

MAIN ACHIEVEMENTS

The first phase of InovAgro was one of deepening the understanding of the problems facing the various market systems supporting SHF building relationships. While there had been solid buy-in from lead partners on the out-grower schemes, they had only reached 2,110 SHF in their managed supply chain systems (though many more farmers benefited). Those farmers received all the services they needed from access to inputs to farm mechanization and access to markets.

On access to commercial finance, InovAgro engaged with BOM which started lending to SHF reaching 800 clients by the end of Phase I. Challenges with both the cost of credit, the willingness of banks to lend, and the interest of farmers to repay, remained serious challenges.

The learnings around the seed sector and the relationships developed with the NDA and the NSA helped to cement InovAgro's position as a central ally to the Ministry of Agriculture in addressing seed sector issues. This credibility and partnership would be a mainstay for the rest of InovAgro as it maintained the dialogue between the private sector and the government and donors. InovAgro developed good relationships with several leading seed companies, especially Phoenix seed, who began thinking about selling directly to SHF.

Most importantly, knowledge was generated by InovAgro on the functioning of the seed market system, the challenges at the national level with seed certification, the capacity of the seed companies, and the changing dynamics between the large seed companies and government contracts.

Around extension, SEAG had been launched and was beginning to provide extension services to farmers in the soya and pigeon pea value chains.

All in all, InovAgro worked in eight market systems (soya market, pigeon pea, seeds, farm mechanization, post-harvest handling, output marketing, access to finance, and extension), exceeding the target of three in the contract.

MAIN CHALLENGES

Multiplicity of issues to address in each value chain. InovAgro treated each value chain, initially, as a market system. But it became evident that numerous smaller market systems were affecting the SHF. Ideally, working with a large lead firm would address those supporting services through embedded support from the lead firm, but even the lead firms were weak on the areas of access to inputs, access to finance, and access to mechanized farm services. Each of those market systems would be critical to address over the life of the project.

Private sector perceptions of donor support. During this first phase, one of the main challenges to building buy-in by private companies was changing their perception of donor support. Private companies were used to projects approaching them to work together, but it was usually from the project's perspective, rather than the company's perspective. In the preliminary negotiations with GETT, they assumed that the donor funding was to pay for their capital investments, and it took months of discussion to establish the correct roles and interest for both parties. In the dealings with ETG, other NGOs, like SNV, would manage the entire out-grower scheme for them, and ETG would simply purchase the output from the farmers, without real commitment or ownership of the out-grower scheme.

Evolving corporate commitment. Both ETG and GETT changed their corporate strategies during the implementation, leading them to pull back from full commitment to leading the out-grower initiatives. When the partners need to be driving the process, changes in corporate strategies affected the companies' ability to engage.

New policy issues. As the project delved into the access to finance issues, one of the main blocking points was a lack of ID cards, especially for women, and being able to submit the tax registration form. While engaging with farmers in Zambezia, the project learned that the absence of land tenure also proved to be a constraint for SHF, many of whom were being dispossessed of their lands by corporates with extensive registered land leases (DUATs) given to them by government.

Gender inclusion. While gender remained at the top of the agenda for InovAgro, the project was challenged to find the right interventions that would drive greater gender inclusion and have a significant impact on women. The inclusion of groundnuts as a supported value chain, along with the original support to pigeon peas, helped address gender equality as the crop is popular with women. Otherwise, the project struggled to find the right point of entry until later in the program.

Team structure. InovAgro had a light team with just 6 full time technical staff, three of whom were quite junior. Given the nature of the work, requiring more innovative engagement with the partners, the team would need to be strengthened in the following phases.

MAJOR LESSONS LEARNED

Interventions need to be at the core of the business strategy for partners. The initial premise of InovAgro - that creating strong private sector-led partnerships with a focus on corporate social responsibility - was insufficient to lead to transformed market systems. The engagement needed to address their corporate business bottom line, especially in less profitable market systems.

Building strong relationships takes time but is worth the investment. InovAgro invested in working with the private sector and building relationships based on mutual respect and common business interest, rather than moving quickly by simply paying for activities with companies. This took a longer time and more meetings to explain InovAgro's different approach to firms, but it led to greater common understanding of the objectives and eventual buy-in.

Developing the value chains required changes in multiple support markets and the rules that govern the markets. Addressing one single aspect of the problems is not sufficient to promote sustainable results. For example, simply providing seeds is not sufficient, if there is no advice to

accompany them. Similarly, without a viable offtake market, the seed market growth stalls as SHF will not gain income. Meanwhile, the seed market would not grow without the right regulatory environment.

Many problems affecting farmers at the local level needed national level solutions. The rules around the seed industry, the regulations governing access to finance, and the policies supporting land registration and leasing were national in scope and need to be addressed at the national level.

STRATEGIC ISSUES AND PARTNERS CARRIED OVER TO PHASE II

Together, InovAgro and the SDC designed Phase II, taking into consideration the accomplishments, the challenges, and the lessons learned, from Phase I. In particular, by the end of Phase I InovAgro had gained some traction with the out-grower schemes with GETT Lda (now ACAM) and Export Trading, but also on numerous supporting market systems including access to certified seed, to finance, to farm mechanization, and farm extension services that are needed to make the out-grower systems work.

The strategic issues carried forward for investment, based on results in the first phase (including the partners), were:

- Out-grower scheme development, working with ACAM and ETG;
- Investment in developing local commercial extension firms working with SEAG through IMAPEG and SAT;
- Improving access to finance with BOM;
- Continuing investment in the seed sector at two levels:
    - working with government to strengthen the NDA's ability ensure a sound enabling environment for the seed sector through better information sharing, ensuring high quality seed, and establishing a platform to improve dialogue between government, the private sector, and donors.
    - working with the private sector to stimulate improved capacity to produce certified seed, which incorporated investments in supporting leading seed companies like Phoenix seed, Lozane farms and MozSeeds to multiply certified seed for pigeon pea and soya laid the foundation for expanding the availability of certified seed across the country (not just the North).

New areas for expansion included new value chains and enhancing farmer resilience:

- increasing SHF resilience through access to ID cards, tax registration required for accessing loans (NUIT), and access to DUATs for increased land tenure; and
- two new value chains in the oil seeds sector: groundnuts and sesame, were added to the original two, to make four focal value chains.

Phase II (January 2014 - December 2017)

Phase II of InovAgro began in January 2014. As this was the middle of the main agricultural season in the North, many of the interventions flowed straight from Phase I into Phase II especially around out-grower schemes and building extension capacity. The following main thrusts were anticipated in Phase II:

- Supporting the establishment of a structured national seed dialogue platform for seed policy recommendation and to coordinate efforts to strengthen the seed sector and make it more commercially viable and member driven;
- Continuing the out-grower schemes with ACAM and ETG, while adding new partners and expanding into new districts;
- Dis-embedding support services such as extension, mechanization, finance and input supply from the buying contract and stimulating the development of independent markets for these services;
- Facilitating registrations for legal land ownership and overall ease of participation of farmers in the formal market system;
- Facilitating group formation among farmers to consolidate their product and make it easier for other formal actors to work with them;
- Having a stronger gender/ women and pro-poor focus; and
- Expansion into new oilseed value chains (sesame and groundnuts) to widen the options available to farmers.

FIRST YEAR OF PHASE II

Phase II began with ongoing work on the pigeon pea and soya value chains, building the capacity of SEAG, and the driving of the seed sector dialogue. Good progress was made, building relationships with seed companies and gaining recognition as a leader in the seed sector.

Seed Sector Dialogue

Significant, early progress was made on the seed sector dialogue. In April 2014, InovAgro and the NDA organized the first national conference on the seed sector with 110 participants from government agencies, donors, seed companies and agrodealers, farmers, and supporting NGOs and donor programs. It was opened by the Permanent Secretary of the MINAG and the Swiss Ambassador and attended by the heads of numerous other donor agencies. The conference concluded that there was a need to constitute the Dialogue Platform with a permanent secretariat as an instrument that allows information exchange in a structured and coordinated manner, between different participants of the sector.

Extension Services

The first six months of Phase II were focused on the use of SEAG to expand the outreach and extension to farmers in the pigeon pea and soya value chains, reducing the need for the lead firms to use their out-grower staff resources to provide extension to the farmers. SEAG organized demonstrations and provided the supervision of the farmers. They collected detailed information on the farmers and their yields, allowing the project to report much more accurately on their results with the SHF. They provided extension services to more than 3,350 farmers, organizing 25 demonstrations with field days, which proved very effective for addressing farmer knowledge, attitudes, and practices (KAP). This service and the capacity building was predominantly paid for by InovAgro as SEAG was learning the skills to be able to sell them later.

Out-grower Schemes

InovAgro maintained its focus on pigeon pea and soya, expanding southwards into Mocuba district. While it had verbal commitments from its two lead investors, ACAM and ETG, the investors began taking a more distant commitment to the joint venture activities because of shifts in corporate strategy.

Additional Value Chain Studies

InovAgro continued its research with detailed studies of the groundnut and sesame sectors, along with a study on commercial demand for agricultural extension services. The studies confirmed that both value chains were viable for SHF inclusion, especially groundnuts for women. However, there was no evidence of a commercial market for extension services.

RECOGNIZING THAT STRATEGIC SHIFTS WERE NEEDED

Although it was still early in Phase II, conditions changed radically with the out-grower contract partners and SEAG as the agricultural season ended:

- The principal partner in soya bean, ACAM, decided not to issue any purchasing contracts with smallholder farmers during the 2013/14 season, or to support out-grower schemes, as part of a shift in corporate strategy. They then pulled out of the direct purchasing from farmer markets altogether, just before the harvest in 2014. This seriously impacted project operations on access to credit (as the seller of inputs had been expected to provide half of the credit against the buyer's guarantee);
- IMAPEG, the private partner in SEAG, lost interest in investing in the development of a commercial extension service; and,
- ETG, while seeking to increase overall production through increasing commercial supply of inputs to farmers, expressed a disinterest in pursuing investments in contract purchasing and out-grower relationships with farmers, preferring to revert back to their traditional agent purchasing model.

The withdrawal of ACAM and ETG was largely due to circumstances beyond InovAgro's control. ACAM had a major shift in corporate policy, and ETG had internal issues between top management (for) and middle management (against) the out-grower scheme, which led to the discontinuation. The issue with IMAPEG also centered on their lack of institutional commitment to developing a commercially viable extension service. InovAgro had entered the partnership with good intentions to test the commercial extension model, but IMAPEG had never really invested in it to own the service. This highlighted the need for InovAgro to apply much more discerning analyses of its partners and to ensure their full buy-in in the future.

In addition, the project had made little substantive progress on access to finance, with only one relationship with BOM, and there was little active promotion of private sector seed supply. The project also faced challenges finding the right point of entry for registration of farmers for ID cards and improving land tenure. As a result, new thinking was required.

These challenges coincided with a change in project management and supervision. In July 2014, the Team Leader (TL), who had managed the project through all of Phase I, departed the country as part of a planned handover. The new TL arrived in September 2014, which coincided with DAI corporate staffing changes, bringing back their original Project Technical Director (TD) who had not been part of the management team for the previous year 18 months. The new Team Leader and DAI's Technical Director actively reviewed all project engagements, leading to a pivoting of the program to a greater focus on commercially-driven market systems support.

The New Strategy

Starting in November 2014, the InovAgro management team worked closely with the SDC to overhaul the strategy, learning from the weaknesses of previous experiences, and building on their strengths, as

well as taking advantage of opportunities created by changes in the overall environment to increase traction.

Seed sector. Building on the strengths of relationships in the seed sector, this intervention promised to become the major driving intervention under the revised strategy. Seed sector interventions addressed both the enabling environment and the promotion of private seed companies to drive the extension and outreach.

- The enabling environment work would build on the Seed Platform for dialogue, promotion of private sector seed inspectors (PSSI), and improved information sharing through an NSA managed website;
- The withdrawal of the government from most seed distribution to SHF opened up the market (and created the necessity) for private seed companies to try to sell seed directly to SHF, for which they were ill prepared. The private seed company work would also integrate the assets developed in extension (SEAG had trained competent extension agents who sought employment and had proven that the demonstration models were effective forms of outreach) to focus on demand creation.

Output marketing. Links to output markets shifted from intensive contract growing relationships with major buyers to supporting buyers to deepen their direct purchasing from farmers. This new strategy evolved, in the second year, to concentrate on engaging with local Mozambican commodity aggregator traders (CATs) to develop deeper relationships with SHF closer to their villages.

Access to finance. Increasing access to finance for SHF through embedded finance or commercial lending had not succeeded in reaching scale, so new thinking was required. A new approach of leveraging local systems for mobilizing savings would work through extensive existing networks of village savings and loan associations (VSLA) to introduce a new savings product - "savings for seed" - known as the "Fundo Agricola".

Land tenure. With much deeper analysis of the underlying land tenure problems and the opportunities for addressing them, it became apparent that the promotion of DUATs would be a very intensive engagement and that it was not within InovAgro's remit. The new approach was designed to leverage local civil society organizations to delimit communities, as opposed to demarcating individual households.

Farm mechanization. This had previously been embedded in the out-grower schemes but would now focus on the promotion of farm mechanization service centers with private investors.

Value chains. The new strategy kept the four focal value chains and added a fifth one: maize. As maize is the largest value chain in the country, the seed companies do most of their business in maize. The seed companies indicated that if maize was not included, they were less interested in participating in driving demonstrations and outreach as they would not be promoting their main product. This provided a strong market systems logic for adding maize, with which the SDC concurred.

The new strategy was formally approved in July 2015, but many elements took actual effect starting from November 2014. The adaptation brought much more ownership by the private sector in the supporting markets, and fundamentally shifted the emphasis of the project from value chain focused to cross-cutting market systems focused. Results would still be captured by value chain participants, but the supporting markets would be the focus of the interventions.

Introducing a New Tool – the Deal Note

Some of the big challenges in previous engagements with private sector companies had been lack of clarity on common agendas and the full roles and responsibilities of each party. InovAgro wanted firms to invest in approaches that would lead to inclusive systemic change while the firms wanted InovAgro to invest in supporting them to develop viable business models. Creating that common framework (see Annex) in a simple 2-page format (a Deal Note) greatly enhanced the dialogue between the project and its private sector partners. Each Deal Note would be tailored to the needs of both the project and the

partner. The short format allowed for rapid review and agreement by the SDC and the SAC, allowing the project to save time and to develop smaller, iterative agreements with a greater number of local partners.

YEARS 2, 3 AND 4 OF PHASE II: IMPLEMENTING THE NEW STRATEGY

Seed Sector Enabling Environment

This work focused on collaborating with government and the private sector to operationalize the new seed platform for dialogue, strengthen the NSA's ability to manage and share relevant information with the seed industry, and address the capacity constraints of the NSA to inspect and certify seed.

Seed Platform for Dialogue

Building on the April 2014 conference, InovAgro provided lead support to create the structure of the Seed Platform for Dialogue and develop its strategy. One critical challenge was to create a legal status so that the Platform could raise funding to cover its operating costs – donors or other agencies were precluded from giving money directly to the platform until it was legally registered. The participants agreed on an Association as the legal format and created the Association for the Promotion of the Seed Sector (APROSE) with members from government, seed companies, donor agencies, implementing partners, and the farmers. APROSE was formally created in March 2016 following 18 months of discussions. The FAO funded an interim Secretary General for the Association, while it was awaiting legal status.

Once legally established, Pannar agreed to fund the position of President of the Association for the first two years (until 2018). By the end of Phase II of InovAgro, APROSE was generating funding from member dues and contributions from donor projects seeking to use APROSE as a platform for driving seed sector dialogue. Donors included the FAO, USAID's SeedTrade and SPEED projects, AGRA, and continuing support from InovAgro. Early achievements included organizing dialogue around the review of the seed legislation to identify gaps and the harmonization of seed legislation in the SADC region and facilitated the consultations that led to the legislation of the diploma for licensing private seed inspectors and laboratories.

Strengthening the National Seed Authority Outreach

InovAgro sponsored the development of a website for the NSA, which was launched in a test format in November 2017. The website supplied information on the services provided by the NSA and allowed stakeholders to download assorted forms related to the provision of various services such as registration and release of seed varieties and applications for field inspections. The website also contained regulatory information (various legal instruments) related to the seed sector. In parallel, InovAgro supported the development of a database for the NSA to manage all of its data and resources.

Creating a Private Sector Seed Inspection Service

In parallel to the Platform for Dialogue, it was apparent that the NSA did not have the human capacity to properly supervise and certify all the seed being produced in the country. It was agreed to examine the possibility of establishing a private sector seed inspection service, similar to those already in use in other countries in East Africa. Starting in September 2015, InovAgro sponsored tours by NSA staff, the project's seed expert, and members of APROSE to visit Kenya and Zambia to learn about different models for private sector seed inspection. In 2016, once the preferred model was clarified, InovAgro assisted the NSA to draft new regulations, and support them through to the Ministerial Diploma to operationalize Private Sector Seed Inspectors (PSSI), which was approved in June 2017.

Strengthening private seed company marketing

With the government's withdrawal from most seed supply activities in 2013, the large seed companies that had been largely dependent on the government for their market (and all the seed multipliers who supplied them) suddenly found themselves without markets. Initial outreach to major seed companies

at the beginning of the project had been to persuade them to target smallholders directly but had been rejected because it was easier for seed companies to sell to government in bulk. This now changed, and the new seed intervention manager had both extensive experience with seed companies in Mozambique and was respected by them. Consequently, he was able to generate interest to engage with the program from the seed companies.

Very importantly, InovAgro was able to attract leading international seed companies to the north of the country. While Klein Karoo (K2) had been present in the South, InovAgro convinced them to move northwards and support them with introductions to key government offices, the SDAEs, lead farmers and agrodealers. At the end of 2017, InovAgro convinced Seed Co from Zimbabwe to re-enter Mozambique, by starting in the north and signing an important Deal Note in 2018, with Seed Co contributing 90% of the funding for the investment.

Seed Distribution Networks

Eight seed companies partnered with InovAgro in various project locations as indicated in Figure 10. The seed companies initiated activities with local distributors and agrodealers to expand their reach into rural areas. For the larger seed companies, like Pannar, evolution from direct sales to setting up warehouses and working through distributors occurred. The smaller seed companies managed some direct sales, but also worked through agrodealers primarily. Overall, the companies used 35 agrodealers, signing supply agreements with many of them, helping them to co-brand, and teaching them how to organize demonstrations. The firms also recruited a total of 20 village-based agents (VBA).

Figure 10: InovAgro Partner Seed Companies

Demand Creation and Extension

Demand creation was an integral part of the seed company partnerships. The seed companies needed to build awareness of the benefits of their products and the value proposition for SHF to invest in them. These seed companies employed 19 field extension workers by the end of 2017 to drive outreach to farmers. Together they organized 299 demonstrations and more than 9,190 farmers participated in field days organized by the companies. InovAgro developed solid working relationships with the regional departments of agricultural extension (SDAEs) to collaborate with the seed partners. These extension and outreach activities led to the sale of 273.79 mt of assorted certified seeds to smallholder farmers in project districts in 2017, up 145% from the previous year.

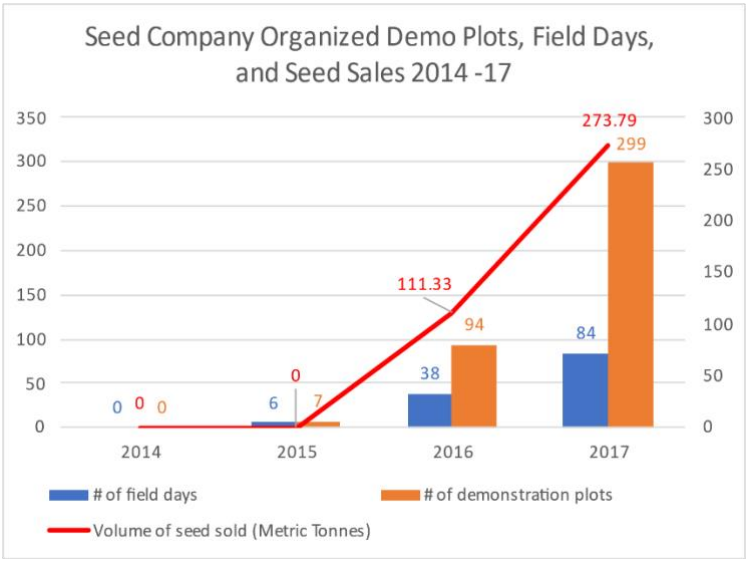


Figure 11: Seed Company Organized Demos, Field Days and Seed Sales 2014-17

Output Marketing

Developing Commodity Aggregator Traders.

InovAgro initially continued to rely on large firms to provide the driving force behind increased linkages to SHF to improve their skills and capacity, working with firms like Cargill and AgroMoz to create closer buying relationships with SHF. However, corporate strategies changed again, and both Cargill and AgroMoz closed their operations in Mozambique in 2016 and 2017. To address the market access challenges for SHF, InovAgro found a new innovative approach of focusing on local commodity aggregator traders who lived in the districts and could develop good relations with SHF to expand/improve their buying arrangements.

Figure 12: CAT at her buying point

A critical issue for the SHF was transparency in their relationships with buyers, usually the Bangladeshis, whom they did not trust. The strategy was to improve transparency using electronic scales and price boards in buying posts that were placed in the villages close to farmer fields and building trust through sharing market information with the SHF. This would ease the transactions costs of selling and allow the CATs to build stronger relationships with the SHF.

By the end of Phase II, 25 CATs were operating 266 buying posts, covering 80% of the costs of establishing the buying posts, ensuring the likelihood of sustainability. InovAgro covered the other 20%, providing digital scales and price boards for piloting the buying point model. In 2017, the CATs purchased 5,447 mt of commodities worth more than USD 1.5 million.

Strengthening Ties to Government Agencies.

During this period, InovAgro also worked closely with the Ministry of Industry and Commerce (MIC) at the provincial level by sponsoring a workshop to create a platform for the different value chain actors to engage on how the output marketing sector in Nampula province could be strengthened, bringing about competitiveness in the sector.

Access to Finance

Figure 13: Fundo Agricola Group in Mocuba, 2015

Having struggled to support farmers to access credit from formal financial institutions, InovAgro designed and piloted the Fundo Agricola (FA) starting in July 2015 in Mocuba, in cooperation with a co-facilitator, the NGO NANA, which was experienced in the village savings and lending associations (VSLA) concept. NANA mobilized farmers, brought awareness, and trained the farmers on the FA concept. Though it was late in the season, the pilot reached 1,039 members who saved USD 4,800 to purchase certified seeds. The model added a separate savings window into the VSLAs' weekly meetings that would be kept separate and designated just for spending during the planting season on inputs, tools, or labor. A second co-facilitator, Ophavela, was recruited in 2016 and by the end of Phase II two years later, there were 4,721 members saving USD 28,000 to purchase certified seeds (Table 2, below).

Table 2: Fundo Agricola Members by District and Savings, End October 2017

Service Provider	District	Number of groups	Total Members	Women	Men	Valor (MZM)
Ophavela	Ribaue	42	1,013	709	304	223,127
	Malema	47	1,750	1,225	525	290,000
NANA	Mocuba	85	1,958	1,022	936	1,065,195
Total		**174**	**4,721**	**2,956**	**1,765**	**1,578,322**

Very importantly, seed companies began to see the FA groups as targets for their sales, and therefore began engaging with District Management Committees (DMCs) formed to coordinate and centralize the negotiations and purchases for their members.

Land Tenure and Farmer Economic Security

In 2015 and early 2016, InovAgro developed its new land tenure strategy after conducting a study on land tenure security to determine the main strengths, weaknesses, opportunities, and constraints to smallholder tenure security in the project locations. InovAgro analyzed the land titling from a market systems perspective, looking at the supply (government to deliver titles) and demand (farmer demand for titles) issues, and laid out a series of issues against which to test possible solutions.

Recognizing the costs of land titling to farmers and the limited capacity of government to deliver titles, InovAgro chose to focus initially on community land delimitation, working through civil society organizations (CSO) specialized in land tenure issues. Land delimitation does not provide as much legal protection but would allow communities to understand the process better and to enter strategic partnerships with investors for effective utilization of the land to facilitate mutual gain and reduce the risk of land related conflicts between neighboring communities.

The CSOs organized 4 community land management committees and developed a network of 57 paralegals to assist farmers to register. In 2016, the first two communities were delimited and in 2017, two more communities were delimited. Between the four communities, 17,225 SHF benefited from the delimitations. Community land delimitation certificates do not provide the full legal protection required by smallholder farmers in the project locations, but land delimitation remains a first step towards individual land titling through DUATs, which would become the focus in Phase III.

However, delimitation or land titling alone does not improve SHF economic security. SHF need to effectively use their land and access market opportunities. InovAgro introduced other interventions into these communities to take advantage of the increased land tenure security and stimulate further investment in land and economic activities. For example, InovAgro facilitated linkages between community members in the delimitated communities with agribusiness value chain actors as a strategy to promote the sustainable / profitable utilization of the delimitated land. InovAgro leveraged its other initiatives to promote savings groups to improve access to finance, encourage one CAT to establish three buying points, introduce two seed companies into the communities and support the organization of seed fairs.

Farm Mechanization

InovAgro approached farm mechanization challenges from two angles; first, to improve the capacity of existing tractor owners to deliver farm mechanization services, and second, through expanding the supply of farm mechanization services.

Factors constraining the delivery of services by existing farm mechanization providers included knowledge of how well to use the implements (focusing on tractor drivers) and business models for selling service (tractor owners). InovAgro supported the UniZambeze to develop a training course for tractor drivers that is now part of their curriculum. Tractor drivers participating in the training highlighted how little they had known about how to properly use the equipment and their effectiveness increased.

On expanding supply, InovAgro worked with new firms running mechanization service centers in conjunction with the government's agricultural development fund (FDA) to provide agricultural support services to SHF. However, the political economy surrounding access to farm mechanization equipment through the government's scheme made it difficult for InovAgro to find effective partners.

In 2016, InovAgro and the SDC agreed that InovAgro should drop farm mechanization as an intervention, as the political risk was high.

PROGRESS, MAIN CHALLENGES, AND LESSONS LEARNED

The strategy redesign in 2014/15 successfully realigned InovAgro to leverage its position and approach to facilitate new private sector led initiatives to transform the way that agricultural market systems operate in Northern Mozambique. Though many of the initiatives were only 2.5 years old by 2017, they had begun to gain traction and laid the foundation for Phase III to take the interventions to scale and to consolidate the market system changes. The project had by then expanded into 11 districts, as highlighted in Figure 14 below. Whereas the first phase of InovAgro worked with only a few partners in 4 districts, by the end of the second phase InovAgro had developed a portfolio of activities with 8 seed companies and 35 agrodealers, 25 CATs and five output marketing companies, two co-facilitators working with the Fundo Agricola and two CSOs supporting land titling initiatives. From virtually zero sales of certified seed directly to farmers, seed companies were investing in organizing demonstrations and field days to drive demand creation and selling nearly 275 mt of certified seed per year. A growing number of regionally based CATs were investing in developing networks of buying posts close to the farmers to outcompete the more traditional Bangladeshi traders. The market systems were beginning to enter virtuous cycles of expansion by creating good competition between seed companies and building stronger relationships along the supply chain.

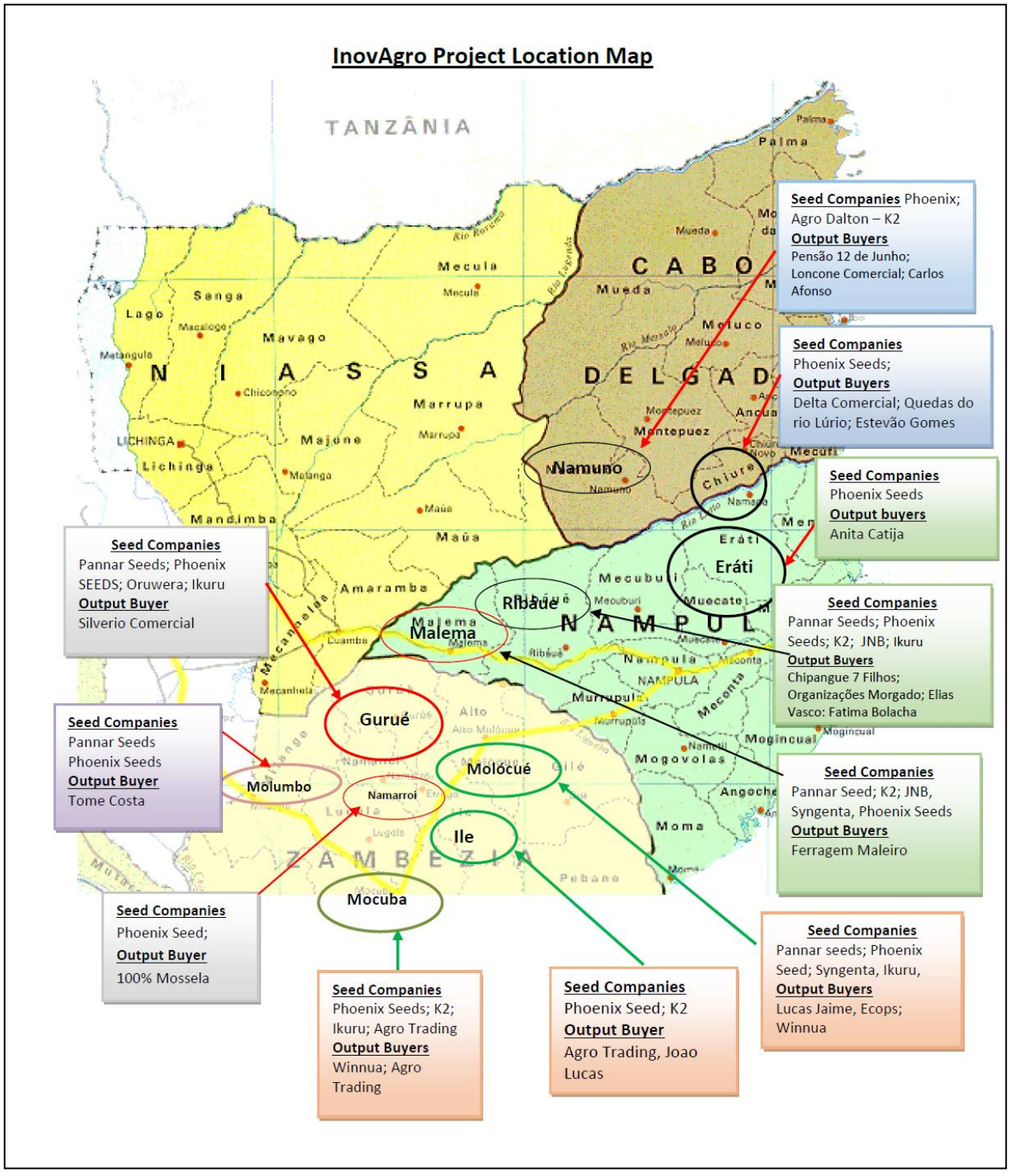


Figure 14 Map of InovAgro Private Sector Partners and Activities at the End of Phase II

The project had fundamentally shifted its approach from one focused on lead firms driving supply chain and embedded services to reach SHF in targeted value chains, to focusing on the cross-cutting supporting market systems of agricultural input supply, output marketing, access to finance, and land tenure. During Phase II, InovAgro strengthened its engagement with government, building strong relations with the regional agricultural services to support the promotion of extension services by seed companies. At national level the National Department of Agriculture and the National Seed Authority supported policy dialogue on improving seed certification systems, and the Ministry of Industry and Commerce on commodity trade issues.

Challenges

There were many challenges during Phase II, especially in the first year when the initial interventions mostly failed, forcing the redesign of the project. Shifts in corporate strategies witnessed in Phase I, continued in Phase II and highlighted the uncertainty of partnering with just a few large lead firms. This emphasized the importance of providing support that would allow a diversified group of market actors to enter and exit the focal market systems, recognizing that they would adapt their business models as the environment changed.

Above all else, the factors that came to the fore to challenge InovAgro's activities were beyond the control of the project. Over the 4 years of Phase II there were huge swings in the exchange rate, rebellions in key geographies of the country limiting access, evolving weather patterns including floods that destroyed roads and bridges and SHF plantations, political elections, changes in national government policy, and changes in the policies of the countries that were Mozambique's leading importers. The market actors in Mozambique needed to have the capacity to be able to respond to these short- and long-term shocks, which comes from increased resilience in the market systems and strong platforms for dialogue to bring together the government and the private sector.

Lessons learned

The main lessons learned from Phase II included the following points:

Addressing the development of cross cutting market systems is critical for broad based sustainable growth. InovAgro's shift from focusing on value chain specific constraints to addressing the underlying root causes of the issues facing all value chains led to substantially increased impact and laid a stronger foundation for sustainable growth.

Identify major challenges early, learn from experience, communicate, and adapt interventions quickly. The major strategy shift at the end of 2014 was imperative for the success of InovAgro over the phase. SDC's flexibility to work with the team to dig deep into the challenges and adapt the strategy to reflect the learning was critical. InovAgro's open communication of the challenges it was facing with pre-defined interventions was a critical part of this successful realignment.

Leverage existing structures at the community level. When it is not possible to rely on strong lead firms to drive interventions (such as output buyers or financial institutions), it is still feasible to leverage other existing structures - it may take longer for them to develop but if the value proposition is strong, their sustainability will be even stronger.

- InovAgro's shift in strategy to work with the CATs provided them with a new way of reaching SHF directly with market information, improved transparency in the marketing channels and improving linkages to the end buyers.
- The introduction of the Fundo Agricola into the existing VSLA leveraged these existing structures, facilitating the uptake of this new financial innovation. Because the VSLAs had been around and there were existing animators, it was easier to gain traction and to organize apex structures such as the district management committees to serve as an interface with seed companies.
- In the seed market, InovAgro began placing greater emphasis on local agrodealers and leveraging their relationships with local lead farmers, establishing demonstration plots and recruiting village-based agents.

Market systems can only progress as fast as the capacity of the market actors. While steady progress was being made in the seed sector, the seed companies had a great many challenges to expanding their operations: business management capacity; financial capacity; and technical marketing capacity. It takes time for farmers to build up their demand and financial resources. Much of the growth was organic and while external investments could have speeded it up, but human and managerial capacity was not present to enable extremely rapid growth.

Market systems often need facilitators to speed uptake. Information asymmetries, making it difficult for input suppliers to know where the best markets are, or output marketers to know where the best suppliers are, slow the development of market systems. InovAgro's ability to engage with both sides of

the supply and demand equations was important for generating successful uptake by seed companies and CATs.

Close collaboration with government can yield strong benefits and credibility. InovAgro's relationships with the NDA, the NSA, the MIC, and the SDAEs allowed them to engage on a wide range of policy and technical issues to strengthen the enabling environment. InovAgro's willingness to support these agencies with small funding for workshops and collaborative engagements increased the project's status as a go-to partner by those agencies, increasing InovAgro's influence on their policy agendas and implementation.

MSD projects operate in a complex world. This phase taught us that we are working in a very complex world where conditions are ever changing. Markets come and go (like the Indian pigeon pea market[7]) due to circumstances beyond the control of Mozambicans. Companies' corporate strategies changed, and national policies lead to exchange rate fluctuations to which business models need to adapt, one year favoring imports and the next supporting exports. A good market systems project needs to build the capacity of the market actors (from lead firms to farmers) to be able to respond to these changes, and to adapt their business models swiftly.

Promoting gender inclusion into the market systems requires careful planning and follow up. InovAgro greatly increased its gender inclusion by explicitly working through the VSLA, which were dominated by women. Finding this point of entry was critical and it spread through to the other interventions via the FA. However, it was difficult to ensure lead firms encouraged women in their core business as the firms did not see the clear value proposition; reaching women would require adjusting their business patterns, staffing structures, and often, their product packaging and offer. Mainstreaming gender inclusion requires businesses to see (and buy into) the value proposition of serving women and be prepared to make additional investments required to reach the break-even point. A project such as InovAgro can support both.

[7] Pigeon pea had grown to be one of the top two cash crops by end of 2016, trading at almost USD 1/kg (MZN 40). In 2017, there was surplus supply of pigeon pea by Indian farmers. The government banned imports and prices crashed by 88% to trade at MZN 5/kg in mid-2017. At time of writing (Oct 2021), pigeon pea prices had somewhat recovered to MZN 35/kg (USD 0.55/kg)

Phase III (January 2018 - December 2021)

The purpose of Phase III was to consolidate the dynamic gains of Phase II, cement the market changes, and take them to scale. InovAgro II experienced the complexity of issues facing SHF, from weather to economic and conflict shocks, highlighting the importance for market systems to be adaptive to become more resilient in the face of those shocks. For the project to be effective, it would also need to adapt its support to respond to changes in the environment.

InovAgro carried over the successful interventions from Phase II into Phase III, focusing on expanding and strengthening the three core supporting systems of input supply, access to output markets, and access to finance. The experimental work on access to land tenure would be taken to the next step in the four pilot communities – how to build the market for issuing land lease certificates.

Phase III also included a new outcome: creating a stronger supporting environment consisting of development agencies and/or private investors applying additional and/or improved market systems approaches to engaging with smallholder farmers in Northern Mozambique. This new outcome explicitly recognized the importance of building momentum among all implementers to apply MSD approaches that create a stronger enabling environment for private sector invest, with less crowding out caused by donor or government programming.

The final phase included an increased emphasis on addressing the challenges of gender inclusion in the market systems and a greater emphasis on knowledge management. As InovAgro has been a flagship project for SDC it was critical to capture and share the project's achievements to influence thinking about MSD in and outside of Mozambique, and to influence the way that other donors and government agencies conduct their programming. An important part of cementing success was to present planned exit strategies for each of the three main interventions to test the sustainability of investments promoted by InovAgro with private partners.

Phase III was intended to have a 3-year tenure. However, the disruptions caused by the COVID-19 pandemic led to a one-year extension until December 2021.

INPUT SUPPLY MARKET SYSTEM

Input supply continued its two-pronged approach focusing on the enabling environment for the seed sector nationally and strengthening the private sector capacity to create demand for, and deliver seed directly to, SHF.

Enabling Environment

The main elements of the enabling environment focused on seed sector dialogue through APROSE, the implementation of the PSSI by the NSA and private seed companies, and operationalizing the NSA website. As with any enabling environment issues led by the government, ownership and financing are very important aspects to their ability to drive change, which proved a sticking point on some initiatives.

The Private Sector Seed Inspectors (PSSI)

With the regulation agreed in 2017, the main challenge was to operationalize and institutionalize the training and evaluation of PSSI by the NSA. InovAgro funded the first round of training in 2018, organized in conjunction with the NSA. Twenty staff from seed companies applied for the training; 13 were accepted, but only 10 paid their application fees. From these ten, six PSSI were certified by the NSA in August 2018 and plans were made for the training to be held 2019, led by the NSA. However, the NSA staff were unable to organize the training as planned for the main growing season (March) and the season was missed. The performance of the six previously approved PSSI was assessed and four were re-certified.

Recognizing the budgetary and logistical challenges facing the NSA to organize PSSI training, InovAgro expanded the buy-in to the initiative to include the USAID regional Seed Trade project, the FAO, the SEMEAR project, and the regional development agency for Zambezia (ADVZ). These organizations assisted with outreach to participants and some financing. To help the NSA market the

training more effectively, InovAgro developed a value proposition to seed companies for the PSSI, which was shared with the NSA. Unfortunately, COVID-19 restrictions cancelled the training in March 2020. The second round of training was finally completed in August 2021, with 8 private seed company staff from 6 seed companies, 7 of whom were eventually certified. Very importantly, 8 lecturers from 6, agricultural colleges attended (5 were certified) to integrate the PSSI training elements into their curricula to improve the overall integration of the PSSI standards into the educational system, contributing to long-term sustainability.

Operationalizing the NSA website and the NSA Database

The database and the corresponding NSA website were launched in May 2018 by the NSA. Unfortunately, the NSA had budget challenges related to maintaining the website and it was not operational at the time of drafting this report. The Ministry of Agriculture and Rural Development (MADER) also instructed departments not to run independent websites. The Ministry plans to have one website where departments such as NSA will post their information.

APROSE

APROSE continued to engage extensively as a platform to stimulate dialogue between the market actors and drive seed initiatives. APROSE developed a new strategic plan in 2019 with four priority objectives, each one with a set of activities: (1) Institutional development of APROSE (2) Improving the sharing of information and coordination in the Seed Sector (3) Stimulating the development of the national seed market (4) Advocacy to improve the seed policy and regulatory framework.

While InovAgro provided capacity building and some financial support for operations, numerous other organizations used APROSE as the convening platform for promoting the seed sector. APROSE partnered with NSA and Seed Trade to facilitate the debate on the review of the seed legislation to identify gaps and the harmonization of seed legislation in the SADC region. With the FAO, APROSE organized a workshop to discuss a study about the evolution of the distribution of donated seed over the past five years[8]. APROSE assisted Speed+ and Mozambique Institute of Agricultural Research (IIAM) to organize round tables to debate the findings and recommendations of the study on the production and supply of basic seed. Inova has used APROSE as a platform for organizing a competition on innovative approaches between seed companies, to reward and give national recognition to companies with superior performance in the market. As APROSE charged to perform these services, they had generated a surplus by 2020 when the pandemic caused the cancelation of nearly all outreach activities.

A major policy issue arose in 2020-21 when the government-funded SUSTENTA project began delivering inputs directly to SHF in a non-transparent manner, risking upsetting the distribution networks that had developed over the previous five years. APROSE organized meetings between seed companies and distributors with the ministry to discuss the matter and find common ground for reaching the government objectives while not distorting the market systems.

[8] "Semente Gratuita e Subsidiada nos últimos cinco anos em Moçambique", Estrela Alberto, FAO and APROSE, May 2019

Private Sector Input Supply

At the start of Phase III, InovAgro had already developed partnerships with all the leading seed companies in Mozambique to ensure their engagement in the north. The new partnership with Seed Co, signed at the very end of 2017, propelled the expansion of demonstration plots and field day participants to new highs by 2019, as highlighted in Figure 15. In 2018 and 2019, InovAgro emphasized the linkages between agrodealers and distributors to deepen relationships within the sector, which also helped greatly expand the outreach in 2019 and drove more seed sales. By the end of 2021, InovAgro had engaged in partnerships with 9 leading seed companies, 3 distributors and 14 leading agrodealers. These partners were engaged with a total of 84 retail outlets by 2021, as well as organizing regular seed fairs in communities. Beyond InovAgro partners, a new seed company, EASI Seed, started in 2020 and is active across the north.

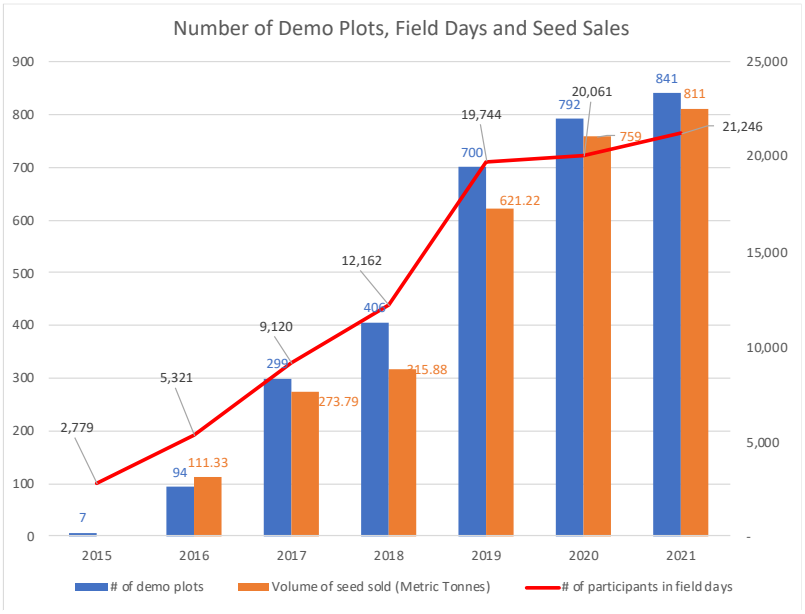


Figure 15: Demo Plots, Field Day Participants, and Seed Sales

The major externality in this phase was the COVID-19 pandemic. The government bans on meetings of more than 10 people put a stop to most of the field day activity and all seed fairs in 2020. However, the seed companies and agrodealers adapted to the challenge by empowering their lead farmers to begin to drive the field days, allowing for them to increase more rapidly (albeit still slower than pre-pandemic) in 2021. This resilience was brought about by the improved relationships between the market actors, and though their outreach activities slowed, the sales of certified seeds continued to grow every year, reaching 811 mt in the project's 11 districts[9].

Figure 16: Field Day Sponsored by K2

In addition to the lighter-touch work with major seed companies, InovAgro introduced new initiatives to build the capacity of the agrodealers responsible for 'last mile' distribution. While InovAgro facilitated lead firms (seed companies and distributors) to increase technical training of partner

9 It is important to note that these figures focus just on the sales and activities by partners in InovAgro districts. Most of the partners had also taken the InovAgro innovations into the other districts where they are working, so the systemic impact was significantly greater.

agrodealers, it also embarked on developing commercially driven business training for agrodealers. This was initially subsidized by InovAgro, but many agrodealers are now paying for mentoring from the business service provider who led the trainings and are investing in upgrading their management systems.

InovAgro's interventions have contributed to stronger and more sustainable relationships between the market actors. Many large lead firms are now well integrated into InovAgro districts and continuing to expand their services as InovAgro's investments for them tapered down to focus primarily on information sharing and facilitating relationships between market actors. The next frontier is to continue strengthening the systems to support the technical and business management skills of the agrodealers, which will greatly increase sales directly to SHF.

OUTPUT MARKETING

Expanding the CAT model remained the main emphasis for Phase III. The team leveraged their deep understanding of the rural trading environment and their strong relations with the Ministry of Industry and Commerce to assist the provincial Departments of Industry and Commerce (DPIC) to improve the regulatory environment in target districts.

Expanding the CAT model

After a successful expansion in 2018 (especially after the challenges from the pigeon pea crisis in 2017), InovAgro began a deeper reflection into the business model, challenges for expansion, and the sustainability of the model. It conducted a detailed analysis of different CAT operations that highlighted the tremendous variation in the companies' models and provided insights into the potential for, and constraints to, expansion. The binding constraints were the management capacity of the CATs, their guaranteed access to end markets, and their working capital. Most CATs did not have access to commercial bank lending for their working capital, but the few that had contract arrangements with larger buyers (who advanced them working capital) were in strong positions.

In response, InovAgro invested in many more information sharing events between the CATs themselves (where they discussed business challenges and opportunities), and organized annual meetings between the CATs, the major end buyers, and financial institutions. In 2019, InovAgro organized a workshop that brought together CATs and seven financial institutions, including GAPI to explore financing relationships. The CATs followed up with GAPI after the meeting and four received funding. This has been ongoing with GAPI giving loans to some CATs every year. In 2020, InovAgro facilitated linkages with Banco Futuro. Even though the bank approved five loans, only two CATs took the loans, the others citing exorbitant interest rates. Farther opportunities for funding CATs were explored with Banc ABC and Standard Bank. These had not materialized due to a bank acquisition and challenges with the central bank regulators at the banks. Similarly, InovAgro facilitated meetings between the CATs and the major end buyers, with seven CATs signing supply agreements with the major end buyers.

Figure 17 highlights the expansion of buying posts, annual volume and value of purchases. As with all other interventions, the restrictions put in place to address the COVID-19 pandemic slowed the rate of increase in 2020. While the value of purchases stagnated in 2020, the volumes increased as the CATs had the buying points on the ground to address travel restrictions (increasing their resilience) and continue to deal with the SHF. The closer relationships that InovAgro has promoted between the CATs, end buyers, and financial institutions have led to a significant increase in both the value and volume of purchases in 2021. Several CATs reported that the belt tightening in 2020 and the regular information sharing meetings helped them focus and adapt their business models to be more efficient.

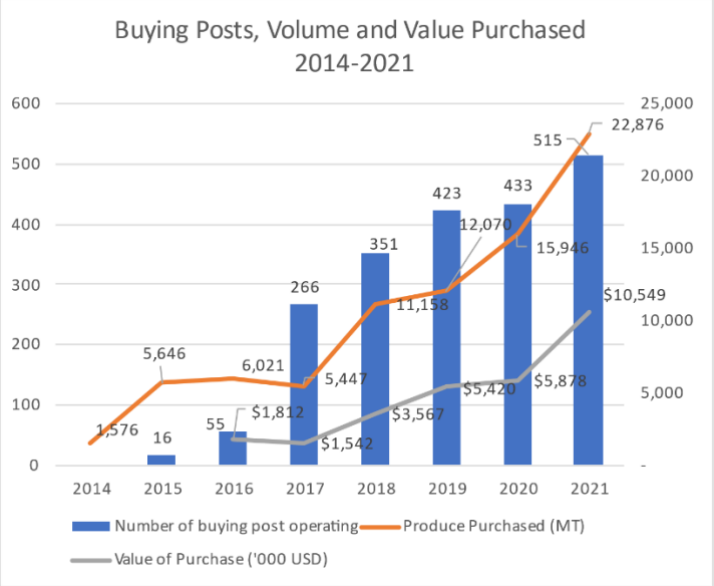


Figure 17: Buying posts, volumes, and value of purchases

The sustainability of the model is very well demonstrated. All of CATs, including those who stopped receiving any support, have continued to open new buying points equipped with new technology promoted and piloted together with InovAgro. InovAgro stopped all material support in 2019. Since then, the buying points expanded to 515 (22% over the 423 in 2019). Some CATs have expanded to neighboring districts, and all say that they will continue to expand on the model.

Enabling environment

Building on the strong relationships developed at the end of Phase II, InovAgro became the partner with the Ministry of Industry and Commerce as they rolled out their new initiative to reduce trade transactions costs through Decree 94/2018, which introduced the *Cadernetas de Comercialização*[10]. The Cadernetas requires traders to formalize – to become registered and become licensed to purchase agricultural commodities. The Cadernetas becomes a license to trade, paid centrally at SDAE. This would reduce their transactions costs and time to get licenses and facilitate the transport of their crops. The regional departments (DPIC) needed support to run the workshops to disseminate the new regulations and to build awareness by the various regulating agencies (police, health department, SDAEs, etc.) and the traders to promote adoption and proper enforcement. By 2021, all the CATs in InovAgro target districts had registered and were reporting reduced transactions costs as a result.

[10] This is a booklet that CATs buy from SDAE and record their purchases. The book has a copy for the CAT and copy to be send to SDAE for recording purchases, allowing more accurate record system of trade by the government

ACCESS TO FINANCE FOR SHF

The Fundo Agricola

Having proven the value of the FA to both SHF and to the seed companies for expanding access to finance to purchase inputs, InovAgro invested in a heavy expansion of the initiative. The project contracted a leading co-facilitator, Ophavela, to design a co-facilitator training[11] to expand the number of co-facilitators able to work in the region. In 2018, five new co-facilitators were trained, testing different organizational models: CSOs, groups of animators, NGOs, and cooperatives. As can be seen by Figure 18 this led a surge in new members (up 156%), but also a significant increase in the total FA savings (up by 439%). This latter reflected the perceived value of the program, as the savings per person rose from USD 4 in 2015 to over USD 25 in 2020.

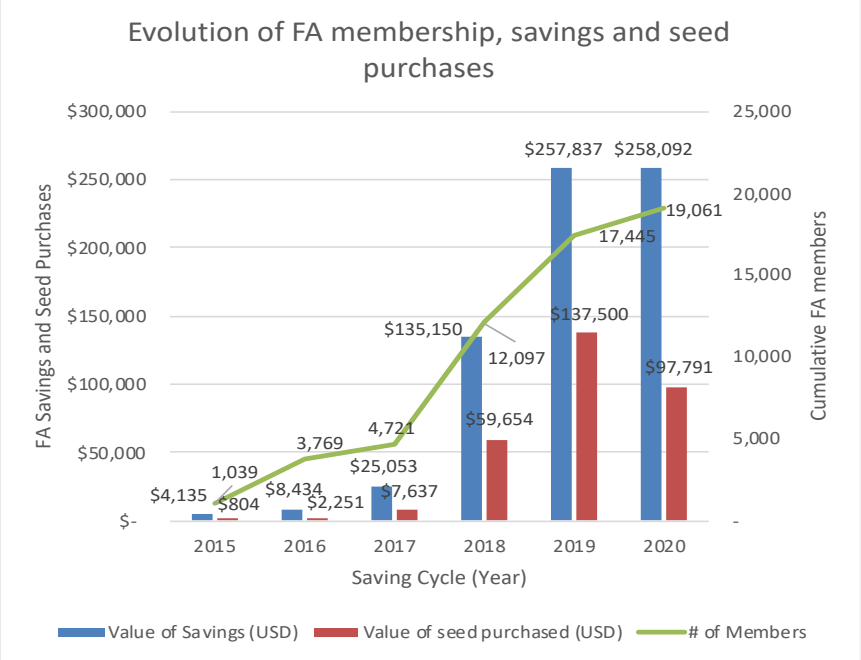


Figure 18: Evolution of the Fundo Agricola 2015-20

Following continued strong growth in 2019, participation in the FA was quite severely affected in 2020 by the meeting restrictions enacted to reduce the spread of COVID-19, as the groups could not meet. While there was a drop in numbers of active participants, there were still some new entrants, and those who saw the value of the FA continued to increase their savings per person, reaching $25 per person in 2020. The continued increase in average savings during the pandemic also reflected the importance of savings as a form of resilience.

Table 3: Progression of Average Savings in the Fundo Agricola

	2015	2016	2017	2018	2019	2020
Average Value of Saving per person (USD)	$ 3.98	$ 2.24	$ 5.31	$11.17	$18.92	$25.08
Average Metical savings per person	167.16	170.24	320.72	672.99	1,153.91	1,590.23

The DMCs continued to take on a larger role, interfacing with the seed companies. There were challenges for the DMCs to collect sufficient information to negotiate good deals with the seed companies, so only part of the savings for inputs was channeled through them directly to the seed companies. As with any savings, their spend is personal; most of the farmers preferred to take their savings and purchase the specific inputs they wanted from local agrodealers, or to purchase tools and hire labor.

[11] The training was consolidated into the *Fundo Agricola Facilitator's Manual* in 2019.

Commercial Finance

Access to commercial finance remained a problem for SHF. InovAgro continued to work with BOM on financial literacy during the first year, but in the second year, BOM was acquired by another bank which de-prioritized lending for SHF.

While most financial institutions were not interested in lending directly to SHF, preferring to lend in the peri-urban and urban areas, two financial institutions expressed an interest in promoting agent banking models in rural areas, and more particularly to link into the Fundo Agricola members as their anchor. Banc ABC and Letshego Bank had developed their agent banking models in conjunction with the Financial Sector Deepening (FSD) Mozambique around Maputo and wanted to expand into the north, including rural areas.

InovAgro negotiated a partnership with BancABC that was to start in 2020, where BancABC would provide 90% of the investment and InovAgro would provide them with introductions to the CATs and agrodealers, who could serve as their agents, and create linkages with the Fundo Agricola groups to stimulate information sharing, introduce smart phones to collect information and facilitate putting the FA savings into the banking system, where it would be safer than in their wooden boxes. Implementation was delayed by COVID in 2020, and then BancABC was acquired by Access Bank of Nigeria in late 2020, the acquisition process barring conclusion of any partnerships. The interest is still there, but it was not implemented during the project.

LAND TENURE

After leading the delimitation of the four communities led by the establishment of the land management committees and the 57 paralegals, farmers began to be interested in demarcating their individual lands and applying for land leases (DUATs) from the government. Paralegals assisted with the process, helping with the geo-referencing, and uploading applications in the Land Information Management System. This made it less expensive for the community members to pay for the service and easier for the Land surveyors to engage.

Table 4: Registrations of DUATs

Designation	2018/2019 (Namarroi districts)		Total Namarroi	2018/2019 (Mocuba districts)		Total Mocuba	Grand total
Targeted communities	Mussano	Mutaliua	2	Malopa	Munhacua	2	4
# of plots surveyed in each community	561	534	1,095	602	524	1,126	2,221
# of applications for DUAT submitted and accepted by system per community	344	7	351	602	524	1,126	1,477
# of DUATs in contention with investors	217	527	744	0	0	0	744
# of DUATs delivered	344	7	351	602	524	1,126	1,477

While 1,447 DUATs were issued, the process revealed that the government had issued some DUATs to PortuCel in Namarroi district, a private investor, on land where farmers have been settled for ages, without informing the communities. Therefore, 744 of the DUAT applications remained in contention.

While the exercise was designed to serve as a pilot and not to reach scale, it did demonstrate ways to more cost effectively delimit lands, create demand for DUATs, and implement a more cost-effective process for delivering the DUATs. This learning, including the analysis of the supply and demand characteristics of the market system, was captured in a case study, *Applying a market systems approach to stimulating land titling in Mozambique*[12] and has been shared with land tenure projects.

KNOWLEDGE MANAGEMENT

InovAgro prioritized knowledge management in Phase III. Most important was to capture the results and lessons learned, and then to share them widely within SDC, among donors, government agencies and private investors in Mozambique, and to the broader global MSD community around the world. The emphasis on knowledge management for Phase III was both internal (project) and external (development community) audiences.

Documenting Results and Learning

InovAgro produced case studies, newsletters, videos and success stories to document project results. Six case studies capturing the lessons learned have been produced during this phase, thus far, with two others in the process of finalization:

- Fundo Agricola - Savings for Seed;
- Market Systems Approaches to Land Titling in Mozambique;
- Market Systems Resilience to Mitigate the Impact of COVID 19;
- Strengthening the Enabling Environment of the seed subsector in Mozambique;
- Developing the Seed Sector in Northern Mozambique; and
- Building the Output Markets for Agricultural Commodities for Smallholder Farmers in Northern Mozambique.

Communications Strategies

While generating knowledge through our MRM system, case studies, and reflection sessions with stakeholders, the project leveraged virtual platforms and partner relations to effectively drive more engagement. The communications strategy has applied tactics at the national and international levels.

- Nationally, InovAgro have relied on our extensive database of key government, private, donor and civil society stakeholders to share our publications. Through the MSD Network, InovAgro posted documents and findings on a LinkedIn page, as well as share key findings in the MSD N webinars.
- Internationally we leveraged the SDC Employment + Income (e+i) Network, the BEAM Exchange (part of the DCED), DAI's websites, USAID fora and others to share our documents and communicate our lessons learned on systemic change in weak market systems. All six cases above were published in the SDC's e + i Newsletter.

Within the SDC, InovAgro organized a booth at the quadrennial SDC Face-to-Face meeting in Solothurn in 2019 to present the projects results and its learning adventure to the SDC economic growth staff and the other participating projects. Following the presentations, InovAgro was voted by the meeting participants as "the most adaptive project" in the SDC portfolio.

[12] https://beamexchange.org/resources/1311/

Figure 19: Manuel Sager, SDC Managing Director, presenting "Most Adaptive Project" award to Fauna Ibramogy (InovAgro SDC Project Officer) and William Grant (InovAgro

Stimulating systemic learning

Systemic learning for market actors

The knowledge management also targeted the system actors in the project districts. Starting in 2019, the project began organizing more sessions between the actors in each intervention to identify strengths and weaknesses and to stimulate cross firm learning. These meetings were organized at a central level for each sector – input supply, output marketing, and the Fundo Agricola - in Nampula to maximize learning among key partners.

In 2020, InovAgro prioritized meetings between the partners across interventions to generate additional synergies between the input supply, access to finance and output marketing services. These led to increased partnerships and better market targeting by the various market actors, such as seed companies organizing more demonstrations closer to FA groups, agrodealers asking CATs about preferred varieties, and CATs engaging more on the agricultural input distribution. The meetings were organized geographically as most cross intervention synergies were at the district level.

System learning for donors, projects, and government agencies

To promote better dialogue between implementers to infuse more MSD approaches and limit crowding out by other donor and government projects, InovAgro used several approaches. At the regional level, InovAgro organized three workshops across seed projects working in northern Mozambique in 2020 and 2021 to share knowledge, results, and approaches[13].

In 2019, InovAgro organized a conference in Maputo[14] to emphasize the effectiveness of MSD programming from the IFPRI longitudinal impact assessment of InovAgro and a recap of InovAgro's results. The DAI Technical Director for InovAgro made a keynote presentation of market system models and highlighted InovAgro's results to the 62 participants. InovAgro organized panels involving

[13] Participating projects included: InovAgro, Inova, CLUSA, FAO, PROMER, HortiSempre and private sector companies, Oruwera and Olima Farm.

[14] Report on InovAgro Market System Development Best Practices Dissemination Workshop, July 18, 2019

each of the three main intervention areas, with representatives from projects and private companies working in those sectors.

At the national level, InovAgro leveraged the Market Systems Development Network (MSD N) to reach a much broader audience. In 2020, InovAgro organized a 2-hour virtual session (the first virtual session of the pandemic) on market facilitation with 22 participants. After watching the MSD N decrease its outreach in 2020, InovAgro took the lead to re-dynamize it in 2021. With support from SDC, the project took over the presidency, organized a dynamic steering committee comprised of thought leaders on MSD and recruited a secretariat, sponsored by the SDC through InovAgro. The secretariat created a LinkedIn page and organized regular steering committee meetings which identified key MSD topics for learning events with assigned projects to champion them. There is also now an MSD N website which hosts all related MSD documents on Mozambique to facilitate access to information across projects.

The secretariat assisted the champions to organize the learning events, which included technical presentations from more than one project and panels of Mozambican market actors. InovAgro organized the first virtual session on transformation of the seed sector market system in northern Mozambique to which it invited the FAO to present as well as a panel of leading seed companies to discuss progress and challenges in developing last mile outreach to SHF. While reaching donors and implementing partners, these learning events engaged many market actors, and reached well beyond Mozambique with participants from more than 20 countries. At the time of writing, four events had been organized in 2021, with an average attendance of over 100 per event.

The learning from InovAgro is also influencing mainstream development channels. Most recently, InovAgro's results and learning have been highlighted in the *Independent Evaluation of SDC's Performance in Market Systems Development in Agriculture, 2013-2019*, which noted InovAgro's holistic approach to systemic development and emphasis on program learning. InovAgro was selected as one of the top 14 MSD projects for review in the *BEAM Exchange's Evidence review for 2021: The results achieved by programmes that use the market systems development (MSD) approach*. It featured widely in the comments and case studies.

GENDER

Achieving "win-win" opportunities for women, youth, other marginalized groups, private sector companies, and the markets themselves require intentionality and targeted incentives to overcome constraints and foster opportunities. InovAgro revamped its gender strategy in 2018 and operationalized it through the staff in late 2018 and early 2019. Gender experts trained the staff on mainstreaming and helped them to develop mainstreaming action plans. InovAgro also organized training for our lead partners to help them develop gender mainstreaming strategies that would bring gender inclusion into their core business model. Forty seven percent of the InovAgro's beneficiaries were women, well over the 40 percent project target.

To drive greater gender inclusion and mainstreaming, InovAgro integrated it into all project led interventions and knowledge sharing workshops, continuously putting it in front of sector stakeholders. Sessions on gender were included in systemic learning events by sector and in the cross-sector workshops.

Intervention level gender mainstreaming

In Access to Finance, gender awareness and training was included in the annual savings cycle reviews workshop held in February each year, training of District Management Committees and inter-district DMC learning exchange visits. InovAgro directed the co-facilitators to ensure that the voice of women is heard in FA groups through encouraging women participation, encouraging groups to give women equal opportunities to be in leadership and promoting an increasing number of women animators.

In Output Marketing, InovAgro has tried to empower more female CATs through encouragement of emerging women traders to grow into CATs. Over 15 small women traders / buying agents were trained on basic business management, opportunities identification, business licenses and access to finance. The project lowered the entry criteria for women compared to men and organized exposure visits to

more successful women CATs for younger/newer female traders to learn and be inspired. The women are starting from a lower level, however, and will need a lot of training, incentives and coaching to bring them up to the acceptable level. Inside the CATs, many partners were reinforcing women's involvement through recruiting female buying posts agents and capacitating them the same way they are doing with the male buying posts agents. Some CATs have indicated that female buying agents are proving to be more trustworthy and they are putting in more women as buying agents.

In the inputs sector, InovAgro leveraged on the agro-dealer training by presenting a gender module that emphasized the importance of considering the needs of women farmers, giving examples of how to do this in product and service offerings. Among other issues emphasized was use of small packs to respond to women's reduced purchasing power. In addition, agrodealers were encouraged to ensure shop attendants have product knowledge to explain clearly to farmers, especially women, on how to use the products bought from the shops. During lead farmer training, it was emphasized that the training timing, content and language of training should ensure more women participation by catering to their unique challenges of limited time and lower levels of literacy.

In land tenure, InovAgro mainstreamed gender inclusion into the land titling process, including their participation in the land management committees. This led to increased participation in the registration process with the net result that 58% of the land registered was in the names of women.

Sectoral learning events and reflection sessions

The InovAgro Gender Focal person presented a module to deepen understanding of gender mainstreaming and addressing why gender equity is beneficial to households, communities, and agribusinesses at each of the eight regional multi-sectoral integration dialogue sessions. Stakeholders to the dialogue sessions where from the inputs and extension, output marketing and access to finance sectors and government.

During the CAT reflection sessions, InovAgro encouraged CATs to recruit more female buying agents as women tend to be more honest, an issue that CATs desire in agents and struggle to get. Reservations raised relate to jealousy from the men in their lives. A second area emphasized is selecting agents with ethics and integrity who inspire confidence in their communities. This will require involving local leaders in the validation of identified agents. This will make it easier for women and their men to feel comfortable for women to go to the market on their own.

Look and learn events

The Gender Focal Person facilitated three women "look and learn" events in 2020 and 2021 to promote empowerment of female leaders, small-scale farmers and emerging entrepreneurs in Ribaue, Mocuba, and Chiure. The learning events were centered around learning from the more successful women to inspire the promising new ones. The event participants included seed companies, SDAE and AENA extension officers, big and emerging CATs, big and emerging agrodealers, DMCs, FA members, VBAs and FA leadership. Role model CATs and agrodealers were brought in to testify, answer questions and influence the prospective entrepreneurs.

Seed company Phoenix Seed reported how it started working with female out-grower farmers who are producing seed for them, after engaging in the gender dialogue sessions facilitated by InovAgro. They had good experiences with female farmers in Alto Molocue district and want to recruit more small-scale women farmers to produce seeds for them. A group of women DMC members explained how they could work with CATs aggregating commodities for a fee. While this is far from becoming a CAT, involvement in trade on a small scale, could be the first step towards a future pool of female CATs.

EXIT STRATEGY – SUSTAINABLE MARKET SYSTEMS

All InovAgro interventions envisaged the long-term sustainability of the market system through initiatives to change how the market system functioned. They recognized that the market actor behavior would evolve and adapt with time, so varying parts of the initiatives would be kept as fit the business model of each independent company. The nature of InovAgro's support to partners evolved from more financial support in the beginning of Phase III, when it was promoting expansion, to emphasizing

learning and information sharing, with very little direct contribution towards the activities, by the end of Phase III. Also promoted was capacity building of CATs and agro-dealers through training and mentoring. Relationships were also promoted with distributors, big buyers and downstream mini-retailers. The taking on of the roles by private firms is evident in the changes in the market system (covered in the next chapter).

Output Marketing - Commodity Aggregator Traders.

In output marketing, InovAgro's emphasis on the creation of buying points to bring the CATs closer to the SHF, has continued to expand. InovAgro had stopped supporting any new buying points in 2019, and yet there has been a continued expansion by CATs and adaptation of their business models. When working with InovAgro, participating CATs had covered 80% of all co-investments, so were already fully committed. Surveys of CATs who stopped engaging with InovAgro after 2019 demonstrated that they were continuing to use the buying post model, even expanding the buying points. A total of 18 CATs demonstrated their continued interest by participating in lesson learning and information sharing workshops. 18 CATs participated in the business training sponsored by InovAgro. Of those, eight CATs cost shared to receive mentoring support during 2021.

The relationships established between the CATs, financial institutions and major buyers were commercial and negotiated and will continue after InovAgro. These have led to greatly increased purchases commodities. The *Cadernetas* is now firmly in place, as a government initiative; InovAgro's main role was to facilitate and speed the roll out, which will continue without InovAgro.

Seed Sector – Distribution and Extension

The seed sector in northern Mozambique has evolved significantly since 2015. The Figure 20 depicts the structure of the seed industry in the InovAgro districts, in 2014. With few active seed companies and virtually no direct sales to SHF (selling mostly to NGO projects), InovAgro's support focused initially on getting the major seed companies to move to the north. The seed companies came and are staying and becoming more specialized. They are expanding their distribution networks and continuing to promote demonstrations and field days which are part of normal demand creation. The linkages between seed companies, distributors and agrodealers, and even down to lead farmers are strong. Two of the distributors are now delivering technical training to the agrodealers because it is in their interest, and the seed companies are investing in training lead farmers (mostly without InovAgro support). Figure 21 highlights the structure of the seed sector today and the increasing complexity of the relationships and the demand creation activities they are implementing.

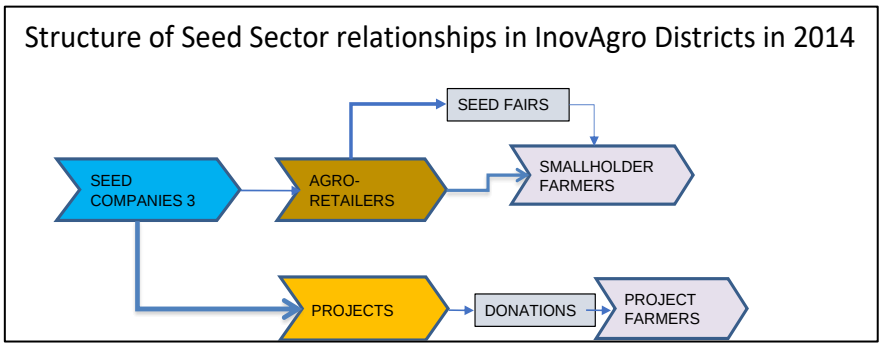


Figure 20: Structure of seed sector relationships in 2014

A survey of three agrodealers who stopped receiving support in 2019 showed that all are still operating and active in organizing demonstrations. Two of them are carrying out field days and two of them are participating in seed fairs, highlighting how the businesses will pick and choose which demand creation activities make the most sense for them. As with the business training for the CATs, the business training for the agrodealers remains a nascent market system.

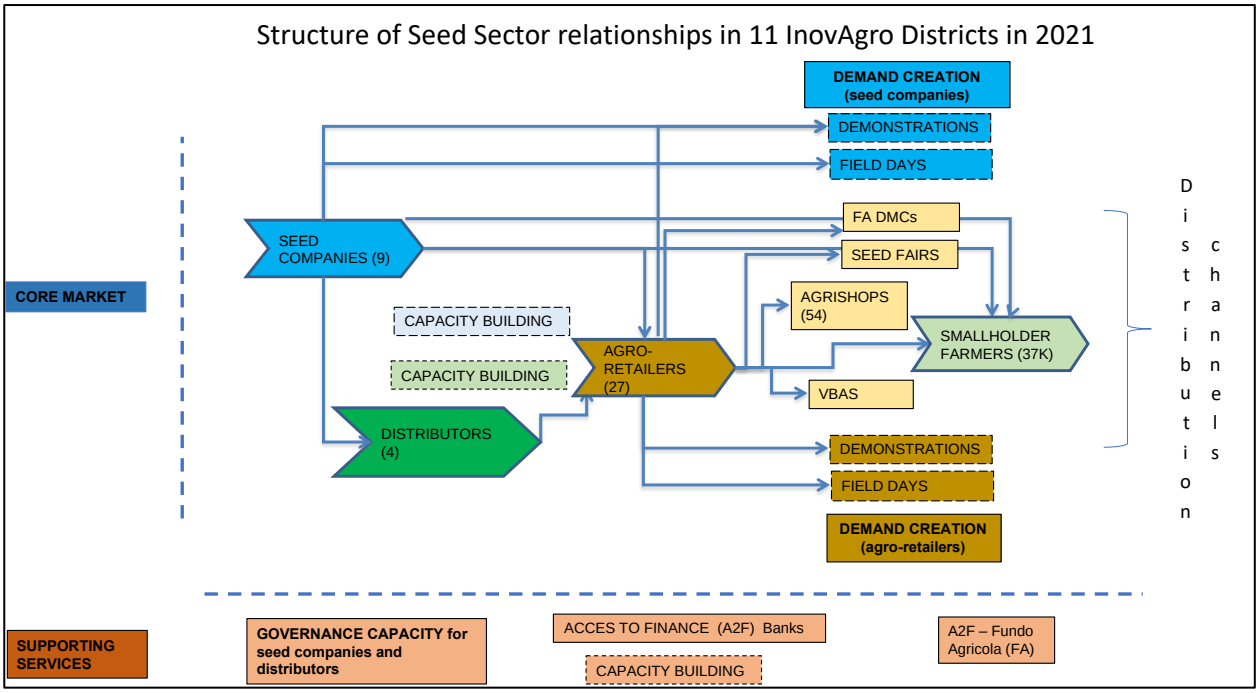


Figure 21: Deepening of the seed sector in northern Mozambique

Seed Sector regulatory framework

The regulatory initiatives in the seed sector were with the government and designed to promote more efficient functioning by the private sector and better policy dialogue. But the work is driven by government or private associations and their future is dependent on accessing the funding – either from government budget allocations or the contributions of partners:

- APROSE was set up as an association, providing it with the institutional framework to become sustainable, but it is still largely dependent on external funding (and always will be) as it is a multi-stakeholder initiative.
- The PSSI training has gained some traction but has only been through two rounds of training. The seed companies are still learning value proposition for having seed inspectors. The two that benefited from the first round highlighted how much it improved their overall business and are enthusiastic, but other firms now need to see the benefits. The NSA does not have the band width (or incentives) to organize this, even though it can be self-sustaining. This will require continued support and may be years until it is full self-funding. The smaller seed companies may need and continue to receive co-financing for the PSSI training from funding partners.
- In 2018, InovAgro funded for the NSA website, which for a short time went live. It is not operational now because the NSA does not have the funding or expertise to maintain it, despite their commitments to do so when it was initiated. MADER has since said departments will not be allowed to have independent websites. A website will be created centrally that will carry the departmental information. The APROSE website is already hosting most of the official information from NSA.

Access to finance

The Fundo Agricola faced challenges mobilizing members to participate in savings during the COVID-19 pandemic. The numbers of FA members dropped but those who stayed with it increased their savings. During 2021, InovAgro carried out a survey of FA members in communities where it had stopped providing support through a co-facilitator in 2019. The survey revealed that most of the groups were still working well. In fact, in 2021 they showed an increase in membership of 8%, that the District Management Committees were functioning, and they were still organizing purchases of seed from seed

companies (in 2020 the seed purchases in the exited communities were higher than the actively supported communities). These findings are optimistic for the sustainability and continued adaptation of the Fundo Agricola into the future, though the real test will be to see how they are doing a few years from now.

CHALLENGES AND LESSONS LEARNT FROM PHASE III

The above section has focused on the achievements of InovAgro during Phase III and the status of the exit strategies. Most of these achievements, and how they have led to deeper market systems overall, are covered in the next chapter on market system transformation. There were many challenges and many lessons learned on how-to do-good development programming during the phase.

Challenges

Many of the major challenges were related to external events that threatened to undo gains made by the project and tested the resilience of the market system. The cyclones Idai and Kenneth in 2019 did not affect the InovAgro districts directly, but they affected the behavior of government and NGOs buying huge unplanned volumes of seed distorting the market for seeds. The COVID-19 pandemic in 2020 and 2021 affected all meetings, supply relationships, travel into districts for input sales and to purchase outputs.

The government also embarked on a new agricultural promotion strategy in 2019, using the SUSTENTA project to purchase 3,000 mt of seed from seed companies to distribute through emerging farmers to SHF, rather than using the normal distribution channels. Since the distribution process did not include an effective mechanism for the farmers to pay for the seed, most of this will be seen as a handout from government, decreasing farmer interest in paying for seed.

National challenges included the high fluctuation in the value of the MZN in this last phase, political conflict between RENAMO and FRELIMO, the conflict in Cabo Delgado, all of which have placed operating challenges on the project. Political economy issues including land grabs and predatory behavior of large firms threatened SHF incomes. International challenges included Government policies from India banning imports of pigeon pea, Mozambique's largest export. The section in the next chapter on adaptive management discusses each of these in more depth and how they were addressed by the project.

As project strengthened the links between the larger lead firms and the agrodealers and CATs to reach the SHF, addressing the technical and management capacity weaknesses of the smaller firms became imperative. While it was in the interest of the lead firms (seed companies and distributors) to build the technical capacity of their partners, they did not have the capacity to address management concerns. InovAgro was challenged to find a market driven solution to address this. After gaining little traction InovAgro eventually identified service providers in 2020 who were interested in building a market for training these smaller firms. InovAgro paid for the development of business training for CATs and then supported the initial training. While this was gaining traction, additional investment will be required to make it sustainable.

The final category of technical challenges resides in the funding of public good activities. As a small agency, the NSA has difficulty accessing the budgets to continue their work on the website and PSSI. APROSE and the MSD N have accelerated its information sharing and generating good policy dialogue but will also require additional donor funding to continue.

The major internal challenge focused on keeping the project staffed with high quality people as first the project was to end in 2020 and then in 2021. InovAgro, as the leading MSD project, had trained up technical and M&E staff. Then without a guaranteed future and with other projects recruiting heavily, many InovAgro technical staff were wooed away at higher salaries and more long-term contracts by other development agencies. The upside is that former InovAgro staff are now active in most projects engaged in MSD activities around Mozambique, but the downside was a lot of turnover and retraining of staff by the senior management team. This was especially true for M&E staff, where three consecutive M&E managers, once trained up in MSD, were hired away by other donor projects to work

in Maputo (instead of Nampula). Fortunately, DAI provided strong continuity through the Team Leader and the Technical Director over the last three years to keep the project on track.

Lessons Learnt

Most of the overarching lessons learnt will be covered in the next chapter, but some of the key ones from Phase III included the following.

Projects have a strong role to support public good initiatives to drive policy dialogue and change with funding to allow them to gain traction

- **Mozambican government agencies will always have budgetary challenges** operationalizing new innovations. Government agencies need help funding and developing them initially, but then will require ongoing assistance to operationalize them. It is important to be planning for sustainability from day one, but also imperative to understand the constraints that will need to be overcome and a realistic timeframe.
    - The NSA's inability to fund and maintain their website was a function of their budget.
    - While the PSSI training has followed approval of regulations at the national level, its operationalization will require outside assistance for a while to come. The private sector is contributing, but their numbers, sizes and capacity will not make this sustainable in the future. Some will continue to require subsidies for a few more years.
    - The *Cadernetas do Comercializaçao* were put into place by the Ministry of Industry and Commerce, but it has taken several years of sensitization of the stakeholders for it to become firmly accepted, even though it leads to more efficient market systems which required funding that they did not have.
- **APROSE** is a multi-stakeholder platform for dialogue which serves as a very good interface between donors, government and the private sector to stimulate dialogue and reach consensus. In 2019, APROSE had a streak of workshops that allowed them to raise funds to cover most of their operations. But COVID-19 effects on physical dialogues (their main source of funding) has showed their limited resilience thus far and will require funding and support into the foreseeable future.
- **Knowledge management and cross donor coordination require dedicated resources**. Sound development programming requires good coordination across funders and projects. Differing donor agendas and approaches focusing on achieving short term results through direct delivery and paying for the results, can crowd out more sustainable interventions focusing on building strong supporting market systems. The MSD N was floundering until a more formalized structure was put in place with financial resources behind it to promote coordination and sharing of knowledge. While this is not expensive, effective sharing of information as a public good can impact the shape of tens of millions of dollars of development funding. While there is some scope for the MSD N to generate some revenue in the future, the market is still very thin and it will need ongoing funding support.

Resilient market systems can help SHF to withstand the impacts of market shocks. In spite of the travel and meeting size restrictions designed to limit the impact of COVID-19, the firms in the InovAgro market systems were able to adapt their services to ensure continued delivery, because it was in their business interest and they had established the underlying relationships to allow them to respond with continued sales of agricultural inputs and purchases of outputs. In contrast, many projects delivering support curtailed their activities during the pandemic. The pandemic did highlight areas where additional investment by firms would make them even more resilient, as in enhancing the training of lead farmers to deliver field days – which they did. Seed companies also developed a network of mini-retailers to allow them to reach the last mile.

Gender mainstreaming. Gender mainstreaming is necessary to ensure that development projects benefit all market actors positively. As MSD programs make the markets work more efficiently and more profitably, they create incentives for social dynamics to lead to men assuming more control. Very careful attention needs to be paid to ensure that the benefits accrue evenly. With the success of the FA, many more men became involved, and the project needed to place a renewed emphasis on ensuring that

women were in the leadership committees. While there is potential for firms to improve their sales by targeting women, this often requires additional investment, moving it lower on the priority list. For example, there is much market potential for agrodealers to expand sales to women, by adapting their products to make them gender friendly by reducing packaging sizes and hiring more women extension staff to market to women and create demand from women. But this requires additional investment, and the firms rarely see the value proposition for making those investments. A project like InovAgro must be making a concerted effort to clearly present that value proposition and help the firms to make the necessary investments to mainstream them across the market system.

Systemic Changes and Insights From an 11 Year Journey In MSD.

InovAgro's journey needs to be divided between the first four years when it focused on value chains and contract growing as the drivers of market system change, and the final seven years when it switched to focusing on cross cutting market systems. InovAgro delivered outputs in terms of farmers reached and outcomes in terms of their increased income during the first four years, but it did not change the underlying systems to ensure future benefits to an ever increasing number of SHF. InovAgro learned a lot and built very strong relationships during its first four years, which laid a strong foundation, but it was the shift in strategy at the end of year four which drove successful system change over the last seven years of the project. A large part of this was the learning curve on how to implement an MSD project in a very weak market environment, which was just being addressed globally. This is a very important lesson for future programming. This section captures the evolution of the three main market systems InovAgro focused on, considerations for how a project should adjust to changes in the political economy and overall lessons learned.

PRACTICAL FINDINGS ON MARKET SYSTEMS DEVELOPMENT AND DEEPENING

When SDC carried out their initial scoping study 2010, they found virtually no market systems supporting smallholder farmers (SHF) in the north. InovAgro sought to jump start the process by using lead firms as drivers of investment in services to reach SHF. Looking back over the past 11 years, we can see how the market systems have developed and deepened over time. This section of the report takes a deeper look at the evolution of the three main market systems InovAgro has focused on since the strategy redesign seven years ago and how far they have progressed towards becoming mature and resilient, along with the conclusions on market system transformation. This overall conceptual framework of the continuum in market systems development was initially presented on page 2, but is also found in Annex 3, with more explanation.

InovAgro has focused primarily on three main market systems with relation to SHF over the past seven years: the seed and inputs market system, the output marketing market system, and the market system for access to finance. Applying this framework to the numbers and types of firms in Northern Mozambique and the levels of change in transactions, we see how things have evolved considerably over time, but also how much time it takes for market systems to deepen and mature. Figure 22 summarizes the progress of the three market systems, which are then explored in greater detail in the subsequent sections.

Figure 2: InovAgro Supported Market Systems on the Continuum

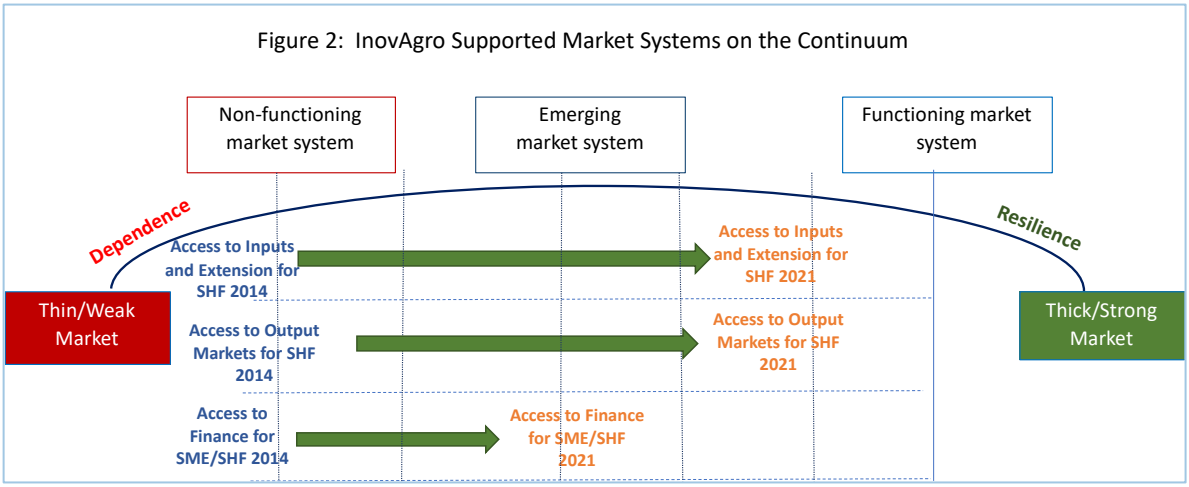


Figure 22: Market System Evolution

Changes to the Seed and Input Market System

The figure below represents that status of the seed industry in Northern Mozambique in 2014 and then in 2021, following seven years of engagement by InovAgro. InovAgro invested quite heavily in building relationships with leading investors and attracting new firms into the project districts. It also focused on strengthening the relationships between market actors (lead seed companies, distributors, agrodealers and SHF) and addressing policy and other supporting market (such as access to finance) constraints to realize the value propositions for the investors. As a result, the numbers of lead and supporting firms have increased and the volume of transactions and sales are increasing steadily, and many more SHF are able to participate in the market system. There is also greater specialization and coordination/cooperation between the stakeholders.

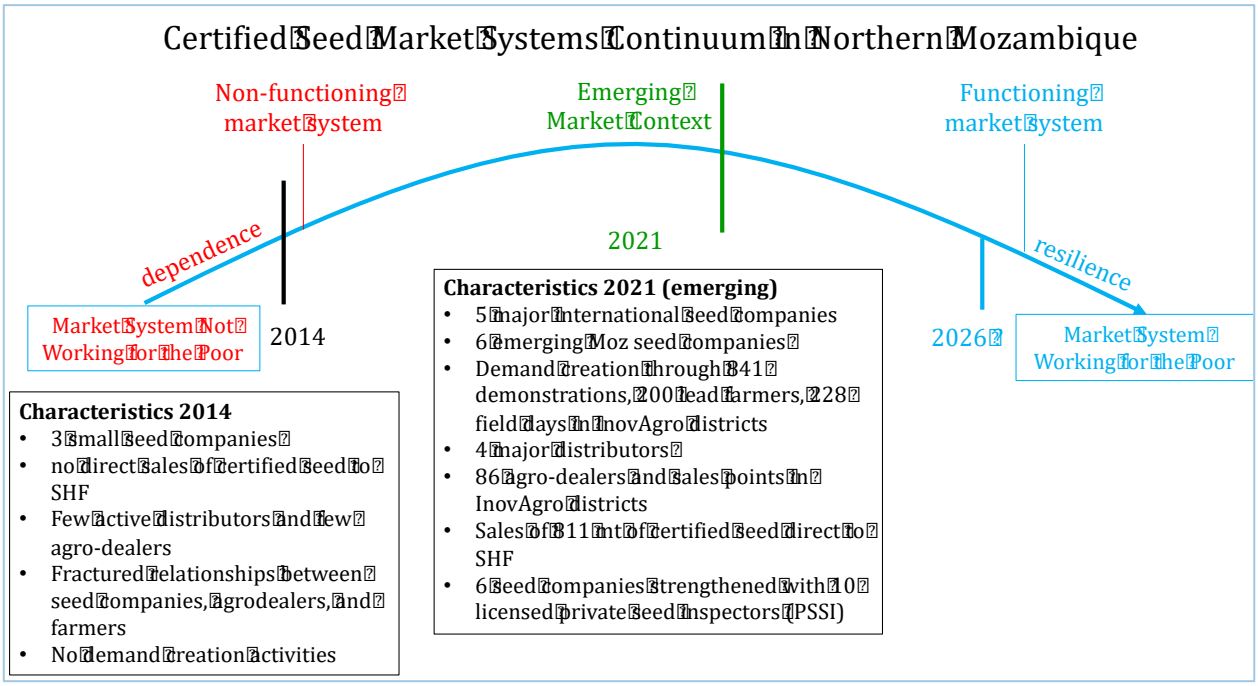


Figure 23: The certified seed and inputs market systems continuum in InovAgro Districts

In general, the policy environment evolved very positively between 2014 and 2021. The government's withdrawal from significant direct purchasing and direct delivery of seed to SHF in 2013 created a more conducive environment for private sector investment was the catalyst for much of the market system growth. The government support to investments in private sector seed inspectors, the harmonization of the seed sector regulations with the rest of SADC, and increased dialogue continued, this trend. Unfortunately, since the end of 2019, the GoM is reverting to distribution of inputs on credit (essentially given to the farmers for free since) through the SUSTENTA project using commercial farmers. This is by-passing and crowding out many agrodealers and last mile delivery agents.

Over the last two years of the project, the market system's ability to serve SHF continued to deepen with all key characteristics improving. But it deepened more slowly than in previous years due to several factors: the GoM's initiative through SUSTENTA, the lingering effects of Government and NGO purchases of seed for relief operations following the cyclones Idai and Kenneth (from two years ago), heavily fluctuating exchange rates, the conflict in Cabo Delgado, and most importantly the negative effects of the COVID pandemic. But despite these negative factors, the market system's continued growth demonstrates its resilience in the face of shocks (policy, weather, health, conflict), greatly increasing the likelihood of continued sustainable growth into the future.

Many initiatives by the private sector are already underway and many changes will occur naturally, driven as a part of the business strategy of the seed companies, distributors, agrodealers, and a few insurance companies and financial institutions. However, some elements, especially improving the

access to finance for demand creation, will still need steady investment. These characteristics demonstrate how the market system has started taking off on its own, with many new entrants, deeper relationships, and significant uptake by the farming communities.

Barring any additional major shocks, by 2026, we expect that the market characteristics in Northern Mozambique will have evolved to reflect more international seed companies, more distributors linked to seed companies and strengthening agrodealers, and extensive demand creation activities led by lead farmers. There will be continued upgrading by seed companies with PSSI, leading to steadily increasing sales of more assured quality certified seed direct to SHF.

Changes to the access to finance market system

In 2010, when InovAgro started, there was virtually no commercial finance available for SHF to purchase agricultural inputs. Many NGOs were providing subsidized support to SHF, but it was not sustainable. Commercial bank lending to SHF was limited by Know Your Client (KYC) regulations from the central bank. After years of trying to promote commercial bank finance to SHF (which required ID cards and formal registration for taxes - NUIT), by 2015 InovAgro had gotten buy-in from only one commercial bank to reach about 1,000 farmers. This was not sufficient to change the performance of the market system. When InovAgro introduced the Fundo Agricola in July of 2015, it sought an alternative approach; to build the capacity of farmers to save for their required inputs at the planting season. By recruiting and training local co-facilitators to leverage existing Village Savings and Loan Association groups (VSLA), uptake of this new model increased steadily. As the savings grew steadily and numbers of members increased to a cumulative 19,154 members to have participated in at least one savings cycle in the FA, the system has gotten traction. Average savings per farmer are increasing year on year (now up to $25), along with aggregate purchases of certified seeds and other inputs. Unfortunately, the pandemic with restricted meeting sizes has had a negative effect on the membership; but where the groups have been well founded, they have been very resilient, and savings continue to increase steadily.

The change in the system between 2014 and 2020 (final savings and seed purchases are not yet final for 2021) can be portrayed in the following graphic. More details on the initiative are found in the case study on the Fundo Agricola. While there has been steady progress over the last few years, the overall market system is still classified as weak, though a foundation has been laid for it to grow. Changes in the policy environment and KYC rules have stimulated interest from commercial banks to engage more closely with SHF through savings mobilization linked through Agent Banking which may have significant impact over the coming years. Insurance companies wanting to promote weather insurance to SHF are also intent on using the FA groups as an entry point.

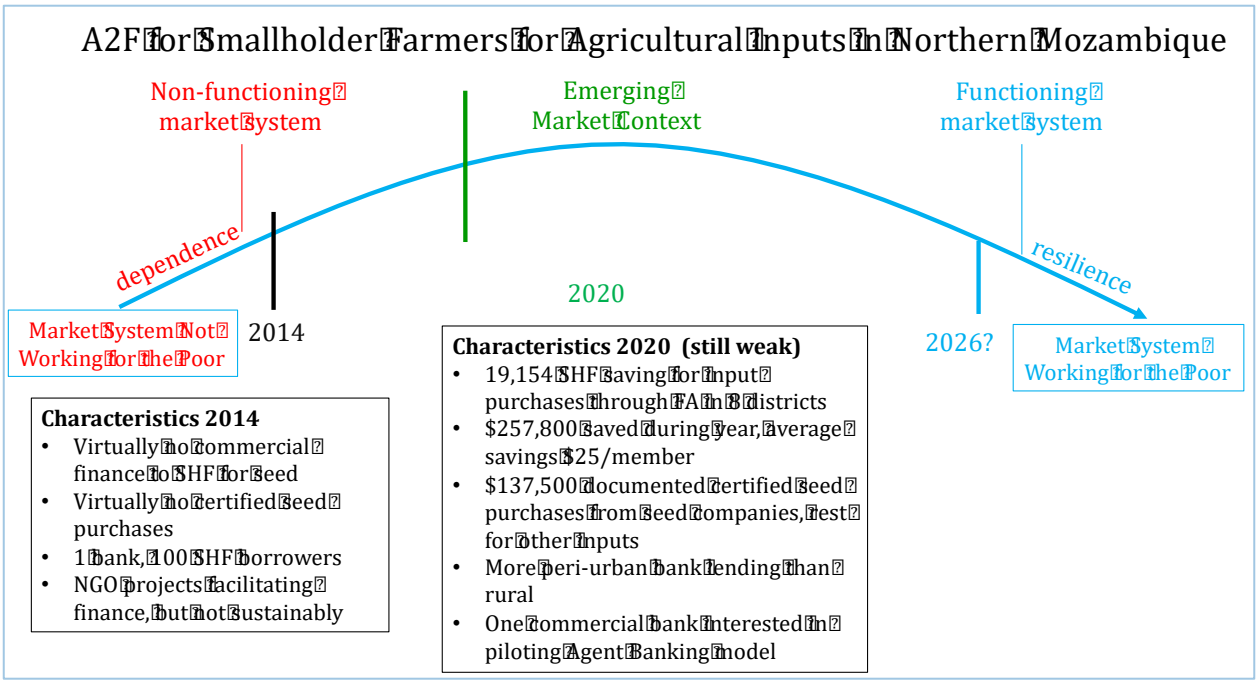


Figure 24: A2F market system for input purchases by SHF

It is expected that by 2026 a much deeper market system will exist with more than 30,000 SHF saving each year in the Fundo Agricola. In addition, it is anticipated that two commercial banks will have active outreach to SHF through agent banking with several hundred agent bankers serving more than 50,000 individuals in rural areas of the north. $1.5 million saved or borrowed for input purchases (>$1,000,000 for certified seeds); and average savings $40 - $50 per Fundo Agricola member.

Changes in the market system for Output Marketing for SHF

Improving the functionality and efficiency of output marketing for SHF has been a major challenge for InovAgro. Large end buyers who drive the market have had little interest in developing closer relations directly with the farmers; they relied on networks of Bangladeshi traders without permanent links to SHF to purchase the commodities.

After years with gaining limited traction, in late 2015, InovAgro shifted its focus to the linkages between local Mozambican commodity aggregator traders (CATs) and SHF. CATs, who were members of the communities, had an incentive to increase and maintain strong relations. By focusing on increasing transparency and building trust between the CATs and the local farmers from whom they purchased, InovAgro sought to create stronger linkages that would result in better access to market information and reduced marketing costs for SHF. InovAgro invested time in improving relationships between CATs and large end buyers and financial institutions, leading to greater access to working capital for many CATs. In 2021, a major increase in purchases by value and volume demonstrated the progress.

At the same time, InovAgro's work with the provincial departments for industry and commerce (DPICs) has improved the regulatory framework for trading, increasing the CATs incentives to formalize and meet government standards.

During 2021 the CATs increased the number of buying points by 20% over 2020, increased total volume purchased by 44% to 22,876 mt, and the value by 89% to $10.5 million from a year ago. Since the investment is made by the CATs, this is sustainable into the future.

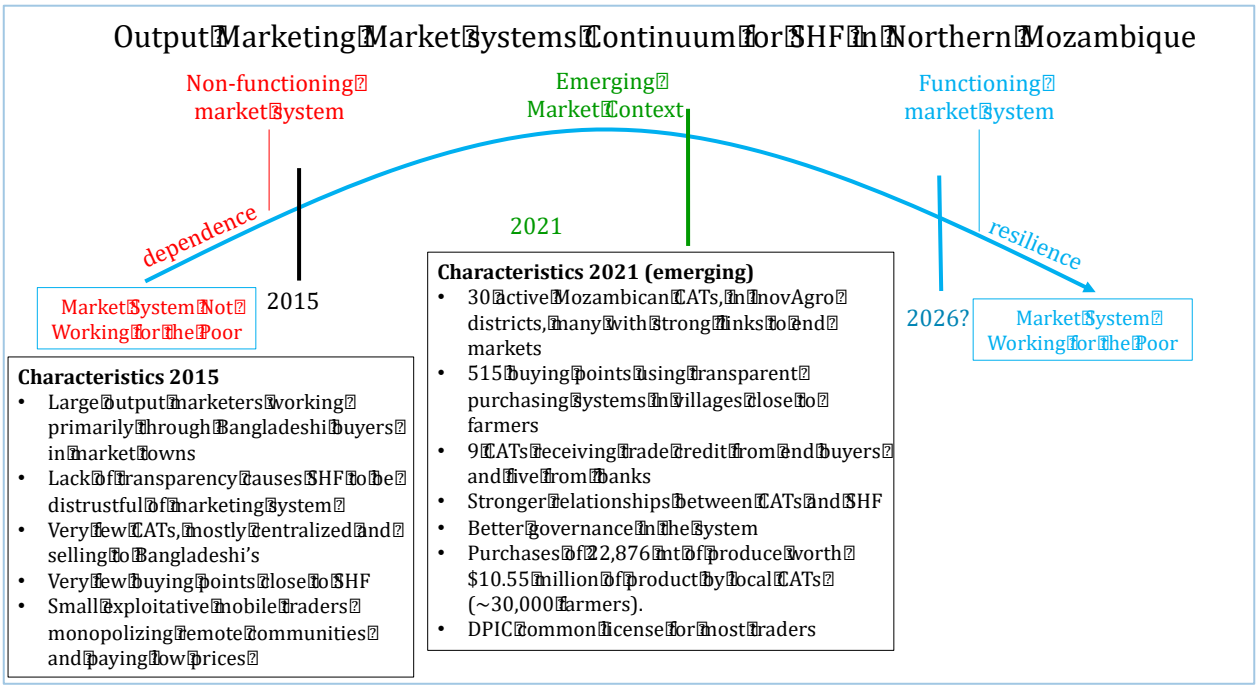


Figure 25: Output Marketing market system

The progress since 2016, when the CAT model was introduced has been steady. We consider this market system to still be emerging as the CATs face numerous problems in business management and access to finance, but it is progressing nicely. Several CATs have taken the buying point model to districts outside InovAgro support for strategic reasons on just to expand their purchases. With appropriately placed supporting services, we expect that by 2026 there will be at least 50 strong CATs operating close to 750 fixed buying points and many more mobile buying posts and purchasing up to $25 million a year from close to 100,000 SHF in the 11 districts.

INSIGHTS ON IMPACT FROM IFPRI EVALUATION

As part of SDC's learning process for market systems development, it contracted with IFPRI to carry out a four-year longitudinal impact assessment of the InovAgro project interventions using a modified Randomized Control Trial (RCT) methodology. Between 2014 and 2019, IFPRI carried out a baseline (2015), midline (2017) and endline (2019) survey of beneficiaries and non-beneficiaries in two treatment and two control districts. The same participants were queried over the three surveys to assess changes.

Impact

The impact assessment found that InovAgro interventions increase farmers' use of yield-enhancing agricultural inputs, access to market information, and productivity. It also found that a more intense, combination approach of using all three modalities (agro-dealers, lead farmers and demonstration plots) appeared to be necessary to achieve long-term positive effects on the overall welfare of households (Amare et al., 2021)[15].

Systemic and Sustainability effects

IFPRI's survey methodology applied a unique spatial identification approach to capture beneficiaries as those within a 60-minute walk catchment area of the three modalities, allowing for comparison

[15] Amare, Mulubrhan; Ghebru, Hosaena; Smart, Jenny; and Zavale, Helder. 2021. Impacts of MSD programs: The case of InovAgro. INOVAGRO Impact Assessment Policy Brief 2. Washington, DC: International Food Policy Research Institute (IFPRI).

between InovAgro modalities for interventions and the modalities of other donor interventions in the control and beneficiary populations. IFPRI also held focus group discussions and key informant interviews with the agro-dealers, seed companies and lead farmers to assess the sustainability on their activities. This allowed IFPRI to examine and document the following market level effects, as presented during the InovAgro close down workshop[16]:

- *Systemic effects*: IFPRI found evidence in support of the project's having a systemic market effect, that the market actors were changing their behaviors based on work with InovAgro.
- *Sustainability effects*: The InovAgro MSD program has more sustainable impact than non-MSD programs. Farmers who had benefited from access to the InovAgro intervention changed their behavior more than those benefitting from direct delivery programs applied by other donors in the region.
- *Large-scale (spillover) effects*: The InovAgro project benefited large numbers of smallholder farmers beyond the project's direct sphere of influence and intended beneficiaries. Due to the systemic nature of the intervention, many more farmers were reached and benefited from the intervention.
- *Unintended effects:* The InovAgro MSD program and other non-MSD programs have an unintended effect on reducing households' crop diversification. Because households were earning more money from the crops being promoted by the seed companies and agrodealers, they tended to invest more time and money in those crops, reducing their cultivation of less profitable crops, reducing the diversity of their production.

INSIGHTS INTO MARKET SYSTEM TRANSFORMATION

InovAgro's voyage over the past 11 years has provided many lessons on factors that drive market system transformation. The project's original assumptions that lead firms were needed as the entry point to stimulate systemic development have proved right in cases where good lead firms could be identified. But what of those critical systems to drive sectoral growth where there were no interested lead firms? How do we go about filling that void? Our experiences in the three market systems analyzed above, point to the following lessons:

- Large technically competent firms with strong **skills** (good management, and solid financial resources) can bring more rapid transformation to a sector if the right value proposition for them is there. Larger firms have the resources to drive more rapid growth. We have seen the best results on market system transformation in the seed sector, driven by the work of large multinational firms like Pannar, SeedCo, and K2, which have both invested in expanding the market as well as setting the technical bar for their competition to follow. These strong lead firms knew what their eventual business models should look like, and the importance of depending on distributors and agrodealers to drive eventual market growth. With strong firms setting the standards, other firms wishing to compete will adopt the same approaches and principles more rapidly.
- The **will** of the lead firms to engage and invest will dictate how fast change can happen. In access to finance, there was low will from the financial institutions to engage; they did not see the value proposition of engaging with SHF. Simultaneously, the will from the large exporters (and end markets) to engage directly with smallholder farmers has been less responsive. This is in part due to the incentives within the management structures of the big firms to change behaviors towards promoting innovation and change that ties back to good relationships.
- Getting the incentives right within lead firms can lead them to improve their coordination and to expand their engagement, build solid win-win relationships to expand their outreach and drive market system transformation. The seed sector has demonstrated how **good cooperation**

[16] Amare, Mulubrhan; Zavale, Helder and Smart, Jenny. December 2, 2021. Impact Evaluation of The Innovation for Agribusiness (InovAgro) Project in Northern Mozambique

between firms performing different functions creates efficiencies and is good for developing the market system as a whole.

- Creating a foundation for smallholder engagement can serve as a strong magnet for investment by lead firms, which can speed innovations and introductions of new products. InovAgro's investments in the Fundo Agricola have proven that there is demand for savings to purchase inputs. But have also created a large enough pool of savings to attract the interest of financial institutions to see how to engage more proactively with the SHF. The introduction of agent banking to leverage the Fundo Agricola, may be an innovation that will create a synergistic effect to stimulate increased financial sector activity targeting SHF.
- Creating a pool of strong intermediaries, who are closely linked to their clients (either as buyers or as suppliers) is good for enhancing coordination within the market systems. Increasingly we have noted that as the sectors mature, companies become more specialized and create stronger relationships at the level of the last mile (CATs for purchasing and agrodealers for selling inputs) and speed up the transformation of the sector.
- Getting other development projects to adopt sound approaches can create synergies and speed the development/transformation of a market system. While InovAgro may have been the lead innovator on introducing demand creation activities by the seed companies, numerous other projects have followed the example and are now investing in developing private company driven models. We have noted that many project sponsored voucher schemes (which have been introduced to stimulate demand) have stimulated new entrants by agrodealers. However, care must be taken to truly understand the absorptive capacity of the market (purchasing power of the SHF without the subsidies) to know how many of the new entrants will be able to survive in the future.
- Promoting **good competition** between firms carrying out similar functions those firms will lead to more innovation and crowding in. In output marketing, as the CATs started opening up new buying points, many Bangladeshis started copying the approach in order to compete more effectively to access product from the SHF. This is good for the SHF.
- InovAgro's holistic approach, which addressed input supply systems, output marketing systems, and access to finance systems created many synergies. During the last two years the heavy emphasis on knowledge sharing, both across market actors in the same fields to learn about how others were operating as well as between market actors in different sectors has paid dividends (see section on tactics for results, below).

ADAPTIVE MANAGEMENT – DEVELOPING NEW TACTICS TO ACHIEVE STRATEGIC MARKET SYSTEM CHANGE

When InovAgro introduced its new strategy in 2015, the initial interventions were straightforward and used only a few tactics to address the market system challenges. As the project's learning on the challenges facing the businesses increased and it worked more closely with the businesses to identify new solutions and opportunities, it was able to adapt its interventions to introduce new tactics to resolve the root causes of the fragmentation of the market systems and to promote stronger business models. The evolution of these changes in tactics are briefly covered below.

Seed Sector

The initial seed sector activities started with attracting new leading seed companies into the north of Mozambique, the promotion of demonstration plots with lead farmers and field days, both organized by seed companies, and stronger linkages to agrodealers. In 2016, InovAgro began supporting companies to develop commercially driven seed fairs and mobile sales units.

As the market system grew, and sales began to increase, firms began playing more specialized roles. Seed companies, which had been active in direct sales to farmers, stepped back to focus on production of quality seed and sign distribution agreements with distributors. InovAgro followed these changes and adapted its tactics to use MSD approaches to work more closely with distributors and the agrodealers to build greater capacity to drive last mile delivery. In 2020, when COVID disrupted the

demonstration and field day process, InovAgro collaborated with the seed companies and distributors to realign their approaches to work more effectively through lead farmers.

Over the last several years of the project, InovAgro placed much more emphasis on capacity building of the agrodealers. While initial capacity building (2015-19) had been carried out by the seed companies, InovAgro worked with the distributors after 2020 to take on technical capacity building. Distributors had previously focused on seed promotion, but InovAgro encouraged them to do formal, documented training every time they visited downstream partners. InovAgro then supported private trainers to develop business training programs for the agrodealers. This latter progressed more slowly, but is gaining traction, and the agrodealers are paying for various aspects of training and investing in the tools (computers and software) they need to manage their businesses better.

Output Marketing

The 2015 strategy focused initially on large firms and getting them to develop more direct farmer outreach, rather than relying just on purchases from traders. This included the recruitment and use of extension agents who would explain the importance of proper varieties, sorting, and product characteristics. While there was some uptake, changing corporate strategies required a new tactics to increase the actual outreach by traders to more rural areas and drive increased access to markets by SHF.

New strategy in 2016 was to focus on the use of CATs, which represented a strategic shift. Tactics included piloting and then scaling of the fixed buying points with trust enhancing and quality assurance technologies. This evolved to strengthening linkages to financial institutions and end market buyers, who would provide capacity building support to the CATs. The next shift in tactics was to organize regular meetings between CATs and get them to share ideas amongst themselves to review main challenges and discuss joint initiatives to build their capacity. This latter led to the development of CAT specific training, in which many CATs are now investing directly.

In parallel, the new tactic around promotion of the Cadernetas has stimulated reduction in transaction costs.

Access to Finance

Initial tactic was to work with formal financial service providers, tied in through structured finance deals with a guaranteed buyer. When the project encountered challenges due to the legal framework, it moved to direct lending based on credit worthy clients (not tied to a buyer) who could meet the regulatory Know Your Client requirements.

With limited uptake from the formal sector, in 2015, introduced the Fundo Agricola as a new tactic to save for seeds, while also identifying areas with purchasing power where seed companies could demonstrate and sell seeds. A new tactic was introduced in 2017 with the development of the DMCs, who coordinate FA group savings and seed needs and links with prospective seed suppliers. In 2020, the DMCs were decentralized to ensure more frequent and cost-effective contact with the FA groups. Another tactic was introduced with the expansion of the co-facilitator model and introduction of paid animators (by the FA group members). A new tactic was being developed in 2020 just as the pandemic hit to link the FA groups to formal financial institutions through agency banking models – which would also leverage the CATs and agrodealers.

In 2019 InovAgro organized a first “cross group” meeting of seed companies, FA animators, DMCs, co-facilitators, and financial institutions. The workshop transparently presented the status of savings by the FA groups, to incite the seed companies to target their activities in areas where there were more dynamic FA DMCs and to enhance coordination with the co-facilitators. Similar events in 2020 and 2021, strengthened the relationships and are leading to more effectively planned linkages between seed companies, distributors, and the FA DMCs.

Overarching Tactical Shifts

As each of the sectors gained greater maturity and traction, in 2019 InovAgro introduced new tactics to stimulate greater collaboration and cross sectoral learning by the market actors within the three intervention areas. The market actors have expressed that this exposure provides valuable benefits in terms of ideas for new innovations as well as increased business opportunities as they see the synergies between the different sectors. Some of the new business opportunities which created better integration include:

- Increasing the use of Lead farmers to run field days, as well as demonstrations;
- Using lead farmers as village-based agents to promote seed sales because they have the relationships;
- Interlinkages between the CATs and the agrodealers (each picking up the roles of the others);
- CATs using their buying agents as disseminators of information on desired products for the following year and best practices;
- FA members as buyers for the CATs;
- FA members working with agrodealers on demo plots management; and
- District Associations of CATs to drive self-policing. For example, in Malema, the CATs agree on when to start purchases and get traders to get scales properly calibrated.

The new innovations are taking on a life of their own and will continue to develop and evolve after the project ends.

ADAPTIVE MANAGEMENT - ADJUSTING TO/LEVERAGING POLITICAL ECONOMY AND CLIMATIC ISSUES

Ultimately market systems development programming needs to create resilient market systems that can adapt to a wide range of evolving conditions and shocks that affect the opportunities. Over the life of InovAgro there were many such events and the project sought to use them to its advantage to engage with partners, to stimulate the introduction of innovations, and to effect behavior change by the partners. Shocks can also be good sources of innovation. The most important element is for the project to be aware of these changes as they happen (in real time), start anticipating how they will affect the market system, determine if they can be used to stimulate innovation and adaptation, and then engage with the market actors. This section looks at some of the major policy changes and external shocks beyond the project's control, to which the project and its market systems needed to adapt. Some provided opportunities to leverage new market systems, while others forced innovation to adapt and overcome the shocks.

Government Policy Changes

Policy change can be one of the greatest stimulants for market system change since policies affect everyone in the market system. They can be negative or positive. A good MSD project should be looking for ways to positively influence policy change, or else to be able to respond to it and leverage it when it happens. Since much policy change is not anticipated, projects must be able to react quite quickly.

Government of Mozambique withdrawal from the seed sector in 2013 opened up new opportunities

Up until 2013, the government of Mozambique had played a central role in the distribution of certified and improved seeds to smallholder farmers, reducing market demand to purchase inputs, and crowding out many seed companies, distributors, and agrodealers from entering the market. Large seed companies had competed for government tenders, but never tried to sell cereal and legume seeds direct to farmers. But when the government stopped purchasing certified seeds in bulk in 2013, the three leading seed producing companies in Mozambique closed (Pannar, SEMOC, and MozSeeds), and their networks of seed multipliers had no market to sell to. This opened the door for InovAgro to work with the local seed companies to help them develop distribution channels, while also working with the government on policy issues related to seed sector dialogue and private sector seed inspection.

Introduction of the Cadernetas de Comercialização Agrícola by the DPIC

In 2018, the Government of Mozambique introduced the *Cadernetas de Comercialização Agrícola* (Cadernetas) designed to facilitate the trade of agricultural products in Mozambique by streamlining fees and controls for licensed traders[17]. As with many regulations, the awareness of the changes and the adoption/respect of the new regulations. This new policy framework offered a strong opportunity for InovAgro's partners (CATs) to become more dynamic and InovAgro seized the opportunity to provide minimal, but much needed, assistance to the provincial Departments for Industry and Commerce (DPIC) to first test the roll out in two districts in Zambezia in 2018, and then supported all three provinces to roll them out in the InovAgro focal districts. This support led to significantly higher uptake in those districts, and demonstrated ways to improve the awareness building exercises.

SUSTENTA inputs intervention in 2020-21

A major potential disruptor to gains in the development of the agricultural input market systems with an emphasis on reaching the last mile was the 2020 investment by SUSTENTA to circumvent the agricultural input distribution channels by delivering inputs directly to farmers on credit (without a way to effectively collect the repayments). This risks to disrupt the market system significantly when the government runs out of money to subsidize free inputs. The 3,000 MT of seed bought on the market led to most seed companies exhausting their stock, leading to little seed being available for the seed distribution network established by InovAgro. In addition, the lack of seed to sell disincentivized the seed companies from promoting demand creation. For as long as the government can afford to gie away inputs this will gradually erode the commercial market for seeds, gradually crowding out many of the market actors who have invested over past seven years.

InovAgro addressed this externality by raising concerns about the effects of the SUSTENA approach. It worked through APROSE to organize meetings with the Ministry of Agriculture to lobby for changes in the approach while also establishing the MSD Network as a conduit to highlight how market systems approaches were more sustainable over the long term. Lobbying for these change will be a continuous effort, as the political economy behind the SUSTENTA approach reflects the government's desire for immediate outreach and benefits (especially as elections near), without a deeper understanding of the way the market systems will develop sustainably.

Devaluation and growth trends

As all value chains are global, they compete with products from inside and outside the country. Therefore, trade conditions will be affected by the stability of the currency. Over a five-year-time frame (2011-2016), the Metical ranged from 33 MZN, appreciated to 26.25 MZN and then depreciated to 71MZN to the US Dollar as depicted in figure 26. There was a similar swing from 2016-2020 when it appreciated, depreciated, and is currently appreciating again, in 2021. This high fluctuation of the value of the currency has made it difficult for private sector seed companies (which import some certified seed) to plan, causing them to change their mix of strategies on importing vs local production. It has also affected the farmers' behavior and purchasing power, when faced with a doubling of the cost of imported seed, slowing adoption rates.

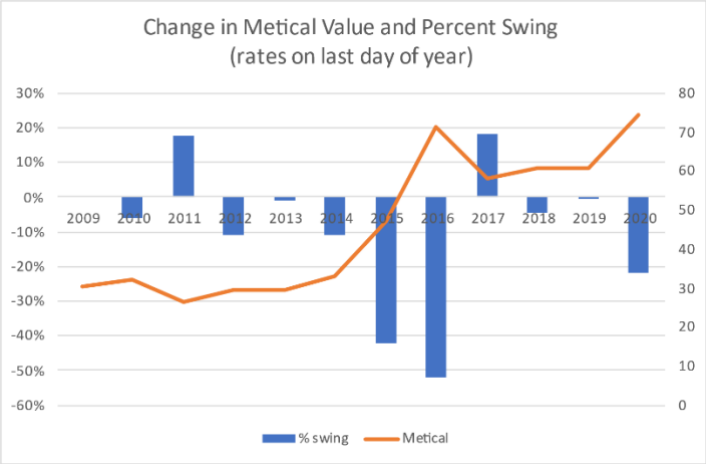


Figure 26: Exchange rate fluctuation Dec 2009-Dec 2020

[17] In the past, a trader required licence at district, post, localidade levels. Now they only require one licence at district level

This has allowed InovAgro to work with the seed companies to help them develop alternative strategies for producing locally and segmenting their market. For example, in the seed sector, major international companies initially relied entirely on imports of certified seeds, but as the metical depreciated, these became more expensive reducing demand. This presented the opportunity for the multinational firms to invest in multiplying certified seed in country, when appropriate, for local sales.

Fluctuations in currency had equal effects on the output marketing side. When the Metical appreciated, commodities that are partly imported (soya cake and maize) were incentivized to import, reducing their local demand and dropping prices for local supply. The appreciating Metical would also affect exports, making the products less attractive for farmers. When the metical depreciated it could lead to greater increases in price. In practice, the big commodity buyers do not pass the full metical benefit to farmers.

Political Unrest and Conflict

Northern Mozambique has seen conflicts flare up between RENAMO and the government since 2013. The intensity has been up and down though the disturbances had waned at time of reporting. Since October 2017, there has been attacks on civilians and private companies by insurgents in the far north of Cabo Delgado, leading to over 3000 deaths and more than 800,000 people displaced and some becoming resident in InovAgro project districts and Nampula city. Instability and conflict deter investment by private companies and prevent the transportation of goods and personnel across the conflict zones. Some partners who had worked with InovAgro in 2015 and 2016 curtailed their sales and marketing efforts into the North in 2017 following the conflicts. It has also hindered project staff ability to enter certain zones.

In response to this, InovAgro has developed stronger relationships between other NGOs and market actors from within the conflict zones who are able to circulate more freely and can represent private companies. These improved relationships increased the resiliency of the market systems in the conflict areas.

Political Economy

Mozambique is in the process of major change with international investments seeking access to its natural resources, big companies seeking opportunities to establish monopoly rights in sectors, and opportunistic behavior. Two cases, in particular, elicited strong interventions from InovAgro: land grabs by large investing companies and an attempt to monopolize the pigeon pea market by a major trading company.

All rural land in Mozambique is owned by the government. While communities and farmers have traditional rights to use the land, the formal leasing process from the government can supersede traditional rights if they have not been formally registered. Following the displacement of many farmers by one major investor, InovAgro began a process for analyzing why farmers were not registering their land rights developing a market driven approach to land registration in Mozambique.

The largest exporter of pigeon peas in Mozambique tried to capture the entire market through regulatory change. A push to require all local pigeon pea processing to be met before exports would be allowed, by the one company that had all of the pigeon pea processing capacity, would have reduced competition and lowered the price of pigeon peas to SHF. After lobbying by InovAgro, APROSE and other actors, the regulatory plan was shelved.

Global Issues – Policies in Other Countries Impacting Mozambican Farmers

Mozambique's exports of pigeon peas have been one of the major successes over the six-year period from 2010 and 2016 as exports had soared from 30,000 MT to over 200,000 MT to India. However, in 2017, the Indian government instituted a new policy to stimulate pigeon pea production in India, leading to an increase in production of 2.2 million mt of pigeon pea (record production levels nearly double the preceding year), eliminating the need to import pigeon peas from anywhere. This wiped out most of Mozambique's exports and crashed the price of pigeon peas in Mozambique. As this had been a growing part of InovAgro's portfolio this impacted farmer profitability and behavior.

The project responded by organizing information sharing workshops with the Ministry of Industry and Commerce and the International Growth Centre on the causes of the crash for pigeon peas but also on how to get the government to honor the trade agreement with India that guaranteed a quota of sales. At the same time, there was a shift in the behavior of the SHF to move out of pigeon pea and into other crops, where the farmers had information on alternatives and access to the inputs, advice and markets. Other adjustments by the government to re-dynamize the Cereals Marketing Board (ICM) so that it could interface with the Indian market have helped to put the exports back on track.

Natural Disasters Flooding and Cyclones

InovAgro's activities were frequently affected by flooding, starting in 2014, which wiped out some bridges and reduced farmers' access to markets. In 2019, northern Mozambique was hit with two major cyclones – Idai which heavily impacted the seed multiplication areas in Chimoio and wiped-out production for hundreds of thousands of SHF in the Beira Corridor; and Cyclone Kenneth, which hit Cabo Delgado and some districts in Northern Nampula province. Besides impacting farmers directly, InovAgro had to anticipate other responses from donors that might distort normal market actor behavior and sought ways to use the disasters to promote resiliency solutions.

The main threat to Mozambique's seed market system from the Cyclones would be government and NGOs buying up all available seed to distribute to affected farmers directly, which is a normal activity in response to such a crisis. However, if the local seed companies sold all their seed for relief in response to big tenders which are always easiest for seed company sales, it would undermine their investments in developing their distribution channels to reach their developing market with SHF. InovAgro engaged with the management of all the seed companies to warn about short term profit maximizing behavior that would damage their long-term interests.

In terms of promoting resiliency, the damage to the crops presented opportunities to promote crop insurance products to both the seed companies, distributors and agrodealers to build awareness and stimulate uptake of input insurance, which is being commercially promoted, which is more popular with SHF than the full index insurance (cheaper).

COVID-19

The government's measures to stem the spread of the COVID-19 pandemic in 2020, which included travel restrictions and meeting sizes to maximum 10 people, slowed down the outreach activities for the project. In addition, the local populations where highly sensitive to many external people that might bring the disease into their communities. By building up the local market systems over the previous 9 years, InovAgro had created an environment that was able to respond to these situations, with some support from InovAgro.

Seed companies were able to leverage their relationships with lead farmers at the demonstration plots to take over more of the field day activities. InovAgro facilitated the seed companies to speed up the training of their lead farmers so that they could take on this role from the seed company staff. This enhanced project activities in the following year. Because the CATs had developed more localized buying points, there was less intrusion into the communities by outsiders and no requirement to travel to urban areas to sell their product, which facilitated the continued purchase of farmer production. In some cases, the CATs instituted mobile buying points to reach previously underserved communities.

Changes in National/Regional/Local Government Leadership

InovAgro worked closely with many of the MDAs, but these are dynamic and always evolving. Ministries get re-organized, and staff move from one region to another. As InovAgro developed good relations with one set of leaders and they changed postings, it needed to invest to build new relationships and educate the new managers about the project and its interventions. Since most of InovAgro's support to MDA typically runs in parallel to their mandates and usually helps them to achieve their mandates, it is easy to build good relations. One example which stands out is the work in support of the DPICs for the *Cadernetas do Comercialização*, where our support helped them to roll out the materials and awareness, making it more effective and making them look good for achieving their mandate.

But the project maintained the old relationships as well, leveraging these individuals in their new positions to be ambassadors for InovAgro's approaches and methodologies. One of the best examples Dr. Mahmod Vala, the former director of the National Department of Agriculture, with whom InovAgro worked closely for 5 years to develop the seed initiatives. When he moved to head up the newly rehabilitated cereals board, he has remained an ally from a more influential position.

At the close down conference, Dr. Mahmod Vala reflected on the progress made under the project. He lauded the success, but also on how much more there is still to do. He stated that InovAgro made "it halfway" and that the changes in market systems facilitated by InovAgro still need to be continued, consolidated and expanded.

His comments focused on the seed sector and areas where InovAgro had collaborated with the government. He acknowledged how the Ministry of Agriculture and Rural Development still needed a better seed policy and increased support to the NSA so that it can fulfill effectively its regulatory role which is fundamental to the development of the national seed industry. He said that in the last campaign, seed with less than 60% germination was distributed and the those that supplied that seed should be penalized.

He considers that it is very important to guarantee the continuity of APROSE and MOSTA. He highlighted that support from development partners continues to be required, because the members of these organizations are not yet in a position to guarantee financial sustainability by themselves. He recommended the government should promote the adoption of a specific regulation on agriculture fairs and markets aiming to promote its development based on "formal" operators leading to better structured services.

Lessons Learned from Implementation for Future SDC Programming

InovAgro has lived through major changes in the MSD world. When it started in 2010, it was one of the early MSD projects and there were few good examples to learn from. Lots of experimentation and learning were happening, especially on implementing MSD in thin markets, but each project was learning on its own. InovAgro learned as well but was able to access experiences from other MSD projects, especially those DAI projects whose learning was brought into InovAgro. With 11 years of experience, it has contributed to the evidence and learning both for SDC as well as for the broader development community.

When working through market systems to deliver impact, the behavior of the various actors will drive the results. Therefore, InovAgro had to have a clear value proposition for the partners, both public and private, which would incentivize them to deliver on the project's desired outcomes of increased productivity and incomes for SHF. The most successful interventions occurred with the Partner was aligned with InovAgro's vision for systemic change. Partners need to express the **will** to implement the agreed approaches, as well as the **skill** (technical, financial and managerial capacity) to deliver the results. A few key lessons stand out from the progress to date on how to engage with the private sector, to engage with government, how to manage the M&E and the timeframe for an MSD project.

ENGAGING WITH PRIVATE SECTOR PARTNERS

InovAgro learned many lessons on partnering as it started with very few partners, each with a large investment, but eventually expanded the numbers to make smaller investments and increase the competition between the partners to stimulate innovation.

- Don't rely on just one partner in a sector during the pilot stage; find and support several partners to allow for choice, fallback options, and to stimulate healthy competition between all partners to drive innovation.
- Establish a clear value proposition (business incentive) for interventions and set out the vision for the future and how the partner would benefit from owning the activities. Then define clear roles for the project and partner from the beginning to avoid later confusion.
- Institute continuous monitoring and evaluation of partners and interventions to understand what is happening on the interventions in real time and the political economy issues that need to be addressed. In this way, the project can be proactive about working in partnership with market actors to fix them. Understanding the trends will inform the project of changes in value propositions and likely changes in partner behavior.
- Be creative, adaptive, and flexible. If an intervention or a partner is not delivering the desired results, first understand why not and adapt the intervention or the relationship. If that does not work, then be flexible enough to cancel the partnership and move onto trying a new idea. A corollary to this is that, as partners' corporate strategies shift, projects need to understand why they are shifting and be able to pivot with them quickly to continue to influence them on inclusive policies or else pull back support completely.
- Systemic approaches to access to finance for rural SHF must include mainline financial institutions but need to include an emphasis on the whole value chain financing input suppliers, output marketers, and processors in addition to SHF.

ENGAGING WITH GOVERNMENT

Getting buy-in and collaboration from government can speed system change at scale. Projects need to work at the right levels and build the right relationships, especially with government. One of the major successes of InovAgro was its ability to work with government ministries, departments, and agencies (MDA). InovAgro effectively engaged with many government agencies (National Director of Agriculture, the National Seed Authority, the Ministry of Industry and Commerce (MIC), etc.) who

perceived InovAgro to be a trusted partner who is supporting them, not just a source of funding. This has provided InovAgro with a seat at the table as government is developing policy.

In order to get a seat at the table, InovAgro identified major constraints with the government and organized joint research to dig in and come up with the root causes. This allowed for common agreement on the issues and the ability to chart a way forward. InovAgro's value chain analysis of the seed sector, done in conjunction with the NDA and the NSA, provided that foundation. Then InovAgro's support to host the national workshops and facilitate a way forward with all the stakeholders created that partnership with the government. InovAgro only invested in activities that addressed the key constraints it had identified but did it in close consultation with the government. The SDC mission in Mozambique played an important role in assisting with these relationships, as well, bringing its gravitas to the work being done by InovAgro.

However, projects must be pragmatic on what the government can do on their own and make investments accordingly. Many governments desire to drive initiatives, make commitments for continued funding, but then are not able to follow through. When co-investing with government, a project needs to have charted out the path forward after the initial investment.

M&E IN AN MSD PROJECT

Effective monitoring, evaluation, and learning are critical components of an MSD project. But they are much more challenging to get right than for a normal direct delivery project. On a traditional project, the implementation team is in direct contact with the beneficiaries. In contrast, MSD projects work through other market actors, so are dependent on those market actors to report the results of the outreach. This means that the project must invest in ensuring that the partners can report outputs and outreach effectively and they must be held accountable.

Measuring systemic change is also a challenge. Starting with a clear theory of change is necessary, but then measuring the results requires well planned out surveys and lots of reflection. Many MSD projects focus on partnerships with "inclusive market actors" but the real systemic change only happens when you move beyond those partners and their direct outreach and see the effects of crowding in and copying. It is not always easy to identify those changes unless the project staff are on the ground and actively looking for and documenting the changes. Measuring the systemic change is the responsibility of the whole team, and not just the M&E staff.

STAFFING FOR AN MSD PROJECT

Effective market systems development requires a variety of skillsets that must be reflected in the overall team: analytical capacity, effective facilitation skills, strong communications skills, and internal learning and adaptation. Above all, an MSD project is about facilitating good solutions, learning about what works, and adapting the delivery to ensure sustainability. This requires a team that embodies these skills and can work as a team:

- **Analytical skills**. The team needs capacity and commitment to carry out good analysis to get at the underlying root causes of market failures and be able to think through possible solutions and the best points of leverage for driving behavior change among the key market actors. This requires analyzing and understanding the context, engaging the stakeholders to get their opinions, and then collaboratively designing and testing the most appropriate strategies and approaches.
- **Facilitation skills**. Systems change and long term sustainability require the market actors to own the change process. This means the market actors must change their behaviors and the project's role should be to facilitate the delivery of solutions by the stakeholders, rather than deliver the solutions themselves. This is a process of introducing new concepts and approaches to private sector and government partners, being able to present the value proposition and convince them to take on the behaviors that will be good for them as well as good for the system. The team needs to have excellent communications skills to share new ideas and to build constituencies among the stakeholders; and

- **Monitoring, learning, and adapting**. As noted above it is critical for the team to have the skills to collect the appropriate information in a timely manner, to drive learning from that information, and make the necessary strategic and management adaptations. The learning and adaptation at the project level needs to be dynamic and continue pushing on the new initiatives. The project should also facilitate (and support) learning and adaptation among partner firms and stakeholders; this will ensure that they are seeing the anticipated benefits and are able to adjust their own initiatives.

InovAgro's success was built on bringing these different elements together. With three engaged team leaders across its three phases and 11 years, it had a consistency of staffing which was able to engage effectively with partners and leverage learning. Each new team leader added new experience and ideas to build on the work of his predecessor. They were able to build teams under them to take on the facilitative roles of engaging with partners, though most of the senior level facilitation was led by the team leaders. The team leaders were complemented by two senior advisors who supported the team for the full 11 years and were able to ensure institutional knowledge in the team. The local strategic advisor brought in depth knowledge of the Mozambican political economy while the international Technical Director brought best practices from successful MSD projects around the world. The two were instrumental in leading project learning, maneuvering the political economy, and supporting the team leaders to a very rich, dynamic, and innovative team which was able to evolve steadily over the three phases.

TIMEFRAME FOR SYSTEMIC CHANGE

Systemic change takes time, especially when the market systems are weak and require a heavier investment to jump start them. Weak market systems are also fragile, and major shocks can set them back significantly. But as they strengthen, a virtuous cycle is created, they will deepen more rapidly and become more resilient. SDC's emphasis on projects with a longer timeframe, running across two or three phases between 8-10 years is ideally suited to running a systemic change project. It allows for lots of learning and adapting.

Having a long timeframe also means that there should be lots of adaptation and changes during the implementation as the environment changes and lessons are learned. InovAgro's requirement to submit a new ProDoc for each phase forced it to think through the progress it had made during the previous phase and plot out the way forward. It allowed the project to determine which interventions were delivering well, and which were not and should be dropped. But even within a phase, there was significant adaptation and modifications to implementation methodology.

But as systemic change happens, the projects must know when to pull back their support and let the market system take over. This means withdrawing the direct support to the partners. It is very easy for a project to continue capturing the benefits from a system that has already developed, but the real challenge is to know when to exit interventions in a sector and just reinforce the positive changes through learning and information sharing.

Annexes

ANNEX 1 – POTENTIAL INCEPTION PHASE PARTNERS, OPPORTUNITIES AND SECTORS

1. King Frango – Soya (for poultry feed)
2. New Horizons - poultry
3. Export Marketing – Sesame and pulses
4. Mozfoods - seed multiplication
5. Olam / Cabo Caju – fairtrade cashew
6. Olam – fair-trade sesame
7. Miranda – oil seed
8. Olam – cashew replanting
9. Matanuska – TBD but to leverage their facilities on the banana plantation
10. Condor Cajou – cashew replanting
11. Matanuska – Cross docking facility
12. AgriNut – groundnuts
13. SANAM – oil seeds (land preparation services)
14. Miranda – fair-trade tea
15. Eggs for Africa / King Frango (lichinga company)
16. Cabo Caju – rice

Table 5: Sectors to investigate

Poultry	cashew	sesame	groundnut	oilseeds (sunflower)	rice
ag input supply	soya	small livestock	Pulses	artisanal fisheries	tea

ANNEX 2 – DEAL NOTE FORMAT

Draft Deal Note for Project and Partner

Company details (Proposed Partner for Project under this initiative)	Overview of the company • (contact details, manager, etc) • business objectives, products, sales, etc • how the company works
Objective of the Partnership with Project during the xxxx season	What are the overarching objectives of the partnership towards long term business and sectoral growth
Proposed Partnership Activities	List of the activities that will be undertaken to achieve the objective between the two parties required to achieve the objectives.
Partner Responsibilities under the partnership	What the partner will be contributing to the project activity
Project Responsibilities under the Partnership	What the project will be providing
Expected Results from the Partnership	Detail the expected results in a quantitative manner
Financial Contribution by Partner	Value of the contributions from partner (in cash and in kind)
Financial Contribution by Project	Project financial contributions (in kind and in cash)

ANNEX 3: MARKET SYSTEMS CONTINUUM - CONCEPTUAL FRAMEWORK

The figure below highlights the characteristics that define a dynamic, inclusive market system that is serving SHF more effectively. Thick/strong markets are characterized by a high volume and value of transactions, often segmented by market leaders and surrounded by niche market followers. As demand grows and differentiates along both price and quality dimensions, more firms are likely to compete for market share which, in turn, encourages crowding-in firms performing specialized market system functions (e.g. finance, ICT, consultants). An enabling policy/regulatory environment encourages more investment in innovation while also encouraging a high degree of stakeholder cooperation to take advantage of opportunities and counter competitive and other threats to market growth. When these characteristics are present, they tend to correlate with an effectively functioning market system.

Thin/weak markets are characterized by a low volume of transactions with few active firms, who are often beneficiaries of a policy environment which does not enable competition and innovation. Low demand discourages critical support to enter the market compared with alternatives. Public and private sector stakeholder interests are mis-aligned, creating competition between stakeholders where cooperation is vital to market system growth. When these characteristics are present, they tend to correlate with a non-functioning market system.

The strength (or weakness) of a market system is also reflected in its resilience. Weak market systems are not resilient and the market actors within those market systems are often dependent on outside services, so when there is an external shock they stop working. As the market system deepens and strengthens, it becomes more resilient and able to withstand external shocks and able to continue delivering services to the target beneficiaries within the system – smallholder farmers.

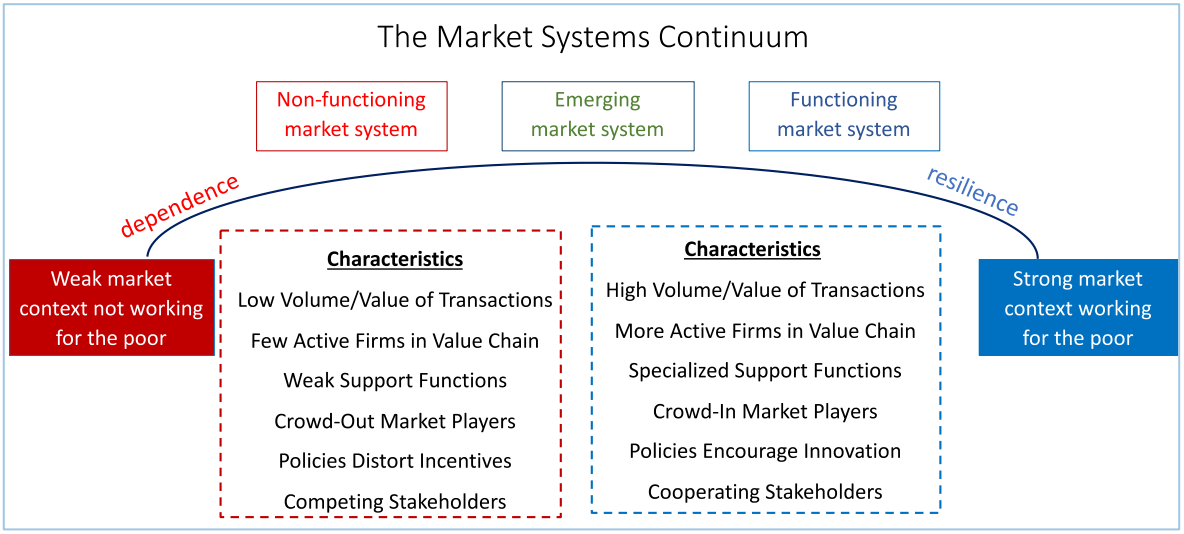


Figure 27: The Market Systems Continuum