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Evaluation Report of the InovAgro project on behalf of SDC

Final version

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List of acronyms

ACIANA Association of Commercial, Industrial and Agricultural businesses of Nampula
AENA Isocyanato Nacional de Extension Rural
AGM Annual General Meeting
AGRA Alliance for a Green Revolution in Africa
APROSE Association for the Promotion of the Seed Sector
BOM Banco Oportunidade de Moçambique
CAT Commodity Aggregation Trader
CNE National Elections Commission
COVID-19 Corona virus disease of 2019
CTA The Confederation of Economic Associations of Mozambique
DAI Development Alternatives Initiative
DCED Donor Committee for Enterprise Development
DEMO Demonstration Plot
DMC District Management Committee
DPASA Provincial Agricultural Directorate (Direcção Provincial de Agricultura e Segurança Alimentar)
DPIC Provincial Department of Industry and Commerce
DUAT Direito do Uso e Aproveitamento da Terra (Land Use Right)
ETG Export Trading Group, a global integrated supply chain manager
FA Fundo Agrícola
FAO Food and Agriculture Organization of the United Nations
GAP Good Agricultural Practices
GoM Government of Mozambique
IIAM Instituto de Investigação Agrária de Moçambique
IFPRI International Food Policy Research Institute
IPM Integrated Pest Management
ISFM Integrated Soil Fertility Management
ICS Instituto de Comunicação Social
INOVA Feed the Future Agricultural Innovations project
INGC National Institute for Disaster Management
ITC Community Land initiative (Fundação Iniciativa para Terras Comunitárias)
K2 Klein Karoo, Regional Seed Company
KM Knowledge Management
LIMS Land Information Management System
LNRMC Land and Natural Resources Management Committees
MASA Ministry of Agriculture and Food Security (Ministério da Agricultura e Segurança Alimentar)
MIC Ministry of Industry and Commerce
MOSTA Mozambique Association of Seed Trading Companies
MRM Monitoring Results Measurement
MoU Memorandum of Understanding
MSD Market Systems Development
MZN Meticais (1 unit of Mozambique currency)
MT Metric Tonne (1,000 kilograms)
NGO Non-Governmental Organization
NANA Associação de Apoio ao Desenvolvimento
NSA National Seed Authority
OLAM International, a global integrated supply chain manager
OPV Open Pollinated Variety (seeds)
PFU Project Facilitating Unit
PSSI Private Sector Seed Inspector
SADC Southern African Development Cooperation
SDAE District Services for Economic Activities (*Serviço Distrital de Actividades Económicas*)
SDC Swiss Agency for Development and Cooperation
SHF Smallholder Farmer
SME Small Medium Enterprise
SNV Netherlands Development Organization
SPGC Provincial Cadastral Services
STTA Short Term Technical Assistancy
ToR Terms of Reference
TVM Televisão de Moçambique

UATAF Associação para o Fortalecimento Comunitário
USD United States Dollar
VBAs Village Based Agents
VSLA Village Savings and Loan Association

Note of thanks

The evaluation team expresses its warm thanks to all the interview partners, the project team of InovAgro and all the supporters who worked in the background for the success of this mission. Meetings in Maputo from 10 to 12 November and from 29 November to 1 December as well as the field visits in the Nampula region from 15 to 26 November were all well organized by the project team. Due to the fact that the evaluation of the HortiSempre project was done in parallel it needed a lot of coordination between the two teams. The evaluation team got all the information which was asked for. It didn't get the impression that any critical aspects or events which may happen in any project were hidden. A special thanks to the author Bill Grant of the very useful overview about the history and the achievements of InovAgro. (DAI/COWI, InovAgro's Voyage of Learning and Adaptation for Market Systems Development in Northern Mozambique, William Grant Technical Director, November 2021)

Executive Summary

In 2010, Swiss Development and Cooperation (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. Since 2015 the project applies a market systems development (MSD) approach.

Objective of the evaluation: To assess the performance of the project in terms of relevance, effectiveness, efficiency, impact and sustainability in relation to the project objectives including the drawing of lessons learnt on what worked and what did not work, and what progress towards a better functioning market system has been achieved/not yet achieved.

Methodology of the evaluation: Interviews with the team, the project management and some beneficiaries (stakeholders). As a part of the inception report questionnaires for the team, the project management, actors of the value chains and selected beneficiaries were developed. At the end of the mission in Mozambique a presentation highlighted the key preliminary findings and lessons learned were presented and discussed during a validation workshop in Nampula. The scope of the evaluation comprises the period 2011 -2021. Since the approach was adjusted in 2015 the focus is on phase II and III (2015 – 2021).

Economic environment: The economic deterioration during 2019/20 and pandemic aspects had a negative impact on the implementation of the project 2020 and 2021. Phase III was planned to end by December 2020. Due to the COVID-19 situation activities of the project had to be reduced. Therefore, SDC decided to extend the phase until end of December 2021.

The MSD approach in Phase III intends to intervene catalytically in the following systems:
1. Market systems for the exchange of agri-goods, services and commodities to operate efficiently for everyone but especially the poor as consumers/producers including women. These interventions should be climate smart (adaptive to the effects of climate change);
2. Systems for the delivery of basic services to promote an enabling environment, such as land tenure, policies and regulations.

3. A mixture of different functions to be undertaken such as knowledge and information management delivery with a range of stakeholders including public and private players.

Gender: The gender issue was in the interviews with the actors/partners of the value chain part of the discussions. The discussions showed that the interventions in this area have been acknowledged as being important, which can be considered as a positive effect of the increased investments of InovAgro during the phase III. However, the constellations of the evaluation meetings revealed the still existing differences of the position of females and males.

Certified seed supply and improved agri-services sector: In the last three agricultural seasons, the number of SHFs purchasing and using certified seed has grown steadily. An IFPRI study from June 2021 investigated the agricultural productivity in two districts of the project area. Their analysis reveals that the InovAgro program boosted the agricultural productivity of maize among beneficiary households, increased their likelihood to sell maize produce in an agricultural output market, and led to an increased ratio of marketable surplus. Even with all the growth in seed sales and sector actor linkages, the market system is still emerging as the actors at all levels are just beginning to mature. Downstream actors, distributors, agro-dealers and village-based agents still have capacity issues including limited formal business systems, limited working capital and inexperience working with contracts, characterized by a tendency to default. Overall, the volume of seed and agricultural inputs sold increased considerably.

Seed policy and enabling environment reform services: Based on a conference of major actors in the seed sector donor organizations mandated 2014 InovAgro to support the platform for discussions on seed issues APROSE. InovAgro and APROSE have engaged development partners known to support the seed sector to mobilize funding and collaborate in interventions. The institution was not intended to become self-sustained by members' financial contributions.
Interviews of the evaluation team showed, that most actors of the seed value chain recognize the necessity of policy dialogue in issues of the seed value chain. However, they are not ready to cover the costs of the organization.
The evaluation team considers APROSE as not sustainable with its actual strategy based on donor financing. Being dependent on such a mechanism can lead to the end of the organization when donors lose the interest in seed issuts. In order to survive even in the medium term with decreasing donorsupport, APROSE needs to clearly identify member's needs, tabulate them and solve some problems for the actors of the seed value chain.
PSSI: Seed inspection is the mandate of the National Seed Authority (NSA). The NSA is under-resourced to discharge their seed inspection mandate. This leads to a very slow process in certifying seed and as a consequence to poor quality seed on the market.
The private seed inspectors (PSS) are a step ahead, since they undertake a part of the certification activities and reduce the level of effort required from the NSA.. If demand for seed certification is further growing it will however need more efficient structures. Training of PSSI and their certification needs to be undertaken on a cost recovery basis.
There is a need to develop a more efficient structure which has to solve the problem of the regulation that money paid for the training is locked up in central government and cannot be used for covering the training costs. The costs of training will have to be covered by the payments of seed producers for the service of certification of their seed production or by outside sources. The supervision of the certification process will remain at NSA.
Financial services:
InovAgro was unable to convince financial institutions to provide agricultural credit to smallholder farmers, whom the FIs considered too risky to lend to. Therefore,
InovAgro designed and piloted the Fundo Agricola (FA) starting in July 2015 based on the village savings and lending associations (VSLA) concept. 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 agricultural inputs, tools or labor. FA is estimated as successful and sustainable tool being part of an established savings scheme.
Whereas FA is oriented towards farmers the collaboration with GAPI is focusing on the needs of agro-dealers and CATs. GAPI is partly co-owned by Government and manages funds provided by NGO's and international donors. Several agro-dealers and CATs mentioned during the interviews to have received loans from GAPI for investments. So, this instrument seems to meet their needs with respect to investments in some cases in combination with getting financial support from other projects.

Commodity trade services resp. output marketing: InovAgro analysed the market actors more deeply and identified the potential for an increasing role by local commodity aggregator traders (CATs) by taking them closer to their clients. InovAgro then developed the Commodity Aggregator Trader (CAT) model, which places a positive focus on private local traders as links between smallholders and large buyers, encouraging the CATs to open buying posts closer to the farmers, reducing transactions costs to smallholders, and increasing efficiency.
In 2021 CATs partnered by InovAgro were operating 515 BPs, an increase of 19% over the 433 in 2020 without material support from InovAgro. It can be concluded that the InovAgro interventions in the output marketing component contributed significantly to the availability of marketing services to farmers. The investments for the expansion were financed by different sources – in some cases with contributions of other programs, in other cases by loans or own capital.
Knowledge management platform for markets systems development: InovAgro prioritized knowledge management in Phase III. Most important was to capture the results and lessons learned, and then to share them widely within the group of SDC, other donors, government agencies and private investors in Mozambique, and to the broader global MSD community around the world. At the national level, InovAgro leveraged the Market Systems Development Network (MSD N) to reach a much broader audience. This network will be sustainable if any of the involved organizations will take over the presidency and the interested donor organizations will be ready to finance the costs of the MSD Network. The secretariat is run by a business service provider which could accumulate considerable know-how about the MSD approach and might be interested in offering services also in future.

Other cross cutting issues:
During Phase III, InovAgro partnered with Terra Nossa to facilitate the implementation of a **land titling** pilot in four communities in two districts of Zambézia. Experience has shown that with good education and communication, members of society can change behaviors and embrace good practices that will change women's lives such as: registering land parcels in the name of women, co-titling, including women in land-based institutions or in land administration bodies. The land delimitation reached 17'225 SHF and 1447 DUATs were issued.

Natural disasters: In 2019, northern Mozambique was hit by 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 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. Using the existing channels of seed companies would minimize these threats.
Climate change: InovAgro has encouraged seed companies to respond to climate change by promoting short season varieties and drought resistant varieties. In addition, Seed Co has responded by mapping out varieties along Mozambique's agro-ecological regions. Klein Karoo, who previously promoted one hybrid seed variety throughout the country have also introduced more varieties for the low, medium and high rainfall regions.

Impact: The evaluation team considers the overall objectives of phase III (incl. extension to 2021) compared to the planning at the start of the phase in 2015 as achieved. Beneficiaries increased 2021 by 2,865, to a cumulative total of 37,786 farmers who have benefited from the changes in the market systems in the focal value chains (maize, sesame, pigeon pea, ground nuts, soya bean). Since 2015/16 InovAgro beneficiaries have generated a cumulative additional net income of $34.37 million in the 5 value chains. Compared to the objectives defined at the beginning of the phase III (30'000 SHF, income 8.5 Mio. USD) InovAgro has the objectives on the impact level more than achieved.

The evaluation team recommends that APROSE redefines its strategy for becoming an efficient platform for improving the regulations of the seed sector.

Relevance: The evaluation team concludes that InovAgro is in line with the priorities of Mozambique. Discussions with the authorities at provincial level (DPIC) confirmed that the activities of InovAgro support well their plans

The use of the project budget was according to the objectives and the overall expenditures until the end of the year will represent 92% of the budgeted costs. The management of InovAgro did a good job. The team leader has held a steady ship through challenging times and has been well supported by his staff as is evidenced by low turnover despite the project nearing its end.

Efficiency: In order to get an idea about the efficiency of the program implementation one has to compare the costs of the program to the additional net income of the target groups. Based on the respective figures the ratio of income benefits to program costs for the period 2015-2021 achieves 2.64. This ratio is comparable to other MSD projects having reached much larger numbers of beneficiaries. This figure represents a success.

Market Systems Development:
The activities of InovAgro have helped to improve some public services such as seed certification by the PSSI, improved output marketing with the Cadernetas or land titling better with the paralegals and land management committees. Nevertheless, although not under the control of InovAgro some critical points of the market development are the still not really improved services of Government such as:

- seed certification process
- lack of budget for SDAE
- too little resources for research (IIAM)
- bad road infrastructure in remoter areas

The second area is the lack of financial institutions providing working capital for the SMEs in the value chain (mainly CATs and smaller agro-dealers) and loans to farmers.

The evaluation team recognizes changes in the market system, although the above-mentioned areas remain for improvement in order to strengthen the market system further. In the MSD approach attribution of project interventions to the achievements has to be evaluated. Attribution is difficult to evaluate since there are many influences during a project duration of 10 years. Therefore, the evaluation team uses the term contribution. The business expansion of agro-dealers and CATs were in combination with the move of seed companies to Northern Mozambique crucial for the success of InovAgro. Their business expansion occurred thanks to larger transport capacities, use of better technologies in the buying points (e.g. scales), improved business attitude etc. InovAgro reached these improvements through coaching. In some cases, investments (warehouses, transport, processing facilities etc) of other projects such as PROMER, SUSTENTA. AGRA, FinAgro strengthened the capital base of some of the participating CATs. These donations as well as supporting farmers' demand (voucher program of FAO) supported the expansion of CATs. These investments allowed some of the CATs to access finance from market intermediaries

such as GAPI The combination with support of other programs may be considered as happy coincidence which is positive for the actors in the value chain. To quantify the contribution of the project to the market changes is not possible. However, the evaluation concludes that Inovagro made a notable contribution to the growth of the seed sector as well as to improved marketing services in the target region. The fact that seed companies have become active in the area is a clear contribution of InovAgro, which was the basis for the expansion of the CATs and agro-dealers' business. These considerations show that MSD projects are embedded in complex environments with many actors not following a market-oriented strategy. Sometimes this helps some actors within the value chains (e.g. investments of CATs), sometimes it distorts the markets (subsidies).

1. Introduction

“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.

In 2010, Swiss Development and Cooperation (SDC) 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 line 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’“ (DAI/COWI, InovAgro’s Voyage of Learning, 2021).

In parallel SDC supported another MSD project HortiSempre which started 2013 and was implemented by Swisscontact. Both projects are intended to be phased out at the end of 2021. The phasing out by end 2021 is the reason for the evaluation of both projects. Due to the fact that both projects had many common partners and a certain geographic overlapping the evaluation took place at once for both projects. However, the results of the evaluation are presented in two separate reports.

2. Scope and methodology of the evaluation

The TOR of the evaluation define two objectives:

Objective 1: To assess the performance of the projects in terms of relevance, effectiveness, efficiency, impact and sustainability in relation to the project objectives specified in the 7 respective project documents, including the drawing of lessons learnt on what worked and what did not work, and what progress towards a better functioning market system has been achieved/not yet achieved.
Objective 2: To recommend possible directions, objectives, and approaches for an engagement of SDC in supporting inclusive agro-economic development beyond 2021, building on the results achieved and lessons learnt of the current projects.

The proposals for objective 2 are presented in a separate report (Proposals for supporting inclusive agro-economic development in Mozambique). This report is focusing on objective 1.

Methodology of evaluation and validation of information

Interviews with the team, the project management and some beneficiaries (stakeholders): As a part of the inception report questionnaires for the team, the project management, actors of the value chains and selected beneficiaries were developed. At the end of the mission in Mozambique a powerpoint presentation highlighted the key preliminary findings and lessons learnt (objective 1 of evaluation) were presented and discussed during a validation workshop in Nampula. This step was important in order to check with the team and partners whether the evaluation team understood the approach and the results of the project correctly. Their inputs lead to some adjustments of the results or point out different opinions of the evaluation and the team/partners.

The evaluation matrix can be found in **Annex 1)**.

The mission interviewed several partners and stakeholders from 10 to 12 November in Maputo. Field visits from 16 till 19 November 2021 and from 22 to 24 November focused on the common districts of both projects (HortiSempre and InovAgro) Ribáuè and/or Malema. These districts were selected due to travelling distances and efficiency reasons.

Scope of the evaluation

The scope of the evaluation comprises the whole period of the project (2011 – 2021) in the sense of an end of project evaluation. During these 10 years there were significant adaptations in the strategy and approach of the project, both as it moved across the three phases, but also within the phases, if interventions did not deliver as anticipated. Due to methodological reasons, it is therefore not possible to compare the basis from 2011 with the situation in 2021. As a consequence, the evaluation is focusing on the phase III resp. the starting situation in phase II (2015) when the new approach of Market System Development (MSD) was applied. In chapter 4 about the history of the project the situation described in the base line study is discussed.

3. Political and economic context

“The onset of the COVID–19 pandemic caused a sudden stop to Mozambique’s good economic performance. Real GDP contracted by an estimated 0.5% in 2020, the first decline in 28 years, after growing 2.2% in 2019. A slowdown in construction, tourism, and transport, and a decrease in demand for commodities exports were the main drivers of the deceleration. Economic activity was also hurt by the escalating conflict in the northern province of Cabo Delgado, which has displaced more than 250,000 people and resulted in more than a thousand deaths. The economic contraction was expected to drag 850,000 people below the international poverty line in 2020, an increase of 1.2 percentage points to 63.7% of the population, according to the World Bank, while GDP per capita was expected to contract by –3.4% in 2020. Despite negative growth, a slight increase in inflation was expected for 2020, from 2.8% in 2019 to 3.1%, pushed by a 21.7% depreciation of the metical against the US dollar.” (African Development Bank Group, 2021).

These economic and pandemic aspects had a negative impact on the implementation of the project 2020 and 2021. Only relaxing the gathering restrictions of Government in summer 2021 allowed InovAgro to carry out its activities more easily than in 2020.

The insecurity situation has not affected the InovAgro project directly, though partners in Cabo Delgado have lost markets and their districts have experienced a number of displaced people. During the years 2016/17 the conflict influenced the work of the project negatively through disruptions in supply lines The insecurity in the Sofala province between Renamo

and the government has significantly calmed down; this gave seed partners based in Manica confidence to travel to northern Mozambique. (DAI/COWI Annual report 2021)

The metical depreciated by 17% throughout 2020, peaking at over MZN 75/USD 1 in February 2021. In early March, the metical began a steep appreciation of 21% over six weeks to mid-April (MZN55.3). It bounced back and settled around 63.3 MZN/USD 1 as of mid-May. The wide swings make it difficult for private agricultural input suppliers and for Small Holder Farmers (SHF) to plan and invest: the depreciation had made imports of agricultural inputs more expensive while the appreciation will make exports expensive, leading to farmers receiving lower prices for export crops.

The seed sector was affected by two major political economy issues. First, the continued purchase of seeds by NGOs and the Government to distribute directly to SHF. The second event was Sustenta's purchase and distribution of 3'000 MT of certified seeds to select SHF as part of the government's new agricultural production strategy. Both of these events crowded out private sector investment in direct seed sales to SHF. (DAI/COWI Annual report 2021). Interviewed SDAE representatives underplay the negative impact of Sustenta distributions arguing that the number of beneficiaries per district has been low. The representative of Sustenta interviewed by the evaluation team considers the direct distribution as a success in light of the urgency. Nevertheless, he admitted that the technical support from their side was of lower quality than the one from InovAgro.

4. History of the project

A document provided by DAI/COWI summarizes the experience of InovAgro over the last 11 years with the objective of building sustainable market systems in Northern Mozambique (DAI/COWI, InovAgro's Voyage of Learning, 2021). The history is described as follows: "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.

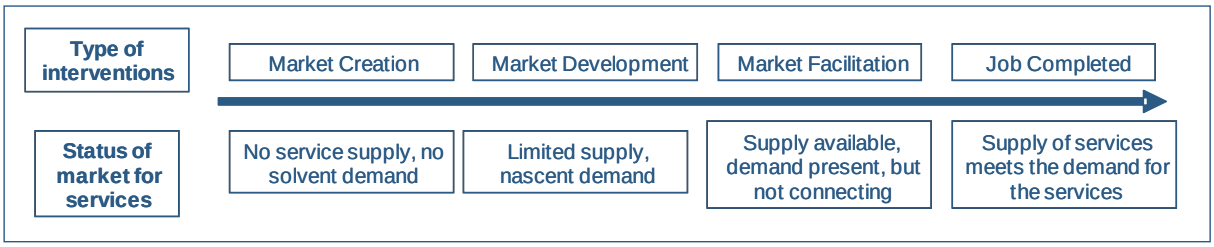
The chart in the annex no. 2 highlights the range of interventions delivered by the project, when they started and how they evolved. It is clear from the chart that the initial range of interventions failed to deliver the anticipated systemic results, so they were ended or adapted. However, they had 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.

Phase III was planned to end by December 2020. Due to the COVID-19 situation activities of the project had to be reduced. Therefore, SDC decided to extend the phase until end of December 2021.

In the first ProDoc in 2011 the situation in Northern Mozambique with respect to the value chains concerned were described as follows:

This market continuum will vary by sub-sector, often depending on the level of overall market activity. Service markets develop more quickly when there are more dynamic and higher value products and markets in the value chain. As the project team carries out its initial analysis, it will need to determine the level of key service provision in each key area and then move to address it in the most sustainable, market driven approach possible.

Market development continuum for business services and implications for donor programming



The graph above explains the status of the market situation at that time in 2011. At the starting point no services are available and the demand has no access to markets due to several reasons (lack of finance, lack of traders, low quality of products etc.). Phase I and II moved the markets towards better functioning. Nevertheless, during phase II SDC and the project decided to adjust the strategy and to follow an MSD approach. At this point the situation can be described as follows:
In Northern Mozambique, almost none of these services necessary for a functioning market exist at present. As we look to develop the supply and demand for services in a private sector led model, there will likely be a concentration on a “directed” or “governed” value chain approach where by the private sector “leader” will manage the delivery of many of the services to get the out-grower model working in the first place. This will be needed to ensure access to the basic requirements. In addition, the private sector generally prefers to not have to provide all the services listed, as it is not their core business, so they would prefer to develop market solutions, as long as they are reliable. (InovAgro, Strategy Document, 2015)

Due to the lack of services the following major focus formed the basis for the new strategy:

- Increasing access to the right seed (both for soya and pulses)
- Input supply services
- Increasing access to technical services
- Improving access to financial services
- Developing the supply for other services, such as transport, farm machinery, and mechanical services for ploughing, planting, and harvesting

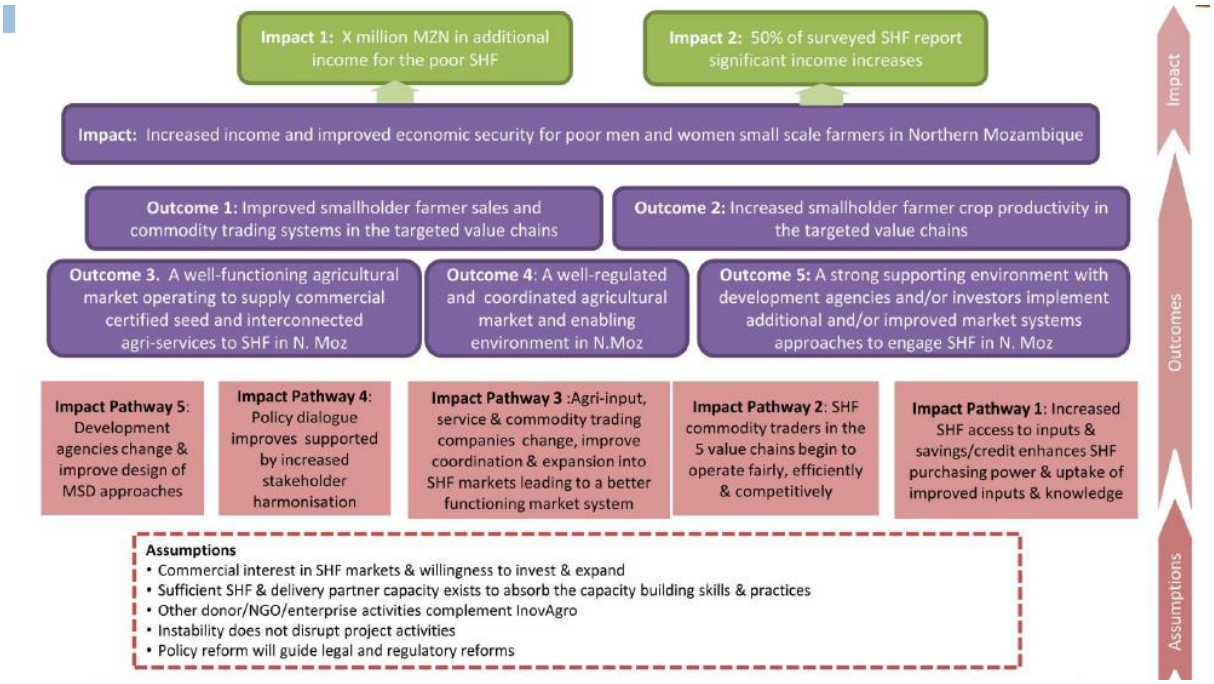
Based on these challenges the MSD approach defined the strategy of change and the outcomes of phase III which will be presented in the following chapter. The base line figures and the indicators of the LFA can be found in details in Annex 4. Some of them were revised after the start of the phase. Summarizing the base line figures with respect to the number of SHF in 2017 who are improving their sales, productivity and contacts to agro-dealers are at the level of 15'000. As an objective this figure should be increased by 2020 to 25'000 through the interventions of InovAgro.

5. Approach of InovAgro

Geographically the project includes in Northern Mozambique three provinces and 11 districts:

1) Nampula (Ribáuè, Malema and Eráti)
2) Cabo Delgado (Chiúre and Namuno)
3) Zambezia (Alto Mólocuè, Gurúè, Mocuba, Namarroi, Ile, Molungo)

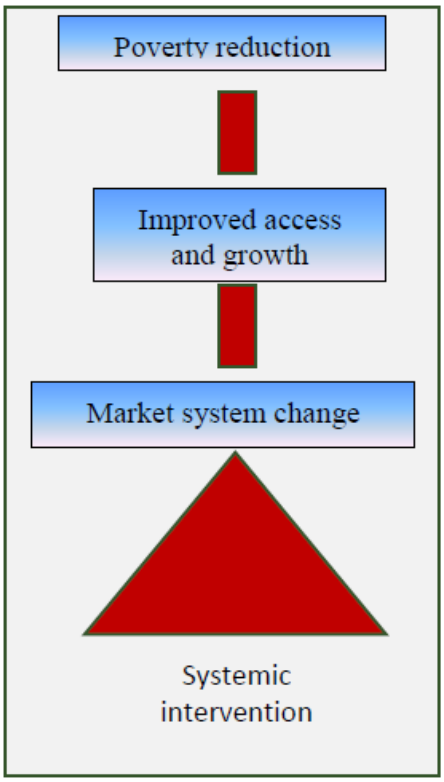
The project is following the MSD approach. In the ProDoc for Phase III the approach was presented as in the graph below.



The MSD approach in Phase III intends to intervene catalytically in the following systems:
1. Market systems for the exchange of agri-goods, services and commodities to operate efficiently for everyone but especially the poor as consumers/producers including women. These interventions should be climate smart (adaptive to the effects of climate change);
2. Systems for the delivery of basic services to promote an enabling environment, such as land tenure, policies and regulations, to build smallholder households' capacities to escape poverty; and
3. A mixture of different functions to be undertaken such as knowledge and information management delivery with a range of stakeholders including public and private players.

5.1. Theory of change

In InovAgro Phase III the program's theory of change builds on its achievements and momentum from Phase I and II, whilst also identifying and strategically addressing new opportunities and market challenges. The Phase III new objectives include, firmly adopting climate smart agricultural objectives as well as gender sensitivity objectives, and incorporating these into its relevant interventions and intended results.
Moreover, a new intervention to be launched in Phase III aims to capitalize on InovAgro's seven years of MSD experience to develop evidence-based MSD learning and knowledge products to share and improve the knowledge of development facilitators, agencies and interested stakeholders in Mozambique and beyond. The different InovAgro interconnected inputs and services are expected to have a catalytic effect. Systemic change both at the market system level amongst the input and service providers (InovAgro implementing partners) and the subsequent changes expected at the beneficiary level amongst the target smallholder farmers in Northern Mozambique are promoted.



5.2. Objectives

InovAgro intends to implement the market systems development approach and growth strategies for the following interventions:

- Certified seed supply and improved agri-services sector
- Seed policy and enabling environment reform services
- Financial services
- Commodity trade services
- Knowledge management platform for markets systems development

5.3. Assumptions

The theory of change for InovAgro Phase III is built on the premise that continued MSD support is needed to further promote systemic change for a well-functioning agricultural market in Northern Mozambique thereby increasing resource poor smallholder farmers' access to high value agri-inputs, services and commodity markets for diverse cash crop value chains and contributing to smallholder production and income opportunity.

Key assumptions:
Private companies and market service providers' willingness and ability can be expanded to strategicallv invest to deliver high quality services to smallholders via cost-effective distribution channels, and the Government follows through on implementing and enforcing policy reforms to improve the enabling environment, leading to a better functioning market system and poverty reduction.

6. Evaluation of outcomes based on the OECD criteria

6.1. Gender aspects

6.1.1. Gender strategy

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 the lead partners to help them develop gender mainstreaming strategies that would bring gender inclusion into their core business model.

47% of the InovAgro’s beneficiaries were women, well over the 40 percent project target. InovAgro integrated gender interventions and awareness building 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. (DAI/COWI, InovAgro, Learning journey, 2021) In 2020/21 gender had a strong emphasis in the project interventions. InovAgro has observed a greatly improved understanding of gender compared to the situation before.

After realizing the low numbers of female entrepreneurs, meeting minimum partnership criteria, InovAgro decided to identify women doing business on a small scale and expose them to more successful women entrepreneurs. These included Village Based Agents, Buying Agents, Lead Farmers/Seed Promoters, etc. The exposure to possibilities was through look and learn visits. What emerged was that these women had the drive to be entrepreneurs but lacked basic knowledge of entrepreneurship. Consequently, trainings for basic life skills – entrepreneurship, leadership and communication as well as basic business management concepts were organized. Lead farmers are influential women and men in the rural society and are often ‘trendsetters’ in promoting changes in rural areas, not only with respect to farming practices but also, potentially, with respect to social and cultural gender norms. Unfortunately, many women still hesitate to take over this role, although they have the prerequisites for it.

6.1.2. Interventions

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. Access to Finance is the intervention with the greatest opportunities for women empowerment. Women are the majority of participants in Fundo Agricola (FA) groups and taking prominent leadership roles. Emphasizing this part of the gender strategy was a successful step.

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 to be project partners 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 the use of small packs to respond to women's reduced purchasing power. In addition, agro-dealers were encouraged to ensure that 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 trainings, 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 (registering land parcels in the name of women, co-titling, including women in land-based institutions or in land administration bodies). The project outreach initiatives encouraged women to become active. 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.

6.1.3. Achievements and challenges

The project team reports the following achievements and challenges in its documents:
The intervention partners did not initially fully understand the value of integrating gender into their programs or business models – during the first training workshop the partners sent either junior staff members or women as representatives and many gender action plans were not budgeted for.
CATs raised reservations with regards to employing women as they would/might face jealousy from the men in the women's lives.

The Fundo Agricola model promotes the use of animators, especially women, to promote and support the savings groups. Rural women´s low level of literacy and numeracy has limited the number of female animators as they require technical skills to read, write, calculate savings, interest sharing, etc. In districts that previously have had training in functional literacy, more women have assumed the role as animators.

The COVID-19 pandemic has been especially challenging for rural women as they had greater domestic demands on their time, and faced greater constraints than men in accessing productive resources, services, technologies, markets, financial assets and local institutions. This has further limited women's ability to participate in production, and program events including training, and travel to distant markets.

For the seed companies, gender aspects have been anchored around the lead farmers, who have been trained on incorporating gender in their extension work and the companies' technicians continue to provide refresher training.

The seed companies were encouraged to introduce their seed by adding small packages of 1 kg to encourage women to "pilot" improved seed as women often have less capital for investment in their farming. Most stores have product use pamphlets and were encouraged to provide that information to farmers, especially the more illiterate women.

For CATs, extending their network to villages, gives women more opportunities to participate as they can personally attend markets when near their homes. In communities where there is not enough produce to justify permanent buying points, CATs are using mobile buying units and participation in village markets to reach more women.

6.1.4. Evaluators' experience

The gender issue was in the interviews with the partners of the value chain part of the discussions. The discussions showed that the interventions in this area have been acknowledged as being important. However, the constellations of the meetings revealed the still existing differences of the position of females and males. Of course, in some cases also women had arguments for not hiring more women. Fatima (CAT) mentioned that she is hiring only one woman due to the hard work in her business of milling. However, she has attended all the gender trainings and considers to have now a better position in this men-dominated business due to that. The interventions of the project should have effects after the end of the project. For example, the visit program for small commodity aggregators led by women being taken to the more successful women-owned CATs to encourage inspiration and to learn the process of expanding into a CAT. Successful women entrepreneurs are the best way to show how other women could find their way and via this a better position in social life.

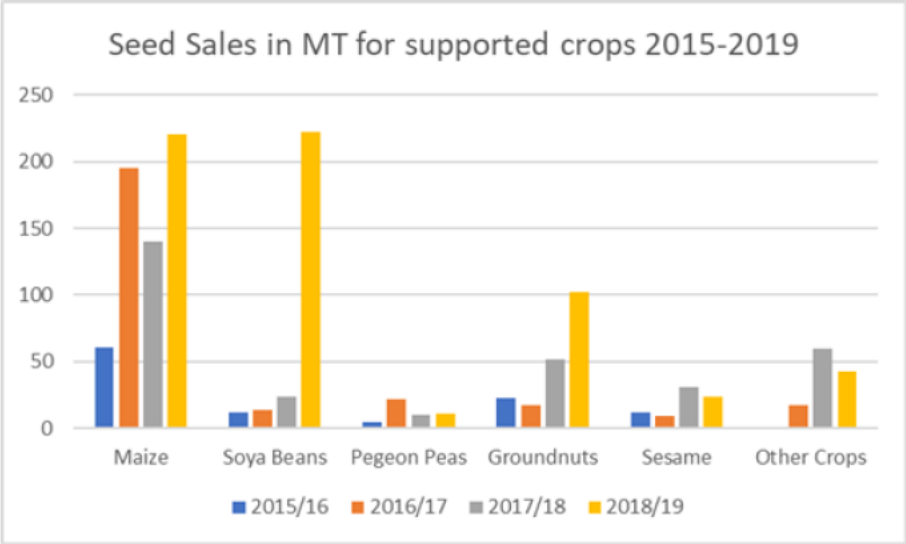
Mainstreaming gender in extension showed mixed success. Some lead farmers just attended the training but didn't follow up with implementation. Others tried some aspects learned from the training. It is important for the agro-dealers to keep gender as a requirement for continued participation of lead farmers. The extension reference manuals for each crop emphasized gender dimensions. Also, a refresher training of lead farmers that focused largely on gender dimensions in extension should support the consciousness on the issue in future. The main changes observed due to the increased project engagement on gender are available in the tools provided by InovAgro. This may help that with good education and communication, members of the society can change behaviors and embrace good practices that will change women's lives in future.

6.2. Certified seed supply and improved agri-services sector

6.2.1. Summary of outputs in outcome 1

2016 InovAgro started to work with 6 seed companies. 2021 InovAgro III has established partnerships with four big private sector seed suppliers (PANNAR Seeds, Seed Co, Klein Karoo and Phoenix Seeds) and smaller seed companies (IKURU, Oruwera, Sementes Nzara Yapera, Agro Rural & Servicos and Olima Farms), that have in turn established partnerships with 21 agro-dealers with a network of 84 selling points. These agro-dealers have received support and some capacity-building from the seed companies (with InovAgro's facilitation support) and are at different stages of retailing certified seed to smallholder farmers in the project geographic locations.

Annual seed sales for the five crops (maize, soya, pigeon pea, sesame, groundnuts) reached in the 11 InovAgro districts 811 MT by April 2021, up from 274 MT at the end of 2017. This is an average annual increase of 39% over the last three seasons of Phase III. Even though certified seed sales have increased steadily during InovAgro III, direct sales to farmers remain low compared to seed actors' aspirations. Considering all of the factors including major environmental disasters, political upheaval and the absorption of available seeds by Sustenta and NGOs this increase of seed sales can be considered as a success. Especially, 2018/19 considerable growth of seed sales were achieved (see graph below).



Source: DAI/COWI, annual report 2019

Seed companies have been placing a growing emphasis on demand-creation initiatives to stimulate demand. InovAgro's partners organized 792 demonstration plots by the 2019/20 season and organized more than 150 field days per year in InovAgro operating districts alone. (DAI/COWI, InovAgro Extension phase, 2020) The concept of demonstration plots started 2015 with 2 of them and reached at the end of the project 841.

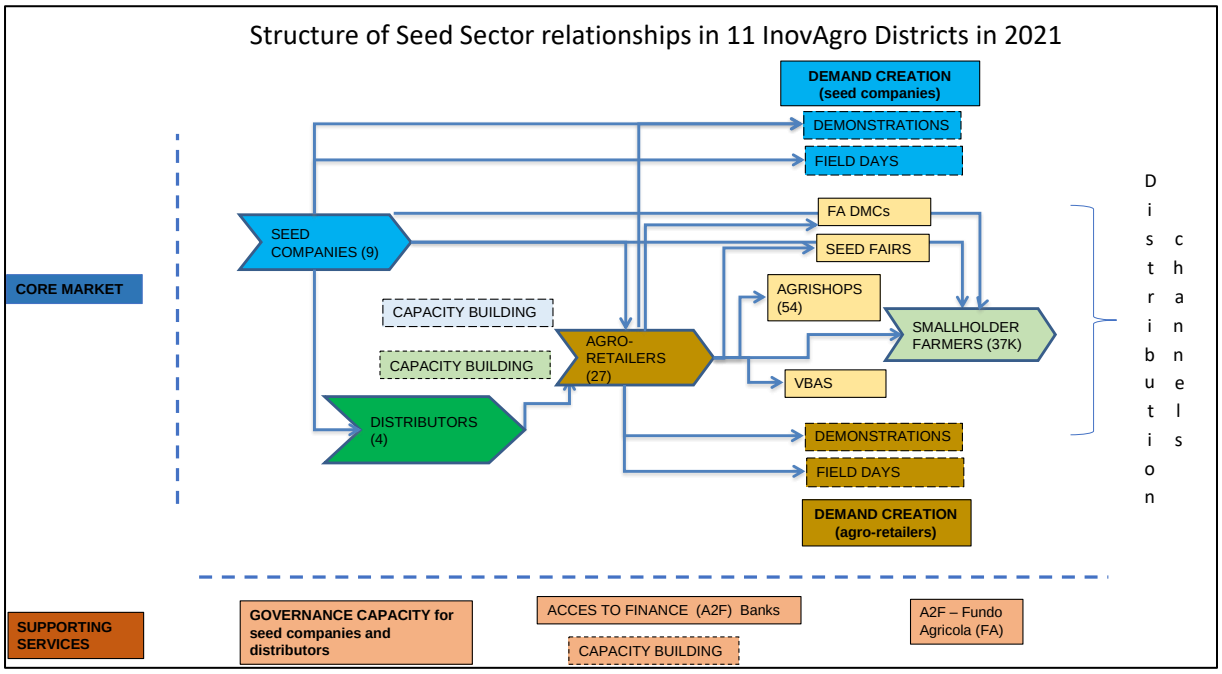
The InovAgro team focused the 2020/21 season work on facilitating improved linkages in the input distribution network and supporting the seed companies and distributors in strengthening the capacities of agro-dealers, lead farmers and field technicians, as part of the wider exit strategy. The number of participating agro-dealers and distribution points increased by 30 in project districts, without any additional investment by InovAgro. Agro-dealers invested 2021 in 49 new sites for demonstrations and a total of 256 demo plots.

In 2021, InovAgro emphasized agro-dealer upgrading. In late 2020, InovAgro carried out two business management trainings for 23 agro-dealers (2 women). This was followed by on-site mentoring of eight agro-dealers by a commercial service provider. The mentoring promoted digital record keeping systems, paid for by the agro-dealers. A second round of mentoring support in May and August 2021 saw more partners investing in computers and working directly with the STTA. Since then, four partners have put in place complete sales and stock electronic management systems and paid for annual software license fees.

The major activities of InovAgro focused on seed partners establishing demos, jointly running of "best practice" district field days, and training and mentoring of agro-dealers. 30 new retail outlets were opened by six InovAgro seed partners and 50 new VBAs were contracted by the project partners. The retail outlets are a new franchise-type model that includes branding and capacity building of downstream retail shops. Two seed companies and two distributors were supported to provide formal in-store capacity building to 27 downstream agro-retailers.

In 2021, InovAgro and partners carried out refresher training of 78 lead farmers and seed company technicians (21% women) on how to run demos and field days. InovAgro supported partners to run 14 flagship district-based field days to train lead farmers, encourage learning on good agronomic practices and give women opportunities to be heard. The lead farmers cascaded the knowledge to farmers through small local field days in their communities. A total of 490 (42% women) SHF participated, bringing the cumulative total field day attendances to 20,555 (40% women). (DAI/COWI, Annual report 2021)

The interventions of InovAgro have supported the development of a better structured market than at the start of the project (s. graph below).



Source: DAI/COWI, InovAgro's Voyage of Learning and Adaptation for Market Systems Development in Northern Mozambique, November 2021

6.2.2. Effectiveness

In the last three agricultural seasons, the number of SHFs purchasing and using certified seed has grown steadily. Apparently, an increasing number of SHFs have understood the advantage of using certified seeds and other inputs for improved production technologies. In the baseline study of 2017 10'500 farmers used improved inputs. For 2021 a number of 23'180 farmers were targeted. Effectively, with 32'684 farmers the objective was overachieved. (DAI/COWI, Annual report 2021)

An IFPRI study from June 2021 investigated the agricultural productivity in two districts of the project area. Their analysis reveals that the InovAgro program boosted the agricultural productivity of maize among beneficiary households, increased their likelihood to sell maize produce in an agricultural output market, and led to an increased ratio of marketable surplus. In addition, in all five value chains the InovAgro interventions have a positive and significant impact on households' likelihood of using agro-chemicals like pesticide and herbicide. (IFPRI, 2021) Additionally, the project has larger-scale spillover or multiplier effects through benefitting large numbers of smallholder farmers beyond the program's direct sphere of influence and targeted beneficiaries. The proportion of households who were new adopters of modern farm practices was significantly larger for non-beneficiary households who resided in close proximity to households treated or exposed to the InovAgro MSD program compared to those who resided further away. (IFPRI, 2021)

The major tools of InovAgro to achieve these results are the following:

- seed companies to pilot demo plots and field days for farmer training
- product marketing to build demand
- Demo plots and farmer training anchored on lead farmers
- Demand Creation led by distributors and agro-dealers

Consequently, oriented towards the exit of the project the support for the field days by InovAgro was steadily reduced. The project was successful in transferring the responsibility for the demo plots from the seed companies to the agro-dealers. However, it has to be seen that many of them establish the plots on their own fields since they are farmers at the same time. One unsolved problem is the duplicity of demo plots established under the public activities of SDAE in the same villages. The interviews revealed that farmers consider no technical quality difference between the two suppliers of demo plots. Especially, the lead farmers are used to work with various NGOs, international projects or public support at the same time or subsequently.

6.2.3. Sustainability

Even with all the growth in seed sales and sector actor linkages, the market system is still emerging as the actors at all levels are just beginning to mature. Downstream actors, distributors, agro-dealers and village-based agents still have capacity issues including limited formal business systems, limited working capital and inexperience working with contracts, characterized by a tendency to default. Even though the big seed companies like Seed Co and Pannar are multinational companies, their local structures in Mozambique are still weak as they need to align the structure with the level of business.

The development of the seed market system is still hampered by other factors such as fake seed sold by unscrupulous actors in the districts, and other development agencies promoting free or heavily-subsidized seeds, limiting the growth of a culture of buying commercial seed. Especially, the FAO voucher program (introduced 2015/16) provides SHF with purchase potential for buying seed using no or only little own funds. Farmers might profit of this support. But getting support totally free as for example from CLUSA distorts the markets. The huge demand for seed by the NGOs supplying relief projects in Cyclone impacted regions continued. In addition, the Sustenta project purchased a reported 3'000 MT of seed from the market in 2020, putting a lot of pressure on the supply side. Officially, in the governmental program Sustenta farmers are getting loans for buying the seed. However, nobody intends to repay these loans. Such interventions of NGOs or Government distort the seed market heavily. It has three major negative effects:

- Most agro-dealers are by-passed in the distribution system. Where there is a Sustenta agent, agro-dealers struggle to sell commercial seed
- seed companies prioritize the big tenders and neglect to invest in their distribution network. In 2020/21, most of them even ran out of seed to sell through the normal commercial channels
- farmers get used to free of charge seed supply, discouraging the habit of saving for inputs
-

These effects undermine the sustainability of the positive effects of InovAgro project interventions.

The IFPRI study gives evidence that the InovAgro's interventions create more sustainable long-term adoption of good agricultural practices than non-MSD programs. It shows that the proportion of households that continue to adopt modern farm practices was significantly larger for households treated or exposed to the InovAgro MSD program compared to those treated or exposed to non-MSD programs (e.g. direct service delivery or subsidy programs). (IFPRI, 2021). Since farmers are reacting on any available programs it cannot be excluded that after the end of InovAgro they might change their attitude again.

The fact that the demo plots and field days at the end of the project are being undertaken by agro-dealers is positive. However, the interviews revealed that some of the agro-dealers are not aware of the financial consequences of organizing field days in future. In 2019/20,

2020/21, the InovAgro support was meant to cost-share costs related to meals during field days. These were confined to one field day per partner per district. The rest were done locally with no food and transport. This is how the partners should continue and do local field days. Some agro-dealers are interested in continuing the field days, but they are not ready to pay for the necessary incentives for participants. This may question the sustainability of these activities in some cases resp. demands co-financing by the seed companies. At the beginning of the new strategy in 2015 2 field days were realized – 2021 228 field days. Given the positive impact of this concept, field days will remain, but maybe not at the same level as 2021.

6.3. Seed policy and enabling environment reform services

6.3.1. Summary of outputs in outcome 2

Policy support via APROSE.

The seed conference of 2014, with donors, government, private sector and farmers, decided to create the Seed Sector Platform for Dialogue. Donors wanted a single point of entry into the seed sector to reach all players. Without any official standing, however, the donors could not contribute to a “Seed Platform”, so it needed to register. InovAgro was the supporter and facilitated this process, but it was always led by the board of the Seed Platform, which then became APROSE. InovAgro and APROSE have engaged development partners known to support the seed sector to mobilize funding and collaborate in interventions. The institution was not intended to become self-sustained. However, since only registered organizations can receive financial support APROSE was 2016 legally formalized. The recent partners include National Seed Authority (NSA), InovAgro, SPEED+, Inova, Seed Trade, AGRA and FAO. A few meetings were organized with the more concrete outcomes being:
Partners agreed to let APROSE take a leading role in mobilizing their seed producing members and coordinate the participation in the private sector seed inspectors (PSSI) training. The mobilization started in late 2020 and with the training done in August 2021, allowing APROSE to recover some administration fees.

The COVID-19 pandemic brought the management plans for APROSE into difficulties. In late 2020, APROSE organized online regional meetings that saw more participation of members outside Maputo than they ever had with in-person meetings, which are limited due to the costs of flights and accommodation. This new normal is in line with the requests of members during the 2019 perception surveys when the members wanted to have regional meetings to liaise with the national office.

Private Sector Seed Inspectors Training (PSSI)

In the drive to improve the availability of quality seed on the market, InovAgro and its seed producer partners agreed that seed inspection is a key constraint. Seed inspection is the mandate of the National Seed Authority (NSA). The NSA is under-resourced to discharge their seed inspection mandate. As a consequence, NSA does 1 or 2 inspections instead of the 4 required and it attends less than the 50% of the private companies demand for inspections. Because of this NSA issues certificates for the seeds produced in fields not inspected only on the basis of laboratory quality control analysis of processed seed. This leads to a very slow process in certifying seed and as a consequence to poor quality seed on the market.

Following planning in 2014, starting in 2015, InovAgro supported the NSA to to study options to engage the private sector more in the process of seed certification under the supervision of the NSA. InovAgro organized look and learn visits to Kenya and Zambia. Thereafter, once the NSA decided on the model they wanted to adopt, InovAgro supported the NSA to draft legislation to allow for the certification of private sector seed inspectors (PSSI). This was approved by the Government of Mozambique (GoM) in late 2017. In August 2018, InovAgro

supported the NSA to carry out the first training with 10 participants which led to the certification of six PSSI. The planned training in 2020 did not take place due to COVID-19. Whereas 2021 15 technicians got their training and 14 of them received the certification as seed inspectors.

6.3.2. Effectiveness

APROSE

Interviews of the evaluation team show, that most actors of the seed value chain recognize the necessity of policy dialogue in issues of the seed value chain. However, they are not ready to cover the costs of the organization. APROSE is actually financed by international programs such as InovAgro, FAO, AGRA, Inova, Seed Trade Project. Some of these organizations convey studies to the management of APROSE, in order to secure the financing. This financing strategy may help to survive, but it doesn't lead to a clear orientation of the organization. Its activities remain donor-driven. In conclusion the evaluation considers that limited progress was registered in facilitating the institutional development of APROSE.

In parallel exists an organization of seed traders which is called MOSTA (Mozambique Association of Seed Trading Companies). The chairman of APROSE explained that the management of APROSE is also working for MOSTA which would be too weak to manage their institution. Whether the separate organization MOSTA (part of the platform APROSE) is really managed by APROSE might be open. Nevertheless, MOSTA doesn't show any own profile. Interviews with seed traders revealed that they are not convinced that APROSE can help to solve their problems at the policy level. On the other hand, they are not ready to invest themselves in the development of MOSTA, Obviously, it lacks on clarity about the strategy of APROSE and MOSTA.

PSSI

The availability of private seed inspectors increases the capacities for approving seed production. They do five field visits at the level of seed producers and report the necessary data. At the end of the process NSA does the last field visit to provide the final approval for the certification of the seed. The interview with one of the freshly certified private inspectors revealed that it is unclear to him what to do now. He was of the opinion that his own seed production cannot be inspected by himself. In reality the PSSIs inspect the fields of their companies and NSA certifies the seed production at the end.
The PSSIs are a step ahead, since they provide technical support to the producers and increase the resources for the certification process. If demand for seed certification is further growing it will however need more efficient structures. Even the training of PSSI cannot be organized by NSA being a governmental structure which is not allowed to use funds paid by participants for the training. The government is reviewing this now. They may figure out how to do it under government supervision and perhaps government has even to pay for most of it. It should be checked how far a private organization can be the owner of PSSI training in future.

6.3.3. Sustainability

APROSE

Inovagro has supported APROSE appropriately and well in 2020/21, however it is concerning that despite a survey showing general satisfaction in APPROSE, members fees only account for Mt200k per annum. As it stands at the moment, it appears to be a very long way from this. (SDC response to INOVAGRO Annual Report, 2020) Although it has never been anticipated that APROSE could become self-financing in the short and medium term, one

would expect a significantly larger figure than this, if seed companies truly see a value in APROSE.

The evaluation team considers APROSE as not sustainable with its actual strategy based on donor financing. Being dependent on such a mechanism can lead to the end of the organization when donors lose the interest in seed issues. In order to survive even in the medium term with decreasing donorsupport, APROSE needs to clearly identify member's needs, tabulate them and solve some problems for the actors of the seed value chain. This will save members individual expenditure and they will likely gladly reach into their pockets and share some of the savings. The results of APROSE's activities perhaps support further changes in the seed sector. However, the range of members' interests (Government, donors, private seed companies, farmers) is too broad for defining a clear orientation and bundling them. Especially, farmers are not represented. As consequence it is a platform and not an institution to defend the interests of its members. Without change it will remain a donor financed and donor-driven organization. Therefore, the members should define their interests and if necessary, develop specialized and separate organizations for seed importers, seed producers and agro-dealers. In the logic of the MSD approach it is indispensable to define a vision for the future role of the APROSE or any other structure in relation to the interests of the actors of the value chain and of a functioning market system. This aspect of an enabling environment remains an ongoing task at the end of InovAgro.

PSSI

Unlike the first training in 2018, when InovAgro paid for all the costs of the training (trainers, participants travel, accommodation and subsistence, conference and field travel costs), in 2021 InovAgro motivated development partners and the seed companies to share costs to avoid overdependence on InovAgro but also to move the costs to the participating seed companies. The main costs in the program are: i) cost of the NSA trainers (salaries) and their travel, lodging and dinners; ii) the travel, lodging and dinners for all participants; iii) the venue costs and meals during day; and iv) the travel to the field for the practicum. (DAI/COWI, Annual report 2021)

PSSI training by the NSA needs to be undertaken on a cost recovery basis. For securing sustainability it has to be developed a more efficient structure which has to solve the problem of the regulation that money paid for the training is locked up in central government and cannot be used for covering the training costs. The costs of training will have to be covered by the payments of seed producers for the service of certification of their seed production or by outside sources. A related matter is that the PSSI requires increased demand for certification from seed companies. The number of companies producing seed locally is currently low and largely limited to the small local companies. The supervision of the certification process will remain at NSA. Government buy-in to the model is needed to increase the sustainability of the model, This aspect of an enabling environment remains also an ongoing task at the end of InovAgro.

6.4. Financial services

6.4.1. Summary of outputs in outcome 3

InovAgro was unable to convince financial institutions to provide agricultural credit to smallholder farmers, whom the FIs considered too risky to lend to. Therefore, 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. The concept of FA is based on existing or newly founded savings groups. 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 agricultural inputs, tools or labor. The money saved is communicated to the DMCs which place the orders to buy the seed and other inputs with a discount due to the larger quantities bought.

2016 in the base line study 3'785 members were reported. For 2021 22'000 members of FA activities were planned. With 20'830 reported the objective is almost achieved at the end of the project. These figures lower than expected can be explained by the COVID-19 crisis. The Fundo Agricola faced challenges mobilizing members to participate in savings during the COVID-19 pandemic due to government restrictions on meetings, heavily enforced in most districts. 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 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. (DAI/COWI, Voyage of Learning, 2021) Total savings were less affected and reached USD 559,446 (loan and FA funds), 3% increase over USD 544,045 saved in 2020.

Whereas FA is oriented towards farmers the collaboration with GAPI is focusing on the needs of agro-dealers and CATs. GAPI is partly co-owned by Government and manages funds provided by NGO's and international donors. GAPI Nampula has overall outstanding loans of USD 1.5 Million of which 3% are in default (delayed payments). The organization occupies 18 staff in Nampula and in 3 branches. Since the revenue from the interest rates cannot cover the costs for functioning, international programs pay the running costs of GAPI. The interest rates are actually 1.5% per month for agro-dealers and CATs. In addition, GAPI provides a special credit line for small traders at 4% per month which corresponds to a microfinance program.

InovAgro provided business training to its potential clients for GAPI (agro-dealers, CATs). But this was not a condition for getting a loan from GAPI. Banco Futuro has considerably higher interest rates of 5% per month. In 2020, InovAgro facilitated Banco Futuro to review CATs and consider them for funding. They approved 4 loans and funded 2 CATs. Some CATs declared their interest rate as too high. However, Banco Futuro's focus is rather on microfinance in urban areas. They consider CATs and agro-dealers as too risky clients having a low level of financial literacy and being geographically too far away. The last remark is a bit surprising since mobile banking is well functioning in most countries of Africa.

6.4.2. Effectiveness

The savings under the FA normally are used for buying seeds and other inputs. However, the figures for total seed purchases reported by the seed companies to InovAgro decreased for 2020 to 37,670 kg which represents a quantity being 27% lower than the 48,828-kg purchased in 2019/20. Since the savings belong to the members the project or the VSLA cannot decide about the use of the funds paid out to the members at the beginning of the new season. Therefore, they are in some cases used for other emergency or family purposes. Nevertheless, it can be concluded that the FA system supports the increase of using better inputs by SHF.

Several agro-dealers and CATs mentioned during the interviews to have received loans from GAPI for investments. This was after InovAgro brought the CATs and financial institutions together starting in May 2019 to understand the scope for doing business. Immediately, GAPI gave out four loans that season and has since developed a CAT loan portfolio. So, this

instrument seems to meet the CATs' needs with respect to investments sometimes in combination with getting financial support from other projects[1].

6.4.3. Sustainability

The FA system is part of an established savings scheme. Therefore, the system can be sustainable. Precondition for this is the mutual trust between the groups and the DMCs, who are ordering the seeds for the groups. The second crucial point is the importance of developing production plans at the beginning of the savings cycle. It has been proven that group members with plans tend to achieve them and attain higher savings that those who save whatever they can. (DAI/COWI, Annual report 2021)

In contrast to other projects the animators in the FA scheme were always paid by the savings groups. They evaluate the animators' support critically and can stop the collaboration if they don't perform well. InovAgro supported the animators by training. The animators form the DMCs which have to be paid by another institution after the end of the project. Communities will have to put in place a system for their payments. In some communities such as Alto, Molócuè and Chiúre such a payment scheme is in place. But even such payments do not guarantee the sustainability of the FA system if other projects provide seed at a subsidized price. The future will prove whether the voucher program will work as an incentive or disincentive for savings. The InovAgro beneficiaries survey showed that the FA members took their savings and invested in a FAO Voucher, that more than doubles the farmer's purchasing power in terms of what inputs they can buy. These purchases are done individually through selected agro-dealers and are not captured in the FA facilitated seed purchases

6.5. Commodity trade services resp. output marketing

6.5.1. Summary of outputs in outcome 4

Initially, InovAgro encouraged large output marketing companies (primarily exporters and large local industries) to engage proactively with smallholder farmers by using inclusive market system approaches. Attempts to establish contract growing schemes and output buying schemes to improve quality and quantities of farm produce failed primarily due to shifting corporate strategies by the lead partners. As a result, InovAgro analysed the market actors more deeply and identified the potential for an increasing role by local commodity aggregator traders (CATs) by taking them closer to their clients. InovAgro then developed the Commodity Aggregator Trader (CAT) model, which places a positive focus on private local traders as links between smallholders and large buyers, encouraging the CATs to open buying posts closer to the farmers, reducing transactions costs to smallholders, and increasing efficiency. (DAI/COWI, InovAgro, Prodoc 2017)

At the beginning of 2021, InovAgro carried out reviews with each CAT on their performance in 2020, the contextual aspects and their plans for 2021, leading to an identification of needs and negotiating of tailor-made deal notes with each of the 18 CATs (two women, 11%). The table below shows the areas of support for CATs that were provided by InovAgro in 2021:

[1] GAPI has been managing donor supported financial instruments targeting Agro dealers-CATs (PROMER)

Output Marketing Interventions and Results Achieved in 2021 (InovAgro, Annual Report 2021)

Target	Service to be provided	Results achieved
18 CATs	Reflection, learning and networking sessions with CATs and big buyers	InovAgro and 26 partners (18 CATs, 4 SDAEs and 4 representatives of big buyers) reflected and shared information about the progress of the season, market trends, lessons learned, opportunities, and challenges.
18 CATs	Three days in training for CATs in technical and business management topics	13 (15% women) of the 18 selected CATs received training to improve their knowledge on how to set up buying points, supply chain management, quality control issues (including warehousing); and business management (business ethics, financial records, inventory management);
Eight CATs	Participate in one-one mentoring sessions	100 % of the selected CATs received mentoring sessions to improve their specific needs in technical and business management areas are improved
12 CATs	Facilitation of linkages with the end buyers	4 CATs and the preferred end-buyers negotiate new agreements and partnership terms making a total of 7 CATs with agreements for the 2020/21 season
Eight CATs	Facilitation of linkages with financial institutions	5 selected CATs had their credit application submissions approved totaling MZN 7 000 000.00 channeled to strengthen their working capital (USD 111,000)

While the top seven CATs have formal relationships with big buyers, including obtaining advances for working capital, the rest of the CATs still have informal relationships, shifting from one buyer to the next or selling to the retail market as they are also processors (e.g. millers). InovAgro has been working to increase their capacity to supply consistent volumes of quality produce for them to develop formal relationships with the big buyers. Most CATs do not have well-defined and documented business systems, keeping very limited records and carrying out limited financial analysis, which hinders their access to finance. The majority of CATs use their own limited capital, which constrains their ability to buy produce throughout the limited buying windows. Most CATs are also limited in terms of warehouse capacity and transport systems.

The CATs visited (e.g. Fatima in Ribaue) received from InovAgro training in business management and book keeping (incl. software). The CATs paid the fees for the use of the software. In the beginning they were also supported by precise scales, bags for stocking and other equipment on a cost-sharing basis. They are satisfied with the results of increased sales.

6.5.2. Effectiveness

The crucial question is how far the interventions of InovAgro contributed via the partnership during the project implementation to the effects planned. One major effect is in the output marketing outcome the increase of buying points (BP) by the CATs. The base line study reports 2015v 16 buying points with a volume of 6’034 MT bought. Towards the end of 2021 the CATs partnered by InovAgro were operating 515 BPs, an increase of 19% over the 433 in 2020. Of the BPs operated in 2021, 127 (25%) were new buying points. Since InovAgro provided only technical assistance, and no equipment for the buying points in 2020 or 2021,

this is evidence of a strong commitment to investing in expanding the buying point model. Partners are also taking responsibility for repairs and maintenance of the old buying point equipment. Some CATs have taken the CAT model piloted with InovAgro to non-project districts.

The expansion of the buying network is reflected in the quantities bought from SHF. The value of products purchased by the CATs increased from $1.54 Mio in 2017 to $10.54 Mio in 2021. The volume of purchases increased by 320% in the same time. This is a massive increase in the volume and value of purchases. This increase was possible through higher amounts of borrowing, retained earnings, and buyer lines of credit. At the same time, it expresses a significant increase in the CATs sophistication and improved business systems.

This expansion of the business area by increasing the number of BPs is only possible by using larger transport capacities. The interviews with Fatima and Chipangue in Ribaue confirmed this fact. In both cases the CATs use new trucks for the increased amounts traded. Some of the CATs could purchase the trucks on the basis of matching grants provided by other programs such as PROMER or Sustenta in earlier times. InovAgro in addition to the other activities provided links to financing institutions such as Banco Futuro or GAPI. The CATs got loans from these institutions which they could pay back even in the CORONA-19-year 2020. Other CATs also work with transport capacities hired, so they don't have to bind own capital for investments.

It can be concluded that the InovAgro interventions in the output marketing component achieved the effects expected. The investments for the expansion were financed by different sources – in some cases with contributions of other programs, in other cases by loans or own capital.

6.5.3. Sustainability

From the increased volumes bought by the CATs SHF could certainly profit. The CATs as private actors will continue their work. Most of them could even strengthen their relationship with big buyers allowing them to secure higher sales volumes. Some CATs seem to be able to replace equipment less expensive such as scales or even buying new tools, some others even heavier equipment such as trucks. Apparently, the CAT model is successful and has improved the access to market for SHF. Nevertheless, for securing the sustainability of this model CATs need access to finance at reasonable conditions. This element remains work in progress.

6.6. Knowledge management platform for markets systems development

6.6.1. Summary of outputs in outcome 5

InovAgro prioritized knowledge management in Phase III. Most important was to capture the results and lessons learned, and then to share them widely within the group of SDC, other 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 and published six case studies, newsletters, and success stories to document project results and to examine the market system process. At the national level several activities supported the learning process of the actors linked to the project:
InovAgro relied on the extensive database of key government, private, donor and civil society stakeholders to share the publications mentioned above. Through the MSD Network, InovAgro posted documents and findings on a LinkedIn page, as well as shared key findings

in the MSD N webinars. The webinars attracted participation of senior development practitioners, exceeding 100 people a few times and over 20 international participants.

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. Due to COVID, in 2020 and 2021, some of the meetings were done regionally.

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, agro-dealers asking CATs about preferred varieties, and CATs engaging more on the agricultural input distribution. (DAI/COWI, Annual report 2021)

6.6.2. Effectiveness

At the national level, InovAgro leveraged the Market Systems Development Network (MSD N) to reach a much broader audience. This network brings together donor organizations active in the field of MSD. In 2020, InovAgro organized a 2-hour virtual session (the first virtual session of the pandemic) on market facilitation with 22 participants. InovAgro took the lead to re-dynamize the network 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.

6.6.3. Sustainability

It is planned that the Mozambique MSD Network will continue to organize a regular series of presentations and information sharing events that will address the underlying market development issues in Mozambique, at least once per quarter after the end of InovAgro. The organizer of each event will host the meeting, either at a location of their choosing, or virtually. Each session will focus on one topic in particular, involving members from one or more projects or interested stakeholders, followed by opportunity for informal discussion among the participants.

The Network will serve as a platform to discuss policies that are conducive to the development of market systems. The Network events would aim to inform donors and government on best and most sustainable approaches. This network will be sustainable if any of the involved organizations will take over the presidency and the interested donor organizations will be ready to finance the costs of the MSD Network. The secretariat is run by a business service provider which could accumulate considerable know-how about the MSD approach. They are probably interested in providing their services, particularly since they got a prefinancing of their services. Nevertheless, SDC or another donor has to take the initiative for securing this activity.

6.7. Other cross cutting themes

Land Tenure

During Phase III, InovAgro partnered with Terra Nossa to facilitate the implementation of a land titling pilot in four communities in two districts of Zambézia. Experience has shown that with good education and communication, members of society can change behaviors and embrace good practices that will change women's lives such as: registering land parcels in the name of women, co-titling, including women in land-based institutions or in land administration bodies. The land delimitation reached 17'225 SHF and 1447 DUATs were issued.
The project outreach initiatives encouraged women consideration in ownership and land administration institutes. The net result was that, overall, 58% of the land registered was in the names of women. Women DUATs ownership reached 56% in Malopa-Mocuba, 55% in Munhacua-Mocuba, 64% in Mussano-Namarroi and 62% in Mutaliua-Namarroi. The Mocuba land titling was undertaken during the reporting period from October 2019 with the DUATs issued in February and March 2020, which concluded the intervention. (DAI/COWI, Annual report 2021)

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 by 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. Unfortunately, the warning was not heard by all the companies and negative effects arose on the seed market.

In terms of promoting resiliency, the damage to the crops presented opportunities to promote crop insurance products to both the seed companies, distributors and agro-dealers 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).

Climate change

Climate change has had very profound effects in the project districts in the last couple of years. In 2019/20, there were very good rains to start the season but the rains ended in February in more than 50% of the project districts, affecting crop yields, especially for sesame, which is grown from mid-January to mid-February. Even the other crops received rains around flowering stages. In 2020/21, the rains started very late in most districts but lasted to April. The poor first half of the season affects especially maize, soya and groundnuts. Agriculture stakeholders are getting aware of these factors and have been discussing this during the cross-sectoring dialogue sessions.

InovAgro has encouraged seed companies to respond to this situation by promoting short season varieties and drought resistant varieties. In addition, Seed Co has responded by mapping out varieties along Mozambique's agro-ecological regions. Klein Karoo, who previously promoted one hybrid seed variety throughout the country have also introduced more varieties for the low, medium and high rainfall regions.
Lead farmer training has also flagged the reality of climate change. Lead farmers were trained to encourage farmers to use short season varieties, mixed with medium season varieties to manage their risk from erratic rainfall while also planning for higher yields with the medium season varieties.

The activities of InovAgro in this area are reasonable answers to the challenges of climate change. Nevertheless, finding technical solutions to cope with these changes will remain a task for any future project in Mozambique.

7. Impact

7.1. Overall Achievements

Phase III started 2018, however, the change of strategy to the market system development approach occurred already 2015. Therefore, the achievements 2021 are compared to 2015. This evaluation covers the whole project (2011-2021). Since the majority of the results came after the strategy redesign started in late 2014, the evaluation is focusing on the results of phases II and III. The evaluation team considers the overall objectives of phase III (incl. extension to 2021) compared to the planning at the start of the new approach in 2015 as achieved.

By the end of the project InovAgro had worked in 11 districts, leaving in most cases 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 in 2021 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.

The number of project beneficiaries was increasing rapidly in the first two years of phase III, proving the assumptions of scale from an MSD project. However, although still growing the growth slowed significantly during the two pandemic years. Beneficiaries increased during phase III by 21'876, to a cumulative total of 37'786 farmers who have benefited from the changes in the market systems in the focal value chains (maize, sesame, pigeon pea, ground nuts, soya bean). Calculations on annual productivity, profitability, and farm sizes determine the changes in income compared to the baseline year 2015/16 when InovAgro began implementing its revised strategy. Changes in income 2020/21 did not increase as rapidly as in previous years, due to the effects of COVID-19, but since 2015/16 InovAgro beneficiaries have generated a cumulative additional net income of $34.37 million in the 5 value chains. Compared to the objectives defined at the beginning of the phase III (30'000 SHF, income 8.5 Mio. USD) InovAgro has the objectives on the impact level more than achieved. Focus group discussions of the evaluation team with SHF have confirmed these achievements reported in the annual reports of the project. The figures in the tables below reveal the boost achieved from 2018 onwards with respect to number of farmers as well as net additional income. In few years (e.g. 2016/17) also negative income flows were reported and included in the table below. 47% of the farmers reached were women, which represents a relatively high value and is more than the targeted value of 40%.

Net additional income of InovAgro beneficiaries 2015-2021

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Total
Maize		$ (868'411)	$ (109'377)	$ 889'806	$ 1'815'210	$ 1'659'451	$ 3'386'680
Soya	$ 184'972	$ 74'848	$ 715'115	$ 1'387'355	$ 808'260	$ 1'368'968	$ 4'539'517
Groundnuts	$ 136'638	$ 259'704	$ 1'397'750	$ 1'665'412	$ 1'800'156	$ 1'962'520	$ 7'222'181
sesame	$ (47'260)	$ 108'214	$ 474'828	$ 2'320'341	$ 1'276'628	$ 1'501'893	$ 5'634'644
Pigeon Pea	$ 1'698'779	$ (222'968)	$ 183'401	$ 2'758'306	$ 5'511'442	$ 3'660'996	$ 13'589'956
Total NAIC/Yr	**$ 1'973'129**	**$ (648'613)**	**$ 2'661'718**	**$ 9'021'221**	**$ 11'211'696**	**$ 10'153'827**	**$ 34'372'978**

Number of farmers reached by InovAgro 2015-2021

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Male farmers	8'025	10'555	13'182	16'314	18'400	19'990	53%
Female farmers	3'915	5'445	7'818	13'764	16'521	17'796	47%
Total Farmers/Yr	11'940	16'000	21'000	30'078	34'921	37'786	

The restrictions put in place to address the COVID-19 pandemic continued to affect all agriculture outreach, markets, and knowledge transfer. Even with these restrictions, the market systems have proven to be resilient and continued to perform in support of the SHF, who have continued to see increases in productivity and continued access to inputs and output markets.

On the regulatory side, an institutional platform for dialogue (APROSE) between seed companies, the government, donors, and farmers was established and facilitated 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. The evaluation team recommends that APROSE redefines its strategy for becoming an efficient platform for improving the regulations of the seed sector.

7.2. Relevance

In the National Plan of Development 2015 – 2035 agriculture is one of the four priority sectors. In order to develop agriculture small and medium private enterprises shall play a crucial role. Given this background the evaluation team concludes that InovAgro is in line with the priorities of Mozambique. Discussions with the authorities at provincial level (DPIC) confirmed that the activities of InovAgro support well their plans.

Flooding and COVID-19 occurred during phase III which had a negative impact on agriculture. Nevertheless, objectives were achieved and the priorities of private sector development remain valid. International donor organizations such as USAID put an emphasis on private sector development, too. "We focus on increasing growth in the agriculture and tourism sectors, which show strong potential to attract private investment and create jobs. Our programs provide business development services and access to financial services that help small- and medium-sized enterprises become more efficient and productive." (USAID August 2021) The World Bank considers needs to press ahead with a structural reform agenda. In the recovery phase, policies should be focusing on supporting economic transformation and job creation, especially for the youth. In order to reestablish confidence improved economic governance and increased transparency are necessary. (World Bank

2021) This statement supports the above-mentioned necessity to reform the seed sector by setting-up a more efficient system for seed certification.

8. Finances of the project

During the phase 2018-2021 InovAgro had an overall budget of 7.691 Mio USD at its disposal for implementing the project. Actually, the data for expenses are available until 31 October 2021. In the table below these figures are in the respective row presented. The project team estimates the overall expenditures until the end of the year up to 7.105 Mio USD which represents 92% of the budgeted costs.

The deviations in the part of the management costs against the budget are minimal and don't exceed in the single years the budgeted values. Expenses for the interventions are also within the range of the budget. The only exception is outcome 5, knowledge management, which shows a considerable underspending. This can be explained by the strongly reduced activities due to COVID-19 in the years 2020 and 2021. 75'000 USD were reserved for close-down events, videos, materials etc. which were not yet in the books at the moment of the evaluation. In addition to the project budget partners invested USD 173,332.44 to roll out agreed activities. Overall, one can say that the costs of the implementation are at reasonable level in comparison with other MSD projects.

These figures don't include partners' investments which have achieved mainly towards the end of the project considerable amounts. This development was a part of the exit strategy.

Budget and expenses of InovAgro for Phase III (incl. extension 2021)

		2018		2019		2020		2021		TOTAL	
		Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual 31/10/21	Budget	Actual
Part 1-3											
Part 1	Services Headquarters	114'133	117'058	150'394	162'954	78'858	58'863	116'228	80290.59	459'612	338'874
Part 2	Local Office	20'410	21'602	22'420	25'597	23'385	15'825	12'367	16358.88	78'582	63'024
Part 3a	Long-term experts	1'044'025	1'050'551	947'449	844'868	995'299	894'219	836'579	523201.61	3'823'351	2'789'638
Part 3b	Short-term experts	21'045	5'275	22'830	-	28'290	44'194	49'300	25837.53	121'465	49'469
Part 3c	Local Support	307'798	342'924	294'713	285'749	286'697	266'660	312'100	170786.61	1'201'308	895'333
Total Part1-3		1'507'411	1'537'409	1'437'806	1'319'167	1'412'528	1'279'761	1'326'574	816'475	5'684'318	4'136'338
Administrated project funds											
Outcome 1	Output Marketing	125'000	157'838	90'000	65'515	70'000	31'179	36'647	27012.28	321'647	254'532
Outcome 2	Extension services and Finance	100'000	115'404	143'000	81'859	60'609	59'899	46'279	30319.08	349'888	257'162
Outcome 3	Seed	70'000	175'927	182'214	94'878	80'000	81'051	93'506	38799.65	425'720	351'856
Outcome 4	Enabling Environment	146'450	127'210	87'800	103'702	70'000	52'051	55'205	22680.21	359'455	282'963
Outcome 5	Knowledge Management	70'000	33'303	63'000	18'613	54'000	6'918	20'613	16440.49	207'613	58'834
Monitoring and Measurement		60'000	61'873	49'000	50'347	42'000	25'910	70'785	39766.64	221'785	138'130
Gender and Resilience		14'000	19'349	14'000	10'297	12'000	1'871	42'853	8589.62	82'853	31'517
Evaluations and Planning		10'500	14'587	19'500	21'767	9'000	746	646	768.93	38'354	37'100
Total Administerd Funds		595'950	705'491	648'514	446'977	397'609	259'625	365'242	184'377	2'007'315	1'412'093
Total		**2'103'361**	**2'242'900**	**2'086'320**	**1'766'144**	**1'810'137**	**1'539'386**	**1'691'816**	**1'000'852**	**7'691'633**	**5'548'431**

9. Management of the project

Phasing-out projects is always a challenge since staff is searching understandably new jobs for the period after the project's end. In this case with the COVID-19 situation and the extension decision during the year 2020 it was even more challenging. Under these framing conditions InovAgro did a good job. The team leader has held a steady ship through

challenging times and has been well supported by his staff as is evidenced by low turnover despite the project nearing its end.

SDC evaluated the performance of the team in 2020 as very satisfactory: The implementation of the project during the year 2020 has been rated as “Very Satisfactory”. Considering the difficult circumstances brought about by the cyclone, the political unrest and COVID-19, InovAgro has done well to meet or exceed most of its targets. (SDC response to INOVAGRO Annual Report, 2020)

Towards the end of the project most of the members of the InovAgro team have an agronomist background. With respect to the agro-technical aspects of seed markets, varieties, technical training for farmers etc. is this background very valuable. Since a great part of the project’s activities are related to market aspects, financial issues, investments decisions etc. the team was led by an agricultural economist. During the whole project period several other agricultural economists or business specialists were in the team. A good mixture of agronomists and economists is crucial for an efficient project management.

Exit strategy

In 2020, InovAgro started testing the exit strategies for the following interventions:

1. In the Fundo Agricola, InovAgro ended direct capacity building support to districts of Ribaue, Malema and Mocuba. A co-facilitator was assigned to carry out three monitoring checks with the DMCs through the savings cycles. The project is monitoring the performance of these districts18 in comparison to their performances in prior years with support and the relative changes in comparison to supported districts. This will help manage the effects of COVID-19;

2. In output marketing, InovAgro tested the buying point expansion intervention. No material support was provided to CATs. The project is monitoring the changes in CATs investment in buying points. The project is providing capacity building to some 15 CATs and will monitor relative performances with those not engaged in the partnership in 2020;

3. In the inputs market, support for farmer training was limited to co-investing in a maximum three field days per partner to be used as best practice for training lead farmers. More than 50% of partners from 2019, among them seed companies and agro-dealers, did not receive any direct support from the project from 2020 onwards. The project is monitoring the changes to their sales compared to those who continued to receive some direct support.

InovAgro has phased out certain partnerships (graduate the partners) during the extension year and verified the sustainability of the activities it has been implementing for years. The reduction of support took into consideration that the firms are prepared to take on their business models without outside support. InovAgro has included the exit strategy measures in all the interventions of the project in 2021. Most of them were implemented as planned and had a positive effect on the sustainability of the value chain actors.

Efficiency

In order to get an idea about the efficiency of the program implementation one has to compare the costs of the program to the additional net income of the target groups. Based on the figures presented in chapter 7.1. the ratio of income benefits to program costs for the period 2015-2021 achieves 2.64. This ratio is comparable to other projects having reached much larger numbers of beneficiaries (see table below).

The DCED study presents a relatively low ratio of income benefits to costs of the InovAgro program. However, the additional income of 18 Mio USD in the table seems to be rather low.

This is due to the fact that the last 2 years were not included in the study. On the other hand, the study calculated the costs of the project over the whole period (2011-2021). The evaluation team uses therefore its own calculation of the ratio 2.64.

Efficiency ratios of several MSD programs

Programme	Country	Costs	Additional Income	Beneficiaries	Ratio of income benefits to costs[1]
ALCP	Georgia	$ 8.8m	$ 34.7m	403,000	3.9
AVC	Bangladesh	$ 34m	$ 117m	307,000	3.4
InovAgro	Mozambique	$ 20 m	$ 18 m	35,000	0.9
MDF	Asia: multi-country	$ 48m	$ 112m	242,000	2.3
PMDP	Palestine	$ 28m	[2] $ 180m	3,400	n/a
R2J	Afghanistan	$ 7.5m	$ 2.1m	49,000	0.3
RLDP	Tanzania	$ 8m	$ 40m	627,000	5.0

Source: DCED, Results achieved by programmes that use the market systems development (MSD) approach, BEAM exchange, July 2021

An important aspect of efficient program management is the ability of the team to learn from results achieved or not achieved. InovAgro has shown a strong capacity to draw the right conclusions from interventions which were less successful. The project team found creative solutions to adapt the project interventions to the local conditions of Northern Mozambique. Examples may be the mobilization of savings for buying seeds through the FA or improving the access of SHF to the market through CATs. This ability to adapt the project interventions is one of the success factors for MSD projects.

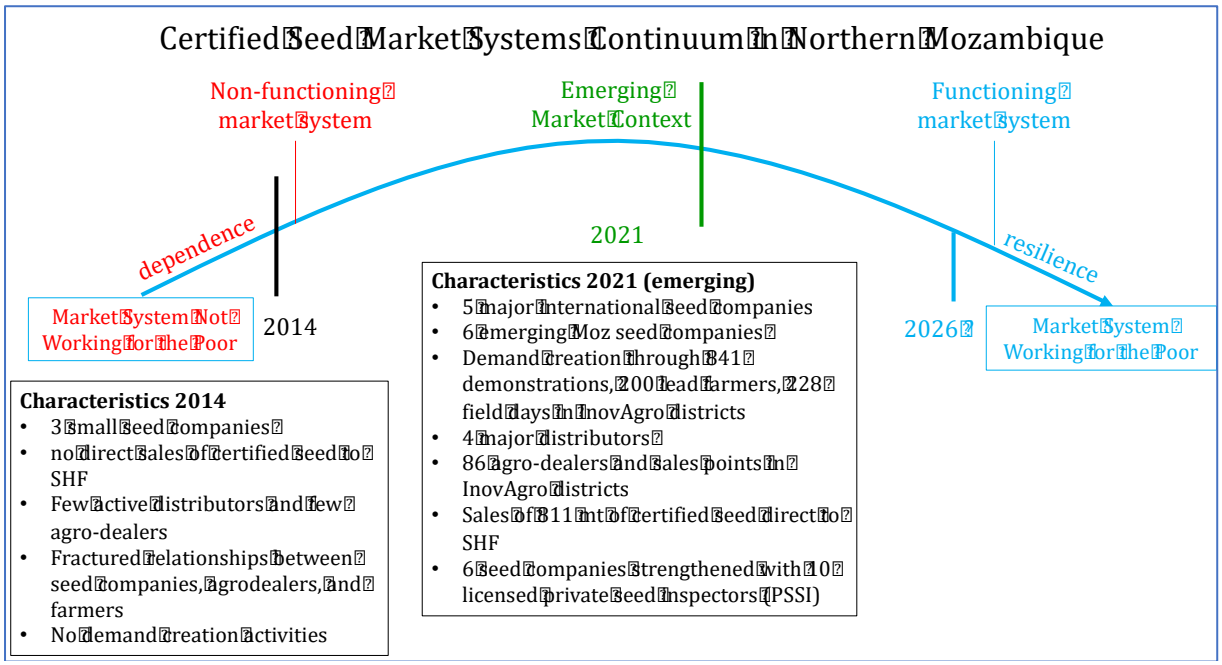
10. Phase out and Market Systems Development

IFPRI made a study on the MSD approach in 2021. Overall, the IFPRI study provides evidence in support of the project's having a systemic market-level effect, benefitting large numbers of smallholder farmers beyond the program's direct sphere of influence, as well as sustainable long-term effects on household's adoption of good agricultural practices and access to input and output market information, as compared to non-MSD programs. Further, one key takeaway from the findings is that a more intense, combination approach of using agro-dealers, lead farmers and demonstration plots appears to be necessary to achieve long-term positive effects on the overall welfare of households. (IFPRI study, 2021)

Change of market functioning is achieved in the sense that more private actors are now in the value chain (e.g. seed traders). Others have improved their functioning and business model (agro-dealers). The project has achieved a better functioning of the market system in the following aspects:
- Higher volume and value of transactions
- More active companies in the value chain
- Specialized support functions
- Crowd-In market players
- better relationships between market actors

The graph below shows the positive changes of the seed market from a non-functioning to an emerging market context. The fact that large international private companies such as

Seed Co, Pannar, Klein Karoo, Syngenta, etc. have entered Northern Mozambique gives evidence for the market potential in future.



The activities of InovAgro have helped to improve some public services such as seed certification by the PSSI, improved output marketing with the Cadernetas or land titling better with the paralegals and land management committees. Nevertheless, not under the control of InovAgro some critical points of the market development are the still not really improved services of Government such as:

- seed certification process
- lack of budget for SDAE
- training for farmers
- too little resources for research (IIAM)
- bad road infrastructure in remoter areas

The second area of concern is the lack of financial institutions providing working capital for the SMEs in the value chain (mainly CATs and smaller agro-dealers) and loans to farmers.

The evaluation team recognizes positive changes in the market system, although the above-mentioned areas remain for improvement in order to strengthen the market system further. In the MSD approach attribution of project interventions to the achievements has to be evaluated. Attribution is difficult to evaluate since there are many influences during a project duration of 10 years. Therefore, the evaluation team uses the term contribution. The business expansion of agro-dealers and CATs were in combination with the move of seed companies to Northern Mozambique crucial for the success of InovAgro. Their business expansion occurred thanks to larger transport capacities, use of better technologies in the buying points (e.g. scales), improved business attitude etc. InovAgro achieved these improvements through coaching. In some cases, investments (warehouses, transport, processing facilities etc) of other projects such as PROMER, SUSTENTA. AGRA, FinAgro strengthened the capital base of some of the participating CATs. These donations as well as supporting farmers' demand (voucher program of FAO) supported the expansion of CATs. These investments allowed some of the CATs to access finance from market intermediaries such as GAPI The combination with support of other programs may be considered as happy coincidence which is positive for the actors in the value chain. To quantify the contribution of the project to the market changes is not possible. However, the fact that seed companies have become active in the area is a clear contribution of InovAgro, which was the basis for the expansion of the CATs and agro-dealers' business. These considerations show that MSD

projects are embedded in complex environments with many actors not following a market-oriented strategy. Sometimes this helps some actors within the value chains (e.g. investments of CATs), sometimes it distorts the markets (subsidies).

Since the sister project HortiSempre was working partially in the same districts as InovAgro combined effects of activities both projects may have arisen in the markets and supported the efforts mutually.

Challenges identified after the end of InovAgro include the following points:

External “market disruptors” – distort behavior and momentum.
Free inputs / heavy subsidies by donors distort farmers’ market behavior.
Programs that by-pass the agro-distribution networks are threatening the viability of agro-dealers.
Weak culture of honouring credit by agro-dealers disrupts the growth of the agro-distribution network
Fake seed in the market is considered a big hindrance to the seed sector development

These challenges have a threatening potential for the developing market system. Additionally, the sustainability of several activities such as field days, replacement of transport capacities, policy dialogue, financing at farmer (e.g. Fundo Agricola) and SME level is not guaranteed. InovAgro has done all the necessary steps during the project duration to secure the sustainability of the improved market system.

It can be concluded, that the seed and inputs as well as the sales market system of the value chains concerned in Northern Mozambique is now maturing and the roles of the actors alongside the value chains are becoming more specialized. This momentum needs to be maintained. It remains important for projects to coordinate (Government/donor/NGO) their approaches and not to distort the markets. So, they should enhance the existing input distribution systems rather than to bypass and threaten the viability of the system. How far this coordination of donor programs is realistic, cannot be estimated now. However, it needs considerable efforts of the donor community to achieve this objective. The MSD N platform might be a tool to improve the donor coordination.

The evaluation team estimates the process of moving towards an improved market system in Northern Mozambique as probably irreversible. 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, agro-dealers, and a few insurance companies and financial institutions. However, some elements, especially improving the access to finance for all the actors of the value chain will need improvements. The positive development occurred in spite of a fragile environment (interventions of donor community in a non-market manner, switches of governmental policy, natural disasters, political turmoil). This shows that driving market actors can move things ahead even under adverse circumstances.

11. Lessons learned

The evaluation team has taken up some of the lessons learned proposed by InovAgro which are in line with the overall achievements of the project. Some lessons were added by the evaluation team.

1) **Resilient market systems** can help SHF to withstand the impacts of market shocks.

2) Some of the new business opportunities through the **introduction of improved crop varieties** 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;
- 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 agro-dealers;

3) Farmers group purchasing inputs, led by DMCs has shown to be the most effective mechanism that can ensure that members use **FA savings** to purchase inputs as a group. This calls for trust building by the DMCs working with agro-dealers who deliver to their promises.

4) **Demo plots and field days** are playing an important role for disseminating the know-how on improved seed, adopting the new varieties and using GAP. Their sustainability is only secured if seed companies will continue to finance them in future via the agro-dealer network.

5) The training of **private seed inspectors** is strengthening the role of the PSSI and the understanding of the value proposition to the seed companies. However, a sustainable inspection service in line with an MSD approach can in the long-run only be achieved when a more efficient organization is set-up. NSA has the role of a supervisor and delegates the practical work of field visits to a certain degree to the PSSI. For covering the costs of trainings Government has to adjust its regulations for getting the payments of private actors.

6) In the **APROSE platform** too many diverging interests are integrated which results in an unwillingness of the private members to pay their contributions. As long as the actors of the seed value chain (traders, agro-dealers, CATs, farmers) do not define their specific interests for advocacy the platform will remain donor-driven and donor-financed. A strategy process must clarify the future orientation of APROSE.

7) The **distortionary effects** of the big World Bank funded SUSTENTA program were felt in the market and will impact on the evolution of the markets for seed and other inputs in Mozambique. If such programs will be implemented in future again the development of the market system may be jeopardized.

8) Gender

Female farmers are interested in and able to increase agricultural production by saving own money and investing in improved agricultural inputs provided that they have easy access to the same (e.g. through Fundo Agricola) joint purchasing, packaging adjusted to farmers´ needs, and extension advice about GAP.
Several sub-aspects can be taken as lessons learned:
- targeting women can increase business results of the value chain actors.
- there are many opportunities to be gender inclusive in how the value chain actors interact with communities, how they package, market, and label their products, etc. to make them more affordable to women clients
- training on business management, entrepreneurship and basic life skills such as leadership, networking and communication is essential to equip upcoming women entrepreneurs
- successful women entrepreneurs are the best way to establish more women owned enterprises

9) **Large technically competent firms** (partly multinationals) with strong will, 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.

10) Contributions of other programs for the **investments of the CATs** have in some cases supported the expansion of their business and outreach. In the longer run access to finance remains an issue for securing their business.

11) The **financial market** is not yet oriented towards SMEs. For the sustainability of the agro-dealers and CATs it will be crucial that they have access to working capital. GAPI offers such opportunities. Banco Futuro is unfortunately not in this business involved. A reorientation of their business focus to rural areas could be a contribution to overcome the financing gap of SMEs and SHF.

12) **The MSD N network** needs external funding through donors or donor projects to be dynamic, since this is not a commercially driven activity. For its continuation any of the involved Donor organizations has to take over the presidency and the interested participants have to be ready to finance the costs of the MSD Network. The existing secretariat has the capacities to run the platform successfully. It is certainly useful to promote the ideas of MSD and to exchange experience among the interested donor organizations in order to have less distorting activities in programs in future.

Annexes

1) Evaluation Matrix

InovAgro

Evaluation Matrix

The DAC criteria (relevance, effectiveness, efficiency, impact and sustainability) form the basis of the evaluation methodology. The major aspects of the five criteria are written in bold letters in the following matrix.

The five project outcomes (1. Improved smallholder farmer sales and commodity trading systems in the targeted value chains 2. Increased smallholder farmer crop productivity in the targeted value chains 3. A well-functioning agricultural market operating to supply commercial certified seed and interconnected agri-services to smallholder farmers 4. A well-regulated and coordinated agricultural market and enabling environment 5. A stronger supporting environment consisting of 3 development agencies, support service providers (private, public, and NGO) and/or private investors) will be considered in the detailed questions during the interviews.

Target Groups (based on the ProDoc Phase III 2017)

Target smallholder farmers are defined as low-income Northern Mozambique individual female or male farmers, who are 18 years of age or older and whose family earnings around USD $1.90 per family member (as per the World Bank extreme poverty definition of income per day per family member). The smallholders are up-and-coming commercial farmers whose production includes at least 50% destined for retail markets (or production of at least one crop type promoted by InovAgro). There is no selection based on religion or ethnicity.

The target number of smallholder farmers is 30,000 individuals including a target of 40% female farmers. The total number includes beneficiaries from InovAgro Phase II. The **gender sensitive target** aimed at reaching 40% female farmers reflects the aim to promote women's access and use of the program supported services, inputs and technologies (seed, irrigation land). The aim follows that these women go on to benefit, improving their capacity, productivity and incomes, and agency.

The evaluation will carry out focus group discussions with all groups of smallholder farmers. Women groups will especially be considered under the discussion of cross-cutting aspects.

1) Relevance

Main Questions/sub-aspects	Discussion partners	When
Objectives and strategies in line with the priorities of the partner countries?	SDC, respective ministries	1st week
Difficulties/changes during implementation?	SDC, resp. ministries, SC team	1st week
Impact of climate change?	SDC, resp. ministries, SC team	1st week
Which aspects positive/negative?	SDC, resp. ministries, SC team	1st week

Relevant, valid and consistent with the needs of the direct and indirect target groups?	Focus groups discussions target groups, actors of the value chain	2nd week
What changed in their business model?	Focus groups discussions target groups, actors of the value chain	2nd week
Which innovation?	Focus groups discussions target groups, actors of the value chain	2nd week
Economic impact?	Focus groups discussions target groups, actors of the value chain	2nd week
What didn't work?	Focus groups discussions target groups, actors of the value chain	2nd week
Changes due to environmental and/or COVID crisis?	Focus groups discussions target groups, actors of the value chain	2nd week
Intervention logic models (including assumptions, risks etc.) valid and at appropriate levels?	Evaluation team	2nd week
Outputs consistent with the intended impact, overall goal and the achievement of the project objectives?	Evaluation team	2nd week
Relevant for the market actors without disturbing markets?	Focus groups discussions actors of the value chain	2nd week
What changed in the markets during the last 5 years?	Focus groups discussions actors of the value chain	2nd week
What are the reasons for these changes?	Focus groups discussions actors of the value chain	2nd week
Which expectations for the future developments of the markets?	Focus groups discussions actors of the value chain	2nd week
What impact had interventions of Government?	Focus groups discussions actors of the value chain	2nd week
Which influences did/do have projects of other donors?	Focus groups discussions actors of the value chain	2nd week
Complementary and coherent with other similar projects?	SDC, respective ministries, other projects	1st week

2) Effectiveness

Main Questions/sub-aspects	Discussion partners	When
Analysis of the quantity and quality of project outputs and results (outcomes) achieved?	Evaluation team	3rd week
Which intended and unintended, including both positive and negative effects?	All interview partners	
Why did they occur?	All interview partners	
Application of a market system development approach?	Implementing Organizations	2nd/3rd week
Reasons for deviation?	Implementing Organizations	2nd/3rd week

Which effects in the implementation of the projects?	Implementing Organizations	2nd/3rd week
Effectiveness of private sector partnerships and the project's role in the partnership towards the set objectives?	Implementing Organizations, actors of the value chains, public partners	All the time
Which value chains are functioning today without interventions?	Implementing Organizations, actors of the value chains, public partners	All the time
In which value chains are further adjustments necessary and which one?	Implementing Organizations, actors of the value chains, public partners	All the time
What did work well in the collaboration between private sector, public sector and implementing organizations?	Implementing Organizations, actors of the value chains, public partners	All the time
Contribution of the project's interventions to institutional strengthening?		
Question to be asked at all the interviews with institutional partners	Institutional actors of the value chains, public partners	All the time
Indications and evidences of systemic change taking place in the sectors concerned?	Implementing organizations, evaluation team	2nd week
Separate view on the different sectors		2nd week
Which aspects could not be achieved according to the exit plans?	Implementing organizations, evaluation team	2nd week

3) Efficiency

Main Questions/sub-aspects	Discussion partners	When
Reaction to unforeseen external factors?	Implementing Organizations	2nd week
Political changes?	Implementing Organizations	2nd week
Climate change and environmental disasters?	Implementing Organizations	2nd week
COVID 19?	Implementing Organizations	2nd week
Efficiency of the project administration?	Implementing Organizations, evaluation team	2nd week
Staff turnover high?	Implementing Organizations, evaluation team	2nd week
Costs of staff in relation to overall costs and financial means used for activities?	Implementing Organizations, evaluation team	2nd week
Overall use of budget?	Implementing Organizations, evaluation team	2nd week
Collaboration with private and public sector actors?	Implementing Organizations, evaluation team	2nd week
Division of labor optimized?	Implementing Organizations, evaluation team	2nd week
Financial means of third parties available and used?	Implementing Organizations, evaluation team	2nd week
Use of the monitoring system for decision making?	Implementing Organizations, evaluation team	2nd week

Which improvements in the monitoring system during the phase II?	Implementing Organizations, evaluation team	2nd week
Which data could be used for changes/adaptations of the project implementation?	Implementing Organizations, evaluation team	2nd week
Which data improved the reporting process?	Implementing Organizations, evaluation team	2nd week

4) Impact

Main Questions/sub-aspects	Discussion partners	When
What tangible positive or negative changes have been achieved by the project particularly for the female and male farmers?	Target groups, evaluation team	2nd week
Incomewise? How is this measured?	Target groups, evaluation team	2nd week
Direct/indirect changes: which ones?	Implementing organizations, evaluation team	2nd week
Intended changes?	Implementing organizations, evaluation team	2nd week
Unintended changes?	Implementing organizations, evaluation team	2nd week

5) Sustainability

Main Questions/sub-aspects	Discussion partners	When
Better functioning of the market system?	Evaluation team	3rd week
Differences among the different value chains?	Evaluation team	3rd week
Institutional aspects?	Evaluation team	3rd week
What is necessary for further growth of the markets?	Evaluation team	3rd week
Economic growth of the overall economy?	Evaluation team	3rd week
Increase of productivity at all levels of the value chain?	Evaluation team	3rd week
Less interventions of Government?	Evaluation team	3rd week
Stronger competition in the trade sector?	Evaluation team	3rd week
Systemic changes in the benefit of the target groups?	Evaluation team	3rd week
Effects of the project's measures for phasing out?	Evaluation team	3rd week

Cross-cutting aspects

Main Questions/sub-aspects	Discussion partners	When
Gender Equality		
Women economic empowerment = successful approach?	Women of target group, implementing organizations	2nd week

Influence of markets, traditions, available resources?	Women of target group, implementing organizations	2nd week
Access to existing funding options	Implementing organizations, financial institutions, SDC	1st and 2nd weeks
Availability of funding organizations?	Implementing organizations, financial institutions, SDC	1st and 2nd weeks
Access for target groups given?	Implementing organizations, financial institutions, SDC	1st and 2nd weeks
Use of external financial funds?	Implementing organizations, financial institutions, SDC	1st and 2nd weeks
Impact of climate change	Implementing organizations, SDC	1st and 2nd weeks
Good governance	Implementing organizations, SDC	1st and 2nd weeks

Remark: Annex 2 (work plan) removed for publishing due to personal data of staff.

3) History of the project

	Phase I - Contract Growing and Seed Policy			Phase II - Shift to Input Supplier, Strong Seed Policy, Locally driven Output marketing, and Decentralized financial Services (Fundo Agricola) and land tenure				Phase III - Expand and Deepen Phase II, Knowledge management			Extension Year
Major Initiatives	**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	TBD
# of beneficiaries with CATs							7,350	7,420	13,583	28,223	
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 = Business		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		Cyclones Idai (Beira Corridor) and Kenneth (Cabo Delgado)	COVID-19 restricts activities	COVID-19 restricts activities, SUSTENTA initiates seed distribution

4) Logframe InovAgro Phase III

InovAgro Phase III Logframe

	Description	Key Indicators	Means of Verification	Disaggregation	Baseline	Milestone 2018	Milestone 2019	Milestone 2020-End	Assumptions and Risks
Programme Impact	Increased income for poor men and women smallholder farmers in Northern Mozambique	Net additional income[1] for the smallholder farmers[2] (40% female). (Cumulative)	Annual farm surveys with Input-Output modelling benefit/cost ratios and analysis. End of Season surveys	Female/male	Average baseline annual income per target population USD		$ X	$ X	1. Improved market systems increase farmer income 2. Commodity prices remain attractive 3. Insecurity does not disrupt or inhibit scope of activities
		% of surveyed smallholder farmers[2] reporting income increases[3] per year (Cumulative)	Annual farm surveys with beneficiary reach measurement, comparative analysis and distributional analysis		35%	45%	60%	75%	

Outcome

Outcome1	Improved smallholder farmer sales and commodity trading systems in the targeted value chains	**Outcome Indicator 1.1** % increase in value[4] of crop commodity sales by smallholder farmers to commodity traders through InovAgro developed trading systems (Cumulative)	End of season Survey with bi-annual farm surveys; Deal Notes; Commodity trader Quarterly Progress Reports	Pre-intervention commodity sales	135,878,900.00 Meticais	204,000,000.00 Meticais	226,666,666.00 Meticais	272,000,000 Meticais	1.Smallholder commodity markets remain attractive 2. Favourable weather conditions support productivity 3.Instability does not disrupt activities or access
		Outcome Indicator 1.2 Cumulative No. of smallholder farmers[5] (40% female) who record an increase[6] in sales (Cumulative)	End of season Survey with bi-annual farm surveys;	Female/male	15,000	18,000	20,000	25,000	
		Outcome Indicator 1.3 % of stakeholders satisfied the crop commodity markets supported by the programme are operating more fairly, efficiently and competitively in all programme provinces[7](Cumulative)	Bi-annual Stakeholder perception survey	Female/male	30%	45%	50%	60%	
Outcome2	Increased smallholder farmer crop productivity in the targeted value chains	**Outcome Indicator 2.1** Percentage increase in smallholder farmers productivity[8] in all programme provinces (cumulative)	Post-Harvest Evaluation Survey Reports; quantitative empirical study of productivity; Beneficiary feedback survey; Comparative performance assessment of climate resilient versus existing commercial variety' yields under both stress and optimum growing conditions	Climate resilient/existing commercial varieties	40%	50%	60% (30% is from climate resilient production)	75% (50% is from climate resilient production)	1.Smallholder markets remain commercial attractive 2. Favourable weather conditions support productivity 3.Instability does not disrupt activities or access 4. Selected climate resilient crop varieties and climate smart GAPs are suitable to smallholder farming conditions
		Outcome Indicator 2.2 Cumulative No. of smallholder farmers (40% female) with higher yield volumes[9]in all programme provinces (cumulative)	Post-Harvest Evaluation Survey Reports; Quantitative empirical study of productivity; Beneficiary feedback survey	Female/male	15,000	18,000	20,000	25,000	
Outcome3	A well-functioning agricultural market operating to supply commercial certified seed and interconnected agri-services to smallholder farmers	**Outcome Indicator 3.1** % increase in additional sales (15% climate resilient product sale) by input service providers[10] to smallholder farmers in programme locations through InovAgro developed trading systems (cumulative)	Deal Notes; Input Service Provider Quarterly Progress Reports;	Climate resilient agri- inputs sales (15%)	Baseline Company Annual sale USD	20%	25%	30%	1.Smallholder markets remain commercial attractive 2. Instability does not disrupt activities or access 3. The political and enabling environment improves 4. Business leaders remain committed to reform and smallholder markets 5. Seed companies and market service providers are willing and able to invest
		Outcome Indicator 3.2 Cumulative No. of smallholder farmers (40% female) reached, purchasing and applying programme supported improved and climate resilient agricultural inputs and services[11] in all programme provinces (cumulative)	Deal Notes; End of season Survey with bi-annual farm surveys; Longitudinal assessments of institutional capacity of beneficiaries	Female/male & Climate resilient agri-inputs & services	15,000	18,000[12]	20,000[13]	25,000[14]	

		Outcome Indicator 3.3 % of smallholder farmers satisfied the programme supported market systems, agri-inputs & services are accessible, adequate&affordable[15] (cumulative).	Bi-annual Smallholder perception survey	Female/male	40%	50%	65%	80%	
Outcome 4	A well-regulated and coordinated agricultural market and enabling environment	**Outcome Indicator 4.1** % increase in private sector[16]compliance with national agricultural standards (cumulative)	Deal Notes; Survey of companies in selected value chains: pre& post-standard interventions			50%	60%	75%	1.Improvements in the business environment catalyse improved market systems 2. Government/Targets are willing to undertake reforms 3.APROSE and seed suppliers function efficiently to promote information dissemination to SHF 4.Compliance with regulations & standards promotes market systems 5. Policy reform will guide legal and regulatory reforms
		Outcome Indicator 4.2 % increase in volume of properly inspected and certified seed[17] produced and marketed in Northern Mozambique	Records of inspection undertaken by private sector seed inspectors. Expert Study of volume of properly inspected certified seed.			30%	60%	75%	
		Outcome Indicator 4.3 % level of APROSE financial sustainability to deliver planned activities (cumulative)	APROSE Reports		30%	50%	75%	100%	
		Outcome Indicator 4.4 No. of smallholders with programme supported land tenure/delimitation registration who increase their productive capacity, investments & yields (50% female)[18]	Post-Harvest Evaluation Survey Reports; Quantitative empirical study of productivity; Beneficiary feedback survey;	Female/Male		Smallholder Land tenure registration monitoring system established	6,000	10,000	
Outcome 5	A stronger supporting environment consisting of development agencies and/or private investors applying additional and/or improved[19]	**Outcome Indicator 5.1** No. of development agencies and NGOs[21] implementing additional and/or improved market development interventions[19] (Cumulative of Direct & Indirect) in Mozambique as a result of InovAgro's MSD awareness raising efforts.	Annual survey; Longitudinal assessments; Knowledge product user surveys of development agency investment/planning/policy documents			1	2	3	1.Development agency capacity exists to absorb & apply new knowledge & practise; 2. Instability does not disrupt activities or access 3. The political and enabling environment improves
	market systems approaches[20] to engaging with smallholder farmers in Northern Mozambique	**Outcome Indicator 5.2** No. of additional and/or new interventions[19] sponsored[22] by development agencies and/or private investors using market systems approaches in Mozambique as a result of programme support (cumulative).	Annual survey; Longitudinal assessments; Knowledge product user surveys of development agency investment/planning/policy documents	Female/male & Climate resilient		Monitoring system established	1 (addresses gender; and climate smart objectives)	2 (50% address gender; 50% address climate smart objectives)	

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