PROJECT EVALUATION SERIES

Final Evaluation of the project "Strengthening capacities of agricultural producers to cope with climate change for increased food security through the Farmers Field School approach (FSP) in Mozambique

(GCP/MOZ/112/LDF)
ID GEF: 5433

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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Final Evaluation Team

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Acronyms and abbreviations

AESA	Agro-Ecological System Analysis
CAIP	Climate Action Improvement Package
CAT	Characterisation of the Agroecological Transitions
CC	Climate Change
CCA	Climate Change Adaptation
CEWD	Crops and Early Warning Department
CTA	Chief Technical Advisor
DPAP	Provincial Directorate of Agriculture and Fisheries
DEAS	District Economic Activities Service
DPIS	District Planning and Infrastructure Service
ET	Evaluation Team
ETL	Evaluation Team Leader
EECDP	Environmental Education, Communication and Dissemination Programme
FFS	Farmer Field Schools
FAO	Food And Agriculture Organization Of The United Nations
FNSTS	Food and Nutrition Security Technical Secretariat
GEF	Global Environment Facility
IIAM	Mozambique Agricultural Research Institute
IPCC	Intergovernmental Panel on Climate Change
LDCF	Fund for Least Developed Countries
LOA	Letter of Agreement
LTO	Lead Technical Officer
LAP	Local Adaptation Plan
M&E	Monitoring and Evaluation
MADER	Ministry of Agriculture and Rural Development
MISAU	Ministry of Health
MTA	Ministry of Land and Environment
MTR	Mid-Term Review
NCU	National Coordination Unit
NDC	Nationally Determined Contribution
NDSFF	National Direction of Support for Family Farming
NDEM	National Directorate of Environmental Management
NIPAS	National Investment Plan for the Agricultural Sector
NSCCAM	National Strategy for Climate Change Adaptation and Mitigation
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OED	FAO Office of Evaluation
ONU	United Nations
PAES	Provincial Agricultural Extension Services
RBM	Results Based Management
SDG	Sustainable Development Goals
SPASD	Strategic Plan for Agricultural Sector Development
SCCF	Special Climate Change Fund
SHARP	Self-assessment and Holistic Analysis of the Resilience to Climate Change of Farmers and Pastoralists
TAPE	Tool for Agroecology Performance Assessment
TE	Terminal Evaluation
ToC	Theory of Change
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Executive Summary

The Project GCP/MOZ/112/LDF (GEF ID: 5433) - "Strengthening capacities of agricultural producers to cope with climate change for increased food security through the Farmers Field School approach in Mozambique", was an initiative financed by the Global Environment Facility (GEF) and the Mozambican Government, implemented in Mozambique by the Food and Agriculture Organization of the United Nations (FAO), with the Ministry of Agriculture and Rural Development - MADER (former MASA) and Ministry of Land and Environment - MTA (former MITADER) as executing agencies. The project was implemented between October 2016 and July 2021. The project was formulated in the GEF-5 funding cycle under the Climate Change Adaptation (CCA) focal area and had an effective budget of USD 9,000,000 funded by the GEF. It was implemented between October 2016 and July 2021. The total project budget is USD 36, 344,657 including co-financing in kind of USD 1,170,000 from the Government of Mozambique and in cash from the PRONEA Support Project (USD 1,274,657) and two projects implemented by FAO (USD 24,900,000) through funds originating from the European Commission and Belgium.

The FAO Office of Evaluation (OED) conducted this evaluation in accordance with the general guidelines and criteria of the OED and GEF. The Project was assessed against the following GEF evaluation criteria: relevance, effectiveness, efficiency, co-financing, sustainability, factors affecting performance, gender and progress towards impact.

Methodology and limitations

1. The evaluation team was composed of one international team leader and two national evaluators. The evaluation used a qualitative approach, including desk review, interviews and focus groups. Field visits in the 4 provinces covered by the project included districts and Farmers Field School (FFS) selected to represent balance between different ecosystems, regions affected by tropical cyclones and types of activities implemented. The evaluation team interviewed a total of 193 people, in person or remotely, at various levels, sectors and locations through 48 individual and 18 collective interviews or focus groups.

2. Limitations included reduced time for primary data collection before the closure of project activities; travel restrictions due to Covid-19; size of the country (which reduced the number of sites visited); lack of response from some stakeholders, and unavailability of the TAPE report (endline) until the completion of the evaluation work.

Main findings

The overall rating of the project is Satisfactory.

3. **The main findings and conclusions for each evaluation criterion were:**

Relevance

4. The Project, its objectives and results were and will continue to be very relevant for the strengthening of national capacity for adaptation and resilience to climate change. The project design is coherent with the initial problems, with the reality of the context and of the target audiences, and included strategic responses and a logical sequence to achieve its final objective.
The FFSs approach remains the most effective and efficient option to ensure the transfer and adoption of climate change adaptation (CCA) technologies and practices in rural Mozambique.

Results - Effectiveness

5. The project was quite successful in Components 1 and 2, contributing to increasing the capacity of the agricultural and pastoral sectors in the 4 intervention provinces to cope with climate change. The organization of producers into FFSs makes the process of training and specialized technical assistance to producers more efficient, both in the context of CCA practices and other social contexts, when compared to traditional extension approaches implemented in Mozambique. The focus on training through FFS is an appropriate strategy for working with farmers with low levels of technical knowledge and has great potential in terms of results and sustainability. The participatory, transparent and democratic approach implemented by the FFSs has created an informal learning environment and favoured the participation of the most vulnerable producers and those with lower levels of technical knowledge. The involvement of some former FFS beneficiaries in other projects as facilitators allowed for efficiency gains.

6. The institutional articulation with the ministries produced relevant outcomes at the level of the definition of rural development programmes and intersectoral coordination, although the political changes that took place limited the scope of these outcomes.

7. In addition to the capacity improvement achieved through trainings and sensitizations on various themes and for stakeholders at various levels, some noteworthy results that had direct input and support from the project include: (i) under Component 1, the incorporation of specific CCA actions into ministerial-level strategic plans and the agricultural crop planning process and the Social Economic Plans and District Budgets (PESOD); the elaboration of Mozambique's Nationally Determined Contribution (NDC); the creation of 15 local plans and 250 community plans for adaptation to climate change; (ii) under Component 2, the installation of 11 agro-meteorological stations and training of over 600 professionals in interpretation and integration of agro-meteorological information; construction of infrastructure to support agricultural and livestock production in 4 provinces and over 15,000 people benefited directly from training actions; (iii) under Component 3, the highlight was obtaining funding under the Climate Action Enhancement Package (CAEP) of the NDC Partnership, with support from the project, to implement the NDC operationalization plan in Mozambique; significant advances in intersectoral coordination at district and provincial level, with improved communication and articulation among the agents active in the territory and between them and the ministerial level and national structures; and the adoption by the MTA and MADER of internationally validated procedures to collect data and prepare the Malabo Declaration and NDC reports..

Efficiency

8. The project managed to mobilize all the necessary resources for effective and efficient implementation, and achieved a very high financial execution rate (98%). However, some lack of proactivity by management and the lengthy FAO procurement processes led to some relevant delays that limit the impact and sustainability of the outcomes. Government partners effectively and diligently carried out their responsibilities. The letters of agreement were a key instrument to ensure a clearer division of responsibility and to allow the necessary operational and financial autonomy to support autonomy and 'ownership' by government partners.

Sustainability

9. Some conditions for sustainability of knowledge on CCA and capacity of the various stakeholders to continue implementing the techniques introduced have been created. By training and educating actors at provincial and district level, knowledge was not limited to a target group, but became available to the whole community, facilitating replication of knowledge and sustainability of results. However, there are doubts about the financial capacity of the provincial and district entities to ensure continuity of support to farmers and about the political commitment of the Ministries to continue FFSs and keep CCA as a sectoral priority.

Progress towards impact

10. The Project has achieved, through institutional, technical and individual training of farmers as well as their adoption of CCA practices, very important progress towards long-term impacts. The available information confirms significant progress in terms of immediate impacts, as well as the creation of a critical mass at

the national level that is critical for the achievement of long-term impacts. However, and despite having created very favourable conditions for the materialisation of impacts, there are environmental and political risks that must be taken into consideration by the various project partners and on which effective coordination between FAO and MADER is required.

Factors affecting performance

The consensus on the relevance of the CCA theme and the MTR were determining factors for the success of the intervention. However, there were significant delays in the start-up of the project and in the implementation of the micro-projects and installation of the weather stations. Other issues that affected project performance were the Covid-19 pandemic, armed conflicts in the central region of the country, political changes in government and particularly the various cyclones that hit the country. These threats were identified in a timely manner and some specific measures were put in place to protect the overall project results and performance. The exception was the management of changes in government that should have been managed more proactively and immediately after the national elections.

There were significant improvements after MTR, notably after the signing of the Letters of Agreement. High rate of activity implementation and financial execution. Good capacity to adapt to unforeseen events, in particular to the constraints imposed by the pandemic. Good coordination with partners, namely at district and provincial level.

Monitoring and Evaluation and quality of implementation

11. The project had a monitoring and evaluation (M&E) plan and system suited to the management and implementation needs of the intervention, composed of robust indicators, well-defined targets and baselines, and mechanisms for the collection, storage, processing and analysis of data adjusted to the reality of the country and the project. The decentralisation of data collection allowed the project to have regular and quality data, despite the difficulties faced with data collection by extensionists. The data produced by the M&E system proved useful for the reporting function but also to support project management, decision-making and to feed into the design of other initiatives. However, it is important to ensure that the final data includes information disaggregated by sex, district and province.

12. The timely completion of the MTR allowed for the definition of new goals, influenced the composition of the project team and allowed for several decisions to be taken that proved to be strategic, namely the signing of the Letters of Agreement with the project implementing partners.

Co-financing

13. The project was able to mobilise the co-financing identified as necessary at the time of approval, and even exceeded the stipulated amount of USD 24,900,000, thanks to the mobilisation of an additional USD 2,659,198 from the "Accelerate Progress towards MDG1c in Mozambique" project. The co-financing raised for the intervention was 1.14% higher than defined in the project approval, and the project has always had the necessary resources available for the normal and timely implementation of activities.

Social and Environmental Safeguards

14. The project adapted the FFS to the local context and the economic and social profile, needs and expectations of the beneficiaries, and integrated environmental concerns into the techniques and methods used by project activities. The project also included a set of specific measures to ensure that the CCA measures disseminated were in line with best practices for environmental sustainability in the agricultural sector, namely by promoting the production and use of organic fertilizers by the FFS beneficiaries, the use of natural waste to produce organic compost or the use of natural materials to build natural fences, among other examples.

Stakeholder engagement

15. Involvement of different stakeholders in the design and implementation of the project contributed to a better design of the project and to increase its relevance. Contributions from partners to the initial project design allowed the inclusion of more tailored and effective responses. Beneficiaries not involved in the project design, but integrated into decision-making about FFSs priorities, allowing a tailor-made response for each beneficiary community. Partner entities generally complied with agreements, and the letters of agreement were fundamental for creating conditions of autonomy and facilitating the transfer of the means necessary for their actions.

Gender

16. The strategy defined by the project for the promotion of gender equality proved to be coherent with the project objectives and with the needs of the communities, in particular women. The FFS proved to be an effective approach in creating conditions for greater equality between women and men, having facilitated the inclusion of women in climate change adaptation and resilience and socio-economic development activities, which allowed women to secure greater financial autonomy, breaking the cycle of dependence on men.

Knowledge management

17. The project ensured that all FFSs had quality training materials and tools to promote CCAs in rural development processes in the beneficiary regions. The design developed and carried out for the FFSs included a facilitator's manual, curriculum development plan for the FFSs and templates for data recording. An ECC manual was developed and distributed to fill the gap in training material in the area of livestock. Didactic materials based on FAO benchmarks and also based on SHARP study data and data from 60 FFSs were integrated into the extension curriculum.

The project also developed a COVID 19 information package, including awareness materials that were disseminated to all the FFSs involved in the project.

Some FFSs also disseminated the results of the practices learnt by farmers through actions such as field day and exchanges among FFSs.

Progress towards development objectives

18. Project objective to be achieved in all four project provinces as a result of the very satisfactory level of achievement of outcomes, with the introduction of relevant structural changes at the level of awareness of sectoral actors, inclusion of CCA in rural development programmes, creation of increased technical capacity at the level of provincial and district service providers, and intersectoral coordination. There is evidence of adoption of these practices in all 4 provinces. Results 3 and 4 are limited by policy changes at the ministerial level.

Rating: Satisfactory

Overall quality of implementation

19. Significant delays in project start-up and implementation of micro-projects and installation of weather stations. Significant improvements after MTR, notably after the signing of the Letters of Agreement. High rate of activity implementation and financial execution. Good capacity to adapt to unforeseen events, namely to the constraints imposed by the pandemic. Good coordination with partners, namely at district and provincial level.

Rating: Moderately satisfactory

Risk to sustainability (overall).

20. Despite the various gains in knowledge and capacity of the various actors in the field, there are doubts about the capacity of the provincial and district entities to sustain this support in the long term without external funding and support, due to the financial constraints facing the Ministries. There are also doubts about the political commitment of the Ministries to continue the approach implemented by the project, as the Mozambican Government prioritizes support to the new Agrarian Extension Programme (Sustenta Programme) which does not contemplate FFS as an instrument for territorial action. In addition to these risks, the absence of a properly structured exit strategy and knowledge of partners limits the capacity of national authorities and partners to take ownership of the results.

Rating: Moderately likely

Conclusions

Conclusion 1 The GCP/MOZ/112/LDF project, its objectives and outcomes were and will continue to be very relevant for the strengthening of national capacity for adaptation and resilience to climate change.

Conclusion 2 The project design is coherent with the starting problems, with the reality of the context and target audiences, and included strategic responses and a logical sequence to achieve its final objective.

Conclusion 3. The FFSs approach remains the most effective and efficient option to ensure the transfer and adoption of CCA technologies and practices in the rural areas of Mozambique.

Conclusion 4. The GCP/MOZ/112/LDF project was quite successful in Components 1 and 2, contributing to increasing the capacity of the agricultural and pastoral sectors of the 4 intervention provinces to cope with climate change.

Conclusion 5. The institutional articulation with the ministries has produced relevant outcomes at the level of the definition of rural development programmes and intersectoral coordination, although the political changes have limited the scope of these results.

Conclusion 6. The consensus on the relevance of the CCA theme and the MTR were determining factors for the success of the intervention.

Conclusion 7. The project managed to mobilize all necessary resources for an effective and efficient implementation and achieved a very high financial execution rate. However, some lack of proactivity on the part of management and the slowness of FAO procurement processes led to some relevant delays that limit the impact and sustainability of the outcomes.

Conclusion 8. Some conditions of sustainability of knowledge on CCA and capacity of the various actors to continue implementing the techniques introduced have been met. However, there are doubts about the financial capacity of the provincial and district entities to ensure the continuity of support to farmers and about the political commitment of the Ministries to continue with FFSs and keep CCA as a sectoral priority.

Conclusion 13. The GCP/MOZ/112/LDF Project has achieved, through institutional, technical and individual training of farmers, as well as their adoption of CCA practices, very important advances towards long-term impacts.

The main recommendations of the TE were:

Recommendation 1. To FAO in the design of future projects. In the design of future projects of similar size and complexity levels, a more realistic inception period (minimum 6 months) should be considered, allowing for adequate implementation planning and timely preparation of all necessary conditions for effective and efficient execution.

Recommendation 2. To FAO (project formulators, project task forces and Budget Holders), **and FAO GEF in the design of future projects**. Projects should include, as an activity, the definition of an exit strategy or sustainability plan that is strategic and realistic.

Recommendation 3. To FAO (project formulators, project task forces and Budget Holders), **and FAO/GEF, in the design of future projects.** Consider political cycles and potential changes in strategy, vision or leadership as a risk to project execution and results.

Recommendation 4. To FAO/GEF (project formulators, project task forces and Budget Holders)**, in the design of future projects.** For more effective project implementation, and for Results Based Management (RBM), the M&E system should include a more comprehensive level of data disaggregation (by gender, district, province, and stakeholder). Present indicator data in disaggregated form for better adaptive management.

Recommendation 5. To FAO immediately. To strengthen the outcomes achieved under component 3 of the Project, it is recommended that FAO may maintain support to the Government to finalize the revision of PEDSA and PNISA, ensuring the integration of AMC in these documents.

Recommendation 6. To FAO and MADER, immediately. Initiate, as soon as possible, specific talks on the future of CMEs and their integration into future rural development policies and programmes, including in the Sustenta Programme. The investment made in the creation and training of FFSs is strategic to the country's rural development efforts and to ensure that the most vulnerable farmers have adequate follow-up and technical support.

Recommendation 7. To FAO, immediately. Review the adequacy of the procurement processes and procedures currently in place and applicable to projects of this nature. The successive delays caused by the complexity and lengthiness of procurement procedures, and their mismatch with the context of the intervention, damage FAO's reputation and the effectiveness of implementation.

Recommendation 8. To FAO in the design of future projects. In a possible continuation of the Project, include initiatives focused on the development of value chains, promotion of access to markets by farmers benefiting from FFSs and and support to access information systems.

Chart 1. FAO-GEF Rating Scheme

GEF criteria/sub-criteria	Rating [1]	Summary Comments
A. STRATEGIC RELEVANCE		
A1. Overall strategic relevance	S	Initial relevance of the Project remains unchanged from the beginning and is projected into the future. The FFS approach is highly relevant and remains the most valid and efficient option to ensure the support and empowerment of producers to cope with the threats of climate change, particularly the most vulnerable farmers. The Project Objective and Outcomes coherent with the initial needs diagnosis, main priorities of the country on rural development and CCA, Country Programming Framework, GEF operational programme and SDG. Implementation strategy appropriate to the reality of the intervention and to enable the achievement of results. Installation (inception) phase with inappropriate duration. Incorrect identification of the number of existing FFSs at the beginning of the project conditioned the achievement of higher outcomes in terms of the number of beneficiaries.

[1] See rating scheme at the end of the document.

A1.1. Alignment with GEF and FAO strategic priorities	HS	The project contributes to GEF/LDCF strategic objectives CCA 1, CCA 2, CCA3 and during implementation it was aligned with FAO Strategic Objectives SO 2 and SO5. It was also aligned with priority areas 2 and 3 of the FAO Mozambique CPF.
A1.2. Relevance to national, regional and global priorities and beneficiary needs	HS	The project is aligned with national laws, policies, strategies, programmes and action plans that define priorities at the level of rural development, adaptation to climate change and the agricultural and livestock sectors, including measures and results that directly contribute to the different specific objectives of these documents. In particular, the project objectives and results directly contribute to: National Strategy for Adaptation and Mitigation of Climate Change 2013 - 2025 (NSCCAM) and the NDC/UNFCCC. The project is also aligned with the objectives of the National Investment Plan for the Agricultural Sector (NIPAS) and is consistent with the vision of the Strategic Plan for Development of the Agricultural Sector (SPASD). It has also high coherence with SDG 2 and SDG 13 targets. The involvement of the different stakeholders in the conception and implementation of the project contributed positively to the high relevance of the intervention, allowing an effective response to the needs identified in the initial diagnosis, but also meeting the expectations and socio-economic conditions of the beneficiaries.
A1.3. Complementarity with existing interventions	MS	There is evidence of collaborations with entities such as WFP, Save the Children, World Vision, Caritas, GAPI, ORAM and IDE in Gaza, Sofala and Tete. These complementarities include distribution of resources (productive supplies, seeds and motor pumps), or activities of (training on) nutrition and vegetable vegetable production to complement the FFSs intervention. The project has not developed a specific tool to map and monitor the scope, reach and results of these partnerships or collaborations. Other results could have been achieved if an effective strategy had been developed to leverage these partnerships and collaborations (namely with academic institutions).
B. EFFECTIVENESS		
B1. Overall assessment of project results	S	Project objective in a position to be achieved in the 4 provinces of the project, as a result of the very satisfactory level of achievement of results, with the introduction of relevant structural changes at the level of awareness of sectoral agents, inclusion of CCA in rural development programmes, creation of greater technical capacity at the level of provincial and district service providers, and inter-sectoral coordination. Very relevant results at the level of capacity building of farmers for the adoption of CCA practices. Evidence of adoption of these practices in all 4 provinces. Outcomes 3 and 4 limited by policy changes at the ministerial level.
B1.1 Delivery of project outputs	HS	Very relevant results at the level of capacity building of farmers for the adoption of CCA practices and of extension technicians.
B1.2 Progress towards outcomes[2] and project objectives	S	Project objective in a position to be achieved in the 4 provinces of the project, as a result of the very satisfactory level of achievement of results, with the introduction of relevant structural changes at the level of awareness of sectoral agents, inclusion of CCA in rural development programmes, creation of greater technical capacity at the level of

[2] Assessment and ratings by individual outcomes may be undertaken if there is added value.

		provincial and district service providers, and inter-sectoral coordination. Evidence of adoption of these practices in all 4 provinces. Outcomes 3 and 4 limited by policy changes at the ministerial level.
Outcome 1 - Awareness and knowledge of CCA measures	S	Considerable strengthening of the level of awareness and knowledge of national, provincial and district managers, and farmers, on the importance of including CCA practices in national rural development programmes. Contribution to strengthening the capacity of the various actors to minimize exposure to climate change. Decisive contribution of the project to the elaboration of Mozambique's NDC. Political changes prevented the conclusion of the review of SPASD and NIPAS.
Outcome 2 - Adaptation of CCA best practices	HS	Widespread appreciation by farmers and extension technicians of the results obtained in the FFSs experimentation fields in terms of productivity, resilience and cost. Recognition of the FFS methodology as extremely relevant for the capacity building and empowerment of farmers, which are fundamental for the adoption of CCA practices. Level of adoption of enhanced CCA strategies and practices has evolved positively in the 4 provinces of implementation. Directly benefited 75,000 producers, of which 60% are women (94% of the target set by the project)
Outcome 3 - Institutional capacity and coordination	MS	Significant improvements in intersectoral coordination at district and provincial level. Changes at national level limited by political changes and some inertia in project coordination. Strengthening of institutional capacities at different levels of action (district, provincial and national), contributing to greater integration of CCA measures in sectoral planning processes. Elaboration of the NDC fundamental for a dissemination of CCA measures and access to alternative sources of financing for the sector.
Outcome 4 - Results-based management	S	MTR recommendations key to improving project effectiveness and efficiency. M&E system enabled results-based management and contributed to the adaptation of implementation to the main context challenges. Activity execution rate was 92%, contributing to a satisfactory level of achievement of the main project results and its objective. Important delays in the implementation of micro-project activity due to project management responsibility.
B1.3 Likelihood of impact	S	There is considerable progress towards the longer-term impacts defined in the ToC. The available information confirms significant progress in terms of immediate impacts, as well as the creation of a critical mass at the national level that is critical to the achievement of long-term impacts. However, and despite having created very favourable conditions for the materialization of impacts, there are environmental and political threats that must be taken into consideration by the various project partners and on which effective coordination between FAO and MADER is required.
C. EFFICIENCY		
C1. Efficiency[3]	MS	Financial execution rate of 98%, having complied with FAO and GEF contracting and procurement rules and principles. Delays related to procurement processes undermine the achievement of some relevant

[3] Includes cost efficiency and timeliness.

		changes and FAO reputation. Co-financing mobilized on time and in an amount higher than estimated.
D. SUSTAINABILITY OF PROJECT OUTCOMES		
D1. Overall likelihood of risks to sustainability	Moderately likely	Despite the various gains in knowledge and capacity of the various actors in the field, there are doubts about the capacity of the provincial and district entities to follow up on this support in the long term without external funding and support, due to the financial limitations that the Ministries face. There are also doubts regarding the political commitment by the Ministries to continue the approach implemented by the project, since the Mozambican Government prioritizes support to the new Agrarian Extension Programme (Sustenta Programme) which does not contemplate FFS as an instrument for territorial action. In addition to these risks, the absence of a properly structured exit strategy and knowledge of partners limits the capacity of national authorities and partners to appropriate the results.
D1.1. Financial risks	Moderately unlikely	Doubts remain about the Government capacity to provide all the material and financial means for extensionists to have the conditions (means of transport, fuel, etc.) to continue providing follow-up and support to farmers.
D1.2. Socio-political risks	Moderately unlikely	The prevalence and worsening of armed conflicts in the central part of the country and covering the project intervention provinces may threaten the sustainability; as well as the effects of the Covid-19 pandemic and the uncertainty about how the situation will evolve at national and regional level. Doubts remain about the political priority given by the MADER to the FFS methodology.
D1.3. Institutional and governance risks	Likely	The new Sustenta Programme adopts a completely different approach from the FFS. It is not clear at this stage that the Government is assuming any responsibility in supporting the maintenance of FFS as an instrument for territorial action. Despite these doubts, FFS are considered by the great majority of the stakeholders at the provincial and district levels as an effective and strategic approach to to increase the capacity of Mozambique's agricultural and pastoral sectors to deal with climate change.
D1.4. Environmental risks	Moderately likely	Climate change and in particular the occurrence of extreme phenomena such as floods, extreme droughts or cyclones, could compromise the results already achieved and further limit the capacity of communities that are already very vulnerable.
D2. Catalysis and replication	Moderately likely	The greatest risk to the sustainability of the project results is the failure to define a structured exit strategy, designed together with the partners, activated and made known during the last year of the project, which limited the ownership of the results by the partner entities and generated doubts among the various partners about the phase after the end of the project and about who will take responsibility for the processes activated or created by the project.
E. FACTORS AFFECTING PERFORMANCE		

E1. Project design and readiness[4]	MU	The project had difficulty in recruiting technicians and establishing the necessary technical team at the beginning. The process of identifying the profiles, publication of the tenders, selection and recruitment of staff took about one year, during which time most of the technical responsibilities were concentrated at CTA. This contributed decisively to the various delays registered initially, which were compounded by CTA limited experience in the field management of a project of this size and which also led to delays in various decision-making processes, with negative effects on the efficiency of the project: delays in hiring a seed specialist, in signing the letters of agreement with the partner entities, delays in reviewing the reports produced by the M&E specialist or in starting the micro-project activity.
E2. Quality of project implementation	MS	Significant delays in the start-up of the project and in the execution of the micro-projects and installation of the meteorological stations. Significant improvements after MTR, namely after the signing of the Letters of Agreement. High rate of activity and financial execution. Capacity to adapt to unforeseen events, namely to the constraints imposed by the pandemic. Good coordination with partners, particularly at district and provincial level.
E2.1 Quality of project implementation by FAO (BH, LTO, PTF, etc.)	MS	FAO has relatively well fulfilled its responsibilities at the level of project identification, concept preparation, implementation and evaluation. Despite initial delays, the level of programmatic and financial implementation achieved by the end of the intervention was positive, even considering the various contextual factors, such as the Covid-19 pandemic, the occurrence of several cyclones and the armed conflicts in the central region of the country. Some aspects that negatively influenced the implementation include (i) the slow execution of the project up to the MTR; (ii) the poor initial identification of the number of existing FFS in the implementation territories; (iii) the excessive centralization of responsibilities in the CTA and its limited prior experience in leading fieldwork; (iv) the delay in recruiting the technicians to set up the project team; (v) the significant delays with the procurement processes; and (vi) the delay, at the project management level, in making some decisions or activating some processes.
E2.1 Project oversight (PSC, project working group, etc.)	S	At Management Committee meetings the Logical Framework and progress on indicators were regularly reviewed so that corrective or supporting measures could be activated in a timely manner, but there were some challenges in the leadership of the management committee and coordinating with the Ministries after the 2019 general elections. In spite of that, at the central level the project managed to establish platforms of understanding for the execution of the joint activities with the Ministries. At the provincial level, the implementation was also satisfactory, particularly after the signing of the Letters of Agreement, which allowed for a better definition of responsibilities and priorities.
E3. Quality of project	MS	MADER and MTA have fulfilled their responsibilities at central level with a satisfactory level of effectiveness and autonomy. The performance of the provincial and district structures was conditioned

[4] This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

execution for DEX projects		in terms of scope and pace of implementation by the insufficient availability of resources. Performance improved with the signing of the Letters of Agreement. The General Elections in 2019 significantly altered the Ministries' political support to the project, although this did not affect the performance of the district and provincial structures in the execution of the project activities under their responsibility.
E4. Financial management and co-financing	HS	The project achieved a very satisfactory financial execution (98%), and FAO and GEF contracting and procurement rules and principles were complied with in a transparent and rigorous manner. The project managed to mobilize the co-financing identified as necessary at the time of its approval, and exceeded the stipulated value of USD 24,900,000, thanks to the mobilization of an additional USD 2,659,198 from the "Accelerate Progress towards MDG1c in Mozambique" project. The co-financing raised for the intervention was higher than that defined when the project was approved.
E5. Project partnerships and stakeholder engagement	S	Involvement of different stakeholders in project design and implementation contributed to better project design and increased relevance. Input from partners to the initial project design allowed the inclusion of more tailored and effective responses. Beneficiaries not involved in the project design, but integrated into decision-making about FFS priorities, allowing a tailor-made response for each beneficiary community. Partner entities generally complied with agreements, and the letters of agreement were fundamental for creating conditions of autonomy and facilitating the transfer of the means necessary for their actions.
E6. Communication, knowledge management and knowledge products	S	The project ensured that all FFSs had quality training materials and tools to promote CCA in rural development processes in beneficiary regions. Project developed and made to the FFSs included a facilitator's manual, FFS curriculum development plan and templates for data recording. An ECC manual was also developed and distributed to fill the gap that existed in training material in the area of livestock. Teaching materials based on FAO benchmarks, but also from SHARP study data and data from 60 FFSs which allowed the identification of the gaps or limitations that were integrated into the extension curriculum. Project developed a COVID 19 information package, including awareness-raising materials that was disseminated to all the FFSs involved in the project. Some FFSs have also disseminated the results of practices learnt by farmers through actions such as the field day technique (peer to peer) and exchanges among the FFSs.
E7. Overall quality of M&E	S	Monitoring and evaluation (M&E) plan and system suited to the management and implementation needs of the intervention. Decentralisation of data collection allowed the production of regular and quality data, despite challenges with data collection in charge of extensionists. MTR, including report, conclusions and recommendations was instrumental in improving project performance. Final reporting of data lacks further disaggregation by province/district and by gender.
E7.1 M&E design	HS	Robust baseline evaluation matrix, with well formulated indicators for all project components, baseline, interim and final targets defined.

		Proper identification of collection methods, periodicity of data collection and the entities responsible for data collection and analysis
E7.2 M&E plan implementation (including financial and human resources)	S	M&E plan generally followed despite challenges with data collection by extensionists. Digitization and decentralization of data collection allowed for quality and timely data collection. M&E data allowed for effective reporting and the introduction of relevant adjustments during project implementation. Final data lacks information disaggregated by sex and geography (district and province) that would allow a deeper understanding of the progress and difficulties verified in each province.
E8. Overall assessment of factors affecting performance	MS	Main aspects affecting the project performance were the Covid-19 pandemic, the armed conflicts in the central region of the country, the political changes in the Government and, particularly, the various cyclones that hit the country. These threats were identified timely and some specific measures were applied to protect the results and general performance of the project. The exception was the management of the changes in the Government that should have been addressed more proactively and immediately after national elections.
F. CROSS-CUTTING CONCERNS		
F1. Gender and other equity dimensions	S	The strategy defined by the project for the promotion of gender equality proved to be consistent with project objectives and with the needs of communities, in particular women. The FFS has proved to be an effective approach in creating conditions for greater equality between women and men, having facilitated the inclusion of women in climate change adaptation and resilience and socio-economic development activities, which has enabled women to secure greater financial autonomy, breaking the cycle of dependence on men.
F2. Human rights issues/Indigenous Peoples	n/a	n/a
F2. Environmental and social safeguards	S	The project adapted the FFS to the local context and the economic and social profile, needs and expectations of the beneficiaries, as well as the integration of environmental concerns in the techniques and methods used by the project activities. the project also included a set of specific measures to ensure that the CCA measures disseminated were in line with best environmental sustainability practices in the agricultural sector, namely through the promotion of the production and use of organic fertilizers by FFS beneficiaries, the use of natural waste to produce organic compost or the use of natural materials to build natural fences, among other examples.
Overall project rating	S	

1. Introduction

21. This document summarizes the findings, conclusions and recommendations of the Terminal Evaluation (TE) of the GCP/MOZ/112/LDF Project (ID GEF: 5433) - "Strengthening capacities of agricultural producers to cope with climate change for increased food security through the Farmers Field School approach in Mozambique" (hereafter, "GCP/MOZ/112/LDF Project"). The evaluation was conducted in accordance with the general guidelines of the FAO Office of Evaluation (OED) and GEF. The evaluation answered all questions included in the ToR and included all GEF specific dimensions and requirements as per the guidelines.

22. The layout of the project objectives, results and indicators sometimes leads to repetition or overlapping; there is also coincidence between some of the dimensions evaluated and the layout of the GCP/MOZ/112/LDF Project. For greater conciseness and to avoid unnecessary repetition, some questions from different criteria were jointly analysed and responded (see page 3).

23. This report was submitted for review by OED, the FAO GEF GCU and FAOMZ teams and other actors involved in the implementation of the Project for validation of the findings, correction of any errors, complementation and clarifications.

1.1 Evaluation purpose and report structure

24. The Terminal Evaluation (TE) of the GCP/MOZ/112/LDF Project is a mandatory task within the framework of GEF and FAO project closure, and meets the objectives of accountability and identification of lessons learnt (learning) for FAO, GEF and partner institutions. The TE also proposes recommendations for future actions, with a view to improving the formulation and implementation of similar projects or with similar approaches, as well as strategic recommendations aimed at enhancing the institutionalization and ownership of project results by stakeholders and disseminating information to the authorities that may benefit from it.

25. The present report is structured according to GEF guidelines. It includes the scope of the final evaluation and methodology (Chap. I), the presentation of the GCP/MOZ/112/LDF Project and its Theory of Change (Chap. II), the summary of the main evaluation findings and answers to the Evaluation Questions (Chap. III), and a concluding chapter with Conclusions and Recommendations (Chap. IV). It is accompanied by appendices and annexes that consolidate detailed information.

26. In Chapter III, the order of the evaluation dimensions was changed (in comparison with the Terms of Reference) to better report the results. The chapter starts with the analysis of project relevance and issues related to social and environmental safeguards, followed by the assessment of results (effectiveness), issues related to efficiency and co-financing, sustainability, aspects or factors affecting performance (including M&E), gender issues and finally progress to impact.

27. The reorganisation of the order in which the evaluation dimensions are presented led to the joining of the analysis of some criteria (Relevance and Social and Environmental Safeguards; Efficiency and Co-financing) and to some questions of different criteria being answered together, in order to facilitate the reading of the report and ensure greater coherence in the presentation of the evaluation results:

1) answer to evaluation question 26 (Q26), of the Environmental and Social Safeguards criterion is done together with the analysis of the Relevance criterion (Q1, Q2 and Q3);
2) answer to evaluation question 25 (Q25) of the criterion Factors affecting performance is done together with the analysis of question 4 (Q4) of the criterion Relevance;
3) answer to evaluation question 29 (Q29) of the Co-financing criterion is done together with the analysis of the Efficiency criterion (Q17, Q18, Q19 and Q20). (Q17, Q18, Q19 e Q20).

1.2 Users and stakeholders

28. The main users of the evaluation are: the FAO-GEF unit, the National Coordination Unit, the FAO country office in Mozambique, the Project Steering Committee, members of the Project Task Force, and other stakeholders directly involved in implementation, who will use the findings and lessons identified in the evaluation to inform future decision-making and improve the formulation and implementation of similar projects. The GEF, the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF), the Government of Mozambique and FAO, as co-financing partners of the project, will use the findings to inform future strategic investment decisions. Mozambique's government institutions at various levels (including relevant ministries and departments), farmers and other partners, who will use the evaluation findings and conclusions for planning future initiatives to sustain project achievements.

29. The audience of the evaluation includes FAO as a whole, other stakeholders in Mozambique, other UN and donor agencies, organizations, and institutions interested in supporting and/or implementing similar projects, which could equally benefit from the evaluation report, namely researchers and academic institutions from the provinces where the project was implemented.

1.3 Objectives and scope

30. The objectives of the TE, as defined in the Terms of Reference (Annex I), are to assess the relevance, effectiveness, efficiency, project performance, project execution and operation and to make recommendations for improving the future delivery, impact and probability of sustainability of project results, based on clear evidence and findings developed from information collecting and analysis.

31. The evaluation covered the following dimensions: relevance, effectiveness, efficiency, sustainability, factors affecting performance, environmental and social safeguards, gender, co-financing, progress towards impact. The assessment of the results achieved also incorporates the evaluation of the Project Theory of Change, as the project components were designed according to the vision of a process of change.

32. The evaluation covered the total implementation period of the GCP/MOZ/112/LDF Project, between 2 October 2016 (project implementation start date) and 30 July 2021 (project

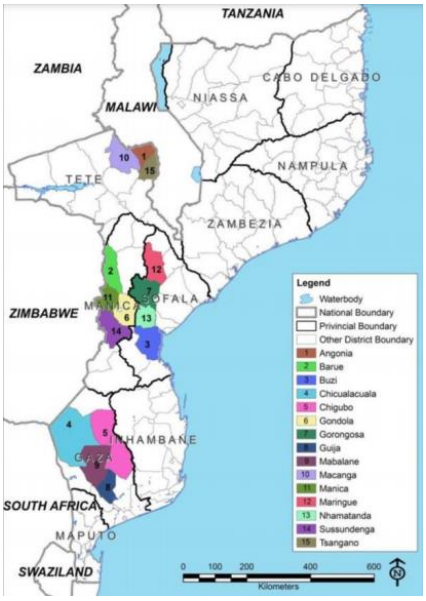
implementation end date), with a particular focus on the period post-MTR (September 2018).

33. The TE gave special importance to the findings and recommendations provided in the MTR as a relevant starting point to assess the project achievements. The TE covered the 4 intervention provinces (Gaza, Sofala, Manica and Tete), carrying out data collection in 6 of the 18 districts where the project was implemented: Barué, Gondola, Mabalane, Nhamatanda, Angónia and Tsangano, including visits to 13 Farmer Field Schools (FFS).

Chart 2 - Chart of provinces and districts included in the data collection.

Province	District	FFS
Gaza	Mabalane	Txivirica phukwe
		Tsakane
		Dzondzane
		Força Unida Zona 8
Sofala	Nhamantanda	Santa Isabel
		Nhambende
		Ufumi ndi badza
Tete	Angónia	Muguadala 1
		Tiguirane Manja
	Tsangano	Gimo
Manica	Barué	Kupedza Urombo
		Hama Maoko
	Gondola	Kulima kwa kanaka

Figure 1 - Map of project implementation provinces and districts



34. In addition to the visits and data collection that directly involved the beneficiaries of the 12 FFSs mentioned in the table above, the TE also conducted focus groups with the facilitators of the other FFSs in the districts included in the TE (more detail in appendix 1).

35. The main evaluation questions, as presented in the Terms of Reference, are presented in Table 2 (full evaluation matrix in Annex 2.).

Chart 2 - Evaluation questions

Relevance	1. Was the project design appropriate to deliver the expected outcomes? 2. Was the project design congruent with the GEF focal areas/operational program strategies, country priorities and Mozambique's Country Programing Framework? 5. Is the project (still) relevant? Were there any contextual changes which may have affected its relevance? (e.g. new national policies, plans or programmes, disasters or emergencies, Covid-19?)
Effectiveness (general outcomes)	6. To what extent and how effectively has the project objective been achieved? 8. What is the added value of the approach adopted by the project (i.e. integration of FFS with climate change adaptation and agroecology) 9. To what extent can the achievement of such results be attributed to GEF and to FAO? (applicable also to each of the outcomes) (GEF additionality) 11. Which and how other contextual factors and actors have contributed for the results achieved? 12. Did the project develop or adopt innovative solutions to achieve its results?
Effectiveness (Outcome 1)	13. To what extent has the project increased awareness and acknowledgement among farmers, national, provincial and district-level managers to include CCA practices and measures into rural development programmes?
Effectiveness (Outcome2)	14. To what extent has the project contributed to the adoption of improved CCA strategies, practices and a broader choice of adapted genetic material in the selected districts (covering staple crops, vegetables and mixed tree/crop/animal production systems)?
Effectiveness (Outcome 3)	15. To what extent has the Project effectively increased institutional capacities and cross-sector coordination for designing and implementing efficient extension/outreach approaches, strategies and mechanisms in support of mainstreaming CCA in the agricultural and animal production sector?
Effectiveness (Outcome 4)	16. To what extent has the Project effectively enhanced results-based management and application of lessons learned and good practices for future replication?
Efficiency	17. To what extent did FAO deliver on project identification, concept preparation, appraisal, preparation, approval and start-up, oversight and supervision? How well risks were identified and managed? 19. To what extent has the project been implemented efficiently and cost-effectively?
Sustainability	21. What is the likelihoo that the project results will continue to be useful or remain even after the termination of the Project? 22. What are the key risks which may affect the sustainability of the project benefits?
Factors that affect performance	23. Was the M&E plan practical and sufficient? 24. Were the recommendations provided by the MTR implemented? Which were the repercussions of the implementation (or lack of it) in the project implementation?
Environmental and social safeguards	26. To what extent have environmental and social concerns been taken into account in the design and implementation of the project?
Gender	27. To what extent have gender considerations been taken into account in designing and implementing the project? 28. Was the project implemented in a manner that ensures gender equitable participation and benefits?

Co-financing	29. To what extent did the expected co-financing materialise? How has this affected the results of the project?
Progress towards impact	30. To what extent is the project likely to contribute to CCA in the agricultural and animal production sector in Mozambique? 31. Are there any barriers or other risks that may prevent future progress towards long-term impact? ?

1.4 Methodology

1.4.1 Approach

36. The evaluation used a qualitative approach that included a desk review, key informant interviews and focus groups with beneficiaries and facilitators. The focus groups with beneficiaries included mixed groups (men and women) and women-only groups, with priority given to the inclusion of youth under 35 years old in both types of focus groups. Numerous project documents were also reviewed and made available by the Project Team and the FAO OED.

37. Considering the size of the country, the time and resource limitations, as well as the constraints imposed by the Covid-19 pandemic, it was necessary to sample the districts and FFS involved in the GCP/MOZ/112/LDF Project, in order to better represent the diversity found and according to: balance between different ecosystems (tropical dry, tropical semi-arid and high altitude climate), regions affected by tropical cyclones(namely Idai) and typology of activities implemented in the territories.

38. The interviewees were informed about the evaluation and the Terms of Free and Informed Consent. For each type of informant, a specific questionnaire was developed based on the evaluation questions and sub-questions. The content of the interviews and focus groups was tabulated and analysed seeking to answer the evaluation questions and sub-questions.

39. The principles of the Outcome Harvesting approach were used during the interviews and focus groups to allow a regressive analysis of some changes identified and whose justification does not follow automatically from the implemented activities, but to which the project may have contributed, mainly to identify uses and other types of influences of the GCP/MOZ/112/LDF Project, as well as to allow the ET to obtain data and information that only the endline study will allow to provide accurately.

40. Principles of the Outcome Mapping approach were also used to identify potential intermediate changes not included in the Results Framework and to explore 1) to what extent there were behavioural changes by the beneficiaries and other target groups that can be justified by the project action; 2) to what extent the project developed mechanisms to identify, monitor and enhance these changes; 3) to what extent there are internal (FAO) changes that should be protected, enhanced or implemented.

1.4.2 Sample

41. In total, 193 people were involved in data collection through 48 individual interviews and 18 collective interviews or focus groups conducted in person or by Zoom, including: beneficiaries, facilitators, extensionists, members of the management team of the GCP/MOZ/112/LDF Project, team members of the FAO office in Mozambique, members of

the FAO-GEF coordination unit in Rome, provincial focal points, members of ministries and other government structures directly involved in project implementation, members of provincial or district project partner entities and other partners involved in the project. The list of persons interviewed including name, position and institution can be found in **Appendix 1**.

42. The interviews with members of the management team of the Project GCP/MOZ/112/LDF, team members of the FAO office in Mozambique, members of the FAO-GEF coordination unit in Rome, members of the ministries and other government structures (at central level) directly involved in project implementation were carried out by the ETL team via Zoom. The remaining interviews and focus groups conducted in the 4 provinces covered by the project were conducted face-to-face by the two evaluators that complement the ET.

43. Upon completion of the data collection, a presentation of preliminary findings was held, in which several members of the GCP/MOZ/112/LDF project management team, members of the FAO office team in Mozambique and members of the FAO-GEF coordination unit in Rome participated, for validation of the ET preliminary reading of the data and identification of relevant missing information.

1.4.3 Evaluation team

44. The evaluation team was composed of one international team leader specialised in results evaluation with training and experience in evaluation of international development initiatives, especially in Lusophone Africa countries, and two national experts with experience in evaluation of nation-wide projects in the sectors of agriculture, environmental studies, public policies, sustainable land management and climate change.

1.5 Limitations

45. Lengthy contractual procedures and the approaching closing date for the GCP/MOZ/112/LDF project meant that the time available for this evaluation was significantly reduced. Thus, a concentrated dedication by the ET was required in order to fulfil all the tasks envisaged. An additional effort was also required to articulate and reconcile agendas in order to facilitate interviews with a very representative sample of actors involved (and potential users of the results).

46. The restrictions imposed by FAO in response to the Covid-19 pandemic made it impossible for the ETL to travel to the country, so all the interviews he conducted were carried out using information technology (Zoom), a measure that proved to be very efficient without compromising the outcome of the evaluation, as most of the interviewees are familiar with these tools, and the ET had a semi-structured script to carry out the discussion. Despite the limitations, data collection was carried out face-to-face in 6 districts of the four project provinces by two consultants with several years of experience in evaluations and a deep knowledge of the country and the sector.

47. The size of the country, as well as the specificities of each province, would require multiple large and time-consuming trips, which was not possible given the time and budget available. Thus, the number of districts and FFS visited had to be reduced and the ET had to split up to carry out the field visits, allowing each evaluator to visit 2 different provinces (and therefore integrating all 4 provinces in the data collection), which also reduced travel and accommodation costs.

48. Some planned interviews could not be held due to the impossibility of the informants' schedules; in other cases, there was no response to the interview request despite several attempts to contact them. Even so, it was possible to guarantee a very significant representativeness.

49. At the time of the TE, the endline report had not yet been finalised, conditioning the ET ability to carry out a precise analysis of the project's impact prospects. Although the preliminary (untreated) data collected by the team responsible for the endline study was shared with the final evaluation team, a methodology (TAPE) distinct from that applied for baseline data collection (SHARP) was used in the endline. As the endline study team has no specific knowledge or experience in the use of the new tool that would allow them to convert the results into comparable information, the data that can be read is very limited.

2. Background and project summary

Box 1 - Project summary information

- GEF Project Identification Number: 5433
- Beneficiary country: Mozambique
- Implementing Agency: Food and Agriculture Organization FAO
- Executing Agency: Ministry of Agriculture and Rural Development - MADER (ex MASA) and Ministry of Land and Environment - MTA (ex MITADER)
- GEF Focal Area: Climate Change (Adaptation)
- GEF Strategy / operational program: SO-2- Increase and enhance the supply of goods and services from agriculture, forestry and fisheries in a sustainable manner. SO-5- Enhance resilience of livelihoods to threats and crises
- GEF strategic objectives: CC-A- 1: Reduce vulnerability to adverse impacts of climate change, including variability, at local, national, regional and global levels. CC-A - 2: Enhance adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global levels. CC-A-3: Promote the transfer and adoption of adaptation technology
- PIF approved: 25 September 2013
- CEO endorsement date: 15th May 2015
- PPRC endorsement date: 3rd July 2015
- Project start date: 02 October, 2016
- Execution agreement signed: 9 September, 2015
- Amended Implementing Agreement:
- Initial project completion date (original NTE): June 2019
- Revised project end date of implementation: July 30, 2021
- Mid-term evaluation date: (16 August to 5 September 2018) report approved by December 2018

2.1 Background

50. The agriculture sector in Mozambique has a significant potential to contribute to the reduction of rural poverty and food insecurity. Investments in improving this sector provide the means for narrowing income disparities between rural and urban areas and for reducing poverty in regions that have benefited little from the economic growth experienced in the country in recent years. Despite this potential, the increasing unpredictability and severe effects of frequent floods and droughts compromise agricultural production and negatively impact household livelihoods. In the first quarter of 2015 floods destroyed more than 100,000 hectares of crops, affecting around 102,000 peasant families. Compounding this scenario, irrigation infrastructure in Mozambique is underdeveloped and at a lower level than in other sub-Saharan African countries.

51. On the other hand, Mozambique has been experiencing very significant climate change, putting at risk more than 60% of the population living in low-lying coastal areas, where intense storms coming from the Indian Ocean and rising average sea levels put infrastructure, coastal agriculture, key ecosystems and economic and livelihood activities such as fishing at risk. The prevalence of extreme natural phenomena is regular in the country, being Mozambique the most vulnerable country to these types of occurrences, according to the 2019[5] Climate Change Vulnerability Index . In 2015-16 the El Niño phenomenon caused the worst droughts in 35 years, reducing food availability by 15%[6] . In 2017, 2018 and 2019, the country was ravaged with cyclones Dineo, Idai, and Kenneth, which destroyed crops and much of the agricultural infrastructure, including several project-created infrastructures that were destroyed or severely affected by floods and cyclones. In 2021, Mozambique was affected by cyclones Eloise and Guambe, which, although having comparatively smaller effects than the phenomena mentioned above in terms of material damage and loss of human lives, also caused considerable damage and losses, especially for populations living in greater difficulties. Future projections indicate that, in the next 20 years, the average temperature will increase by 1°C, increasing the probability of cyclones and the intensity of rainfall.

52. Apart from agriculture, livestock farming also contributes significantly to the livelihoods of family sector farmers, especially in rural areas, where this activity allows for income diversification and the reduction of risks associated with climate change and its effects on agriculture. The animals that families have access to livestock production include chickens, ducks, pigs, goats and cattle. Traditionally, women are in charge of raising chickens and pigs, while men are engaged in raising goats and cattle.

53. In 2019, Mozambique held its sixth general and presidential elections which culminated with changes in the administrative structure of the country, highlighting the restructuring of the former Ministry of Land, Environment and Rural Development (MITADER), now the Ministry of Land and Environment (MITA) and the transfer of the rural development component to the then Ministry of Agriculture and Food Security (MASA), which is currently called the Ministry of Agriculture and Rural Development (MADER). This change had repercussions not only at national level, but also at provincial level, where the Provincial Directorates of Agriculture became responsible for the fisheries sector. There was also the departure of the Rural Development component from the former Provincial Directorates of Land, Environment and Rural Development.

54. As a result of the political changes that derived from the electoral process, the new policy of decentralisation of administrative organs of the state came into force. This policy profoundly altered the territorial division of the country, increasing the total number of districts from 110 to 150 and electing provincial governors and assemblies for the first time in the history of democracy in Mozambique. The measure also resulted in the creation of Secretariats of State at central and provincial level, with part of the attributions formerly concentrated in the Provincial Directorates of Agriculture and Fisheries passing to the new organic institution.

[5] Global Climate Risk Index (2021): https://reliefweb.int/sites/reliefweb.int/files/resources/Global%20Climate%20Risk%20Index%202021_1_0.pdf

[6] World Bank (2020)

55. The outbreak of the Coronavirus pandemic (Covid-19) in 2020 interrupted the cycle of economic growth that Mozambique had been experiencing in recent years. The pandemic affected the country precisely at a time when Mozambique was trying to recover from two major economic shocks: the economic crisis caused by hidden debts and the devastating effects of cyclones Idai and Kenneth in 2019. In 2016, the economic growth Mozambique had been experiencing was interrupted when undeclared amounts of foreign loans totalling US$1.3 billion were reported. The ensuing crisis affected the confidence of the international community and the country main donors, leading to an increase in debt levels, and the reduction of the economic growth rate by more than 50%. Subsequently, in 2019, Cyclones Idai and Kenneth caused enormous damage to the productive infrastructure and livelihoods of the people, further worsening the living conditions of Mozambicans.

56. The full effects of the Covid-19 pandemic are not known, but projections indicate that Mozambique is likely to face new difficulties and further decline in economic growth rates. If this projection holds true, the prevalence of poverty in Mozambique could worsen dramatically as households' livelihoods and food security deteriorate and their incomes may be affected by the economic downturn.

2.2 Project summary

57. The project "Strengthening capacities of farmers to manage the impact of climate change to increase food security through the Farmers Field Schools (FFS) in Mozambique (GCP / MOZ/112 /LDF)" was an intervention implemented between 2016 and 2021 (5 years) by the Food and Agriculture Organization of the United Nations (FAO) in Mozambique. The project was formulated in the GEF-5 funding cycle under the Climate Change Adaptation (CCA) focal area and had an effective budget of USD 9,000,000[7] . The total project budget was 36.344.657 USD including in-kind co-financing of 1.170.000 USD from the Government of Mozambique and in cash from the PRONEA Support Project (1.274.657 USD) and two projects implemented by FAO (24.900.000 USD) through funds provided by the European Commission and Belgium.

58. The project was supervised by a Project Steering Committee (PSC, from English Project Steering Committee), which includes the FAO Country Office (CO), the Ministry of Agriculture and Rural Development (MADER) and the Ministry of Land and Environment (MITA).

59. The objective of the project was to "enhance the capacity of Mozambique agricultural and pastoral sectors to cope with climate change by increasing farmers adoption of Climate Change Adaptation (CCA) technologies and practices through an established network of Farmers Field Schools (FFS), and by mainstreaming CCA concerns and strategies into ongoing agricultural development initiatives, policies and programmes in the country".

60. To achieve this objective, the project was structured into 3 technical components, with specific intermediate results, and an operational component:

[7] FAO. 2015 (July). Project Document. The total project budget is US$ 36 344 657 including in-kind co-financing of US$ 1 170 000 from the Government of Mozambique and in cash from the PRONEA Support Project (US$ 1 274 657) and two projects implemented by FAO (US$ 24 900 000) through funds originating from the European Commission and Belgium

Chart 3 - Project Components Summary

Component	Result	Intervention strategy
Component 1: Increase awareness and knowledge of farmers and managers at national, provincial and district levels to include good practices and CCA measures in ongoing rural development programmes.	**Outcome 1:** Awareness and knowledge of national, provincial and district managers and farmers increased to include CCA practices and measures in ongoing rural development programmes.	**(i)** Formulate and implement with stakeholders a knowledge creation strategy on CCA practices based on FFSs**.** **(ii)** Train managers of agricultural and pastoral programmes in strategies to include CCA measures and practices in rural development. **(iii)** Promote participatory identification of integrated CCA measures and practices at local level. **(iv)** Pilot implementation of improved soil, water and crop management practices. v) Identify climate stress tolerant seeds made available and tested in local production systems.
Component 2: Promote the adaptation of improved CCA practices and a wider range of genetic material covering at least three production systems (staple food, vegetable and mixed tree, food and livestock production systems) through the network of FFSs supported by the reference projects.	**Outcome 2:** Adoption of improved CCA strategies and practices and a wider choice of adapted genetic material in up to 15 districts covering at least three production systems (staple crops, vegetables, mixed tree/crop/animal production systems) through the FFS network that are assisted by FAO MDG1c and Food Security and Nutrition for Gaza projects and other partner programmes.	**i)** Elaborate and integrate in the extension and FFS curriculum training material on CCA practices. **ii)** Train peasant facilitators in CCA strategies and practices. **iii)** Train extensionists in ecosystem resilience strategies and practices. **iv)** Develop methods to monitor the progress of climate change resilient production systems. **v)** Develop and test agro-meteorological decision support tools.
Component 3: Enhance institutional capacity and cross-sectoral coordination to design and implement effective extension and assistance approaches, strategies and mechanisms in support of the integration of CCA in the agriculture and livestock sectors.	**Outcome 3:** Increase institutional capacity and intersectoral coordination for the design and implementation of efficient extension/outreach approaches, strategies and mechanisms in support of the integration of CCA in the agricultural and livestock production sector.	**i)** Review and update the Environmental Educator Handbook. **ii)** Assess the agrarian policy to integrate aspects of CCA. **iii)** Strengthen joint sectoral coordination mechanisms on the implementation of the CCA strategy. **iv)** Assess the efficiency of extension approaches based on FFSs and CCA practices. **v)** Systematize and disseminate good practices on CCA. **vi)** Elaborate investment proposals for financing agricultural extension strategies with CCA practices.
Component 4 (operational): Aims to ensure project implementation based on results-	**Outcome 4:** Implementation of the project based on results-based management and application of lessons learnt	Completion of planned M&E activities, including the establishment of baseline values for all project indicators, annual update of indicators, a mid-term evaluation / review and a final project evaluation

based management and to facilitate the application of lessons learnt from the project in future interventions.	from the project in the facilitated future operation.	

61. The Farmers Field Schools" (FFS) approach is an extension method that adopts people-centred learning approach, differing from more orthodox practices that follow a top-down model. For this, the project implements participatory approaches that prioritise the creation of a learning-friendly environment where farmers have the opportunity to learn about the problems affecting their productions, seek solutions based on observation, discussion and participation (learning-by-doing), and that empowers farmers to investigate and seek solutions to the various problems affecting agricultural and livestock production.

62. The project was implemented in the provinces of Gaza, Sofala, Manica and Tete, where it aimed to benefit about 80,000 farmers distributed by the 18 target-districts: Sussudenga, Manica, Barué, Gondola, Macate, Vanduzi, Mabalane, Mapai, Chigubo, Chicualacuala, Guijá, Buzi, Maringué, Gorongosa, Nhamatanda, Macanga, Angónia and Tsangano.

63. The criteria for the selection of the provinces were: i) presence in the list of regions of the country with higher indices of food insecurity; and ii) vulnerability to the occurrence of climate change namely, droughts, floods, and cyclones, phenomena that seriously affect the livelihoods of the local populations.

64. In 2018, a mid-term evaluation (MTR) was conducted by the FAO-GEF CGU. The evaluation focused on the analysis of the criteria of Relevance, Efficiency, Effectiveness and Sustainability at the social, environmental and financial levels. The evaluation concluded that the project design was relevant, comprehensive, met the priority needs of the national CCA partners and producers, and was consistent with the Government of Mozambique's CCA policies. The overall assessment of the project was considered moderately satisfactory, with the recommendations being a no-cost two-year extension, working towards the target of 500 identified FFSs, the creation of new FFSs in the provinces where the project intervenes, promoting CCA practices through the Peasant Facilitators (multiplier effect), and exploring the possibility of attracting more youth to FFS (recommendation 1). It was further recommended to the project coordination team and MASA to intensify the effort to consolidate the support and monitoring mechanism of the CCA practices and the FFSs (recommendation 2). Finally, and given the few achievements of the project in the research component, it was recommended to define a Strategic Plan of the project partnerships and to organize an informative field visit in the project FFS for the IIAM representatives (recommendation 3).

2.3 Theory of Change

65. In the project design phase, a Theory of Change (ToC) was not developed, but was constructed by the MTR team based on project documentation. During the inception phase of this TE, the ET reviewed and reformulated the project's ToC from reading project documents and the initial interviews. The evaluation of the ToC derives from the main findings of this evaluation. The graphic representation of the ToC can be found in **Appendix 4**.

3. Evaluation questions: main findings

3.1 Relevance and environmental and social safeguards

EQ1. Was the project design appropriate to deliver the expected results?
EQ2. Was the project design congruent with GEF operational programme focal areas / strategies, country priorities and the Mozambique Country Programming Framework?
EQ3. Was the project design congruent with the goals and targets of SDG13 and SDG2, as well as relevant international conventions and agreements (e.g. UNFCCC)?
EQ26. To what extent were environmental and social concerns taken into account in project design and implementation?

66. Finding 1 – Relevance and Environmental and Social concerns. The project design is consistent with the problem analysis carried out and includes strategic and context-appropriate responses to the territories and target groups to enable the achievement of the expected results. The project is also perfectly aligned with the main priorities of the country, the Country Programming Framework, the strategies of the GEF operational programme and the goals and targets of SDG 13 and SDG 2. The project was adapted to the local context and economic and social profile of the beneficiaries (e.g. use of low-cost inputs and fostering uptake of know-how for production of inputs); CCA measures disseminated were in line with best environmental sustainability practices in the agricultural sector, such as promotion of organic fertilizers and production / use of organic compost.

Lesson1: Project design, evaluation and planning - For projects with high levels of complexity, involving several geographically dispersed activities, a high number of stakeholders and the implementation of international procurement procedures, it is essential that the inception phases are realistic, allowing for adequate planning and preparation, and creating conditions so that the efficiency of the execution can be raised from the beginning of the intervention.

67. The project design and the defined intervention logic are consistent with the problem analysis carried out and include strategic and context-appropriate responses to the vast majority of the problems identified. The project presents specific activities to respond to the reduced productivity, poor soil management, producers' poor access to qualified technical support, difficulties in water management, lack of institutional capacity of the government entities responsible for the sector in terms of CCA lack of inter-institutional coordination, lack of agro-meteorological data available to producers, or risks associated with the use of chemical pesticides.

68. Among the problems initially identified, the only ones for which the project did not include a specific response in its intervention strategy were the difficulty of access to markets by producers and access to land and credit. Even though the project has, through FFS, allowed producers access to new fields of experimentation with CCA techniques, the issue of access

to markets continues to be a relevant challenge for producers, who experience difficulties in disposing of their production at competitive prices.

69. The intervention logic defined for the project included a holistic approach, intervening at three complementary levels in a coherent manner. At macro level, the project supported the revision of national policies, the technical capacity building of ministries and other government structures in the sector, as well as the improvement of inter-sectoral coordination, all fundamental changes for the mainstreaming of the recognition of the importance of CCA among the main entities responsible for the sector in the country. At meso level, the project allowed for the development of local adaptation plans adjusted to the reality of each province and the development of technical capacities of producer support services, through the training of technicians, but also the creation of new infrastructures (e.g. agrometeorological stations and new FFS). Finally, at the micro level, the project strongly invested in the training of producers, allowing them to access and appropriate new techniques and means of production that were, since the project design, identified as essential for the sector's adaptation to climate change.

70. Despite the coherence of the strategy defined for the project, its initial implementation was hindered by an over-optimistic schedule defined for the inception phase. Given the complexity of the intervention, the number of partners involved, the geographical dispersion of activities, but also the complex and demanding nature of FAO procedures, the three-month timetable defined for the inception phase of the project, including the constitution and installation of the team, was too ambitious, undermining the initial efficiency levels of project implementation.

71. Another project design challenge was related to the number of FFSs that were estimated to be included in the intervention. The number of FFSs stipulated was based on the targets of the MDG-1 project, whose results in terms of FFSs creation were far below the estimated levels, leading the present project to assume an overly optimistic baseline and set unrealistic targets.

72. From a more operational point of view, the project design defined a decentralized management model, including operations teams in each province, an option that proved fundamental to ensure an effective monitoring of activities, but also a timely identification of the project's specific needs on the ground.

73. The project is aligned with national laws, policies, strategies, programmes and action plans that define priorities at the level of rural development, adaptation to climate change and the agricultural and livestock sectors, including measures and results that directly contribute to the different specific objectives of these documents. In particular, the project objectives and results directly contribute to the objectives of the National Strategy for Adaptation and Mitigation of Climate Change 2013 - 2025 (NSCCAM) and the NDC/UNFCCC to increase resilience at the provincial level and include CCA in provincial and district planning processes, increase the resilience of agriculture and livestock, develop low carbon farming practices and increase the adaptive capacity of vulnerable people.

74. The project is also aligned with the objectives of NIPAS, namely with the result areas AR1 (Sustainable Agricultural Production and Productivity), AR4 (Natural Resource Management, focusing on Sustainable Soil Management), AR5 (Agricultural Institutions, focusing on the Development of Priority Policies, Strategies and Programmes, Strengthening of Agricultural Sector Organisations and Development of Human Capital

and Assets) and AR6 (Cross-cutting Issues, focusing on the Resilience and Climate Change programme).

75. Still at the level of national policies, the project is consistent with the vision of the Strategic Plan for Development of the Agricultural Sector (SPASD) to develop the agricultural sector to be more prosperous, competitive equitable and sustainable in responses to the challenges of food and nutritional security. In the particular case of this Plan, the project contributes to its main objectives of enhancing the role of women in agricultural activities, contributing to integrated and equitable social and rural development; introducing technological innovations and promoting the dissemination of new technologies to increase production and productivity, supported by training systems for producers to increase their ability to choose, absorb and adapt technology; encouraging evidence-based decision making in the sector based on the use of agricultural information; and promoting more sustainable management of natural resources.

76. With regard to the alignment of the intervention with the focal areas / strategies of the GEF operational programme, the project clearly and consistently contributes to the following objectives:

Chart 5. Project alignment with the GEF/LDCF strategic objectives

LCDF CCA Objectives	Project Results
CCA 1- Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global levels	
Outcome 1.1	Output 1.2
Output 1.1.1	Output 3.6
CCA-2: Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global levels	
Outcome 2.1	Output 3.1
Output 2.1.2	Output 2.5
Outcome 2.2	Outcome 2
Output 2.2.1	Output 2.2 Output 2.3 Output 3.1
Output 2.2.2	Output 1.3 Output 1.4 Output 1.5
CCA-3: Promoting the transfer and adoption of adaptation technology	
Outcome 3.1	Outcome 3
Output 3.1.1	Output 1.3 Output 1.4 Output 1.5 Output 2.2 Output 2.3 Output 2.4

77. At the time of its preparation, and during implementation, the project was also aligned with Strategic Objectives (SO) 2 - Increasing and improving the supply of goods and services from agriculture, forestry and fisheries in a sustainable manner and (SO) 5 of the

Revised[8] FAO Strategic Framework 2010-2019 - Increasing the resilience of livelihoods to threats and crises, contributing specifically to output 20103[9] , activity 30309[10] and output 50301[11] .

78. As regards the Country Programming Framework, the project was designed in line with priority areas 2 (Food availability, access and consumption) and 3 (Environment, natural resources, climate change and disaster risk reduction), contributing to outputs 2.1 and 3.1, and outputs 2.1.1 and 3.1.2.

79. Finally, the project also presents a very relevant level of coherence with the SDG insofar as its design and intervention strategy contribute to targets 2.3, 2.4, 2.5 and 2.a of ODS 2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture; and to targets 13.1, 13.2, 13.3, 13.a and 13.b of ODS 13 - Take urgent action to combat climate change and its impacts.

80. Two other aspects that contribute significantly to the relevance of the project are the adaptation of the work developed within the FFS to the local context and the economic and social profile, needs and expectations of the beneficiaries, as well as the integration of environmental concerns in the techniques and methods used by the project activities. The techniques and processes introduced also took into account the financial conditions of the populations, privileging the use of low-cost inputs and, whenever possible, facilitating the appropriation of knowledge on how to produce those inputs (e.g. Biol). On the other hand, and through the project's support to the development of local adaptation plans, it was ensured that the characteristics of the context and the populations were taken into consideration in the definition of priorities and objectives at the level of CCA in the different regions benefiting from the project.

81. In addition to its objectives and results having a strong focus on CCA, the project also included a set of specific measures to ensure that the CCA measures disseminated were in line with best environmental sustainability practices in the agricultural sector, namely through the promotion of the production and use of organic fertilizers by FFS beneficiaries, the use of natural waste to produce organic compost or the use of natural materials to build natural fences, among other examples.

EQ25. Which stakeholders were involved in the conception and/or implementation of the project? What was the effect of this involvement on the project results?
EQ4. Was the project design relevant to the final beneficiaries? To what extent did the participation of the beneficiaries influence its design?

Finding 2 - The involvement of the different stakeholders in the conception and implementation of the project contributed positively to the high relevance of the

[8] FAO. 2017. Fortieth Session - Reviewed Strategic Framework, Rome 3 - 8 July 2017. Rome, FAO. Available at https://www.fao.org/3/ms431reve/ms431reve.pdf

[9] Organizational and institutional capacities of public and private institutions, organizations and networks are strengthened to support innovation and transition to more sustainable agricultural production systems.

[10] Multisectoral and South-South technical cooperation on productive intensification and agroecological practices.

[11] Improve the capacities of countries, communities and key stakeholders to implement good prevention and mitigation practices to reduce the impacts of threats and crises

intervention, allowing an effective response to the needs identified in the initial diagnosis, but also meeting the expectations and socio-economic conditions of the beneficiaries.

82. Government counterparts at national, provincial and district level were duly identified and involved in the project conception in a timely manner, and their contribution positively influenced the quality of the final project design. Most of the institutional stakeholders involved in the project value their involvement in the project design phase, recognizing FAO capacity to integrate most of their contributions in the final design of the intervention. This process involved the vast majority of the main stakeholders, namely the ministerial representatives (MADER and MTA), but also the teams from INAM, IIAM and DEA.

83. According to the parties consulted, the involvement of the different stakeholders in the process of defining the intervention has improved the alignment of the project with national priorities, but also with the specific needs and characteristics of each province. One example of this positive influence of the partners in the project design is related to the technical definition of the technology to be installed in the agrometerological stations, whose initial FAO proposal was reviewed and modified after consultation with INAM, and realigned with the specific capacities of the information providers and the needs of the potential users.

84. This involvement of partners from the initial phase also enabled the project to undertake an effective analysis of installed institutional capacities, making it possible to ensure a balanced division of responsibilities based on the skills and capacities of each entity. Through this analysis it was also possible to identify the technical and material needs of each partner and the subsequent inclusion of specific actions in the project design to address these limitations. However, only after the MTR and the signing of the letters of agreement was it possible to achieve the level of autonomy required for the regular and effective implementation of the activities.

85. At the implementation level, the execution of the project was consistent with the management arrangements defined in the conception phase (see chapter 4.2 of the ProDoc - Annex 6), ensuring a balanced and adjusted distribution of responsibilities among the different partners, according to their technical capacities, political mandate and legal attributions. Despite some challenges arising from the high number of partners involved, the general opinion is that the project management ensured an effective coordination between partners, avoiding duplication of efforts and facilitating the fulfilment of responsibilities of each partner with autonomy, especially after the signing of the letters of agreement.

86. However, some of the farmers interviewed, as well as one employee from the now-defunct National Directorate for Environmental Management (NDEM) mentioned that, despite the participatory process involving institutional partners, the project was defined without adequate consultation with the beneficiaries. Even so, both these counterparts recognise that the participatory and democratic approach used in the FFS, in which the beneficiaries are called to participate in defining priority problems and selecting the techniques to be developed, allowed the training activities and technical support provided to be aligned with the priorities and needs of the farmers and in accordance with the characteristics of each province and district.

87. The project design included specific activities to adequately respond to the problems that affected the beneficiaries, particularly at the level of their knowledge. The FFS methodology proved to be adjusted to the profile of the beneficiaries and their learning needs, this point being particularly relevant when taking into consideration that the project beneficiaries were characterized as producers with low levels of education, subsistence farmers or farmers in a situation of high social and economic vulnerability.

88. This aspect is widely valued by beneficiaries who praise the fact that the project always considered the means of subsistence available to them to adjust the activities to their reality, including in the case of responses considered innovative for their context and where access to markets to obtain productive inputs could be more challenging.

89. The bottom-up approach implemented by the FFS, as well as the group learning modality are determining factors for the continuation of the democratic and participatory planning model implemented by the FFS, which allowed producers to have an active say in defining the learning priorities and the techniques that best fit their reality and needs, a factor that is widely valued by the beneficiaries consulted by the evaluation..

EQ5. Is the project (still) relevant? Have there been any contextual changes that may have affected its relevance? (e.g. new national policies, plans or programmes, disasters or emergencies, Covid-19?)

Finding 3 - The relevance of the project remains unchanged, despite the progress achieved by the project, insofar as the threats faced by producers, associated with climate change, have not changed and are likely to worsen in terms of impact or frequency. In this context, FFSs continue to be the most valid and efficient option to ensure that producers and their communities have access to the knowledge, technical support, technology and inputs at controlled costs that are indispensable to their ability to adapt to climate change.

90. The high level of initial relevance of the project remains unchanged, despite the various advances and results achieved by the intervention. Despite the successes detailed in the following chapters, the threats resulting from climate change have not changed and have even worsened since the beginning of the project, a trend that is expected to continue in the coming years, according to the latest projections of the Intergovernmental Panel on Climate Change (IPCC)[12] .

91. On the other hand, and although the producers and the technicians who provide them with support have been trained, the capacity building needs have not been exhausted, and it is necessary to continue the process of training the different target groups for the constant changes that CC introduces and that have affected the project beneficiary communities in a very significant way, through the various cyclones.

92. The technicians of the provincial and district support services to farmers coincide in the opinion that the project continues to be relevant as it offers a unique response to the needs

[12] https://www.ipcc.ch/site/assets/uploads/2019/07/SPM-Portuguese-version.pdf

of reducing vulnerability and increasing the resilience of the agricultural sector to climate change and the unpredictability of its impacts.

> *""The project is relevant as it brings tools related to climate change and resilience. Climate change is here to stay and our province, especially the north of Gaza, has experienced extreme events: if it is not above normal rainfall, it is floods or severe drought. The project helps communities to be resilient to climate change.*
>
> **Testimony from a farmer support technician**

93. Thus, the objectives initially defined for the project are still valid and, considering the various projections for CC at the global level and Mozambique's exposure to extreme natural phenomena, it is expected that the need to develop resilience capacities of Mozambican smallholder farmers to CC will intensify. In this context, it is critical to continue to raise awareness and strengthen the knowledge and capacities of farmers and managers at national, provincial and district levels to include good practices and CCA measures in rural development programmes; promote the adaptation of CCA practices; and increase institutional and sectoral coordination capacities so that there is greater national capacity to respond to the challenges projected for the coming years and decades.

94. The Farmer Field Schools (FFS) methodology, as a platform for technology transfer, for testing and adopting Climate Change Adaptation practices, for training and empowering producers, but also for producing evidence-based knowledge, continues to be a valid option for responding to the needs of farmers, but also of the communities where the FFS are located. The characteristics of this methodological approach favour the sharing of experiences and knowledge among pairs, empowering farmers from their own experiences, needs and expectations in a simultaneous process of collaborative development of innovative solutions to the specific problems that affect them. As a holistic learning platform, the FFS also contributes to the development of other skills and knowledge, complementary to the agricultural activity, such as: gender equality, water and sanitation, community health, nutrition among others.

95. In addition to the potential to capitalize on the knowledge existing in the communities, FFS also represent an extremely valid option for CCA, to the extent that by working with groups of producers it reduces the costs associated with individual assistance modalities, and assumes itself as a multifunctional structure that simultaneously ensures: training, transfer of information, knowledge and technology, and access to productive supplies.

> "*There is no doubt that this programme is relevant and will continue to be relevant because: first, we have a universe of producers at the level of our province that with the extension network that we have the only way for us to be able to cover a high number of producers is to work with them organised in FFSs. The SUSTENTA programme will not cover the entire universe of producers at the level of our province and for the producers who are not benefiting the alternative is the FFS.*"
>
> **Testimony from DPAP provincial representative**

96. Following the 2019 general elections, the Mozambican government significantly changed its policy positions on Rural Development policy, introducing the Sustenta Programme [13] as a priority approach for the sector. As analysed in more detail in the Sustainability chapter, the political support that the project and the FFS benefited from – as a modality of technical support to producers- disappeared, even if this had no consequences neither in terms of the commitment of the partners under the ministries involved in the project, nor in terms of the achievement of results. The data collected through the interviews carried out indicate that, at provincial and district level, the project continues to be seen as a strategic intervention and a priority for the regions. However, at Ministry level the shared vision is that the FFS will have to adjust and fit into the Sustenta Programme, otherwise risking losing relevance for the Government as a modality of support to farmers.

97. The Covid-19 pandemic represented a large-scale challenge for the entities responsible for the implementation of the activities, as it was necessary to adapt methodologies and implement protective and personal hygiene measures to safeguard the health of all stakeholders. However, and despite the socio-economic impact of the pandemic, the relevance of the project was not affected. In the opposite direction, the FFS assumed themselves as a relevant element of information to the community, disseminating informative materials to the populations.

98. One of the factors that most negatively affected the project's performance, but which paradoxically reinforces its overall relevance, was the occurrence of cyclones Idai, Dineo, Kenneth, Chalane and Eloise, among others. On one hand, and as detailed in chapter 3.6.3, it affected the quality of the soils and compromised their productivity, destroying several crops and shaking the confidence of producers. On the other hand, the occurrence of these phenomena reinforced, among farmers, the urgency of developing their resilience to this type of threats and reinforced, among central government entities, the political relevance of the theme of CCA, facilitating the project team's efforts of political mobilization and public debate around the theme of CC and its potential effects for Mozambique and Mozambicans..

3.2 Effectiveness

3.2.1 Effectiveness (overall results)

EQ6. To what extent and how effectively was the project objective achieved?
EQ7. Did the project produce any unintended/unintended positive or negative results?
EQ8. To what extent are these results attributable to GEF and FAO?
EQ9. What is the added value of the approach adopted by the project (i.e. integration of FFS with climate change adaptation and agroecology)?
EQ10. Were there synergies between the project and other initiatives in the same country and/or region? If yes, to what extent and how has the project developed taking into account such synergies (e.g. through partnerships)? (FAO initiative or not, in any sector)

[13] More information about the SUSTENTA Programme - https://www.fnds.gov.mz/index.php/pt/nossos-projectos/listagem-de-projectos/21-desenvolvimento-sustentavel/129-programa-sustenta

EQ11. What and how did other contextual factors and actors contribute to the results achieved?
EQ12. Did the project develop or adopt innovative solutions to achieve its results?

Finding 4 - The project contributed decisively to increasing the capacity of the agricultural and pastoral sectors of the four intervention provinces to cope with climate change, namely through effective transfer of technologies and practices on CCA by farmers and capacity building of rural extension service providers. The project also succeeded in integrating the issues of CCA in various sectoral policy-setting planning documents and processes at both national and provincial/district levels.

Finding 5 - The FFS approach has proven to be an effective and efficient option for the transfer of CCA technologies and practices in rural areas in Mozambique, establishing itself as a key multifunctional knowledge and service delivery pole for beneficiary communities. The methodology used facilitates the introduction of innovations in an effective manner to provide appropriate responses to the specific needs of beneficiaries in different districts and generate opportunities to benefit other members of the communities.

Lesson 2: Extension approach - The organization of farmers into FFS makes the process of training and specialized technical assistance to farmers more efficient, both in the context of CCA practices and other social contexts, when compared to traditional extension approaches implemented in Mozambique.

Lesson3: Stakeholder engagement - It is fundamental that projects develop mechanisms for mapping and tracking informal partnerships and effective unanticipated results, with a view to enabling project coordination to manage these dimensions in a way that is focused or oriented towards enhancing project results and efficiency. It is important that the project leadership (at different levels) has the flexibility and mandate to seek and seize opportunities to amplify the positive actions of the project.

99. The Project has achieved very relevant progress towards the objective of "increasing the capacity of Mozambique's agricultural and pastoral sectors to cope with climate change by increasing the uptake of CCA technologies and practices by farmers through an established network of FFS, and by mainstreaming CCA concerns and strategies into ongoing agricultural development initiatives, policies and programmes in the country". As detailed in the following chapters, the project has promoted relevant structural changes with lasting potential at the level of awareness raising of sectoral agents, inclusion of CCA in rural development programmes, creation of greater technical capacity at the level of provincial and district service providers, inter-sectoral coordination and, above all, capacity building of farmers for the adoption of CCA practices in the four provinces and for coping with climate change. These advances allow us to state that the execution of the project was effective in terms of achieving the objective.

100. Several factors contributed to the achievement of the project, including the development of the Local Adaptation Plans (LAP), the good coordination of the project

team between the central and local levels, the contribution of the provincial and district extension services for an effective implementation of the activities the quality of the project design to respond to the needs previously identified and to cover all the levels of influence (national, provincial and district), the adequacy of the institutional arrangements with the national authorities, the investment in the capacity building of the different stakeholders involved, or the undisputed relevance of the theme, reinforced by the occurrence of several extreme natural events during the implementation of the project.

101. The main success factor of the project was the suitability of the FFS approach to produce robust results at the level of agricultural and livestock production based on agroecological principles, namely among farmers with little technical knowledge, low productivity levels and extremely vulnerable to climate change. The results achieved in the FFS experimental fields have enabled the project to gain the trust of farmers and progressively overcome initial resistance, but have also strengthened the confidence of provincial and regional service providers in the CCA approach proposed by the project. The evidence of the results achieved in the FFSs also allowed the dissemination of the practices to other non-beneficiary farmers.

102. The appropriateness of the methodology results from the integration of five fundamental criteria for its success: favouring low-cost techniques or technologies; building on already proven knowledge; selecting productive methods that are easily accessible by farmers from their territories; seeking to activate immediate response measures to the different climate challenges; presenting results in a reduced period of time.

103. The FFS methodology integrates several unique and innovative features for the context, which together result in a highly effective approach in transmitting technical knowledge, transferring innovative technology, increasing productivity and, above all, developing greater local resilience to climate change. One of these characteristics is that of peer learning and focus on the knowledge already existing in the communities, in a bottom-up approach in which the needs, capacities and characteristics of producers are at the centre of the definition of training programmes and of the tested CCA practices. FFSs also have the advantage of meeting the needs of several producers simultaneously, making the training and technical assistance process more efficient and empowering.

"*The FFSis the best option. It capitalises more on local knowledge, the exchange of experiences between producers, where solutions are generated within the group. This makes it much easier because many of the times they are solutions that do not bring additional costs, it is a technology that one of the members knows, has experienced, who shares with the group and there they take this knowledge and go to disseminate in their plots.*"

Testimony of DEAS representative

104. The comparative advantages of the FFS approach also include other aspects. The multifunctional dimension of FFSs, combining in a single space services of information, knowledge and technology transfer, promotion of access to productive and pharmaceutical inputs at controlled costs, reflection on extra-productive themes related to community health or the testing of innovative methodologies in a protected environment

and with scientific support, make this approach an added value for the country and for the beneficiary communities.

105. The project also managed to introduce a set of innovations at national level, and in the agricultural sector in particular, which played an important role in the performance of the project in terms of results and achievement of the objective. Among the various innovations introduced by the project, the following stand out: the production of blocks of mineral salts to supplement the feed of cattle and goats during the dry season; the integration of agro-meteorological information in the production planning of farmers (although the delay in installing weather stations has been limiting a more appropriate use of this information in production); the introduction of crops more resistant to the dry season (ex. pineapple, cassava); use of agricultural inputs of natural scope; low-cost and highly effective techniques for collecting water in producers' homes (use of low-cost cistern tanks to be placed on zinc plates of the roofs for water collection); introduction of production techniques in bags or tyres; use of shade trees for vegetable production; production and use of compost. Although many of these techniques are used in a generalized way in other contexts in Mozambique, and particularly at the level of family farming, they were relevant innovations and allow increased resilience to CC, increased production and productivity, as well as making production more profitable.

106. Despite the advantages of the FFS methodology, some **challenges** remain that should be taken care of in the future. Firstly, there are doubts about how FFSs can establish themselves as sustainable, multi-functional organisations that are able to carry out the multiple functions that they formally or informally perform in communities without the need for external funding. Secondly, the evaluation noted that the practice of making and keeping up-to-date records on training processes, including record of activities, list of members, attendance control, thematic programmes/curriculum used, etc., continues to be flawed. Finally, the lack of teaching materials, such as pens and notebooks, in the FFSs also limits the learning potential of its beneficiaries.

107. There were also other **factors that limited or conditioned the achievement of the project's objective.** Internally, there were delays in the initial start-up of the project, with significant delays in the composition of the team, the hiring of a CTA with little experience in implementing projects of this scale and difficulties in terms of building and maintaining a permanent dialogue with MADER, especially after the 2019 elections. There were also some delays in the transfer of financial resources to local partners (disbursements), which occasionally conditioned their ability to implement the activities effectively. Finally, the various delays caused by FAO procurement procedures which, combined with the difficulties in supplying some services or products at national level, contributed to the delay of some actions, notably the installation of the meteorological stations.

108. At the external level, the occurrence of the various extreme natural phenomena that affected the beneficiary provinces of the project and the Covid-19 pandemic were the main factors conditioning a potential better performance of the project. The change in political vision of the Government after the 2019 elections also caused increased difficulties in articulation and coordination with the main Government partner, but despite the communication difficulties and the lack of institutional support for the project, this change did not have a direct impact on the execution of activities, including those of a more political nature of review and definition of sectoral policies. In the particular case of Gaza, the conditions of difficult access to water for irrigation and the geographical dispersion of

the communities meant that the results were slightly lower than in the other three intervention provinces.

109. Despite these challenges, the project also generated other relevant **unanticipated results** that are perfectly aligned with the ToC and the objective of the intervention. One such outcome results from the implementation of field days, but also from informal community meetings organized spontaneously by project beneficiaries in various communities, which enabled the dissemination of the CCApractices beyond the geographical area of the project. Another unanticipated change of great value in terms of sustainability and potential future impact of this intervention, is related to the formalization into Associations of some FFSs, particularly in Beira, Sofala, structures that represent an opportunity to strengthen the exit strategy and the continuity of the FFSs. Some of these FFSs-Associations were even some of the beneficiaries of micro-project funding, and such support led some of these structures to open an Association bank account. Throughout the evaluation, some other examples were registered of unexpected results, mostly related to commercial exchanges, provoked by the project, but whose dimension is merely individual and cannot be generalized.

110. The occurrence of these results cannot be considered totally unexpected, since they stem almost immediately from the project activities. However, the project did not develop the necessary mechanisms to map this type of results and frame them in the intervention strategy, in a logic of enhancement and multiplication. The same limitation was noted in terms of the partnerships or occasional or informal collaborations that were carried out in the different provinces. From the data collected by the ETT, there is evidence of collaborations with entities such as WFP, Save the Children, World Vision or Caritas in Gaza, where productive supplies, seeds and motor pumps were distributed, or where activities were developed in the area of nutrition and vegetable production to complement the FFSs intervention. In Sofala, there are also references to collaborations with World Vision, Caritas, GAPI or ORAM in the production of vegetables or training on nutrition. In Tete there are also Save the Children, World Vision and IDE initiatives with which the project has had some interaction. However, and despite these references, the project has not developed a specific tool to map and monitor the scope, reach and results of these partnerships or collaborations. Even so, from the interviews and focus groups carried out, it was possible to understand that the various complementary projects or initiatives being implemented in the project's districts of intervention have an approach solely focused on increasing productivity and not on crossing this objective with agroecology.

3.2.2 Effectiveness (Outcome 1)

EQ13. To what extent has the project increased awareness and recognition among farmers, national, provincial and district managers to include CCA practices and measures in rural development programmes?

Finding 6 - The project was successful in developing awareness and increasing knowledge of national, provincial and district managers, as well as among farmers, of the importance of including best practices in CCA in rural development programmes, including in national sectoral strategies and local adaptation plans. The project has also

contributed to a strengthening of the adaptive capacity of various actors to minimize exposure to climate change.

Finding 7 - The momentum created, at national and international level, by the media and political attention triggered by the effects of Cyclone Idai and other phenomena that occurred in the country during project implementation was determinant for the success of the project in achieving Outcome 1. However, political changes and instability at the level of government vision for the sector limited progress in completing the revision of SPASD and NIPAS.

Lesson4: Political / institutional challenges - Despite the favourable context for the introduction of the theme of CCA in the political agenda created by the cyclones that affected the country, the experience of this project allows us to conclude that in order to trigger political changes of such importance it is fundamental that there is political stability at the level of the agents that occupy the decision-making positions in the ministries, but also at the level of the political priorities defined by the Government.

111. In the project design document, the Strategic Plan for the Development of the Agricultural Sector (SPASD) and the National Investment Plan for the Agricultural Sector (NIPAS) were identified as the main sectoral strategic documents on which the project should focus in supporting the revision or design of the Mozambican Government's policies and plans on CC. However, the process associated with these two documents was marked by political instability in the country and particularly in the sector, leading to an interruption of work between the first phase - in which progress was made in discussing priorities and defining the strategy for implementing the process - and the final phase of the project, when talks were resumed and the Terms of Reference for hiring a consultant to support the development of the new versions of SPASD (2021-2031) and NIPAS (2021-2025) were drawn up (see Annex 9). Despite the interruption of these processes, the project was able to adapt to the circumstances and made progress during this phase in training the technical staff of MADER and MTA, contributing to the development of internal capacities on CCA which will be important when the design of the two documents is completed, and which were instrumental in the progress achieved at other levels detailed below.

112. At the institutional level, and despite the political changes and instability at the level of each ministry's sectoral vision, the project succeeded in integrating specific measures on CCA in several of the activity sectors related to the intervention, namely at the level of fisheries, forest management, environment and agriculture (example: use of agro-meteorological data for agricultural activity planning or the development of Local Adaptation Plans). It is particularly relevant that entities such as MADER, MTA and IIAM have incorporated specific actions related to CCA in their Strategic Plans, a result to which the project has decisively contributed through capacity building and all the technical advisory work carried out. At the MADER level, the integration of CCA into sectoral budgeting processes was also ensured.

113. An important outcome of R1, which was not foreseen, was the support for the preparation of Mozambique's NDC (Nationally Determined Contribution) to the United Nations Framework Convention on Climate Change (UNFCCC) in response from

Government request. The project provided technical support in the definition of the NDC document and a 3-year plan for its implementation, including the definition of the NDC Partnerships Plan. This process comes at a time when the project was more focused on supporting the planning processes of SPASD and NIPAS, but the elaboration of the NDC was prioritized (see annex 7). Once again the project was able to adjust to the needs and priorities of the country, and respond in a timely and effective manner to the commitment of supporting the national government in the design of government policies and plans related to climate change. This process took about a year and a half, and precisely in a period of some political stability in the ministries involved (MADER and MTA).

114. Also during the life of the project, the National Coordination Unit (NCU), a multidisciplinary unit that includes representatives from various sectors and is led by MADER, was created. NCU members were trained by the project in TAAS (Tracking Adaptation in Agriculture Sector), TAPE (Tool for Agroecology Performance Assessment), EX-ACT (Ex-Ante Carbon-balance Tool) and RIMA (Resilience Index Measurement and Analysis), fundamental methodologies to produce quality data for a reporting to the Malabo Declaration, NDC and other relevant processes in which Mozambique is involved. Each NCU member benefiting from these trainings is responsible for disseminating knowledge to their teams, ensuring greater dissemination of practices and knowledge. Informative or capacity building moments on agroecology and resilience (adaptation and mitigation) have also been implemented.

115. At the district level, 15 district authorities developed Local Adaptation Plans (LAP) and 250 FFSs developed community adaptation plans. Through this process, the project also ensured the integration of CCA measures in the agricultural crop planning process and in the District Economic Social Plans and Budgets (PESOD).

116. An important aspect developed by the project to ensure that the changes promoted in terms of the introduction of CCA practices in the sector planning documents have an effective practical implementation, was the training of various agents of the sector to implement the best practices of CCA identified in the various documents. In total, 781 rural extension professionals (target was 650), including managers and technicians at district, provincial and central levels from MADER, MTA, academia and NGOs, were trained in strategies and processes for the integration of CCA practices and measures in rural development efforts. Contents covered include FFS methodology, CCA and Monitoring and Evaluation.

117. Also in this context, several training and awareness-raising actions were carried out specifically on the CCA practices introduced by the project and among different audiences. The various technical service providers at the district and provincial level benefited from training in agro-meteorology, in order to allow a better understanding and ability to interpret agro-meteorological data produced at national level, ensuring a better capacity to support farmers in the management and planning of their crops. With the same public, 30 technicians were trained in the SHARP methodology and 4 provincial workshops were organised to disseminate the FFS methodology.

118. For extensionists (26), and also for farmers (60) and members of the FFSs (30), awareness-raising sessions on the importance of afforestation of agricultural land were organized, and they also benefited from training in syntropic agriculture. This training is considered of utmost importance by the IIAM team, but also by farmers and extensionists,

to enable the introduction of afforestation as an CCACCA measure in the beneficiary districts.

119. The project also supported the National Seed Platform (IIAM) by providing technical support during a national seed conference and by funding a half-time working technician for the Platform. Also related to the seed issue, the project provided training on local seed banks and seed conservation practices for 50 technical staff from all four provinces and held a short-term training session for the master trainers of the FFSs. This training empowered the partner institutions to support local seed producers in promoting seed banks at community level. In Gaza province, 82 producers were trained by IIAM in local improved seed production and in collaboration with FAO seed specialists, the IIAM team also conducted training in quality seed production for 73 extension workers.

120. Among the various agents consulted by the ET, there was unanimity on the **relevance, quality and adequacy of the various training** courses held by the project. The pertinence of the themes and the pedagogical approach are some of the reasons most mentioned to justify the general satisfaction with the capacity building efforts undertaken by the project. Other important aspects mentioned are: (i) the importance of ("on the job") training that favours the assimilation of contents and the confrontation of theoretical knowledge with practical experimentation; (ii) the training of decision makers at different levels (district, provincial and national), which will allow the knowledge and valorisation of the practices introduced not to remain restricted to technical level professionals; (iii) the effort of the project to integrate, reinforce and build on practices that already existed (ex. strategies to combat uncontrolled burning that the DEAS had already been providing prior to the project), while also introducing complementary approaches; and (iv) the follow-up, by means of monitoring visits, that the project carried out after the training on the use of agro-meteorological data in the planning and management of agricultural production, which allowed the introduction of some complementary corrective measures.

121. One aspect that, according to some of the respondents, could be better explored in the future is related to farmers' access to information systems. In some districts where internet access already exists with some stability, several farmers already have internet access, but they lack digital skills to take advantage of this tool to access more knowledge or weather data that can be relevant to improve their performance as producers.

3.2.3 Effectiveness (Outcome 2)

EQ14. To what extent has the project contributed to the adoption of improved CCA strategies, and practices and a wider choice of adapted genetic material in the selected districts (including staple crops, vegetables and mixed tree/crop/animal production systems)?

Finding 8 - The adoption of improved CCA strategies and practices evolved positively throughout project implementation in all 4 provinces. Although final data from the endline study are not yet available, there is already ample evidence that farmers, after some resistance to change, are increasingly replicating the knowledge and methods introduced in the FFSs on their own land. Verification of the results in the trial fields, at the level of productivity, resilience and cost, were key to a higher level of adoption of CCA practices in the final phase of the project.

Finding 9 - The FFS methodology is highly relevant in that it promotes learning based on demonstration and experimentation, allowing farmers to overcome doubts and fears, while contributing to a more effective and empowering capacity building of beneficiaries. The data collected in experimental fields of FFSs indicate that there is a significant difference between the productivity verified in the plots that make use of traditional technologies and the test plots, where innovations have shown very positive results. Despite some differences between provinces, they all register positive results.

Lesson 5: Knowledge, collaboration and learning - The focus on training through FFSs is an appropriate strategy for working with farmers with low levels of technical knowledge and has great potential for results and sustainability of change. Still, it is important to ensure that, as a complement to capacity building, a model of regular monitoring of farmers is implemented, particularly of their work outside the FFS, so that it is possible, in due time, to activate measures to correct possible failures or limitations, or to enhance some positive changes arising from the replication of learning. This approach also facilitates the identification of further training needs.

122. The project developed and distributed to the 510 beneficiary FFSs tools and training material on strategies and processes for including CCA in rural development during the project life cycle. The material made available to the FFSs included a facilitator's manual, FFS curriculum development plan and templates for data recording. The facilitator's manual includes 12 FFS evaluation indicators, which focus on the learning programme or curriculum, regular conduct and correct recording of Agro-Ecological System Analysis (AESA) data, knowledge of the study by group members, existence of the call book and attendance control, and conduct of field days. An ECC manual was also developed, in coordination with other FAO projects, and distributed by the facilitators, in order to fill the gap that existed in training material in the area of livestock. In this way, the project ensured that all FFSs had quality training materials and tools to promote CCA in rural development processes in beneficiary regions.

123. The contents of the developed teaching materials were developed based on the already existing FAO benchmarks, but also according to data from the SHARP study and the dissemination process of CCA in the FFSs, conducted in 60 FFSs, and which allowed the identification of the main gaps in terms of CCA knowledge and technologies in the beneficiary regions. Based on these studies, gaps or limitations were identified at the level of conservation agriculture practices, use of compost, integrated production and pest control, soil erosion control measures, crop-livestock production integration, use of adapted seeds of the main crops and seeds adapted for animal use, among others that were integrated into the extension curriculum.

124. In response to the pandemic, the project also developed a COVID 19 information package, which included awareness-raising materials (poster and guiding principles for

FFSs), with a view to preventing the incidence of COVID 19 among the beneficiaries of the project activities. This package was disseminated to all the FFSs involved in the project.

125. Making use of the tools mentioned above, the project trained 781 extension technicians, including 38 master facilitators, responsible for disseminating the training contents to 1463 peasant facilitators, 49% of whom were women. With the training of these technicians, the project was able to implement the various training actions planned under the FFSs and directly benefit about 15,000 people.

126. Although the project does not have specific data on the number of indirect beneficiaries, it is estimated that nearly 75,000 people have been reached, counting only the households of the direct project beneficiaries, of which 60% are estimated to be women[14]. This number corresponds to 94% of the 80,000 target set by the project. However, it is likely that this number has been largely exceeded. On the one hand, the project trained 123 non-FFS extension workers in CCA in the four provinces, and it is estimated that they supported about 5,000 other farmers. On the other hand, because the number of indirect beneficiaries mentioned does not take into account the other people in the communities where the project intervened and who replicated the methods adopted by the direct beneficiaries.

127. Some FFSs have also **disseminated the results** of practices learnt by farmers through actions such as the field day technique (peer to peer) and exchanges among the FFSs. According to project monitoring data, over 500 FFSs groups have been exposed to improved soil, water and crop management practices through these events. The field days have played a very relevant role in promoting interaction between farmers who are direct beneficiaries of the project and other farmers in the communities, as results are shared informally and based on the beneficiaries own experiences, in addition to allowing farmers outside the FFSs to observe and analyse for themselves the results in the experimentation fields.

128. The data collected regarding the level of adoption of improved CCA strategies and practices, but also regarding access to greater availability of adapted genetic material, allow for the conclusion that the FFS methodology is highly relevant, as it offers unique spaces for experiential learning. The data available at the time of the evaluation indicates that there is a significant difference between the results verified in the plots using traditional technologies and the test plots, where the innovations introduced by the project are applied.

129. Despite some aspects to be improved, the evidence collected by the ET, but also the data produced by the various results monitoring exercises carried out by the project team is robust in confirming the effectiveness of the project in introducing CCA practices. The number of farmers using and adopting CCA options, measures and practices is clearly higher than that recorded at the start of the project and, in general, there is evidence of the use of the CCA practices introduced by the project in the 4 provinces, namely: soil and water conservation practices (mulching, cover crops, organic compost production, construction of water reservoirs, drip irrigation systems), seed management practices (drought tolerant varieties, short cycle varieties and varieties adapted to low soil fertility),

[14] Each of the 510 EMC was composed of an average of close to 30 members, and according to population censuses, each family will consist of 5 members (approximately), of which 3 are women (60%)

pest management practices (organic pesticides) and livestock practices (hay and mineral blocks production, animal vaccination).

130. At the livestock level, the project aimed to reduce the challenges arising from low rainfall and characterized by reduced availability of water and feed for animals (particularly cattle). To address these problems, the project introduced two innovative practices for most beneficiary provinces: food supplementation (hay) and the introduction of blocks of mineral salts. In the case of feed supplementation, farmers learnt to produce and store hay during the post rainy period, in order to have feed for the cattle in the dry season and thus reduce their mortality. This practice was a innovation for most of the project provinces, although in Gaza some producers had already had contact with the methodology, through the influence of contact with some farmers in South Africa. On the other hand, and to cope with the lack of mineral salts during the dry season, the technique of producing blocks of mineral salts was introduced as a complement to the cattle and goats feed. Once again, this methodology is already common in other geographies, but was unknown in the 4 provinces of the project and was adopted in a very positive way.

> "*With the production of the hay bales and the production of mineral salt blocks, when there is drought, farmers already have feed for their cattle. Cattle no longer die like in 2015.*"
>
> **Testimony from DEAS representative**

131. These innovations increase the probability of survival of new births and prevent the loss of body weight of cattle and goats during the dry season. There are also reports that, for some farmers, hay production has already become a supplementary income-generating activity, meaning that, on the other hand, the benefits of the introduction are not limited to gains in the health of their animals and, on the other hand, that there are other people in the communities who benefit from the hay produced by the project beneficiaries (spillover effect).

132. Still regarding livestock, the project trained 91 members of the local beneficiary communities (there are reports that the information was also disseminated by them to other people in the communities) on how to proceed with community vaccination of animals. Demonstrations were also implemented in FFS open to the community, with the aim of replicating the practice of vaccination in the surrounding communities. The data at this level indicate that the vaccination, by the beneficiaries of the project, against Newcastle disease in chickens reaches 94.9%, a result that allowed reducing the mortality of chickens due to this disease and that attests the effectiveness of the project in the introduction of community vaccination, in the training of community vaccinators and in raising the awareness of the beneficiaries to the importance of this process, as a preventive measure and that has direct effects on the food security of families and on their sources of income.

133. The producers are favourable towards the adoption of CCA strategies and practices, and adapted genetic material. According to the interviews and focus groups conducted, producers have considered the information disseminated by the project as useful to help them prepare for agricultural campaigns and consider themselves today more able to cope with extreme events, through the use of short or long cycle varieties with high productivity and high nutritional qualities, by adjusting sowing dates or selecting varieties based on

climatic variability. This reading is seconded by data from the Knowledge, Attitudes and Practices Survey (KAP Survey) implemented among 400 farmers in 6 districts in 2019 and which indicated that knowledge and attitude towards the use of CCA strategies and practices and a wider choice of adapted genetic material (drought tolerant and short cycle varieties) was estimated at 88.5%.

134. Despite this success, the same study indicated that the level of adoption of CCA practices was only 29%, below the 50% set as a target. According to the study, but also the data collected by the ET, the common causes for the difficulty of adoption that CCA practices require intensive labour, specific knowledge or materials (e.g. water harvesting and retention systems, improved livestock or farming facilities, improved seeds or Biol production), so some resistance to this change still persists. However, data from the endline study (under development) and the interviews, focus groups and visits conducted by the ET indicate that the level of adoption of CCA practices has increased significantly since 2019.

135. Based on the qualitative data collected for this assessment, beneficiaries reported that they have increasingly adopted CCA practices for crop cultivation and animal husbandry. Reported practices included composting, use of live mulch, mulching, use of Biol, use of drought tolerant maize varieties, use of drip irrigation system and seed production. In livestock farming, the production of hay bales, production of mineral salts, use of raised-floor pens for goats and the capoeira for landim chickens stood out. The DEASs, provincial and district focal points, and extension departments corroborate that there is evidence of the project's contribution in the adoption of these strategies and practices of adaptation to climate change introduced in the FFSs, although they recognise that there are limitations in assessing adoption because the monitoring they carried out was focused on the FFSs.

136. On the IIAM side, it is noted that adoption levels of organic compost as well as mulching are more appreciated by farmers as an alternative to avoid the use of inorganic fertilizers which, from the users' perspective, are expensive. According to a report by IIAM, after assessing soil profiles in five randomly selected districts of Gaza province, soil analyses indicated that all soils improved in structure and fertility rate compared with the situation before the intervention. This is a clear evidence that farmers are adopting soil management practices and the improvement is due to the integrated implementation of climate change adaptation practices.

137. The table below shows the main techniques adopted in each province, according to the available data. The endline study report still under development will be important to confirm these data and allow a more detailed analysis per district.

Table 6. CCA practices adopted by beneficiaries in each Province

Province	District	CCA techniques adopted
Gaza	Mabalane	Recommended Compass
		1S/C
		Biol
		Mulching
		Composting

		Hay production
		Production of salt blocks
		Construction of elevated capoeira
		Elevated floor pens
		Cassava cultivation
		Vegetable cultivation
		1 seed per hole
		Grooves for water retention
Tete	Angónia	Recommended Compass
		1S/C
		Biol
		Live mulching
		mulching
		Composting
		Home agro-processing
		Drop irrigation
		1 seed per hole
	Tsangano	Permanent hole
		Crop Mixing
		Live mulch (maize, mucuna, canavalia)
		Organic compost (cattle manure)
		Composting
		Improved seeds
		Biol
		Conservation agriculture
Sofala	Beira	In-line seeding
		Conservation tillage
		Crop alignment
		Water harvesting and retention systems
	Nhamatanda	Biol
		Crop plotting
		Water harvesting and retention systems
		Improved barn raising
		Fallow land
		Permanent hoopholes
		Line sowing
		Observance of compass
		Live cover
		Dead mulch
		Diversification of food and cash crops
		Nutricional improvement sourcing locally produce: soy, sesame, feijão-boer (bean), moringa, mango
		Vegetable production
		Livestock: pigs, poultry and goats
Manica	Barué	Production and use of improved seeds
		Permanent holes
		1 seed per hole
		Contour lines

		Live cover
		Dead mulch
		Drip irrigation
		Biol
		Crops intercropping
		Line sowing
		Planting of fruit trees (litchi, banana)
	Gondola	Production and use of organic compost
		(cattle, chicken and duck manure)
		Rainwater retention
		Biol
		Utilisation, by FFSs members, of organic matter discarded by neighbours for soil restoration

138. From the consultation, it was also possible to identify the main factors that facilitate or contribute, and those that hinder or impede the adoption of CCA practices by farmers. Favouring the adoption of the practices were, among others: the experimental nature of the FFS methodology that allows direct observation of the results of the practices and visual recognition of the advantages of the implementation of these practices; the increase in productivity and, with this, the greater potential for farmers to derive better yields from production; the capacity of CCA practices to increase producers resilience to climate change, improve animal health and nutrition, improve soil fertility and pest control; lower costs associated with the production of organic composts and pesticides, when compared to the costs of purchasing fertilisers and pesticides. Other factors cited were the adaptation of methodologies to the reality and instruments already available to producers (jerrycans/bottles) and the greater effectiveness of CCA practices in pest control.

139. On the other hand, the delays in the beginning of the implementation of the project and the consequent late start of the experiments of the CCA practices in the FFS, meant that the visible results to date correspond to 2 or 3 production cycles, when it is after 5 cycles that all the results manifest themselves in their fullness. Another factor that is related to this aspect and has limited the speed of adoption of the practices, is the aversion to risk of changing traditional methods by the producers benefiting from the project, who mostly have low yields.

140. Three last factors that have negatively influenced the adoption of CCA practices by farmers are: 1) the project's weak connection to the market, which could result as an extra risk factor for the introduction of new production methods by farmers; 2) the fact that the soil component was among the last to be introduced by the project, when it should, according to IIAM technicians themselves, have been among the first components to be activated to allow experiments to take place in better productive conditions; 3) the limitation of agrometeorological data provided by INAM.

141. Regarding to this last point, it is important to mention that the project installed 10 rain gauges and trained 626 extensionists, farmers and community radio operators on how to interpret agro-meteorological information and integrate it into production decisions. Six technicians from the MTA, INAM and IIAM were also trained in the use of SIG and agrometeorological data in agriculture, with the aim of building capacity to develop

agrometeorological products (monthly agricultural bulletins) to support farmers. Finally, 20 MTA provincial technicians were trained in agro-meteorological data communication techniques for dissemination through local radio in local languages to farmers. As a result of these initiatives, farmers began to use agro-meteorological information in their decision making process on crop production, as for example several farmers ascertained that, based on rainfall information, they decide which short-cycle seed varieties to sow or planting dates. Other gains associated with the use of this type of data in agricultural production planning are the improvement in the management of water resources in existing sources and the possibility for farmers to have warning mechanisms to anticipate floods and inundations, and thereby reduce the risk of losing equipment located in areas most vulnerable to flooding.

142. According to data collected by the M&E team of the project, about 76% of beneficiaries now have access to agro-meteorological information, a figure that far exceeds the 20% target set at the beginning of the project. However, and despite the various positive aspects mentioned in relation to the production, dissemination and use of agro-meteorological data, the delay in the installation of weather stations (see more detail in chapter 3.4) means that the data provided in the bulletins are not accurate, generating some distrust on the part of farmers regarding the quality and validity of the data. On the other hand, several producers interviewed refer that this information does not always arrive on time, giving the example of Mabalane, where the May bulletin had not yet been published in mid-June. Finally, the limited coverage of community radios and the limitations at the level of literacy of producers are other factors that limit the appropriate use of these data to positively influence agricultural production.

143. Among the 4 provinces, the results for Outcome 2 are slightly different. Such difference is justified by the characteristics of the territories and the methodologies selected by producers in each FFS, but also by other factors. In Sofala and Manica, the FFS methodology had already been introduced previously by other FAO projects, which decreased the initial resistance to the approach. In addition, these two regions have characteristics at the ecosystem level that make them naturally more productive or conducive to the practice of agriculture than the other provinces, particularly in comparison with Gaza. Despite these apparent advantages, it is relevant to mention that Manica and Sofala were the two regions most devastated by cyclones, particularly Idai, and armed conflicts in the country, limiting the mobility of extension staff and, at times, even the project team itself.

144. Of the 4 provinces, Gaza is the one with the least advanced results, due to the cyclical droughts that have affected the region, but also because it is the province with the greatest dispersion of the populations, which is a difficulty in organizing and bringing together the groups (which is why the number of FFSs is lower in Gaza). This province is also the one with the fewest support services for production, including markets and points of sale for inputs. In Tete, the question of the scarcity of support services is also a reality, but as this province has better conditions of access to markets, due to its proximity to Malawi, there is already enough cross-border trade to mitigate the negative impact of this limitation.

145. The project work in Gaza faced yet another difficulty. As several of the project activities depended on access to water, and in the face of successive years with much lower than

expected rainfall levels, the project focused its efforts along the Limpopo River for demonstration purposes. However, few beneficiaries had access to this area due to the distance and high transport costs, and most of those who had access did not have motor pumps for irrigation. As a result, the project's implementation capacity was limited and some of the demonstrations were only theoretical.

3.2.4 Effectiveness (outcome 3)

EQ15. To what extent has the Project effectively enhanced institutional capacities and cross-sectoral coordination to design and implement efficient extension/outreach approaches, strategies and mechanisms to support the integration of CCA in the crop and livestock production sector?

Finding 10 - The intervention allowed institutional capacities to be strengthened at different levels (district, provincial and national), contributing to greater integration of CCA measures in sectoral planning processes and creating conditions for greater future dissemination of CCA measures in the country, namely through improved planning and access to new funding opportunities arising from the creation of the NDC. The project also contributed to better intersectoral coordination, namely at district and provincial level, although at national level political changes and some inertia on the part of the project's coordination prevented more significant progress.

146. As detailed above, the project has made considerable progress in institutional capacity strengthening by training hundreds of sector actors at district, provincial and national level and creating a national task force (National Coordination Unit - NCU) involving representatives from various ministries and other relevant sectoral structures, which met on average 4 times a year. 30 of the NCU members have been trained in 5 different contents, including training on climate change impact and vulnerability analysis. There were specific intersectoral trainings on agroecology and the 10 elements of agroecology. Added to this is the training of the NCU at the level of national capacity to report on national, regional and international policies related to climate, such as the Malabo Declaration, which monitors the country's resilience performance; the Maputo Declaration, which monitors financial support to the agricultural sector; and the Paris Agreement on NDC, which sets out the country's priorities and targets for climate change adaptation and mitigation. As a result of this training, the MTA and MADER now use internationally validated procedures to collect data and prepare the Malabo Declaration and NDC reports.

147. The project's support to the Mozambican Government also enabled the development and approval of NDC of the country. The NDC operationalization plan was developed with direct support from the project and through a participatory process involving several sectors (Water Resources, Agriculture, Energy, Transport, Early Warning System, Waste, Health, Biodiversity, Communication, Education, Training and Awareness). For the formulation of the NDC, actions and measures for adaptation and climate risk reduction and for mitigation and promotion of low emission development were compiled, in alignment with the National Strategy for Adaptation and Mitigation of Climate Change (NSCCAM - Annex 8) and which facilitated the definition of the NDC operationalisation

plan. The National Monitoring and Evaluation System of the NSCCAM was also approved, and it was defined that the NDC operationalization plan should produce recommendations for the improvement of the National Monitoring and Evaluation System of Climate Change. The NDC also stipulates that by 2025 all 153 Districts in the country should have their Local Adaptation Plan created and that Climate Change should be integrated at district planning level.

148. With the creation of NDC, a funding opportunity has opened for Mozambique under the Climate Action Enhancement Package (CAIP[15]) launched by the NDC Partnership, and with the support of the project, a proposal amounting to 316,048 USD has been developed and approved for the implementation of the NDC operationalisation plan in Mozambique. The project also supported the national validation process that resulted in a request for support from the Government of Mozambique to FAO and subsequent inclusion of the country in a global FAO project with GEF CBIT funds with FAO CBC.

149. Another important evidence regarding increased institutional capacity to design and implement CCA measures at the national level is the creation of 15 district Local Adaptation Plans (LAP), of which 11 include a specific budget in their annual planning for climate change measures and practices. In these districts, provincial facilitators and MADER have been involved in awareness raising activities to promote the use of LAP information in district planning processes (District Strategic Development Plans and Economic and Social Plans and Budgets), ensuring equal participation of women. Within the scope of the Local Adaptation Plans development process, 155 technicians from DEAS, MADER and other sectors have been trained in climate change impacts and vulnerability analysis to enable more effective sector and sub-sector planning. In addition, 250 community Adaptation Plans were developed by the FFSs.

150. Under the project, the EECDP (Environmental Education, Communication and Outreach Programme) Environmental Educator's Handbook was also revised and updated to include aspects related to CCA and adaptation measures for agriculture.

151. Complementary to institutional training, there were significant advances at the level of intersectoral coordination promoted by the project. These advances are reported at district or provincial level, with improved communication and articulation between the agents active in the territory and between these and the project team itself, but also at ministerial level and between partner structures of the project at national level (IIAM, INAM, etc.).

152. The monitoring integrated by the project at district level sought to mobilize the provincial and district services so that the monitoring visits were carried out jointly, thus promoting habits of communication and even professional coexistence until then reduced. Within the scope of these visits, the project team also introduced the practice of holding meetings with the DEAS, enabling the creation of simple coordination routines, but which are fundamental so that the individual efforts of each entity and its technicians are complementary.

153. The project also introduced coordination meetings attended by all DEASs and all district focal points, where the provincial director was invited to lead the meeting and where, among other issues, the degree of compliance with the work plans by the DEASs.

[15] https://www.fao.org/climate-change/programmes-and-projects/detail/en/c/1371043/

154. Another aspect that contributed to this change was the limited financial and transport capacity of the representatives of these district and provincial entities, who benefited from the support of the project to have more means of transport and credit/balance for communications.

155. Despite the success of the project at this level, several partners mentioned that the inability of the project to create a FFS Platform, a space that brought together all the FFSs in the country and allowed the sharing of good practices, limited the improvements in coordination. On the other hand, they recognise that the pandemic and the limitations imposed in this context also contributed to a slowing down of the conversations that had been developed with the project team in order to create this Platform.

156. At the national level, the advances in terms of intersectoral coordination were also several, even though the opinions of the people surveyed for this evaluation are divided as to the improvements registered.

157. One of the examples that demonstrates the existence of some advances in coordination between ministries is the fact that the MTA has started to provide, at district level, guidance to MADER technicians on the process of elaboration, implementation and monitoring of the LAP, thus establishing a strong interdependence between institutions and ensuring greater harmonisation between the documents produced in the different districts.

158. With support from the project the MTA held the first national seminar on climate change and adaptation. This initiative, innovative in the Mozambican context, allowed to increase the awareness of the other project counterparts and other agents active in the sector on the impact of climate change, especially on agricultural activities. The project also supported other activities that enhance coordination and knowledge sharing between actors in the agriculture sector, such as the Periodic Technology Review Meeting (REPETE[16]), a two-day event aimed at reviewing the technology packages made available under extension practices, ensuring a better link between research-extension-production, as well as identifying technologies and approaches for better adaptation to CC. The event involved in the debate MADER staff, researchers, academics, representatives of State Representative Councils and Provincial Executive Councils, Directors of District Services of Economic Activities, extension supervisors as well as representatives of Ministries, cooperation partners, NGOs and Civil Society.

"*The agriculture sector is considered as one of the most determinant for the Climate Change issue. And the project allowed to bring the Agriculture sector closer to the Environment sector. The project created spaces for a better dialogue between these two parties, and in part it is the project contribution this greater approximation and coordination.*"

Testimony of ministerial representative

[16] https://www.agricultura.gov.mz/mader-busca-solucoes-tecnologicas-para-o-sector-agrario/

159. The ministerial representatives (MTA and MADER) interviewed recognize the project contribution to greater approximation and coordination between the ministries, however, FAO and MADER own technical teams were not included in the process of defining the new national extension programme: Sustenta Programme . This Programme, whose priorities and strategic vision are still little known, has generated some discomfort among the sector agents, as its design process is considered excessively centralised and closed at the highest levels of MADER.

160. In addition to the recent political changes that have reduced the dynamics of intersectoral dialogue that took place until the 2019 general elections, several interviewed stakeholders also mention a certain lack of proactivity and political leadership capacity on the part of the Project Coordinator as a factor that has limited the project's results in this area. According to these testimonies, the project fell short in terms of the implementation of dissemination activities and visibility of the results among sector agents, but also in terms of creating a closer relationship between the project and the ministries.

161. Finally, it is important to highlight the project contribution for a greater harmonization of the technical language associated with the CC among the sector agents. According to the data collected, and as a result of the various training courses, awareness raising actions and the technical support offered to the district and national planning processes, there is today a better understanding of the technical concepts associated with CC and their relationship with the agricultural sector.

"*There is greater coordination in the sector now. Today everyone realises that INAM and MADER must work together because they serve the same users. There is also greater coordination of language. Today we no longer say at INAM "there will be flood or there will be drought". We are careful to be precise in the information we share and communicate before "it will rain a lot or it will rain a little". Then it is up to MADER professionals to say what that means for production and alert provincial technicians on what should be done.*"

Testimony from INAM representative

3.2.5 Effectiveness (outcome 4)

EQ16. To what extent has the Project effectively improved results-based management and the application of lessons learnt and good practices for future replication?

Finding 11 - Following the MTR, the project improved significantly the management based on results, and the changes implemented on the recommendation of the mid-term evaluation team were fundamental to the gains in effectiveness and efficiency registered since that process. For the improvement of results-based management, the quality of the M&E system designed for the project also contributed, as well as the diligent and responsible manner in which it was managed and implemented, with 92% of the planned activities having been executed, despite the various contextual challenges that the project had to face.

Lesson 6: Monitoring and Evaluation - The use of information technology and the mobilisation of local partners was fundamental to enable the project to carry out adequate

M&E during the Covid-19 pandemic. To this end, it was crucial to ensure the timely training of the technicians of the partner institutions in the use of the digital application developed and the provision of all the material support necessary for its effective use.

162. There were two factors that proved to be key to improving results-based project management. Firstly, the MTR process and the relevance of the recommendations that were very satisfactorily taken into account and implemented in a timely manner. Secondly, the adequacy of the designed M&E system and the effective way it was managed and implemented, even considering the various contextual challenges faced by the project, having achieved a 92% execution rate of the planned M&E activities.

163. During the initial implementation phase of the project, the SHARP survey (Self-evaluation and Holistic Assessment of climate Resilience for farmers and Pastoralists) was implemented, allowing the construction of a complete baseline, with reliable and robust information for each of the indicators of the project Logical Framework. However, the project's end-line study, which used an innovative methodology complementary to SHARP - TAPE (Tool for Agroecology Performance Evaluation) - was implemented late, and the project ended without the final results of this exercise.

164. The project management team, through the various M&E tools and mechanisms developed (see chapter 3.6.1 for more detail), ensured the collection of regular data on the execution of all programmed activities, which allowed the implementation of regular monitoring of the different outputs and outcomes. The information produced under the M&E of the project was useful for adjustments in implementation that proved to be an asset for the effectiveness and efficiency of the project (see chapter 3.6.1). Still, and as detailed in chapter 3.4, the project had sufficient regular information that should have been used to speed up internal decision-making processes and increase the efficiency of the project, particularly with regard to meeting deadlines and work plans.

165. The information generated by the M&E of the project was particularly relevant to enable the project management to respond quickly and appropriately to the challenges posed by the Covid-19 pandemic and the various cyclones that affected the project implementation regions, as it made it possible to overcome the restrictions on missions by the core project team to the districts and to provide relevant data on the evolution of the situation on the ground. The support of the technicians of the DEAS and other partners at the Provincial level, who ensured the collection of data during this period to inform the central project team of potential challenges or adjustment needs, was fundamental.

166. Until the Covid-19 pandemic, the project implemented 4 annual monitoring visits to each region through multidisciplinary teams, which accompanied most of the activities being implemented. The project was able to anticipate the challenges that travel restrictions would pose to monitoring efforts. The Kobo application was used to collect data at the local level in a secure and timely manner to inform project management.

167. Project management also met the targets set under the Logical Framework regarding accountability, having submitted and seen 5 PIR and 5 PPR approved. The mid-term evaluation in 2018 provided inputs to improve project performance at different levels (see chapter 3.6.2 for more detail).

168. The project adopted a six-month planning model (instead of the annual one normally used by FAO Mozambique), especially after the mid-term review. This facilitated the

definition of micro-cycle priorities, greater agility and autonomy of the project team, and greater efficiency in the management of the calendar from the second half of the project onwards. At Management Committee meetings the Logical Framework and progress on indicators were regularly reviewed so that corrective or supporting measures could be activated in a timely manner. For example, management reformulated the FFS creation targets after understanding from the MTR that the number of FFSs created by the reference projects was substantially lower than considered in the project design.

169. Project planning at three levels - central, provincial and district - also allowed for greater autonomy of the implementing partners and technical teams in the regions, and greater adaptation of the defined priorities to the needs, expectations and context of each province, district and FFS.

3.3 Efficiency and co-financing

EQ17. To what extent has the FAO complied with project identification, concept preparation, appraisal, preparation, approval and initiation, and supervision? Were risks well identified and managed?
EQ19. To what extent was the project implemented efficiently and economically?
EQ20. To what extent was management able to adapt to contextual changes to increase the efficiency of project implementation?

Finding 12 - Despite the various constraints faced by the project and some significant delays, the project achieved a very satisfactory financial execution (98%), and FAO and GEF contracting and procurement rules and principles were complied with in a transparent and rigorous manner.

Lesson 7: Efficiency - Delays with procurement processes seriously damage FAO's reputation in the territories and frustrate the expectations of partners and beneficiaries, who are not always aware of the complexity of the procedures or are properly informed about the progress of the processes.

Lesson 8: Risk management - In projects with a preponderant role of national governments, as was the case with this one, it is fundamental to consider from the design stage political cycles and potential changes in leadership, vision and priorities as a risk to be taken into account, and define possible mitigation or response measures to these threats.

170. FAO has relatively well fulfilled its responsibilities at the level of project identification, concept preparation, implementation and evaluation. Despite initial delays, the level of programmatic and financial implementation (see more detail below) achieved by the end of the intervention was positive, even considering the various contextual factors, such as the Covid-19 pandemic, the occurrence of several cyclones and the armed conflicts in the central region of the country.

171. Even so, there are a number of aspects which negatively influenced the performance of the project in terms of efficiency and which limited some of the results that the project achieved, the responsibility for which is not attributable to external factors: (i) the slow

execution of the project up to the MTR; (ii) the poor initial identification of the number of existing FFS in the implementation territories; (iii) the excessive centralization of responsibilities in the CTA and its limited prior experience in leading fieldwork; (iv) the delay in recruiting the technicians to set up the project team; (v) the significant delays with the procurement processes; and (vi) the delay, at the project management level, in making some decisions or activating some processes (more details below).

172. As mentioned in more details in chapter 3.6 and as identified also in the MTR report (see Executive Summary ES11), up to the date of the MTR, the project execution progressed at a low pace, having contributed to this delay, the poor identification of the number of active FFS, as mentioned above, initially estimated at 3200. This number was significantly reduced to 500 after the MTR.

173. The project also had difficulty in recruiting technicians and establishing the necessary technical team at the beginning. The process of identifying the profiles, publication of the tenders, selection and recruitment of staff took about one year, during which time most of the technical responsibilities were concentrated at CTA. This contributed decisively to the various delays registered initially, which were compounded by CTA limited experience in the field management of a project of this size and which also led to delays in various decision-making processes, with negative effects on the efficiency of the project: delays in hiring a seed specialist, in signing the letters of agreement with the partner entities, delays in reviewing the reports produced by the M&E specialist or in starting the micro-project activity.

> "*The resources are there and the letters of agreement clearly indicated our responsibilities, but when a letter of agreement sometimes took a year to be signed, everything becomes more difficult. This gives an idea of the low efficiency.*"
>
> **Testimony from project partner**

174. According to various sources consulted during the evaluation, the CTA performance also conditioned the performance of the project in terms of leading the Management Committee meetings, mobilizing government partners and coordinating with the FAO Mozambique Programme team.

175. Another factor that significantly penalised the efficiency of the project in terms of compliance with the work plan was the successive delays at the level of procurement processes, resulting from the complexity of FAO requirements and the informality of the Mozambican market, especially at provincial level. Several procurement processes took an excessive time. The most evident case is related to the purchase and installation of the meteorological stations in the Provinces: up to the end date of the project, the 11 meteorological stations contracted with INAM were still to be installed.

176. On the part of the FAO partner entities, and although they recognize and value the effort of the project team in mobilizing efforts to move forward with the various activities after the MTR and the signing of the Letters of Agreement, there are several criticisms of the process and slowness of the disbursement of funds for implementation of the activities under their responsibility. The process of requesting and making funds available is excessively lengthy and bureaucratic, they report, and it can take several months before

the resources are made available. This delays and hinders implementation and consequently benefits for producers.

177. At the level of the management structure, the project defined a relatively clear and functional organisational and management model, which allowed for a satisfactory level of implementation and coordination with partner entities. At the central level, and despite the already mentioned challenges of leading the Management Committee meetings and coordinating with the Ministries after the 2019 general elections, the project managed to establish platforms of understanding for the execution of the joint activities with the Ministries. At the provincial level, the implementation was also satisfactory, particularly after the signing of the Letters of Agreement, which allowed for a better definition of responsibilities and priorities, as well as the transfer of resources to the partners at the Provincial and District level to be able to execute the activities in a relatively autonomous manner. Internally, the fact that CTA reports directly to the FAO Country Representative and not to the Programme Directorate (by definition of CTA ToR) caused some challenges at the coordination level, but these were almost always overcome, although sometimes with some delay.

178. The risk analysis carried out in the design phase (see Appendix 4 of the ProDoc - Annex 6) was relatively effective, having identified several of the main challenges that the project faced during implementation, namely the probability of natural phenomena. FAO together with local partners and other actors in the field, had the capacity to mobilize producers and motivate them to continue the process, return to FFS activities and progress in the experimentation and adoption of CCA measures, despite the significant impacts of these phenomena for producers.

179. From the point of view of the risks associated with the technical capacity of the partners and their commitment to an effective and efficient implementation of the activities in the various districts, the project managed, through the various trainings held and the Letters of Agreement to overcome these threats adequately, although with room for improvement, especially at the level of regular monitoring of the activities and quality of reporting.

180. There were a number of phenomena that negatively affected the project and that should have been considered from the beginning, including the definition of mitigation strategies in advance. The main one is related to the political changes at the Government level. The project had as an assumption the support and commitment of the two Ministries, fundamental for the implementation of the intervention and for the ownership and sustainability of the results achieved. However, the risk analysis did not identify the possibility of loss of political support by the Government, change of vision for the sector on the part of MADER, nor potential difficulties of coordination and mobilization of Government partners during the pre- and post-electoral periods.

181. The restrictive public response measures to the (unpredictable) Covid 19 pandemic at national and international levels also impacted the project. Yet, FAO and the project team managed to find solutions to cope with the imposed constraints, including the increase in the number of training activities to accommodate security regulations, or the reduction of the number of field missions and adoption of virtual monitoring.

182. At the time of the completion of the MTR, the level of financial execution of the project was 44% of the budget, linked to the recruitment processes of human resources and delays in the purchase of inputs mentioned above. Despite the constraints mentioned above, the

project ended with a very satisfactory financial execution, in the order of 98%, and ensuring scrupulous compliance with all the rules and principles of contracting and procurement. It is also worth highlighting the fact that the various delays mentioned above were managed in such a way as not to jeopardise the budgetary management of the project, jeopardising only the management dimension of the work plan.

183. FAO good adaptation and response to the effects of cyclones and pandemic contributed to the positive level of programmatic and financial implementation. In the cyclone emergency response, FAO was able to liaise with organizations such as World Vision International and the World Food Programme (WFP) to ensure the necessary support to the project target communities until activities could resume.

184. FAO was very quick in defining a plan to respond to the constraints and risks associated with the pandemic: it procured and supplied hygiene and protection materials to the FFSs to ensure continuity of operations, produced informative flyers distributed throughout the intervention districts and defined new rules for face-to-face group activities in the FFSs. Simultaneously, the local teams were equipped with virtual communication means, maintaining regular reporting to the central project team and allowing the reduction of the number of field monitoring missions.

EQ18. To what extent has the Ministry of Agriculture and Rural Development - MADER effectively carried out its role and responsibilities related to project management and administration?

Finding 13 - The Ministry of Agriculture and Rural Development effectively and diligently fulfilled its responsibilities within the scope of the project, acting as a strategic partner and guarantor of the quality of the intervention at central, provincial and district level. The Ministry of Land and Environment, as well as the other institutions and government structures at provincial and district level also responded effectively to the responsibilities assigned to them, although the limited resources at their disposal limited the scope and pace of the activities. The Letters of Agreement were a fundamental instrument to ensure a clearer division of responsibilities and allow the necessary operational and financial autonomy so that the government partners could assume themselves as true co-implementers of the project.

185. Despite the challenges related to changes at the ministerial level following the 2019 general elections, overall MADER demonstrated a collaborative and open attitude towards project management and FAO throughout the implementation period. Several interlocutors from party to party changed during implementation, which required an effort to re-approach and align priorities and expectations between the parties. Following the MTR, FAO, through the project team, assumed more effective leadership of the project, but always keeping the Ministry involved in decision making in order to facilitate ownership and engagement of the different government structures involved.

186. The MTR, also at this level, marked an important turning point. Until that process, the Ministry took a supervisory rather than a co-implementation stance. With the signing of

the Letters of Agreement, it was possible to operate a real transfer of responsibilities to government structures at the provincial and district levels.

"We actually had a Letter of Agreement with the project. It was important for ownership by our team. The project is no longer the FAO project, but our institution's project. It became more visible and clearer our responsibility with respect to the project. And with that Charter we started to integrate the project tasks, not as isolated actions, but as part of our daily activity. If we did not have that Charter the project would still be the 'FAO project'."

Testimony of a governmental partner of the project

187. Throughout the project, MADER, at a political and strategic definition level, and the other partners at provincial and local level, demonstrated commitment and capacity to respond effectively to the responsibilities assigned to them. To this end, the project's training and technical support to the different partner structures were fundamental.

188. The factor that most limited a more satisfactory performance of the government partners, particularly at provincial and district level, were the lack of means and resources to respond more effectively and efficiently to the challenges of a project of this complexity. The limited number of extensionists, for example, and the limitations in terms of means of transport available to them, prevent the implementation of the activities or tasks under their responsibility from being faster and in line with the demands and expectations of the other project stakeholders. These limitations may also have conditioned the capacity to mobilize communities neighbouring the FFSs to adopt the CCA practices introduced through these structures among beneficiary producers.

189. Also the Ministry of Land and Environment acted as a reliable and committed partner to the project. In the case of this ministry, its participation was positively marked by leading the elaboration process of the Local Climate Change Adaptation Plans, ensuring the inclusion of several FFSs teachings in the documents.

EQ29. To what extent did the expected co-financing materialise? How did this affect the project results?

Finding 14 - The co-financing foreseen for the project was fully mobilized and exceeded, and in due time, allowing the project a very satisfactory financial execution and having the conditions to implement the activities as planned.

Table 1. Project co-financing data

Sources of co-financing	Co-financier	Type of co-financing	Confirmed amount at CEO endorsement / approval	Total amount mobilised
FAO project funded by the European Commission	Accelerate Progress towards	Amount	USD 22,400,000	USD 25,059,198

	MDG1c in Mozambique			
FAO project financed by the Belgian Cooperation	Food Security and Nutrition for Gaza project	Amount	USD 2,500,000	USD 2,598,150
		Sub-total	**USD 24,900,000**	**USD 27,657,348**
MADER	Governmental support	Species/Gender	USD 770,000	Information not available
	PRONEA Support Project (PSP)	Amount	USD 1,274,657	Information not available
MTA	-	Species/Gender	USD 400,000	Information not available
		Sub-total	**USD 2,444,657**	**Information not available**
		TOTAL	**USD 27,344,657**	**USD 27,657,348**

190. As the table above indicates, the project managed to mobilize the co-financing identified as necessary at the time of its approval, and even exceeded the stipulated value of USD 24,900,000, thanks to the mobilization of an additional USD 2,659,198 from the "Accelerate Progress towards MDG1c in Mozambique" project. At the time of the evaluation, the final figures for the contribution of the two Ministries to the co-financing of the project were not known. However, even without taking this amount into account, the co-financing raised for the intervention was 1.14% higher than that defined when the project was approved.

191. From the interviews conducted with those responsible for managing the project budget, it was also possible to ascertain that the FAO co-financing was mobilized in good time and that the project always had the necessary resources for the normal and timely implementation of activities.

192. Although not considered as contributions to project co-financing, it is important to mention that FAO managed to implement a resource-sharing model with other FAO projects in the same territories, through the organization of joint missions or the sharing of vehicles, for example, and contributed to the efficient management of project resources.

193. Other support was also mobilized that indirectly benefited the project, such as training provided by international NGOs in the territories or the distribution, by FAO and World Vision, of resettlement seeds after the occurrence of Cyclone Idai in the context of the OCHA emergency, an initiative financed by USAID.

3.4 Sustainability

EQ21. What is the probability that the project outcomes will continue to be useful or remain after the project ends?
EQ22. What are the main risks that may affect the sustainability of project benefits?

Finding 15 - The gains in knowledge about CCA and agroecology, and the gains in capacity of the various actors on the ground to implement the techniques and technologies introduced by the project show a high level of consolidation and are sustainable. Local partners recognize the importance of the practices and knowledge introduced and are very interested in continuing to provide support and follow-up to producers in the implementation of CCA practices. The project has also contributed to the development of several planning instruments and tools that will continue to be useful in the future to the various actors, namely through the definition of local CCA plans and the revision of several policy instruments. However, the delay in starting support to micro-projects limited its contribution to the sustainability and potential impact of the project.

Lesson 9: Sustainability - From the implementation of the project it is evident that it is important to ensure that capacity building efforts are broad and cover as many actors involved in the sector as possible. By training and educating facilitators, extensionists and other actors at provincial and district level, the project ensures that knowledge is not limited to a target group but is available to the whole community, facilitating replication of knowledge and sustainability of results.

194. The project effectively developed capacities and knowledge on CCA with a wide diversity and large number of agents, as detailed in chapter 3.3.3 of this report, which also ensures the continuity of the CCA practices introduced by the project, including an increase in the productivity of the sector in the beneficiary communities. The methodology adopted by the project, described above, has contributed to widespread recognition of the importance of adopting CCA methods. Despite this recognition, beneficiary producers state that they still require technical support to follow up on the practices introduced.

" *It is like asking an inmate when he gets out of prison if he wants to go back in. Those who have learnt what this project had to teach no longer change. Knowledge changes people. The farmer today speaks with knowledge. He can identify the problem and find a solution because he knows the alternatives. I cannot believe that a farmer abandons this knowledge and goes back to a time when he was completely blind and depended on the knowledge of the technician, who also knew little.*"

Testimony from a project partner

195. The fact that the facilitators are also farmers from the beneficiary communities guarantees greater possibilities for the continuity of the application of practices in the communities, either by the facilitators themselves, or through informal support to other farmers in the application of CCA practices.

196. The CCA practices selected and introduced by the project are low cost, which facilitates their use and maintenance by producers whose capacity to acquire productive inputs is very limited. There is evidence that many of the practices introduced by the project register a high level of appropriation and use: production, collection and use of quality seeds; composting; use of organic compost as natural fertilizer, soil mulching, use of fruit trees on the land as a source of extra income, introduction of new productive crops.

197. There are also some examples, in different beneficiary districts, of replication of practices by other producers who are not members of the FFS (see further chapter 3.8 for more detail) and there are even reports of informal meetings of farmers held in the communities and outside the scope of the FFS (e.g. Mabalane, Gaza), for joint monitoring of fields and sharing of practices.

198. The microprojects were assumed, in the project design, as a strategic mechanism to promote the sustainability of some outcomes; however, their late implementation calls into question this potential contribution to sustainability, to the extent that the beneficiaries themselves have doubts about their capacity to successfully implement the initiatives autonomously after the end of the project. However, in cases where the implementation of microprojects has already started, there are reports that confirm that these are allowing producers to increase their production and where there is the expectation that they can make a significant contribution to the generation of new sources of income, such as the sale of sesame, seeds or small animals (e.g. Nhamatanda, Sofala; Chimoio, Manica; Barué, Manica).

199. The project has also developed or supported the formulation of different planning instruments and tools that will continue to be useful to the various agents involved in the project with regard to the sustainability of results. These include the local CCA plans or the revision of the meteorological bulletins that are disseminated in paper format and through the community radios. The incorporation of CCACCA practices in local extension services and curriculum are also an important guarantee of sustainability.

200. At the national policy level, the introduction of climate change resilience as a priority in the Government Five Year Plan and the revision of several national strategic documents to mainstream CCA as an objective are important outcomes for maintaining political commitment to the theme. These instruments are also a valuable contribution of the project to the improvements in inter-institutional coordination that took place during the project and are a guarantee of better coordination between the different actors at national level.

Finding 16 - Despite the various gains in knowledge and capacity of the various actors in the field, there are doubts about the capacity of the provincial and district entities to follow up on this support in the long term without external funding and support, due to the financial limitations that the Ministries face. There are also doubts regarding the political commitment by the Ministries to continue the approach implemented by the project, since the Mozambican Government prioritizes support to the new Agrarian Extension Programme (Sustenta Programme) which does not contemplate FFS as an instrument for territorial action. In addition to these risks, the absence of a properly structured exit strategy and knowledge of partners limits the capacity of national authorities and partners to appropriate the results.

Lesson 10: Sustainability - It is essential that projects of this size, territorial scope, technical complexity and involving multiple partners and actors, define in a timely and participatory manner a structured exit strategy, with defined responsibilities, priorities and timetables and the knowledge of all stakeholders, in order to facilitate the ownership of results and responsibilities, contributing decisively to the sustainability of the changes achieved.

201. The network of extensionists in the different territories covered by the intervention predates the project and everything indicates that it will continue to exist with the support of the Ministry. However, the high turnover of technicians that has always characterised the extensionist network is a serious risk to the continuity of technical support enabled by the project in the communities, and may lead to the loss of knowledge installed in the territories. On the other hand, doubts remain about the Governmen capacity to provide all the material and financial means for extensionists to have the conditions (means of transport, fuel, etc.) to continue providing similar follow-up and support to farmers.

202. The successive delays in installing the 11 weather stations planned by the project in the various districts have made it impossible to introduce this information into the decision-making and production process of the farmers and support technicians. Although the project has implemented different training actions for the use of this information, it is not known to what extent this knowledge is maintained and whether there will be capacity on the part of farmers and technicians to make appropriate use of this information. The low literacy of producers also raises doubts about their autonomy in interpreting and making proper use of the data provided through the weather reports and the information shared by the community radios.

203. Fruit of the new political priorities of the national government and the centralization of all extension policy is the Sustenta Programme . Although this programme includes conservation agriculture as one of its priorities and provincial and district technicians are unanimous in recognizing the strategic value of FFS in supporting the most vulnerable communities and producers, it is not clear at this stage that the Government is assuming any responsibility in supporting the maintenance of FFS as an instrument for territorial action. Thus, it is essential to define in the next few months how the FFSs can be integrated in the scope of the Sustenta Programme strategy and the Government agricultural extension policy as a whole.

204. Despite these challenges, the greatest risk to the sustainability of the project results is the failure to define a structured exit strategy, designed together with the partners, activated and made known during the last year of the project, which limited the ownership of the results by the partner entities and generated doubts among the various partners about the phase after the end of the project and about who will take responsibility for the processes activated or created by the project.

> "*The projects are short-lived and sometimes have a lot of speed when they are underway and then there is a halt. The absence of defined mechanisms for the period after the project makes it difficult for producers to consolidate knowledge and greater government capacity to continue interventions.*"
>
> **Testimony from project partner**

205. Other factors that could threaten the sustainability of the changes and results achieved are: 1) the prevalence and worsening of armed conflicts in the central part of the country and covering the project intervention provinces; 2) the effects of the Covid-19 pandemic and the uncertainty about how the situation will evolve at national and regional level; 3) climate change and in particular the occurrence of extreme phenomena such as floods, extreme droughts or cyclones, which could compromise the results already achieved and further limit the capacity of communities that are already very vulnerable.

3.5 Factors that affect performance

3.6.1 Monitoring and Evaluation

EQ23. Was the M&E plan practical and sufficient?
EQ24. Were the recommendations provided by the MTR implemented? What were the repercussions of the implementation (or not) of the recommendations on the project implementation?

Finding 17 - The project had a monitoring and evaluation (M&E) plan and system suited to the management and implementation needs of the intervention, composed of robust indicators, well-defined targets and baselines, and data collection, storage, processing and analysis mechanisms adjusted to the reality of the country and the project. The decentralisation of data collection allowed the project to have regular and quality data, despite the difficulties faced with data collection by extensionists. The data produced by the M&E system proved useful for the reporting function but also to support project management, decision-making and to feed into the design of other initiatives. However, it is important to ensure that the final data includes information disaggregated by sex, district and province.

Lesson 12: Monitoring and Evaluation - Given the strategic value that M&E has for a project of these characteristics, and in order to avoid partner entities perceiving regular monitoring activities as external inspection exercises, it is essential that the instruments and the entire M&E strategy of the project be integrated in a balanced and timely manner with the systems already in use by partners, particularly government entities. This effort is also important to avoid duplication of effort in the collection of information, to allow for efficiency gains in terms of training the agents who will collect the data and to enhance the evaluation function among the different stakeholders.

206. The project had a robust monitoring and evaluation (M&E) plan that was adequate for the management and implementation needs of the intervention. This plan included a very comprehensive set of indicators, with properly identified targets and baseline. With the exception of the indicators defined for outputs 4.2 and 4.3, which were formulated in the form of a target, all other indicators were formulated in a technically correct manner, and it was possible to ensure regular monitoring of all project indicators, including the two mentioned above.

207. Although the indicators defined for monitoring the project were exclusively quantitative, mechanisms were implemented for the qualitative evaluation of the performance of the FFSs, which included the creation of a specific tool for recording lessons learnt and success stories, which was filled out whenever the project management team visited the provinces. The purpose of this tool was to assess the progress of each FFS and identify corrective measures required to improve its performance. The project M&E system also included a tool for recording and controlling all the activities implemented and a mobile application designed specifically for this project, which allowed the collection of data in the field and the production of updated information for project management.

208. The entire M&E system was decentralised to allow closer and more timely monitoring of activities, with the facilitators and extension agents in each district being responsible for regular data collection. These agents were duly trained to know how to correctly use all the project M&E tools, including the mobile application, but also to know the SOP procedures that they should respect and be aware of the importance of making a regular identification of lessons learnt that could influence the implementation strategy.

209. Despite the training they received, the use of the instruments by the extensionists was not the most suitable for the project monitoring needs. Firstly, because the data collected by the ET indicates that there was an effort made by the project team to integrate the monitoring activities into the extensionists regular tasks, avoiding an overload of work for them. However, the fact that the project M&E procedures included mechanisms allowing the project team to know in detail the extensionists workload was interpreted by the extensionists as a supervisory exercise, which so early limited their adoption and correct use of the tools. On the other hand, there were some delays in the upload of the data collected by the extensionists, related to delays in receiving the allowances associated with this task.

210. Faced with these constraints, the solution found was to entrust the agricultural services with this responsibility, making it the responsibility of the government entities to control daily activities and record monitoring data, and the project M&E specialist to verify and analyse the progress of project indicators.

211. Another change in the M&E system that took place during project implementation was the reduction of the periodicity of monitoring reports from quarterly to semi-annual, at the request of FAO and to avoid a disproportionate effort devoted to report production. Despite this change, the project M&E specialist continued to request progress data from the Provinces on a quarterly basis to ensure better monitoring of the implementation of project activities. All reports produced under the project were shared with Government partners and translated into Portuguese to facilitate ownership by FAO counterparts in the project.

212. The data produced under the project M&E system was useful for project management, allowing some adjustments to be made to activities to improve their effectiveness or to make some efficiency decisions, such as redirecting efforts to actions where progress was more limited. Based on the results collected in the reports, the areas of opportunity identified by the facilitators and others responsible for data collection were discussed, a process that facilitated timely decision making. However, the final data reported by the project lacked disaggregated information for some of the indicators whose targets included a specific sub-target for gender balance (indicators 2.1 and 2.2 of outcome 2; indicator for output 2.3).

Finding 18 - The MTR process, including the report, the conclusions and, above all, the recommendations developed were determinant in improving the performance of the project. For that contributed the fact that the MTR was carried out at a relatively early stage of the project and in time to allow the definition of new goals, influence the composition of the project team and allow the taking of several decisions that proved to be strategic, namely the signing of the Letters of Agreement with the project implementing partners.

Lesson 12: Monitoring and Evaluation - While the MTR resulted in a number of changes and decisions that proved to be critical to the project performance, it is important that internally FAO establish clearer procedures for defining an action plan for the implementation of evaluation recommendations (including priorities, responsibilities and timelines) and for following up on their implementation. These procedures could not only contribute to greater project effectiveness, but also increase the usefulness of evaluations and ensure that headquarters structures are better informed about progress in implementing the recommendations of evaluations.

213. The MTR process, as well as the conclusions and, above all, the recommendations included in the report, were instrumental in improving the performance of the project. This process proved to be an opportunity for the project team to reflect and readjust priorities and strategies, which resulted in several changes in the implementation and management mechanisms that allowed the integration of a more programmatic and results-focused vision.

214. As mentioned in the MTR report, the early days of the project were marked by slow start-up of activities, excessive centralisation of responsibilities in the role of the Project Coordinator and lack of coordination and involvement of Government partners. With the results and evidence generated by the MTR, the team was strengthened, with the integration of more technicians and greater delegation of responsibilities, the project team was moved to the Ministry building and served as a wake-up call, not only for the project team and FAO Mozambique, but also for the Government partners regarding the urgency to accelerate implementation and make the necessary adjustments in terms of programming.

215. One of the most relevant aspects resulting from the MTR and which positively influenced the performance of the project after this exercise was the signing of Letters of Agreement (LOA) with the different partners. Through this mechanism it was possible to define more clearly the responsibilities of each actor, which results were to be achieved and the resources to be mobilized. Through the LOA it was possible to accelerate the funding to DPAP and DEAS, key elements in the implementation of the activities at local level, but also to activate other partners such as INAM or IIAM so that the actions under their responsibility could progress positively during the second half of the project.

> "*All the partners of the Government of Manica districts had Letters of Agreement and these came to help a lot because as a State we always have many difficulties, but with the support of the partners and using this methodology we managed to achieve our intentions*".

Testimony of project partner

216. The MTR was a 'wake up call" for the project to accelerate implementation, and resulted in a key turning point for the success of the project, with the recommendations included in the report have been effectively mainstreamed. However, that happened in spite of the fact that no clear mechanisms defining responsibility and timelines for the implementation of MTR recommendations were in place, as it is acknowledged by stakeholders at FAO HQ level. The follow-up system on the implementation of the MTR recommendations should also be improved, allowing all internal structures a a regular and informed monitoring of these processes.

3.6.2 Other factors that affect the performance

Finding 19 - The Covid-19 pandemic, the armed conflicts in the central region of the country, the political changes in Government and, particularly, the various cyclones that hit the country are also factors that limited the performance or scope of the project. Conversely, the move of the project team to the Ministry building and the public recognition of the relevance and pertinence of the issue of CCA, favoured the project capacity to articulate with partner entities and allowed CCA to be integrated as a national priority at the political level.

Lesson 13: Others - The participatory, transparent and democratic approach implemented by the FFSs allowed for the creation of an informal learning environment and favoured the participation of the most vulnerable producers and those with lower levels of technical knowledge. In parallel, it was important for the performance of the FFSs to involve some former FFS beneficiaries in other projects as facilitators, allowing efficiency gains associated with their prior knowledge of the methodology and facilitating the creation of an environment of trust between producers and facilitators.

217. Another aspect that contributed positively to the project performance was the use of a participatory, bottom-up and democratic approach implemented by the FFSs, which allowed the creation of an informal learning environment and favoured the participation of producers, particularly those with lower levels of education. This aspect is particularly relevant if one considers that the project had as beneficiaries small-scale producers with low levels of technical knowledge and who present considerable levels of economic and social vulnerability.

218. The option of selecting and training some beneficiaries of a previous FAO project (MDG-1) to play the role of facilitators also proved to be strategic for the project. This option allowed for efficiency gains insofar as these people were already familiar with the FFS approach and methodological principles, and also facilitated the identification of producers with these facilitator-peers, who are, simultaneously, producers in the same communities as the beneficiaries they were supporting.

219. As a result of the MTR process and the constraints identified at the time, the project team was relocated to the MADER building, which expedited some decision making and facilitated communication between the project team and the Ministry.

220. A number of factors negatively affected the performance of the project. The occurrence of cyclones Idai, Dineo, Kenneth, Chalane and Eloise, among others, affected the quality of soils and compromised their productivity. The confidence of producers in their ability to cope with this type of phenomena was also shaken and required the project team a complementary effort to motivate and mobilise producers to remain committed to the process. As a result of the change in rainfall and wind patterns, there has been a change in soil composition, which causes producers some uncertainty about the effectiveness of the practices introduced and which were defined according to the pre-cyclone soil pattern.

221. Even so, the occurrence of these natural phenomena and the public and media evidence of their effects on communities eventually facilitated public and political recognition of the importance of including CCA practices in national sectoral policies and programmes.

222. The armed conflict in the central zone of the country not only hindered the implementation of activities and the mobility of technicians through the beneficiary territories, but also led to a significant change in contexts, as several project districts were directly affected and others saw several displaced people arrive in their communities.

223. Also the COVID-19 pandemic forced the project to significantly reduce the pace of implementation of activities during the final period of the project, when all efforts should have been mobilised to achieve the results. Due to the restrictions imposed at national level, many activities could not be consolidated, such as the creation of coordination platforms for post-project "handover" or the holding of several supervision meetings. Many producers were also deprived of being able to sell their products at small fairs and thus gain additional income as a result of the practices introduced by the project.

224. The constraints imposed by the pandemic at international level further limited FAO/Roma technical support through the LTO, as it was not possible to carry out field visits to personally assess progress, difficulties and opportunities for improvement, beyond what was reported to it in distance meetings or through the analysis of project progress data.

225. The 2019 general elections profoundly changed the set of project interlocutors at central and provincial level, led to changes in the territorial organization of the country (new and more districts) and represented a significant change in the Government position towards the project. With the change of ministers and ministries attributions, and with the definition of the Sustenta Programme as a priority, the project faced additional challenges in the relationship with the highest levels of ministerial decision-making and which conditioned the negotiation processes of the post-project period.

226. Finally, and according to several of the stakeholders consulted, the short duration of the project did not allow all the results to be materialized and limited the verification of some indirect results of the activities, such as the extension of practices and knowledge to other producers (replication of learning).

3.6 Gender

EQ27. To what extent have gender considerations been taken into account in project conception and implementation?
EQ28. Has the project been implemented in a way that ensures gender-equal participation and benefits?

Finding 20 - The strategy defined by the project for the promotion of gender equality proved to be consistent with project objectives and with the needs of communities, in particular women. The FFS has proved to be an effective approach in creating conditions for greater equality between women and men, having facilitated the inclusion of women in climate change adaptation and resilience and socio-economic development activities, which has enabled women to secure greater financial autonomy, breaking the cycle of dependence on men. The methodology implemented in the FFSs has also created conditions for the affirmation of women as full members, contributing to the election of several women to assume different roles in the leadership of the FFSs.

Lesson 14: Gender equality - FFSs social entities are a valuable opportunity for women participation, but also as a "social lift" in terms of women occupying decision-making positions in rural institutions.

227. According to the project design document (ProDoc), despite some improvements in the policy framework, gender inequality remains high in Mozambique, which occupies position 181 in the UNDP[17] Gender Inequality Index . Rooted in patriarchal culture, this problem makes it difficult for women to achieve greater economic self-sufficiency and social independence. The document identifies women and girls as one of the groups most affected by climate change and most vulnerable to its impacts, such as flooding, water contamination and salinization, soil erosion and destruction of infrastructure.

228. ProDoc identifies that women, for historical cultural reasons, ensure the collection of water and firewood for home and are forced to walk great distances to do so, which deprives them from engaging in school and other development activities. The Gaza region was identified as the most affected by issues of inequality, as many men migrate to South Africa in search of better opportunities, leaving it up to the woman to support the family through farming, one of the few income-generating activities that allow subsistence in rural areas.

229. In coherence with the diagnosis made, ProDoc defined a set of specific measures to ensure the inclusion of gender issues in the project. Gender issues were to be included in the curriculum of the FFSs and through the representation of women among the Master Facilitators and Facilitators of the FFSs, as well as through their mobilization for participation in the FFS trainings. The document further stipulated that all FFS activities should include a significant proportion of women, and a number of indicators were even defined that set a target that 30% of target group members who adopt adapted CCA strategies, practices and genetic material (indicator 2.2 for outcome 2), and of FFS Facilitators and non-FFS Facilitators who were expected to be trained in CCA and resilience strategies and practices (output 2.2 and output 2.3) should be women.

230. The FFSs curriculum was to include specific modules focusing on women traditionally managed practices and cultures in order to increase their resilience to climate change. It

[17] http://hdr.undp.org/en/countries/profiles/MOZ

was further stipulated that the technologies and approaches introduced should be adapted to the needs and traditions of men and women throughout project implementation.

231. From the analysis of the materials developed it can be seen that the project has satisfactorily achieved the inclusion of gender aspects, with the exception of the Facilitator Manual which is omitted in this matter. The FFSs curriculum included gender-sensitive practices/technologies such as nutrition activities through agro-processing and production of soya porridge and milk, cassava flour, sweet potato cakes, installation of solar-powered water pumps, cisterns (example: in Mabalane district, 14 cisterns were constructed in the FFSs for the active members of the FFSs involved in promoting home vegetable gardens, for collection and storage of rainwater). Activities that are traditionally managed by women were also implemented in order to increase their resilience to climate change. These activities included cultivation of vegetables, cowpeas, cassava, sorghum, mulching, animal husbandry (chickens, goats), production of hay and blocks of mineral salts for cattle, and to some extent also the production of biol and compost.

232. Although the Facilitator Manual does not include gender issues, the M&E data of the project also indicates that 49% of the FFS Facilitators training on CCA issues were women, with the project significantly exceeding the 30% target (output 2.2). This result is a result of the project strategy of seeking gender balance in the selection of facilitators, as a means of facilitating the participation of women as end beneficiaries of project activities. However, data is missing regarding the percentage of women beneficiaries for the final indicators of outcome 2 (2.2) and output 2.3.

233. In the main sectoral planning documents of the country, such as NIPAS and SPASD, specific considerations on the theme of gender equality are also included, namely within the scope of the chapter on transversal issues, in which guiding principles are established for the integration of gender challenges in the strategies for the promotion of resilience and CCA. These documents also express the need for the country to be able to "transform the agricultural sector from being predominantly a subsistence agricultural industry to a competitive and sustainable sector that would contribute to food security and increase the income of rural families "in a competitive and sustainable manner that ensures social and gender issues".

234. In the opposite direction, and despite the relevance of the theme, the Local Adaptation Plans to which the ET had access (Guijá and Mapai, Gaza) make no mention of gender issues, being also omitted about any specific strategy that may be integrated within the implementation of these plans and that may contribute to greater gender equality and to the reduction of women vulnerability to climate change. This aspect is particularly relevant when considering that in the initial diagnosis of the project, Gaza was identified as the region where issues of inequality between men and women were most evident.

235. Another factor considered important by the beneficiary women interviewed to facilitate their integration and benefit from the activities was the existence of women among the members of the DEAS extensionist network, agents who move between the various communities to provide support to farmers and who are highlighted by women as a great incentive for women in the communities to continue working and assert themselves as fully-fledged farmers.

236. The project also included a wide range of other measures or initiatives to ensure gender equality in the participation of beneficiaries in project activities. Within the productive micro-projects, proposals that included women farmers in positions of effective

leadership of the initiatives were prioritized. The manual on adaptation to climate change was evaluated by the FAO gender specialist in Mozambique, ensuring the integration of gender sensitive practices in the document, such as those related to water collection, traditionally performed by women and children. The implementation of activities for the development of home vegetable gardens, implemented mainly by women and which have proved to be very important for the diversification of the families diet. Also the activities promoting the collection and storage of rainwater (e.g. installation of cisterns) allowed women beneficiaries of these activities to have water at home, avoiding long journeys for water collection and freeing up useful time for them to participate more regularly in other project activities, including meetings and decision-making spaces in the FFSs. Finally, it is important to mention the integration of women facilitators in the running of the FFSs, allowing the creation of women-to-women empowerment spaces, considered fundamental by the beneficiaries interviewed, to allow them safe spaces to approach subjects that, as a rule, they do not approach when they are in a large group together with their male peers.

237. Another relevant aspect regarding the inclusion of gender issues is related to the themes addressed in the MFFSs training sessions, which integrated issues related to nutrition, community health, HIV/AIDS, as well as the breeding and treatment of small animals, an activity traditionally developed by women and that assumes particular relevance at the level of their financial autonomy.

238. The application of this set of measures promoting gender equality in participation resulted in an effective contribution to the empowerment of women participating in the FFS, both at leadership level (today there are more women in the leadership of the FFS) and at the level of their role in agricultural production. The project also contributed to raising men awareness to accept female leadership of the FFSs and as facilitators, which allowed for more meaningful participation in dialogue and decision-making spaces within the FFSs (democratic participation of women).

239. As a result of the strategy designed and implemented by the project, today there are more women facilitators, more women taking on technical functions to support farmers (e.g. vaccinators against Newcastle avian influenza in Barué, Manica) and, above all, more women elected to leadership positions in the FFSs. At this level, the examples are many. In Barué, Manica, the positions of President, Secretary and Treasurer of the FFS are held by women. In Gondola, Manica, the Treasurer and the Vice-President are also positions held by women. In both cases, the evaluation of the performance of female leaders is very positive and is seen as an incentive for other women to assume leadership positions in the various rural institutions. This transformation is particularly relevant when it occurs in rural environments where leadership roles are historically and culturally associated with a male responsibility.

240. Despite the affirmation of women within the FFSs, the various beneficiaries interviewed during the evaluation, whether men or women, coincide in their analysis of the distribution of the benefits produced by the project. The conclusion they draw is that the benefits flow equally to all members (men and women) because the focus has always been on the collective benefit of the FFS and that the distribution of benefits is decided democratically within the organization.

241. The methodological approach of FFS and the integration of gender issues as part of the intervention strategy allowed the project, in addition to encouraging greater

participation of women in agricultural activities, to promote their financial autonomy and break a cycle of dependence on men. Through access to revolving credit, savings and credit groups or agro-processing activities, examples of initiatives in which the majority of women participated, it has been possible for them to access productive means (e.g. chickens) or processing techniques (e.g. they produce rale, cookies or tuber flour) that guarantee them financial means, from the sales they make, to improve their living conditions. Among the examples shared with the evaluation team were women who said that they were now able to afford school materials for their children and plates of zinc to improve the roofs of their houses, more able to cope with health costs or even to diversify the family food basket (e.g. purchase bread or goat meat).

242. Across all 4 provinces visited by the evaluation, beneficiaries recognise that the project activities have been unique learning and knowledge acquisition opportunities to increase their resilience to the effects of climate change, contributing to increased self-confidence and empowerment of women to solve some specific domestic problems in an independent manner.

> *"As women producers, the project has changed our lives. These trees that you see here, around the FFS farm, it was not the men who planted alone. We women also have our plots. Now we do not have to wait for the men for the money to buy seed."*
>
> *"I grow tomatoes, and I will sell. Being a woman even without a man I can fund my children education expenses, I can buy goats and raise , I can buy zinc plates and make my house without having to rely on the man."*
>
> *"We are widows, our husbands passed away a long time ago and we suffered a lot (before the project). We walked in other people's fields doing wage labour, and from the little we were paid, we were supposed to meet all the needs including children's health, family sustenance, etc. Now, only death will take us away from farming."*
>
> **Testimony of project beneficiaries (different districts)**

243. Despite the various positive aspects triggered or generated directly by the project in terms of empowerment and gender equality, in some districts where the micro-projects have not yet started, some of the benefits listed above are still to be realised. In the specific case of Tsangano, Tete, the women regret that they have not yet had access to seeds, as the microprojects have not yet started, a situation which limits their capacity to leverage all the learning and access benefits that women in other districts already enjoy. In this specific case, 17 FFS microproject beneficiaries were selected and their funding was entrusted to a local NGO, which would assume responsibility for their management. However, only 8 FFSs benefited from this support, leaving the remaining ones without assistance. The UGP also developed efforts to identify and contract another provider that could accelerate the implementation of the remaining microprojects, however, with the end of the project this effort was not achieved in time.

3.7 Progress towards impact

EQ30. To what extent is the project expected to contribute to CCA in the agricultural and livestock production sector in Mozambique?
EQ31. Are there barriers or other risks that may impede future progress towards long-term impact?

Finding 21 - ***The data collected indicates considerable progress of the project towards the longer-term impacts defined in the ToC. Although the data from the endline study is not yet fully known, the available information confirms significant progress in terms of immediate impacts, as well as the creation of a critical mass at the national level that is critical to the achievement of long-term impacts. However, and despite having created very favourable conditions for the materialization of impacts, there are environmental and political threats that must be taken into consideration by the various project partners and on which effective coordination between FAO and MADER is required.***

Lesson 15: Gain of scale - Efforts to increase agricultural and livestock production and productivity through the introduction of CCA technologies and practices must be accompanied by the strengthening of associated value chains and facilitating producers to access the markets.

244. For the baseline and endline studies two different methodologies were used (SHARP and TAPE, respectively), which use different scales, different criteria and different forms of valuation/classification. Given also what was already mentioned in the chapter referring to R.2, only with the final data from this endline study will it be possible to know the data on the adoption of the CCA methodologies with precision and which will allow us to assess the extent to which attribution relations may be established between the changes verified and the project intervention.

245. Despite this limitation, this evaluation has identified - and confirmed through observation - strong evidence that in all 4 provinces the level of adoption of improved CCA strategies and practices (immediate impact) has evolved positively (see chapter 3.3.3 for more detail). There are, for example, consistent reports on the implementation of home vegetable gardens by women beneficiaries of the FFSs, use of seeds of short-cycle varieties introduced by the project, use of conservation agriculture practices, intercropping, construction of pens and elevated floor capoeiras or application of improved water utilization systems.

246. In line with these changes, this evaluation identified greater use of fruit trees on the land as a source of extra income in all 4 provinces, which is consistent with data from the endline study. In response to the question "Do you have more trees inside your farm thanks to the project intervention?", in the 4 regions, more than 50% of the respondents (project beneficiaries) claim to have more trees planted on their farms today as a result of the project action.

Tabela 2 – Summary of beneficiaries responses regarding the number of trees (TAPE data - endline survey)

Response options	Gaza	Manica	Sofala	Tete
Yes, it had an important impact on the number of trees in my farm	**57,9%**	**66,3%**	**65,5%**	**50,5%**
I have more trees than before, but it is not thanks to the project	8,4%	23,9%	1,8%	16,5%
It is the same as before	33,7%	7,6%	25,5%	27,8%
I have less trees than before, but it is not because of the project	-	2,2%	7,3%	5,2%

247. There are also indications that, as a result of participation in the project and the development of greater awareness of the importance of CCA practices, some of the beneficiary producers have changed their pattern of consumption/acquisition of productive inputs. Both from producers and service providers, there are consistent reports that at input fairs, FFS members now purchase more working tools such as hoes, machetes, ropes, watering cans, to the detriment of the pesticides and fertilisers they used to purchase. There are also references to a reduction in the purchase of seeds, because today they already know how to produce these inputs and can channel the financial resources available to purchase other materials.

248. Still on the adoption of the practices introduced and tested within the scope of the FFSs, the case of BIOL is considered by several of the stakeholders consulted as one of the most evident examples of the replication of practices and knowledge acquired outside the FFS fields of experimentation. The references in this regard indicate that farmers do not always strictly follow the technique that was transmitted to them, but that the adoption of the practice is a reality and that it has contributed to a significant reduction in the use of chemicals in agricultural production in the communities.

249. The replication of CCA practices by non-beneficiary producers is another relevant phenomenon that results not only from the intervention, but above all from the adoption of the practices by the beneficiaries. Adoption by imitation has been verified in various communities, especially in the Provinces of Sofala, Manica and Tete, and through the influence of several main factors. On the other hand, through the field days execution, where exchanges of experiences are promoted between beneficiary and non-beneficiary farmers, and where the latter have the opportunity to see the results of the application of improved CCA practices in the fields of the FFSs. On the other hand, because the plots of the beneficiary farmers have generated a lot of curiosity and interest among other producers in the communities, namely for the quality of the results verified, they end up adopting, according to the project beneficiaries, by imitation, some of the techniques on their farms, with particular emphasis on the technique of soil cover.

"The plots of FFS members serve as a mirror to the high demand CCA techniques are having in our communities. The results we have had attract many neighbours to come forward to learn from the trained producers. For example, one individual saw the results we achieved on our

test plot (of 50 x 50) and asked my spouse to teach the techniques. This neighbour went to replicate the method and at the end brought 4 cans of maize to offer us as gratitude."

Testimony of Member of FFS Santa Isabel, Nhamatanda,Sofala

250. The situation verified in Gaza, despite some reports of success in the adoption of BAM practices, is relatively different, in that, due to the greater dispersal of the communities and the high costs of transport, the Field Days involved fewer non-beneficiary producers. Also in the case of Gaza, access to water, fundamental for the implementation of some of the practices introduced, is very limited and rainfed agriculture still prevails as the main productive approach in many of the communities in the territory.

251. Another interesting aspect regarding the adoption and replication of practices is associated with the action of the beneficiaries themselves as knowledge multipliers. During the interviews and focus groups conducted, stories were shared of informal knowledge transmission with neighbours and members of other nearby communities, but also of replication of practices in family plots operated simultaneously by the beneficiaries, but also by their parents.

252. The data presented in the chapter on R1 of the project also indicate that the project contributed decisively to the other immediate impact defined in the ToC: increased capacity of the agricultural and pastoralist sectors of Mozambique to deal with climate change. On the part of the district and provincial service providers, there was a very positive assimilation of the knowledge shared in the various training actions from which they benefited, and also a very positive appreciation of the importance of this knowledge and the CCA practices that are being introduced in the territories by direct action of the project. Some of the service providers interviewed even shared with the evaluation team that they are also users of the CCA practices they learnt in their fields, important evidence that the appropriation of knowledge is a reality.

253. The third immediate impact defined in the ToC concerned "increasing the capacity of the Mozambique agricultural and pastoral sectors to cope with climate change". In this field, there is also evidence that the project allowed the achievement of relevant progress, although only the endline report will be able to confirm the extent of these changes. From the untreated endline data, it is possible to extract some relevant indications on this impact. Firstly, the data indicates that beneficiaries registered consistently higher results (on average) for the Resilience indicator in all 4 provinces of the intervention, when compared to the data verified for the non-beneficiary group surveyed (see table 3). It is important to mention that without a comparison with the baseline data the reading that can be done is limited, but the difference is still significant.

Table 3. Resilience score of beneficiaries and non-beneficiaries (TAPE data: average value per province)

Criteria/question	Province	Outcome Beneficiaries	Outcome Non Beneficiary
Resilience Score	Gaza	38	33
	Manica	59	50
	Sofala	63	54
	Tete	40	33

254. Equally relevant are the differences registered in the result of CAT [18](Characterization of Agroecological Transitions). CAT respresents the combined result of the various indicators considered for the endline study, according to the TAPE methodology, and provides a description of the current state of the level of transition to agroecology. Once again, the data reflect that in the case of the project beneficiaries the level of transition to agroecology is significantly higher (on average) than the non-beneficiaries, in the 4 project provinces (see table 4).

Table 4. CAT overall score of beneficiaries and non-beneficiaries. Average value per province.

Criteria/question	Province	Outcome Beneficiaries	Outcome Non Beneficiary
CAT Overall Score	Gaza	46	41
	Manica	64	52
	Sofala	66	59
	Tete	49	39

255. Within the scope of the TAPE study, beneficiary producers were also asked some questions regarding some of the changes that the project targeted and related to the impacts defined in the ToC, whose responses confirm the evidence that the project has made positive progress towards the expected impacts. Firstly, the beneficiary producers consider that they are now more self-sufficient in terms of access to seeds and that this is due to the project. Secondly, they consider that the project has empowered them to be better prepared to face the threats of climate change. Finally, beneficiaries consider that the intervention was responsible for their increased capacity to manage soil degradation on their farms.

[18] CAET is calculated on the basis of 10 elements of Agroecology proposed by FAO in the Guide for the Use of the TAPE methodology (see annex 5): access to land; productivity (and stability over time); income (and stability over time); value added; exposure to pesticides; food diversity; women empowerment; youth employment; agricultural biodiversity; soil health. More info at https://www.fao.org/3/ca7407en/ca7407en.pdf

Table 5: Summary of the beneficiaries responses to some of the TAPE survey questions. Average data per province.

Question	Response options	Gaza	Manica	Sofala	Tete
Thanks to the project, are you more self sufficient in terms of seeds availability?	Yes, thanks to the project I am more self-sufficient in terms of seeds	**75,8%**	**88,0%**	**87,3%**	**85,6%**
	I am more self-sufficient in terms of seeds, but it is not thanks to the project	9,5%	8,7%	7,3%	10,3%
	It is the same as before	14,7%	3,3%	3,6%	4,1%
	I am less self-sufficient in terms of seeds, but it is not because of the project	-	-	1,8%	
Do you think that after the project intervention you are more prepared to deal with climate change?	Yes, the project has helped me to deal with climate change	**93,6%**	**97,8%**	**98,2%**	**92,8%**
	Yes, but the project did not have any role in this improvement	3,2%	1,1%	-	4,1%
	My condition is the same as before the project's intervention	3,2%	1,1%	1,8%	3,1%
After the project, can you deal better with land degradation?	Yes, I can better manage land degradation in my farm	**89,5%**	**98,9%**	**89,1%**	**96,9%**
	It is the same as before	10,5%	1,1%	10,9%	3,1%

256. According to the interviews and focus groups conducted, there are also indications that the project contributed to the increase in production and productivity, to the reduction of production costs, namely through the acquired capacity to produce organic fertilizers and seeds, and to the preservation of soil quality (long-term 1st level impacts of Toc). The data from the TAPE study should allow confirmation of these changes and assessment of the degree of evolution registered, as well as assessment of the real contribution of the project to these changes.

257. Finally, there are some clues that indicate that the project may have contributed to increased food security (final long-term impact), through the introduction of organic food production, access to improved seeds and the production of new crops, as well as to increased families livelihoods (final long-term impact), through increased production and productivity, and the subsequent greater availability of products for sale in small markets or directly to other community members, but also through the reduction of some production costs.

"*Farmers have started to save money on the purchase of some inputs and in the area of nutrition, they already know the usefulness of pumpkin for child and adult health.*"

"Farmers now produce soya and this is in line with FNSTS[19] and MISAU[20] priorities for nutritional supplementation for children (< 5 years), pregnant and lactating women."

Testimony from FFS Members Hama Maoko, Barué, Manica

"The project is helping families to save costs on food purchases and thus hunger can be eliminated."

Testimony from FFS Members Nhambende, Nhamatanda, Sofala

258. Although the data indicates that the project is in a good position for the anticipated impacts to materialize, there are some conditions that should be ensured so that the chain of changes defined in the ToC can take place in the medium-long term, as well as some risks that could threaten the sustainability of the results and the impact potential of the intervention.

259. Regarding the conditions and resources necessary for the achievement of impacts, it is fundamental to ensure that the Government continues, through the provincial and district extension services, to support the farmers benefiting from the project, preferably through the maintenance of institutional and technical support to the FFSs. On the other hand, only by guaranteeing a mainstreaming of the practices introduced by the project in the other provinces of the country will it be possible to ensure that the benefits are generalized throughout the country.

260. Another important factor to ensure that the results already verified may lead to a real improvement in the conditions of subsistence and resilience of the beneficiary communities, is that the value chains of the introduced crops are developed and that opportunities are created to facilitate the sale of the additional production that tends to occur. Several stakeholders involved in the evaluation refer that the increase in productivity and production is considerable, but that the gain associated with the sale of the productive surplus is proportionally lower, as the communities do not have access to markets and can only commercialise their products within the community at uncompetitive prices.

261. Four types of **risks** have been identified **that may threaten the achievement of impacts**. The first, and the one beyond the control of the actors involved in the project, is related to the possibility of extreme natural events reoccurring and destroying the fields and infrastructure developed under the intervention. Mozambique is one of the countries most exposed to the occurrence of cyclones, extreme droughts and floods, and there is a high level of probability that this risk will materialize. To face this threat it is important to ensure that producers continue to have technical support from the extension services to continue the process of adapting production techniques adapted to climate change and, that these can be disseminated through the Rural Development Programmes of the Mozambican Government.

262. Secondly, the policies that are currently considered a priority by the Government (Sustenta Programme), and in particular by MADER, do not consider the FFSs as a strategic tool for intervention with farmers, which may lead to the closure of these various structures

[19] Technical Secretariat for Food Security and Nutrition.

[20] Ministry of Health.

in the medium term. On the other hand, and even though CCA issues have been included transversally in the various sectoral policy domains, the Sustenta Programme has a very strong focus on increasing productivity, rather than on promoting agroecology as a development strategy for the sector. It is of utmost importance that FAO manages to influence MADER in order to ensure that the FFS approach implemented by the project can be taken into consideration and integrated into future ministerial action. The resolution of this mismatch of perspectives can generate complementary gains at the level of dissemination of CCA practices to the other provinces in the national territory.

263. In the specific case of Gaza, access to water is a problem that not only affected the results of the project, but may jeopardize progress towards the desired impacts. This is a structural problem of the sector that affects this province, but also impacts other areas of the territory, so it is important that the Government, with support from the other partners in the sector, including FAO, can develop mechanisms and adopt technologies that enable access to water by producers. If the situation persists, there is a serious risk that the effects of lack of access to water will worsen in some communities, leading them to abandon some of the agro-ecological practices introduced that depend on accessibility to irrigation points.

264. Finally, the risk was identified that some producers may regress in the adoption of some agroecology practices learnt during the project, due to the higher cost of CCA practices in comparison with the practices previously used. One such case is the practice of cutting grass as an alternative of burning it. Cutting grass has a considerably higher financial and time cost than burning, so there is a risk that farmers who do not derive a direct benefit from grass (those who do not need hay or have nowhere to sell it) will abandon this practice. However, it is important to mention that during the implementation of the project a cost-benefit analysis of the practice of cutting the grass was carried out, and it was concluded that this practice, despite not being profitable in the first campaign, represents considerable gains from the second or third campaign onwards. These results were shared with the producers, in order to make them aware of the importance of maintaining the practice in the future.

4. Conclusions and recommendations

4.1 Conclusions

Conclusion 1 The GCP/MOZ/112/LDF project, its objectives and outcomes were and will continue to be very relevant for strengthening national capacity for adaptation and resilience to climate change.

Despite the project progress in achieving its outcomes and objectives, the threats associated with climate change that justified the project design have not changed and are tending to worsen in terms of impact or frequency. The project is perfectly aligned with the country key CCA priorities, the country Programming Framework, the GEF operational programme strategies and the ODS goals and targets.

Conclusion 2 The project design is coherent with the initial problems, with the reality of the context and target audiences, and included strategic responses and a logical sequence to reach its final objective.

The components foreseen for the implementation of the GCP/MOZ/112/LDF Project included a holistic approach which proved to be strategic for the achievement of the final outcomes and objective, acting at the 1) macro level, in the definition of rural development policies and programmes, 2) meso level, developing the installed capacities of extension services, and 3) micro level, disseminating technical knowledge and CCA practices effectively among the final beneficiaries. The contribution of the different partners to the project conception contributed positively to the final quality and adequacy of the intervention strategy.

Conclusion 3. the FFS methodology remains the most effective and efficient option to ensure the transfer and adoption of CCA technologies and practices in the rural areas in Mozambique.

The FFSs, due to the collective dimension of their methodology, are the most efficient option to guarantee producers and their communities access to knowledge, technical support, innovative technologies and inputs at controlled costs. The bottom-up approach implemented allows adequate responses to be given to the specific needs of the beneficiaries in the different districts and generates opportunities to benefit other members of the communities.

Conclusion 4. the GCP/MOZ/112/LDF project was quite successful in Components 1 and 2, contributing to increasing the capacity of the agricultural and pastoral sectors of the 4 intervention provinces to cope with climate change.

The project succeeded in raising awareness among key stakeholders in the sector and awakening their interest in CCA, a determining factor for the success of training efforts of district and provincial service providers. Through this strategy, but also through the adequacy of the FFSs methodology, several innovative CCA practices were effectively introduced. Experience-based learning has also contributed to a high interest of farmers in CCA techniques and an important appreciation of the changes achieved in terms of productivity and resilience.

Conclusion 5. The institutional articulation between the ministries produced relevant outcomes in terms of the definition of rural development programmes and intersectoral coordination, although the political changes that took place limited the scope of these outcomes.

Good institutional coordination was crucial to ensure greater integration of CCA issues in sectoral planning processes and to create conditions for greater future dissemination of CCA measures in the country. The project had a decisive contribution to the creation of the NDC and Local Adaptation Plans, but the political changes in the post 2019 general elections have conditioned progress in the revision of SPASD and NIPAS, and raise doubts about the Government future commitment to the FFS approach and the priority of CCA.

Conclusion 6. the consensus on the relevance of the theme of CCA and the MTR were determining factors for the success of the intervention.

The occurrence of several extreme natural phenomena created the necessary political and public opinion conditions for the progress made in introducing CCA questions in the discourse and in the main sectoral planning instruments. In turn, the MTR process and its recommendations served as a stimulus for the implementation of important adjustments to the project design and for a more focused and results-oriented management.

Conclusion 7 The project managed to mobilize all the necessary resources for an effective and efficient implementation, having achieved a very high financial execution rate. However, some lack of proactivity from the management and the lengthy procurement processes at FAO led to some relevant delays that limit the impact and sustainability of the results.

The co-financing foreseen for the project was not only mobilized in full and on time, but was also exceeded, allowing the project a financial execution in the order of 98%. Despite this success, the slowness and unsuitability of procurement procedures to the reality of the country, as well as some lack of agility in decision-making by the CTA, meant that the meteorological stations have not yet been installed and the microproject activity has started too late, limiting its contribution to the results and impact of the project and limiting the conditions for its sustainability.

Conclusion 8. some conditions for sustainability of knowledge on CCA and capacity of the various actors to continue implementing the techniques introduced have been met. However, there are doubts about the financial capacity of the provincial and district entities to ensure the continuity of support to farmers and about the political commitment of the Ministries to give continuity to the FFSs and maintain CCA as a sectoral priority.

The results achieved in terms of knowledge on CCA and agroecology, and the gains in capacity of the various actors on the ground to implement the techniques and teconologies introduced by the project present a high level of consolidation and are sustainable. Within the scope of the project, several planning instruments and tools were created that will continue to be useful in the future to the various agents and are highly valued by the different stakeholders. With the change in MADER political vision for the future of the sector and the entry into force of the Sustenta Programme , the FFS are no longer considered as a strategic instrument for rural development by the Ministry. This change, together with the absence of a project exit strategy

that would allow anticipating and mitigating this risk, create doubts about the medium-long term sustainability of the policy changes achieved.

Conclusion 13. The GCP/MOZ/112/LDF Project has achieved, through the institutional, technical and individual training of farmers as well as their adoption of CCA practices, very important advances towards long-term impacts.

Although the endline study is not yet finalized, the available data indicate that the Project was able, through an intensive process of learning, technical training and design of rural development policies and programs, to develop a real national critical mass on CCA and consolidate a path of generalization of CCA practices in the 4 provinces of intervention, fundamental to the changes expected in the long term impacts defined in the ToC. Mozambique's exposure to the occurrence of extreme natural phenomena and doubts about the government's political commitment to the CME methodology and to the prioritization of MIL are the main risks to the achievement of these impacts.

4.2 Recommendations

Recommendation 1. In designing future projects of similar size and complexity levels, a more realistic inception period (minimum 6 months) should be considered, allowing for adequate implementation planning and timely preparation of all conditions necessary for effective and efficient execution, including the hiring of all members of the project management team and the definition of partnership agreements with all key partners.

Responsibility: FAO/GEF.
Deadline: In the future, in the designing of new projects.

Recommendation 2. Future projects should include, as an activity, the definition of an exit strategy or sustainability plan that is strategic and realistic. In order to ensure better conditions for the sustainability of the results achieved and the dynamics created by the projects, it is essential that a structured exit strategy, with defined responsibilities, priorities and timetables, including the role of government entities, is defined in a timely and participatory manner with the main partners who have responsibilities.

Responsibility: FAO (project formulators, project task forces and Budget Holders), and FAO GEF GCU.
Deadline: In the future, in the designing of new projects.

Recommendation 3. Also in relation to project design, it is important to consider political cycles and potential changes in strategy, vision or leadership as a risk to project implementation and results. This aspect should be duly integrated in the assumptions and hypotheses of the Theory of Change, whenever relevant. Possible measures to mitigate or respond to these changes should also be defined at the design stage of the intervention.

Responsibility: FAO (project formulators, project task forces and Budget Holders), and FAO GEF GCU.

Deadline: In the future, in the designing of new projects.

Recommendation 4. For more effective project implementation, but also so that management can be more consistent with the principles of Results Based Management (RBM), the M&E system should include a more comprehensive level of disaggregation of data (by gender, district, province, stakeholder). At the reporting level it should also be ensured that data on project indicators is always presented in a disaggregated way to facilitate a better understanding of potential deviations or limitations, and allow the activation of corrective measures (if necessary) in a timely manner.

Responsibility: FAO (project formulators, project task forces and Budget Holders), and FAO GEF GCU.
Deadline: In the future, in the designing of new projects.

Recommendation 5: To reinforce the outcomes achieved under component 3 of the GCP/MOZ/112/LDF Project, it is recommended to FAO Mozambique to maintain its support to the Government to finalize the revision of SPASD and NIPAS, ensuring that these documents integrate the issues of CCA.

Responsibility: FAO Mozambique.
Deadline: Immediately.

Recommendation 6. FAO and MADER should initiate, as soon as possible, specific discussions on the future of FFSs and their integration into future rural development policies and programmes, including the Sustenta Programme . The investment made in the creation and training of FFSs is strategic for the country rural development efforts and to ensure that the most vulnerable farmers, who do not yet have a market-oriented productive vision, have adequate accompaniment and technical support. Being a highly efficient and effective rural extension methodology, the FFSs should not be abandoned or left to self-management, under penalty of being closed due to lack of support, leaving thousands of farmers without technical support.

Responsibility: FAO and MADER.
Deadline: Immediately.

Recommendation 7: FAO should review the adequacy of the procurement processes and procedures currently in place and applicable to projects of this nature. The successive delays caused by the complexity and length of procurement procedures, and their inadequacy to the context of the intervention, seriously damage FAO reputation with institutional partners and beneficiaries, and jeopardize the effectiveness of implementation in terms of the quality and comprehensiveness of results, therefore these procedures should be subject to a deep analysis.

Responsibility: FAO.
Deadline: Immediately.

Recommendation 8: To build on the results of the GCP/MOZ/112/LDF Project, initiatives focused on the development of value chains, promotion of market access for farmers benefiting from FFSs and support to access information systems should be included. The gains in productivity and increased production generated by the project could be capitalized to facilitate the achievement of long-term impacts if there is a structured focus on the development of agricultural and livestock value chains benefiting from the project, as well as the promotion of market access. To take better advantage of the results related to the instalation of the agrometeo stations, it would be important to support farmers' access to information systems by building digital skills where internet acess already is available. This would allow farmers to access more knowledge or weather data that can be relevant to improve their performance as producers.

Responsibility: FAO.

Deadline: In the future, in the designing of new projects.

Appendices

Appendix 1. List of people interviewed

Name	Organisation	Position	Province	District	Date
Claúdia Pereira	FAO Representation In Mozambique	Assistant FAO Representative – Programme	N/A	N/A	29/jun 7/jul
Pedro Simpson	FAO Representation In Mozambique	Project Manager/Coordinator	N/A	N/A	22/jun
Francisco Chirrute	FAO Representation In Mozambique	M&E Specialist	N/A	N/A	25/jun
Eugenio Macamo	FAO Representation In Mozambique	Program Officer	N/A	N/A	06/jul
Orlando Gemo	FAO Representation In Mozambique	National FFS experrt	N/A	N/A	23/jun
Maximo Ochoa	FAO Representation In Mozambique	International FFS expert	N/A	N/A	05/jul
Baltazar Macucule	FAO Representation In Mozambique	Livestock specialist	N/A	N/A	06/jul
Fritjof Boerstler	TCIDD/FAO GEF coordination Unit (FAO HQ)	GEF Funding Liaison Officer	N/A	N/A	24/jun
Marcio Almeida	FAO Representation In Mozambique	Technical Officer/Operations Specialist	N/A	N/A	23/jun
Abram Bicksler	AGPMD - Office of Director (FAO HQ)	LTO Officer (Lead Technical Officer)	N/A	N/A	28/jun
Licinia Cossa	NDSFF	former technical team of the former National Directorate of Extension	N/A	N/A	08/jul
Nilza Joobert	Office of Environmental Safeguards	Director	N/A	N/A	06/jul
Fredson Patria	CEWD	Head of Department	N/A	N/A	28/jun

Tereza Alves Janet Americano Camila Jacinto Ivete Telmácia Leonel	IIAM	Technical team	N/A	N/A	14/jul
Carla Dovale	IIAM	Germplasm Bank Researcher	N/A	N/A	09/jul
Agostinho Fernando	MITA	Technical team (Former staff of NDEM), currently Head of the National Directorate of Climate Change, Ministry of Land and Environment	N/A	N/A	29/jun
Aderito Adamuge	INAM	General Manager	N/A	N/A	07/jul
Isaias Raiva	INAM	Project focal point at INAM (Planning and Research Department)	N/A	N/A	29/jun
Danilo Latifo	DPA-SA	Provincial Director	Gaza	Xai-Xai	21/jun
César Muhate	DPA-SA	Provincial Focal Point	Gaza	Xai-Xai	21/jun
Anselmo Papuchila	DPA-SA	Provincial Focal Point	Gaza	Xai-Xai	21/jun
Micas Bila	DEA	Head of Department of Ext. Agraria e Pescas	Gaza	Xai-Xai	25/jun
Mauro Sumbane	DEAS	Supervisor	Gaza	Mabalane	22/jun
Narciso Zacarias	DEAS	Director	Gaza	Mabalane	23/jun
Filipe Muchanga	Radio Comunitaria de Mabalane	Director	Gaza	Mabalane	24/jun
Judite Naftal	DEAS	Extensionist	Gaza	Mabalane	24/jun
Miguel Cumaio	IIAM	Researcher	Gaza	Chokwe	24/jun
Luciano Alemao	DEA	Provincial Focal Point	Tete	Moatize	28/jun
Fernando Assane	DEA	Head of Department of Ext. Agraria e Pescas	Tete	Moatize	28/jun

Damiao Pitala	DEAS	District Focal Point/Supervisor	Tete	Angónia	29/jun
Job Pita	DEAS	Director	Tete	Angónia	30/jun
Alcidio Vilanculos	IIAM	Researcher	Tete	Angónia	30/jun
Amade Omar	DPIS	Director	Tete	Angónia	30/jun
Orlando Festa	DEAS	Director	Tete	Tsangano	01/jul
Geraldes Mafunda	DEAS	District Focal Point/Supervisor	Tete	Tsangano	01/jul
Odete Naftal	DPA-SA	Provincial Director	Tete	Moatize	02/jul
Samuel Cumbane	FAO Representation In Mozambique	Provincial Coordinator	Gaza	Chokwe	24/jun
Filipe Saize	FAO Representation In Mozambique	Provincial Coordinator	Tete	Tete	02/jul
Regina Tivane Sasleta Govene Rafissina Chauque Lucas Chongo Arone Mcahava	FFS	Peasants Facilitators	Gaza	Mabalane	22/jun
11 beneficiários da FFS Txivirica phukwe/Tsakane	FFS	Beneficiaries (1H+10M)	Gaza	Mabalane	22/jun
6 beneficiários da FFS/ECC força unida Zona 8	FFS	Beneficiaries (3H+3M)	Gaza	Mabalane	23/jun
6 beneficiários da FFS/ECC força unida Zona 8	FFS	Beneficiaries (6M)	Gaza	Mabalane	23/jun
8 beneficiários da FFS Dzondzane	FFS	Beneficiaries (2H+6M)	Gaza	Mabalane	24/jun
8 beneficiários da FFS Muguadala 1	FFS	Beneficiaries (2H+6M)	Tete	Angónia	29/jun
9 beneficiários da FFS Tiguirane Manja	FFS	Beneficiaries (5H+4M)	Tete	Angónia	20/jun
6 beneficiários da FFS Gimo	FFS	Beneficiaries (3H+3M)	Tete	Tsangano	01/jul
Diogo Borges David	Provincial Directorate of Agriculture and Fisheries	Director	Sofala	Beira	21/jun

Armando Dique Camissa	Provincial Directorate of Agriculture and Fisheries	Coordinator of Agricultural Extension Department	Sofala	Beira	21/jun
Abdul Latif Eugênio	Provincial Directorate of Agriculture and Fisheries	Project Focal Point and Head of Agricultural Department	Sofala	Beira	21/jun
Estefânia Gizela	ORAM	Head of Finance	Sofala	Beira	21/jun
Acácio Jorge Nhequeto	ORAM	Field Technician	Sofala	Beira	21/jun
Edith Cunheto	ORAM	Program Officer	Sofala	Beira	21/jun
Lourenço Lampião Domingos	FFS Lamego	Peasant facilitator	Sofala	Nhamatanda	22/jun
Joaquina Nacho	FFS Xiluvo	Peasant facilitator	Sofala	Nhamatanda	
Manuel Guerra	FFS de Nhamboca, povoado de Momba	Peasant facilitator	Sofala	Nhamatanda	
António Naera	FFS Tica-Sede	Peasant facilitator	Sofala	Nhamatanda	
Benjamin Luís Simane	FFS Mecuzi	Peasant facilitator	Sofala	Nhamatanda	
João Manuel Guerra	FFS Metuchira Pita	Peasant facilitator	Sofala	Nhamatanda	
Castigo Ernesto Sabonete	FFS Mecuzi 2	Peasant facilitator	Sofala	Nhamatanda	
Zangua Afonso Jequecene	DEAS	Project Focal Point	Sofala	Nhamatanda	
Omar Ernesto	FFS Santa Isabel	Beneficiary	Sofala	Nhamatanda	23/jun
Joaquim Jequete	FFS Santa Isabel	Beneficiary	Sofala	Nhamatanda	
Maria do Céu Cabral	FFS Santa Isabel	Beneficiary	Sofala	Nhamatanda	
Joana Ernesto Meque	FFS Santa Isabel	Beneficiary	Sofala	Nhamatanda	

Inês William Bobo	FFS Santa Isabel	Beneficiary	Sofala	Nhamatanda	
Mijalina Jone Domingos	FFS Santa Isabel	Beneficiary	Sofala	Nhamatanda	
Teresa João Mawana	FFS Santa Isabel	Beneficiary	Sofala	Nhamatanda	
Otília Mauze João	FFS Santa Isabel	Beneficiary	Sofala	Nhamatanda	
Marta Bomba	FFS Nhambende	Beneficiary	Sofala	Nhamatanda	23/jun
Catarina Inácio	FFS Nhambende	Beneficiary	Sofala	Nhamatanda	
Lúcia Bernardo	FFS Nhambende	Beneficiary	Sofala	Nhamatanda	
Rabeca Ussore	FFS Nhambende	Beneficiary	Sofala	Nhamatanda	
Joana Augusto	FFS Nhambende	Beneficiary	Sofala	Nhamatanda	
Alberto João	FFS Nhambende	Beneficiary	Sofala	Nhamatanda	
João Santos	FFS Nhambende	Beneficiary	Sofala	Nhamatanda	
Maria Miguel	FFS Nhambende	Beneficiary	Sofala	Nhamatanda	
Filipe Munhave Machava	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	24/jun
Francisca António	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Ricardo Noé Muchanga	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Helena António Jorge	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Emília Manuel	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Vaina Joaquim	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Arminda Noé	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Fernando José	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Cândida Sale Sithole	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Ana Maria Vale	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Orlanda Mário	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Jeremias Cândido	FFS Ufumi ndi badza	Beneficiary	Sofala	Nhamatanda	
Fernando Armando Chimbuia	DEAS	Director	Sofala	Nhamatanda	24/jun

Ernesto Lopes	Provincial Directorate of Agriculture and Fisheries	Director	Manica	Chimoio	24/jun
José Manuel Silvestre	PAES/DPAP	Head	Manica	Chimoio	28/jun
José Chiocho	Departamento de Agricultura	Head of Department and project focal point	Manica	Chimoio	28/jun
Felizardo Constantino Chicoche	Báruè District Government	District focal point	Manica	Báruè	28/jun
Baptista Alficha	FFS de Munene	Peasant facilitator	Manica	Báruè	29/jun
Orlando João	FFS de Nhansanze	Peasant facilitator	Manica	Báruè	
Felisberto João	FFS de Julius Nyerere	Peasant facilitator	Manica	Báruè	
Augusto Deniwa	FFS de Nhampandiwa	Peasant facilitator	Manica	Báruè	
Feliciano Eusébio	FFS de Malomo- Gulamite	Peasant facilitator	Manica	Báruè	
Rafael Quizito Vinte	FFS de Nhamitondo	Peasant facilitator	Manica	Báruè	
Octavio Franque Nguiraze	FFS de Nhasakale-Sede	Peasant facilitator	Manica	Báruè	
Edmon Landene Chisenga	FFS de Catandica-Sede	Peasant facilitator	Manica	Báruè	
Benedito José Deniasse	FFS de Munene	Peasant facilitator	Manica	Báruè	
António Chuva Chimaridzene	FFS de Honde-Sede	Peasant facilitator	Manica	Báruè	
Celestino Costa	FFS de Nhamudzadza	Peasant facilitator	Manica	Báruè	
Manuel Jaquecene	FFS de Musambidze	Peasant facilitator	Manica	Báruè	
Geraldo Sueta Campira	FFS de Nhazonia	Peasant facilitator	Manica	Báruè	
António Soares Paulo	FFS de Munene Chupanga	Peasant facilitator	Manica	Báruè	
Rosa Bica	FFS de Nhamwale-Sede	Peasant facilitator	Manica	Báruè	
Orlando Kumbukane Safrão	FFS de Cruzamento Macossa Mfudze	Peasant facilitator	Manica	Báruè	
Isaque Alfredo Cerveja	FFS de Nhanjiwa	Peasant facilitator	Manica	Báruè	
Zeferino Albino José	FFS de Julius Nyerere	Peasant facilitator	Manica	Báruè	
Daniel Jairoce José	FFS de Cruzamento de Honde	Peasant facilitator	Manica	Báruè	
Vasco Jorge Chapanga	FFS Hama Maoko - Chidengue	Peasant facilitator	Manica	Báruè	
Terezinha Martinho	FFS Kupedza Urombo	Beneficiary	Manica	Báruè	30/jun

Fayoza António	FFS Kupedza Urombo	Beneficiary	Manica	Báruè	
Julieta Eliasse	FFS Kupedza Urombo	Beneficiary	Manica	Báruè	
Margarida Losse	FFS Kupedza Urombo	Beneficiary / Secretary	Manica	Báruè	
Elisa Changadeia	FFS Kupedza Urombo	Beneficiary	Manica	Báruè	
Januário Jequecene	FFS Kupedza Urombo	Beneficiary	Manica	Báruè	
Edmon Landene Chinsenga	FFS Kupedza Urombo	Peasant facilitator	Manica	Báruè	
Veroza Eliasse	FFS Hama Maoko	Beneficiary	Manica	Báruè	
Verozinha Fopence	FFS Hama Maoko	Beneficiary	Manica	Báruè	
Sandista Hoda	FFS Hama Maoko	Beneficiary	Manica	Báruè	
Quizeria Chakuda	FFS Hama Maoko	Beneficiary	Manica	Báruè	
Dermolina Zarko	FFS Hama Maoko	Beneficiary	Manica	Báruè	30/jun
Ana Zireque	FFS Hama Maoko	Beneficiary	Manica	Báruè	
Rita Mesa	FFS Hama Maoko	Beneficiary	Manica	Báruè	
José Tembo Fajune	FFS Hama Maoko	Beneficiary / President	Manica	Báruè	
Vasco Jorge Chapanga	FFS Hama Maoko	Peasant facilitator	Manica	Báruè	
Lucas Raice	DEAS Báruè	Director	Manica	Báruè	30/jun
Emília Manuel Francisco	FFS Kulima kwa kanaka	Beneficiary / Vice-President	Manica	Gondola	
Anita Paulino Zebedia	FFS Kulima kwa kanaka	Beneficiary	Manica	Gondola	
Laura Mesquita Baene	FFS Kulima kwa kanaka	Beneficiary / Treasurer	Manica	Gondola	01/jul
Luís Manuel Pombe	FFS Kulima kwa kanaka	Beneficiary / President	Manica	Gondola	
Ferrão Lapissone Biade	FFS Kulima kwa kanaka	Beneficiary	Manica	Gondola	
Adolfo António Felisberto	DEAS	District supervisor of extension network and project focal point	Manica	Gondola	01/jul

Appendix 2. Number of FFS involved in the project

Province	Total
	N
Tete	**153**
Tsangano	50
Angónia	52
Macanga	51
Manica	**161**
Barue	27
Manica	27
Macate	32
Sussundenga	24
Gondola	27
Vanduzi	24
Sofala	**103**
Buzi	26
Marringue	27
Nhamatanda	24
Gorongosa	26
Gaza	**98**
Guija	18
Chicualacuala	23
Chigubo	20
Mapai	20
Mabalane	17
TOTAL	**515**

Source: M&E data from project

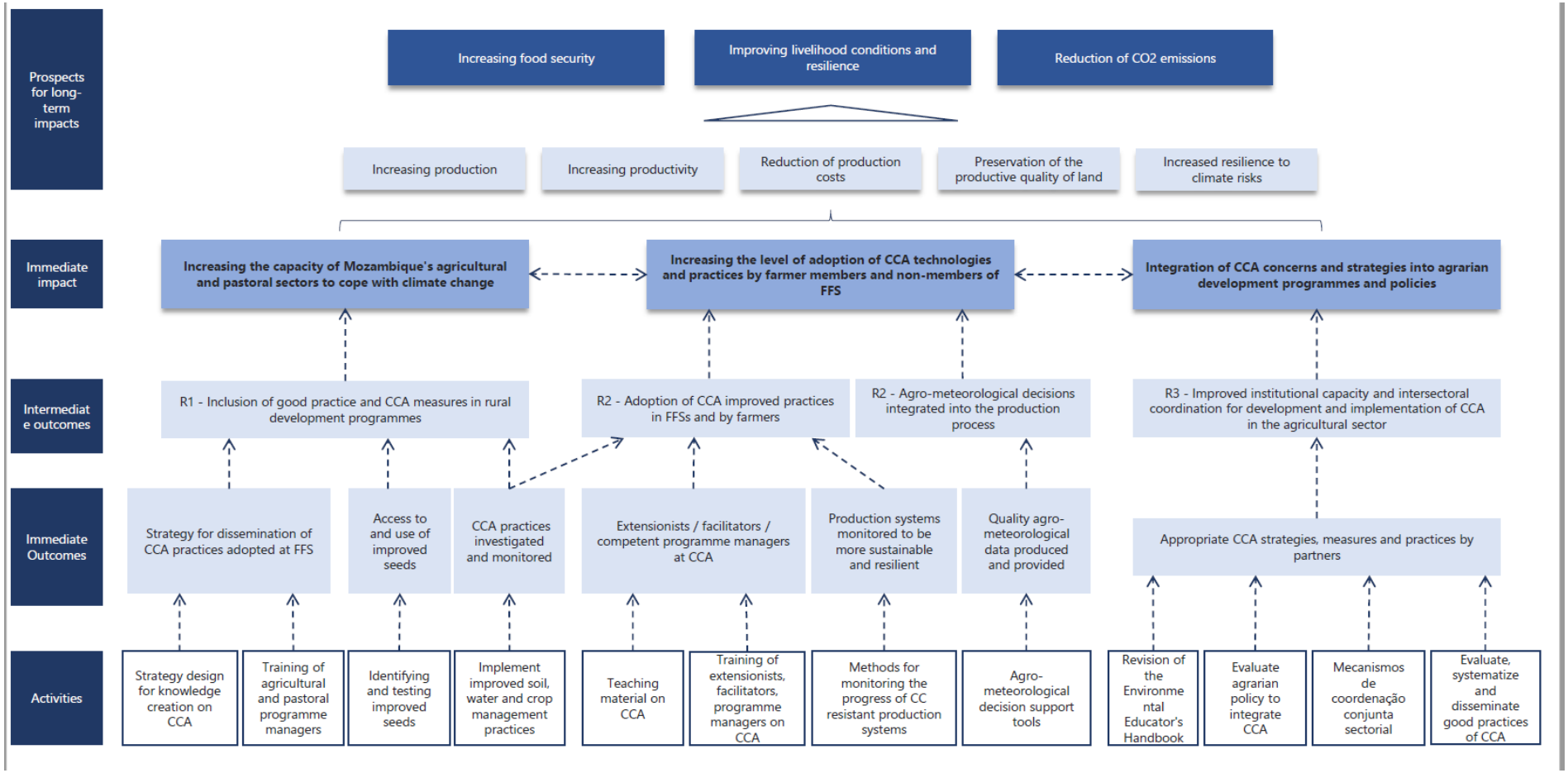
Appendix 3. Number of FFS members by Province

Province	Men		Women		Total
	N	%	N	%	N
Tete	**1.855**	**46,03%**	**2.175**	**53,97%**	**4.030**
Tsangano	629	47,47%	696	52,53%	1.325
Angónia	634	45,22%	768	54,78%	1.402
Macanga	592	45,43%	711	54,57%	1.303
Manica	**1.925**	**43,46%**	**2.504**	**56,54%**	**4.429**
Barue	325	42,99%	431	57,01%	756
Manica	325	44,64%	403	55,36%	728
Macate	390	45,51%	467	54,49%	857
Sussundenga	284	41,95%	393	58,05%	677
Gondola	318	42,12%	437	57,88%	755
Vanduzi	283	43,14%	373	56,86%	656
Sofala	**1250**	**42,59%**	**1.685**	**57,41%**	**2.935**
Buzi	229	32,90%	467	67,10%	696
Marringue	449	58,62%	317	41,38%	766
Nhamatanda	254	36,55%	441	63,45%	695
Gorongosa	318	40,87%	460	59,13%	778
Gaza	**632**	**24,48%**	**1.950**	**75,52%**	**2.582**
Guija	117	18,51%	318	16,31%	435
Chicualacuala	171	27,06%	468	24,00%	639
Chigubo	141	22,31%	389	19,95%	530
Mapai	148	23,42%	463	23,74%	611
Mabalane	55	8,70%	312	16,00%	367
TOTAL	**5.662**	**40,51%**	**8.314**	**59,49%**	**13.976**

Source: M&E data from project

Appendix 4. Project Theory of Change

Figure 2 - Graphical representation of the Theory of Change



ToC Narrative

1. Mozambique is one of the poorest countries in the world with a per capita income of 646 USD in 2013, ranked 181st out of 189 countries in the 2019 Human Development Index (Index: 0.456), which places the country in the Low Income Countries category.
2. 67.2% of Mozambique population lives in rural areas and the agriculture sector absorbs about 80% of the country labour force, a fact that confirms Mozambique dependence on agriculture, and in particular family farming.
3. Most small farmers lack access to technology, benefit from little qualified technical assistance, and face difficulties integrating into markets. In addition, agriculture in the country is an economic activity that is highly dependent on rainfall and regularity of the seasons.
4. This prevalence of the primary sector in the economy makes the country extremely dependent on natural resources and more vulnerable to the adverse effects of climate change. The shortages and needs of the Mozambican population are high both in terms of food security and income generation to enable them to have better access to education and health services.
5. The prevalence of extreme natural phenomena is regular in the country, with Mozambique being the most vulnerable country to these types of occurrences, according to the 2019[21] Climate Change Vulnerability Index. In 2015-16 the El Niño phenomenon caused the worst droughts in 35 years, reducing food availability by 15%[22] . In 2017, 2018 and 2019, the country was ravaged with cyclones Dineo, Idai, and Kenneth, which destroyed crops and much of the agricultural infrastructure.
6. These extreme events, but also more permanent climate changes occurring in Mozambique, put at risk over 60% of the population living in low-lying coastal areas, where intense Indian Ocean storms and rising sea levels put infrastructure, coastal agriculture, key ecosystems, and economic and livelihood activities such as fishing at risk. Future projections indicate that over the next 20 years the average temperature will increase by 1°C, increasing the likelihood of cyclones, the intensity of rainfall
7. Despite this, agriculture in Mozambique has significant potential to contribute to the reduction of rural poverty and food insecurity, as investments in the improvement of this sector provide means for the reduction of income disparities between rural and urban areas and for the reduction of poverty in regions that have benefited little from the economic growth registered in the country in recent years.
8. Livestock farming also contributes significantly to the livelihoods of family farmers, especially in rural areas, where this activity allows for the diversification of income and the reduction of risks associated with climate change and its effects on agriculture. The animals that families have access to for livestock production include chickens, ducks, pigs, goats and cattle.
9. Mozambique has a comprehensive framework of laws, policies, strategies, programmes and action plans that address rural development, climate change adaptation and the agricultural sector as a whole. However, challenges remain in the implementation of these instruments with regards to mainstreaming Climate Change Adaptation (ACCs) practices in the agricultural sector, namely: (i) awareness and internal capacity development of key stakeholders including extension services to promote ACCs technologies and practices, and (ii) coordination of the various actors in the agricultural sector.

[21] Global Climate Risk Index (2021): https://reliefweb.int/sites/reliefweb.int/files/resources/Global%20Climate%20Risk%20Index%202021_1_0.pdf
[22] World Bank (2020)

Assumptions

10. In line with the considerations presented above, the GCP/MOZ/112/LDF Project was designed based on the following assumptions:

    - there is sustained political and public commitment by the Government of Mozambique to support the development and introduction of CCA policies and practices
    - There is political stability, including security and internal conflict resolution within the country;
    - Government institutions (national, provincial and district) have the capacity to implement the CCA policies and measures developed for the country;
    - climate change impacts are not significantly altered
    - communities have interest and motivation to adopt new technologies and production methods.

11. Based on these assumptions, the GCP/MOZ/112/LDF Project was designed with 3 main components, which aim to respond to the above challenges.
12. Firstly, there is a need to increase awareness and knowledge of farmers and managers at national, provincial and district levels to include good practices and measures of CCA in ongoing rural development programmes (Component 1).
13. It is also necessary to promote the adaptation of improved CCA practices and a wider range of genetic material covering at least three production systems (basic food, vegetable and mixed systems of tree, food and animal production) through the network of FFSs supported by the reference projects. (Component 2).
14. Another fundamental aspect to ensure an effective response to the starting problems is to increase institutional capacity and intersectoral coordination to design and implement effective extension and assistance approaches, strategies and mechanisms in support of the integration of CCA in the agricultural and livestock sectors (Component 3).
15. Through effective implementation of these 3 components, the inclusion of good practices and CCA measures in rural development programmes should be ensured (R1), the adoption of improved CCA practices in FFSs and by farmers, as well as the integration of agro-meteorological decisions into the production process (R2), and improved institutional capacity and intersectoral coordination for development and implementation of CCA in the agricultural sector (R3).
16. The consolidation of these results and the sustainability of these changes will increase the capacity of Mozambique agricultural and pastoral sectors to cope with climate change, the level of adoption of CCA technologies and practices by farmer members and non-FFS members, and the integration of CCA concerns and strategies into agricultural development programmes and policies in a more generalized and consistent manner.
17. In the long-term, this set of changes will make it possible to increase production and productivity, reduce production costs, preserve the productive quality of land and be more resilient to climate risks. Ultimately, these achievements will contribute to improved food security, livelihoods and resilience of rural populations in Mozambique, as well as reduced CO2.

Appendix 5. List of Annexes

Appendix 1. Terms of reference for the evaluation

Annex 2. Inception Report

Annex 3. CCA practices by FFS

Annex 4. TF Project Status Report

Annex 5. Guide for the Use of TAPE methodology

Annex 6. ProDoc

Annex 7. NDC Summary

Annex 8. National Strategy on Climate Change Adaptation and Mitigation (NSCCAM)

Annex 9. Terms of Reference for the development of the new versions of SPASD (2021-2031) and NIPAS (2021-2025)

Annex 10. TAPE Study Data

Annex 11. Local Adaptation Plan of Maringue

Annex 12. Local Adaptation Plan of Angónia

Annex 13. Local Adaptation Plan of Tsangano

Annex 14. Local Adaptation Plan of Gorongosa

Annex 15. Local Adaptation Plan of Guija

Annex 16. Local Adaptation Plan of Vanduzi

Annex 17. Local Adaptation Plan of Sussundenga

Annex 18. Local Adaptation Plan of Mapai