PROJECT EVALUATION SERIES

Final evaluation of the project "Integrating climate resilience in agricultural production for food security in rural areas of Mali"

FAO Project Symbol: GCP/MLI/033/LDF
GEF ID: 3979

Evaluation report

FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS
THE EVALUATION OFFICE
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Composition of the Evaluation Team

Evaluation Team

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Abbreviations

AEDD	Agency for Environment and Sustainable Development
AESA	Analysis of the Agro-Ecological System
APCAM	Permanent Assembly of the Malian Chamber of Agriculture
APROCA	Association of African Cotton Producers
ADB	African Development Bank
BCI	Better Cotton Initiative
CC	Climate Change
CCA	Climate Change Adaptation
CEAPV	Field School for Agropastors and Life
CES/DRS	Water and Soil Conservation/ Erosion Control and Land Reclamation
CMDT	Malian Company for Textile Development
CNCEP	National Centre for FFS Extension
Cotton EU	Project Cotton is financed by the European Union
CPS/SDR	Planning and Statistical Cell for the Rural Development Sector
EU	European Union
EUR	Euros (European Union)
FAO	Food and Agriculture Organization of the United Nations
FEM	Fonds pour l'Environnement Mondial (GEF in English)
FFS	Farmer Field School
FP	Farming Practice
GAP	Good Agricultural Practice
GEF	Global Environment Facility
IER	Institute of Rural Economy
IESA	Water and Food Safety Initiatives
IFDC	Institute for Soil Fertility and Agricultural Development
IPPM (*GIPD* in French)	Integrated Production and Pest Management (*Gestion Intégrée de la Production et des Déprédateurs des cultures* in French)
JPO	Open House Days
LDCF (*FPMA* in French)	Least Developed Countries Fund (*Fonds pour les Pays Moins Avancés* in French) (part of GEF)
LOA	Framework Law on Agriculture
MDR	Ministry of Rural Development
MEAD	Ministry of the Environment, Sanitation and Sustainable Development
MTR	Mid-Term Review
NBA	National Board of Agriculture
OED	FAO Office of Evaluation
ON	Niger Office
ONG	Non-Governmental Organization
ONU	United Nations Organization
OP	Farming Organization or Organization of Producers
ORS	Office Riz Ségou
PAFICOT	Support Project for the Cotton/Textile Sector
PANA	National Action Program for Adaptation to Climate Change
PASSIP	Support Project for the Proximity Irrigation Sub-Sector
PDSEC	Social, Economic and Cultural Development Plan
PF	Producer-Facilitator

PIR	Project Implementation Review (GEF/FEM)
PMA	Least Developed Countries
PNCC	National Policy on Climate Change
PNUD	United Nations Development Program
PPR	Project Progress Report (FAO)
RBA	Regional Board of Agriculture
SSN	National Seed Bank Service (National Board of Agriculture)
TF	Technician-Facilitator
USD	American Dollar (USA)
WG/CCA	Working Group on Management of Information and Knowledge in Adaptation to Climate Change

Executive Summary

ES1 Climate change is a reality in Mali, where the population and the economy are mainly dependent on agriculture, livestock and fishing. In the context of climate change, Mali should expect a sharp increase in the average temperature of 2°C in 2050 and 4°C in 2100, followed by a shift southwards in the isopluvial lines.

ES2 Between 2012 and 2016 the FAO – with funding from the Global Environment Facility (GEF/GEF) – implemented project GCP/MLI/033/LDF called "**Integrating climate resilience into agricultural production for food security in rural areas of Mali**", with an effective budget of USD 2,106,818.[1] The overall objective of the project was to *"enhance the capacity of Mali's agricultural sector to successfully cope with climate change, by incorporating climate change adaptation (CCA) concerns and strategies into on-going agricultural development initiatives and mainstreaming CCA issues into agricultural policies and programming"*. To achieve this goal, the project activities were organized into three main components: (1) Piloting of improved climate-resilient agricultural practices; (2) Capacity building and promotion of improved agricultural practices through Farmer Field Schools (FFS); and (3) Climate change considerations mainstreamed into agricultural sector policies and programs.

ES3 This final evaluation of project GCP/MLI/033/LDF covers all aspects related to the implementation of the project since its beginning in August 2012 through to its conclusion in December 2016. The report is based on a literature review and interviews with the project managers in Rome and Bamako, as well as all those key actors involved in the field. In the western, eastern and southern regions, a sample of eleven (11) villages and groups of producers were visited and the results of the project discussed and analyzed.

Piloting of improved climate- resilient agricultural practices

ES4 Project GCP/MLI/033/LDF meets the needs of Mali in terms of guiding adaptation to climate change. The needs of Mali can be summarized in two points: (A) How can retention of water and moisture be improved to make them available to crops, livestock and humans at the right time? (B) How is it possible to adapt to a more restricted agricultural calendar?

ES5 The project has favored a holistic and inter-sectoral approach to identify, document, train and inform the various partners in the agricultural sector about CCA. Together with a working group and the Steering Committee for the project, a list of 37 Good Agricultural Practices (GAP) was defined, which serve as adaptation measures on the basis of accommodating a more restricted agricultural calendar and the retention of rainwater. The list includes any practice which causes an increase in agricultural production without harming the environment.

Capacity building and promotion of improved agricultural practices through Farmer Field Schools (FFS)

ES6 The GCP/MLI/033/LDF project has contributed to capacity building and food security in rural areas by integrating CCA methods and techniques and the Farmer Field School (FFS)

[1]The project has a budget of USD 2,106,818 from the LDCF/GEF and co-financing of USD 4.5 million from the Government of Mali (USD 3 million) and a combination of projects implemented by the FAO (USD 1.5 million), which contribute to the objectives of the project.

approach in the agricultural sector. The facilitation of the FFS has been the most important activity in terms of time and money invested.

ES7 In total, the project has trained and retrained 295 new facilitators, of which 166 (56%) are technicians from a public organization and 129 (44%) are producers who have become producer-facilitators in their area. In addition, 118 facilitators were trained by other projects and programs, bringing the total to 413 facilitators. Unfortunately, the percentage of female facilitators remained very low (about 10%). FFS/CCA facilitators, in turn, trained a total of 33,646 producers through the intermediary of 1,335 Farmer Field Schools (FFS). Other projects and programs have trained 7,471 producers in 374 FFS; thus, bringing the total number of producers trained to 41,117 distributed throughout 1,709 FFS. Women represent 29% of the producers trained by the project and 74% of producers trained by other projects.

ES8 Most of the partners in the project consider the FFS to be the most effective training method for sharing practices, techniques and appropriate technology among producers. The FFS, formed by 20 male and female producers who meet each week, is believed to contribute to social cohesion at a village level as a result of the intensive and sustained cooperation of members of the FFS during the agricultural campaign.

ES9 Analyses of the project show a sharp increase in yields of crops on Farmer Field School (FFS) plots compared to Farming Practice (PP) plots. However, the project does not have an appropriate mechanism to monitor the development and performance of the FFS producers in respect of their own fields. A true impact study would have been timely.

Climate change considerations mainstreamed into agricultural sector policies and programs

ES10 Since the formulation of the project in 2008, many things have changed in Mali in respect of integrating adaptation to climate change in policies. As part of the 2007 implementation of the National Action Program for Adaptation to Climate Change (PANA), Mali created the Agency for Environment and Sustainable Development (AEDD) in 2010, and then adopted a National Policy on Climate Change (NPCC) in 2011. Since then, the CCA approach has been taken into account in all programs and projects concerning agricultural development.

ES11 The GCP/MLI/033/LDF project itself, has significantly contributed to the identification and definition of ways and methods of adaptation. The operationalization of the CCA approach was carried out in a participatory and cross-sectoral manner. It resulted in the list of Good Agricultural Practices (GAP) mentioned above. The project team has also been involved in multiple public and private development programs and projects, which testifies to the quality of their services and ensures certain continuity of capacity in the post-project facilitation of FFS and CCA.

ES12 Although the Farmer Field School (FFS) approach is still not deemed to be a unique or favored extension approach in Mali, the National Board of Agriculture (NBA) urge others "to continue in the dynamic of the FFS, to adopt it, disseminate it, and to ensure that it is consistent with a mechanism that has been commonly defined." A formal statement pertaining to the FFS approach as being a unique or favored extension approach would allow it to become general practice in the country and would lead to better follow-up by the NBA and the RBA on the quality of implementation.

Conclusions

<u>Conclusion 1:</u> Realization of the objectives of project GCP/MLI/033/LDF "Integrating climate resilience into agricultural production for food security in rural areas of Mali" was satisfactory. The project was implemented over the 2011- 2016 period according to a pre-established logical framework and it produced the expected results with regard to the development and integration of Climate Change Adaption (CCA) policies and agricultural programs. Today, CCA is an integral part of all programs and projects in the agricultural sector.[2]

ES13 Project GCP/MLI/033/LDF was designed as a continuation of the GCP/RAF/009/NET program on "Integrated Production and Pest Management through Farmer Field Schools" (IPPM/FFS) (2006-2010). The project effectively integrated CCA into the IPPM/FFS approach and increased the capacity in IPPM and FFS on a large scale; namely in 180 municipalities (out of 708), with 413 facilitators (technicians and producers), who trained a total of 41,117 agricultural producers in 1,709 plots, predominantly looking at dry crops and market gardening. Of these, 28% of facilitators and 17% of producers were trained by partner projects and programs.

<u>Conclusion 2:</u> The GCP/MLI/033/LDF project has meant that those responsible for partner organizations in the project, as well as third parties, could be well informed about CCA and FFS approaches in order that they could support the implementation and application of these approaches in the field.

ES14 The project has trained a good number of officers in the divisional structure of agricultural extension, technicians in semi-autonomous organizations (such as the ON, the ORS and the CMDT), Focal Points, and leaders of farming organizations. The Steering Committee (SC) and the Working Group on Information and Knowledge in CCA (WG/CCA) were cross-sectoral in terms of composition. However, representation and participation of the producers and their organizations in these bodies could have been higher.

ES15 The participation of stakeholders has been satisfactory. Implementation of the project with AEDD and IER partners has experienced some problems, especially in terms of administration at the beginning of the project.3 On the other hand, the GCP/MLI/033/LDF project made a very satisfactory effort to develop partnerships with various programs and projects. This has resulted in partnerships with at least eight (8) large programs and projects: IESA, Cotton EU, GIZ/Resilience and Nutrition, IFDC, PAFICOT, APROCA, BCI and FAO/GEF Agropastoral. Moreover, the FFS approach was adopted by several programs and projects in the field without a true prior consultation at a national level (for example, ICRISAT, World Vision, PASSIP). In fact, the diffusion of the approach was carried out in these cases by the intermediary for FFS facilitators at field level. Regional networks of facilitators, who were supported by the project, played an important role in consolidation.

<u>Conclusion 3:</u> The cost effectiveness of the implementation of the program was adequate, since the project has far exceeded the expected results, both in terms of the number of facilitators and producers trained, and number of partnerships established. However, the

[2] It is important to remember that between the formulation of the project in 2008 and its launch, policies in Mali have changed – see paragraph 3.3.1.

[3] See the Mid-term evaluation report (December 2014): "*The constraints found at an administrative management level are shared between the FAO and institutional partners (NBA, IER and AEDD), and have caused delays that have had a negative impact in respect of the timetable for activities to be carried out, as they were often delayed over the winter (for example, IER and NBA coordination). As for the AEDD, these delays have contributed to a halt in some funding for continuing advocacy and climate proofing in the municipalities.*"

situation of co-financing for the GCP/MLI/033/LDF project was not understood well by the evaluation team.

<u>Conclusion 4:</u> Ownership of the project by the country is very satisfactory in technical and operational terms, and moderately satisfactory in political and financial terms.

ES16 Approaches to the dissemination of CCA practices, including through the FFS, are very strong, as are relationships with the numerous partners. The capacity of CCA and FFS has increased significantly. However, ownership of the project is moderately satisfactory in political and financial terms. The FFS approach has still not been designated a unique or favored agricultural extension approach.

ES17 Financial planning for the project is moderately satisfactory. Planning, financial reporting, as well as the aspect of co-financing for GEF were not clear in the medium-term and final assessment to the evaluation teams.

ES18 The Monitoring and Evaluation System has been satisfactory with regard to the follow-up and documentation of activities, and the reporting of results. Monitoring of the impact of field training for producers was not well covered.

<u>Conclusion 5:</u> Development and training in CCA and FFS approaches are medium and long-term investments, which also benefit from the setting up of many other programs and projects. The evaluation team interlocutors were almost unanimous in stating that there should be a sequel to this well-conceived, well established and well-coordinated program.

ES19 Reproducibility of the actions of the project is satisfactory. CCA, FFS and IPPM approaches may well be scaled up. Many of the organizations, programs and projects are interested in them and adopt them. However, the financing of costs related to the facilitation of the FFS and the maintenance of quality requires an institutional solution that ensures sustainability, with a strong multi-year contribution from the Government of Mali based on the National Budget and national and international climate funds.

Recommendations

Recommendation 1: for the FAO Mali Country Office in support of the Government, on the importance of agricultural extension in Mali

ES20 In the context of the Maputo and Malabo agreements in terms of the budget for agriculture, the Government of Mali should become more involved so that there is more transparency regarding the available budget for agriculture (as a % of the national budget) and in terms of the allocation of these funds at the level of all stakeholders. For certain, it is recommended that a fixed percentage in the agriculture budget is earmarked for public agricultural extension, but on the other hand, the FAO could support the Government in studying and understanding how the Climate Fund (available in Mali and internationally) could be made available for agricultural extension – on the basis of CCA FFS approaches – and used for municipalities, farming organizations and communities at a local level.

Recommendation 2: for the technical division of the FAO AGPM and all project partners regarding the FFS approach in Mali

ES21 Considering the importance of the FFS approach for agricultural extension in Mali, the FAO and its partners in project GCP/MLI/033/FLA should consider expanding what has been gained from the Climate Change Adaptation (CCA) and Farmer Field School (FFS) approaches, which have been proven on the ground in Mali. These activities deserve to be disseminated to all producers and agricultural producers, through public and private organizations.

Recommendation 3: for FAO Mali Country Office in support of the National Board of Agriculture regarding quality assurance at Farmer Field Schools

ES22 In order to support the different frameworks, organizations and networks of facilitators, as well as to ensure the quality of their services in the Field Schools, it is recommended that the FAO, through the Country Office in Mali, as well as through technical support from other offices at regional level and Headquarters if necessary, support the National Board of Agriculture in the development and implementation of a multi-year national plan for agricultural extension on the basis of Farmer Field Schools (FFS), and that a National Centre for FFS Extension (CNCEP) is created. Furthermore, the dissemination of the FFS approach should be supported by an appropriate monitoring mechanism that can help assess the quality of the facilitator training implemented, of the FFS held, and of the performance of FFS participants in the producers' fields. Impact monitoring should be integrated into such monitoring mechanism, with external validation.

Recommendation 4: for FAO Mali Country Office regarding aspects related to gender in the FFS

ES23 The evaluation team recommends that FAO Mali supports the National Board of Agriculture, in the formulation of a Gender Strategy for the FFS that should be developed and integrated in the FFS multi-year national plan for agricultural extension. Such a strategy would set clear targets for the number of women at all levels of the implementation system (% of personnel, % of facilitators, % of producers, % of Focal Points, etc.), and would help intensify the training received by facilitators on gender issues and dynamics and the need for positive gender transformation.

Recommendation 5: for the FAO and the National Board of Agriculture regarding adaptation of the FFS approach to different contexts

ES24 As a result of the various interventions in the dissemination of the FFS approach in different contexts (rice, cotton, etc.) achieved by the various stakeholders in Mali, the FAO should take part in a capitalization and assessment exercise with autonomous organizations (such as the ON, ORS and CMDT), farming organizations, and the National Board of Agriculture, in order to work together and identify lessons to be learned from their respective multi-year experiences. On the other hand, these same actors should further consider how to adapt the approach to the characteristics of the specific contexts of their interventions, as well as developing a strategy in mutual agreement to deal with the challenges related to the (self-) dissemination of IPPM practices.

Recommendation 6: for the FAO/GEF liaison office for projects in francophone countries

ES25 In the case of projects funded by the GEF in francophone countries, the FAO/LFE liaison office should ensure that project teams have documents in French at their disposal (for example, guidelines and procedural documents, follow-up reports, etc.) to allow the projects to report in French as one of the official languages of the United Nations. Regarding co-financing issues, the

FAO/GEF liaison office ensures that the financial management approach employed is in accordance with GEF rules. In this regard, the evaluation team suggests FAO stakeholders involved in the project work together to clarify the financial aspects that currently remain obscured (including co-financing), through, for example, an internal discussion, especially in the eventuality of scaling-up the project GCP/MLI/033/LDF in the country. In all cases, it should be ensured that managers of FAO projects co-financed by GEF are informed about the financing and administrative procedures of the lender.

1 Introduction

1.1 Purpose of the Evaluation

1. The overall objective of project GCP/MLI/033/LDF, entitled "Integrating climate resilience into agricultural production for food security in rural areas of Mali"[4], with an effective budget of USD 2,106,818[5], was to "enhance the capacity of Mali's agricultural sector to successfully cope with climate change, by incorporating climate change adaptation (CCA) concerns and strategies into on-going agricultural development initiatives and mainstreaming CCA issues into agricultural policies and programming". To achieve this goal, the project activities were organized into three main components:

- Component 1: Piloting of improved climate- resilient agricultural practices;
- Component 2: Capacity building and promotion of improved agricultural practices through Farmer Field Schools;
- Component 3: Mainstreaming of climate change considerations into agricultural sector policies and programs.

2. The project is funded by the Least Developed Countries Fund (LDCF), and managed by the Global Environment Facility (GEF). The LDCF is used to fund projects that meet the urgent and immediate needs of LDCs in terms of adaptation, with an emphasis on reducing the vulnerability of sectors and resources essential for social progress and national development, such as water, agriculture and food security, health, management and the prevention of disaster risk and infrastructure, as defined and prioritized in the Mali NAPA (National Action Program for Adaptation to Climate Change).

3. The GCP/MLI/033/LDF project took place in five regions in the south and center of Mali. By number of municipalities, the regions of Kayes (56 municipalities; 31% of the total), Mopti (50; 28%) and Koulikoro (37; 21%) were the regions best served by the project; this was followed by Ségou (22; 12%) and Sikasso (15; 8%). The evaluation team visited villages in four regions; Mopti could not be visited because of the uncertain security situation in the center and north of Mali.

4. The project was implemented on the ground by the project team in Bamako, which consists of a project coordinator, a technical assistant, a communications manager, a driver and two administrative assistants. The project team is guided in its work by the Steering Committee (SC), chaired by the National Board of Agriculture (NBA) of the Ministry of Rural Development (MDR). The SC meets once a year to discuss the annual report and the plan of activities. The SC has about 20 people representing among others: the Ministries of Agriculture, Livestock, and Gender, the planning and statistics cell of the rural development sector (CPS/SDR), the national office of the FAO, the Agency of the Environment and Sustainable Development (AEDD), the Institute of Rural Economics (IER), Mali-Météo, the Permanent Assembly of the Chambers of Agriculture in Mali (APCAM) and the National Network of the IPPM.

[4] See: FAO/GEF (2008), Integrating climate resilience into agricultural production for food security in rural areas of Mali. Project document. FAO/Global Environment Facility (GEF). December 22, 2008, 94p.

[5] The total project budget amounted to USD 6,606,818, thanks to the co-financing in kind agreed by the Government of Mali (USD 3m) and of the FAO (USD 1.5m) through other related projects and funded by Spain, Italy, Belgium, Japan, and the European Commission.

5. The project was drawn up and approved by the GEF in 2008, with a launch date of March 2011 and end date of February 2015. Although the launch of the project took place in August 2011, the effective start-up of the project had to be postponed following unrest in Mali from 2012, and also as a result of the lengthy period of time taken for agreements to be signed between the multiple partners in the project. The Farmer Field Schools could only be launched in June/July 2013. Following the mid-term evaluation (in December 2014), the project was formally extended by mutual agreement with the GEF – without any additional budget – until December 2016.

6. In accordance with the commitments made between the GEF in their role as donor and the FAO as the implementing agency, a final evaluation of the project took place in March 2017 in accordance with the standards and procedures of the FAO and GEF. The final evaluation had the double objective of reporting to all stakeholders, and contributing to organizational learning. The evaluation reviewed key activities, results and impact of the project (expected and unexpected), as well as analyzing the sustainability of results and providing recommendations. The audience targeted by the final evaluation of the project included the Government of Mali and the national authorities, the funding bodies, as well as the FAO itself – at its headquarters in Rome and the national office in Bamako.

1.2 Scope of the evaluation

7. The final evaluation covers all aspects related to the implementation of the project since its inception in August 2012 through to its conclusion in December 2016. Special attention was paid to the analysis of efforts made since the mid-term evaluation to increase the capacity of adaptation to climate change in the agricultural sector in Mali.

8. The evaluation identified and analyzed progress made and the results of the project in the intervention zones, covering all the main activities undertaken within its framework, as well as the causes of success and failure.

9. The evaluation consulted all the stakeholders in the project, including project coordination, the Steering Committee, the working group on information and knowledge in adaptation to climate change, the GEF as the funding body, the head office and the national office of the FAO, as well as all categories of beneficiaries and stakeholders involved in the implementation of the project, including government officials at a national and provincial level.

1.3 Objectives and Evaluation Questions

10. The objective of the final project evaluation is to assess the changes that have occurred following the intervention of the FAO both at a micro and macro level, including all planned and unintentional effects. The final evaluation tries to determine to what extent the project was able to achieve its objectives and identifies any design and implementation issues that need to be improved to guide future actions in similar projects.

11. The final evaluation was structured around the following topics: (A) the relevance of the concept and approach of the project; (B) the achievements and contributions of the project to its objectives; (C) the application of the common principles of the United Nations with regard to country programming and cross-cutting themes; and (D) sustainability.

12. By referring to on the above objectives, the final evaluation was guided by the following evaluation questions:

> **Evaluation Question 1:** *To what extent does the design of the project and its activities meet the needs of Mali and the Malian population in terms of climate change adaptation?*
> **Evaluation Question 2:** *To what extent have the actions of the FAO, within the context of this project, contributed to reaching the overall objective of "enhance the capacity of Mali's agricultural sector to successfully cope with climate change, by incorporating climate change adaptation (CCA) concerns and strategies into on-going agricultural development initiatives and mainstreaming CCA issues into agricultural policies and programming"?*
> **Evaluation Question 3:** *To what extent has the project integrated climate change aspects and/or issues into national agricultural programs and policies?*
> **Evaluation Question 4:** *To what extent have women and indigenous peoples, as well as vulnerable and marginalized groups, participated in the project?*
> **Evaluation Question 5:** *What other impact has the project had, and what is the sustainability of the project interventions?*

1.4 Method

1.4.1 Approach and Methods

13. The final evaluation of project GCP/MLI/033/LDF is comprised of the following stages: (A) document review; (B) interviews (by Skype) with the project managers and the focal point of the GEF at the FAO in Rome; (C) interviews (in person) in Mali with the project's promoters and partners, target groups, some managers of organizations, the FFS facilitators and any other stakeholder associated with the project; (D) analysis of the data; (E) presentation of the preliminary results to the Steering Committee (SC) and to FAO Mali[6]; and (F) the writing of the report.

14. The document review looked at the main documents of the project, namely: the Project Document (ProDoc), the inception report, the baseline study, the annual activity reports, the Project Progress Reports (PPR), the Project Implementation Reviews (PIR), the mid-term evaluation (MTE) report, the FAO management response to the recommendations of the mid-term evaluation, the project terminal report; followed by reports of specific activities such as the meetings of: the Steering Committee (SC), the working group on information and knowledge in adaptation to climate change (WG/CCA), the Open Doors Days (JPO), studies, etc. (Please see the References section for all the documents received.)

15. The selection of villages visited by the evaluation team was made by project coordination team, based on the following criteria: (A) security aspects; (B) recommendations of the mid-term evaluation; (C) activities implemented in 3 different ecosystems (Sudanese, Sudan-Sahelian, Sahelian); (D) different cultivation systems; (D) taking into account of the gender dimensions; (E) former sites and new sites (of producers trained in 2012 and 2015); and (F) the level at which technologies have been adopted (total adoption, reluctance). "The chosen sites present a diversity of results/offering the

[6] See: TON, P. & O. SY (2017), Preliminary Results of the Final Evaluation. Presentation (.ppt) to the Steering Committee (SC) for project GCP/MLI/033/LDF (Bamako, 24 March 2017).

opportunity to learn lessons." The sample of villages visited by the evaluation team (a total of 11 villages: 5 in Kayes; 3 in Segou; 2 in Koulikoro; 1 in Sikasso) corresponds with the relative distribution of project activities in the different regions outside Mopti.

16. The interviews with the different stakeholders and people involved in the project in Mali took place in the period from 13 to 24 March 2017. Interviews involved meetings in Bamako and Ségou with officials of partner organizations or associates of the project (MDR, NBA, IER, Office of Niger, Office Riz Ségou, AEDD), in addition to on-site field visits. Field trips have involved eleven (11) villages in the regions of Kayes (Béréla, Mananko, Oualia, Kounda, Komantra), Koulikoro (Dantorola, Dioïla), Ségou (Zanabougou, Cinzana, Zoumanabougou) and Sikasso (Konséguéla). (See the Program of the Evaluation Mission in Appendix 2.) This program was developed by the project coordination team, at the request of the evaluation office of the FAO in Rome, then carried out by the evaluation team.

17. In all the villages visited, exchanges lasting 1-2 hours each were held with FFS facilitators (technician-facilitators - TF or producer-facilitators - PF) and with producers benefiting from the project. The goal was to check, discuss and evaluate with them the activities carried out and the assessment of the project, donations of agricultural equipment, the impact and sustainability of actions, then prospects for the future. Where activities included horticulture, the market garden perimeter of the FFS group was visited. As appropriate, bilateral meetings were also held with officials in the intervention zone, such as the Regional Director of Agriculture (DRA), the sector leader, the sub-sector leader, the municipality and/or the network of facilitators in order to verify, discuss and analyze their positions, contributions and assessments of the project. A list of interviewees is found in Appendix 3.

18. The character of the interviews in the field slightly differed from one village to the other, in consultation with the focal point of the place (which convened stakeholders according to the plan established in advance by project coordination), and based on the specific activities performed in the village (i.e. dry crops, market gardening, stone barriers, reforestation, etc.) and/or depending on the kind of producers' group (i.e. FFS group, co-operative, union, network, men/women, etc.). The issues debated were also adapted flexibly to the main points raised by the different interlocutors, in order to deepen opinions and evidence.

19. The working language was French. Interpretation of the local language (Bambara, Fula, Soninke, Kassonkhe, Minanke, etc.) into French and vice versa was generally provided by one of the FFS facilitators who was present[7]. The degree of participation of the different members of the FFS group in each village varied from one village to another[8].

20. The evaluation team made sure everywhere that women participated equally in the exchanges[9]. Where women were in the majority in a FFS group, there were often also a

[7] It should be noted that, as usual, each FFS group that was met also involved several people capable of checking the interpretations of the local language into French and vice versa, and to correct or add to them if needed.

[8] In one case (at Zoumanabougou) it was difficult for the evaluation team to use more than one interlocutor. In another case (in Kounda), various members of the FFS present had a lot to discuss amongst themselves first, without a clear division of tasks or leadership, rather than answering the questions of the team. In most cases, however, the groups demonstrated a good structure and the team benefited from participative, informative and fruitful exchanges.

[9] This strategy worked well everywhere, according to the team, except in the village of Dontorola where the presence of village officials made it difficult for there to be an open exchange between the team and the women producers.

few (2 or 3) men who assisted the group with heavy field work and/or in the negotiation of the group's statutes with the local authorities. In general, the evaluation team ensured that different people (individuals, men and women) actively participated in the evaluation discussions.

21. Project activities between 2012 and 2016 involved a total of 180 municipalities in Mali (out of a total of 708; i.e. 25%), instead of the 9 originally planned in the project document. This extension of the project took place at the request of the Steering Committee[10] and as a result of the many requests for support by the different regions and stakeholders. The evaluation team was unable to analyze, on the basis of information made available, to what extent and with what budget each of the municipalities was provided for by the project and this had implications for the methodology and representativeness of places visited.

22. The analysis of documents and data collected during the field visit took place in the two weeks following the field visit. On the basis of the analysis, the evaluation draws specific conclusions and makes recommendations for a series of actions on the part of the Government of Mali, the FAO and others to ensure sustainable development. The evaluation also draws attention to good practices and specific lessons that may be of interest to others through the implementation of similar activities.

1.4.2 Limitations

23. The final evaluation of project GCP/MLI/033/LDF has been limited by the following factors: lack of security in one of the project intervention zones, the limited number of days for the mission, the limited time available in each village, the dependence on project coordination in terms of the selection of villages and key actors to meet, and the impossibility of meeting some organizations and contacts (including the former focal point of the IER, the GEF focal point of the AEDD, the CPS/ex-NBA).

24. However, the team has benefited from conditions that have allowed serious concise, and comprehensive work to be completed, that allows the achievements of the project in the field and the actual assessments of the project as mutually agreed and implemented by the FAO and National Board of Agriculture to be clearly seen. At no time did the team have the impression that their work was influenced or compromised by the stakeholders in the project. On the contrary, the evaluation team benefited from the excellent logistical and administrative support provided by project coordination team and its partners at all times.

2 Background and project context

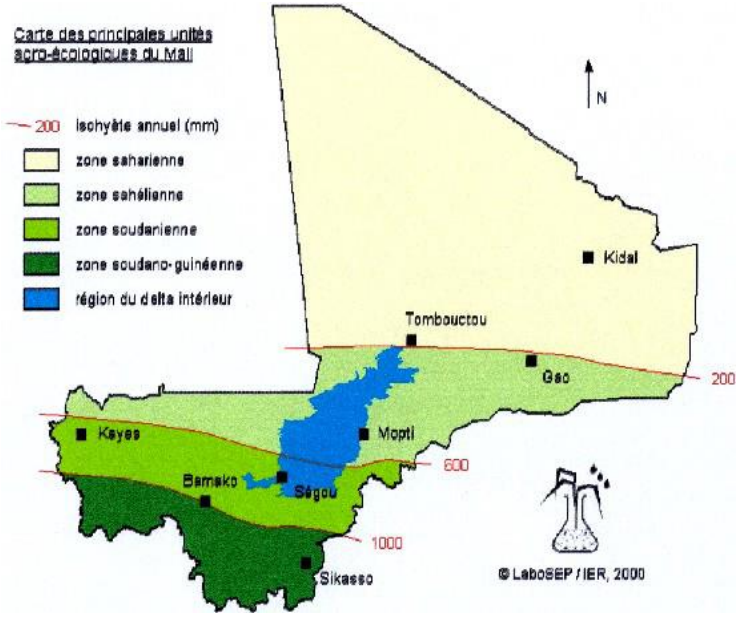
2.1 Background description

25. Mali is a vast Sahelian country without direct access to the sea. The country has four main climatic zones, namely the Saharan zone (average rainfall of <200 mm per year), the Sahelian zone (200-600 mm per year), the Sudanian zone (600-1,000 mm per year) and the

[10] See: SC (2013), Summary of the work of the second session of the Steering Committee for project GCP/MLI/033/LDF. National Board of Agriculture, Bamako. March 2013, 16p.

Guinean zone (>1,000 mm). The GCP/MLI/033/LDF project looked at the Sahelian, Sudano-Sahelian and Sudanian zones.

Figure 1: Map of eco-climatic zones in Mali.



Source: GdM (2007), National Action Program for Adaptation to Climate Change (PANA).

26. Mali's economy is mainly based on agriculture and farming – two economic activities that depend on rainfall and the regularity of the seasons.[11] Together they account for about 80% of the active population. In the Region of Kayes in the west of the country, mining is also of importance, especially for young people. However, migration to the mines would have diminished recently following the recent decline in prices.

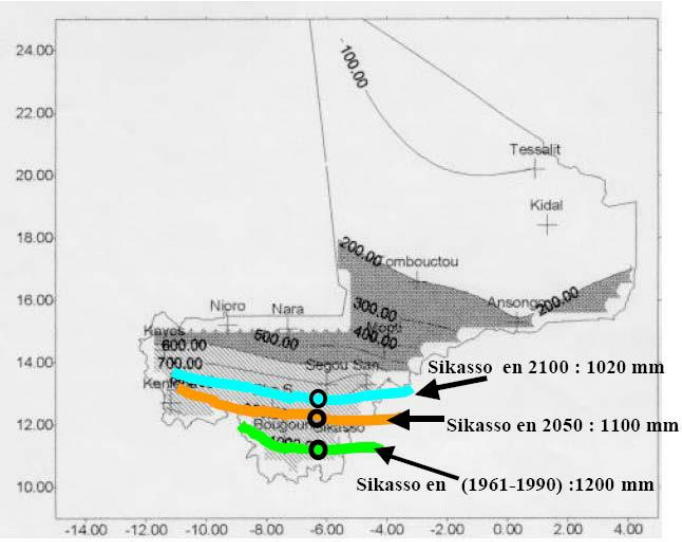
27. The regularity of rainfall and the flooding and receding of rivers, as well as the distribution of the rains across the Malian territory, determines the progress of the agricultural season and the need and the duration of migration. Irrigation is applied as an adaptation strategy, especially in rice production (wintering, flood and recession) and in market gardening (overwintering and/or off-season).

28. In the context of climate change, Mali should expect a clear increase in the average temperature from 2ºC in 2050 and 4ºC in 2100, followed by a shift southwards in the isopluvial lines.[12] The resulting changes will include (and already - include the fact that climate change is fully underway) an increase in evapotranspiration, a restriction of the duration of overwintering, delayed sowing dates, less rainfall and often poorly distributed, delayed harvest dates, and a general decrease in water availability and moisture for humans, animals and crops.

[11] Off-farm, the informal sector is important and predominantly affects the "small jobs" in towns and villages. Formal employment is usually limited to the staff of institutions (including the State), and development projects and programs. The tourism sector has been in crisis since 2012 as a result of the increase in unrest in the north and center of Mali. The war in northern Mali has created jobs in the security sector (military, police, self-directed brigades, caretaking, etc.) but these are not so-called "productive" jobs

[12] See: AEDD (2011), National Policy on Climate Change. Agency for the Environment and Sustainable Development, Bamako. July 2011, 44p.

Figure 2: Decrease in rainfall and movement of isopluvial lines to the south in the town of Sikasso between 1960 and 2100.



Source: GdM (2007), National Action Program for Adaptation to Climate Change (PANA). Government of Mali, July 2007, 100p.

29. Today, the population of Mali is estimated at around 16 million. The population rate is increasing by approximately 3% per year. Mali is among the least developed countries (LDCs) in the world. Poverty and food insecurity are common, the education of the population is low and life expectancy is short. In terms of human development, Mali ranked is 175 of 188 countries.[13] Any adaptation to climate change must therefore go hand in hand with economic and social growth. The actions of the project must become part of the sociocultural context and local customs, which are characterized by the roles and quite different status of men and women.

30. The needs and necessities of the Malian population, in all its diversity, are high in the short term; food security, finances, education and health. In a way, this puts into perspective the urgency afforded by the population to the effects of climate change as such, since these changes are spread over a very long period. On the other hand, to remain sustainable, all economic and social growth in Mali necessarily relies on methods and techniques that are adapted to climate change.

2.2 Description of the project

31. Mali is located in a very fragile geographical area subject to climate fluctuations that are characterized by prolonged droughts, giving rise to a need to strengthen the capacity of producers to develop production systems that are more resilient to drought and the collateral effects of the climate.

32. As noted above, project GCP/MLI/033/LDF, entitled "Integrating climate resilience into agricultural production for food security in rural areas of Mali"[14], with an effective budget

[13] See: UNDP (2016), Human Development for Everyone. Human Development Report 2016.
[14] See: FAO/GEF (2008), Integrating climate resilience into agricultural production for food security in rural areas of Mali. Project document. FAO/Global Environment Facility (GEF). December 22, 2008, 94p.

of USD 2,106,818[15], aimed to " enhance the capacity of Mali's agricultural sector to successfully cope with climate change, by incorporating climate change adaptation (CCA) concerns and strategies into on-going agricultural development initiatives and mainstreaming CCA issues into agricultural policies and programming".

33. Project GCP/MLI/033/LDF focuses on adaptation in the agricultural sector, and it relies on several programs and previous projects, including the UNDP/GEF project "Improving the capacity for Adaptation and Resilience in the face of Climate Changes in the Agricultural Sector in Mali"(2010-2014)[16] and the FAO sub-regional program "Integrated Production and Pest Management through Farmer Field Schools (IPPM/FFS)" (2006-2010).[17] The Mali component of the IPPM/FFS project was based in turn on the public agricultural extension system and Farmer Field School trials carried out in Mali since the beginning of the 2000s.

34. At the time of the design of project GCP/MLI/033/LDF (in 2008), Mali did not have any policies or programs or institutions specifically dedicated to climate change adaption. The Agency for the Environment and Sustainable Development was set up in 2010. The Ministry of Agriculture at the time did not favor the Farmer Field School approach; the FFS approach was considered to be one of the approaches available in the field.

35. The same observation goes for the FAO, who also considered the FFS approach to be one of various possible approaches to agricultural extension. Although the FAO had already supported trials, projects and programs of Farmer Field Schools in about 90 countries around the world, it has not favored the FFS approach in its policy as such.

36. There was no particular gender strategy for project GCP/MLI/033/LDF. It should be noted that the FAO only adopted a mandatory gender policy document in 2013[18], i.e. well after the formulation, approval and start of project GCP/MLI/033/LDF. Gender aspects will be set out in further detail in section 3.4.

2.3 Logical framework

37. The overall objective of project GCP/MLI/033/LDF was to "enhance the capacity of Mali's agricultural sector to successfully cope with climate change, by incorporating climate change adaptation (CCA) concerns and strategies into on-going agricultural development initiatives and mainstreaming CCA issues into agricultural policies and programming". The project is based on a succinct logical framework (see annex 3).

38. To achieve this goal, the project activities were organized into four main components:

> **Component 1:** Drive forward climatically-resilient and improved agricultural practices:

[15]The total project budget amounted to USD 6,606,818, thanks to the co-financing in kind agreed by the Government of Mali (USD 3m) and of the FAO (USD 1.5m) through other related projects and funded by Spain, Italy, Belgium, Japan, and the European Commission.

[16] See: UNDP (2009), Project Document UNDP/GEF "Integrated Production and Pest Management through Farmer Field Schools" (2010-2014). November 2009, 101p.

[17] See: FAO (2011), Final report of activities 2012-2016 of the sub-regional IPPM/FFS project. FAO, IPPM/CCA project, Bamako, Mali. August 2011, 47p.

[18] See: FAO (2013), Policy of the FAO on gender equality. Achieving food security objectives in agriculture and rural development. FAO, Rome, Italy. March 2013, 28p.

- develop a CCA approach based on good agricultural practices and indigenous knowledge;
- develop training materials on CCA;
- identify and disseminate short-cycle seed varieties that are tolerant to climatic variations.

Component 2: Strengthen capacities and expand improved agricultural practices through the Farmer Field School (FFS) approach:

- train the trainers and IPPM facilitators in CCA;
- facilitate FFS/CCA;
- establish a climate adaptation fund and support local initiatives.

Component 3: Integrate climate change aspects and/or issues into programs and policies in the agricultural sector:

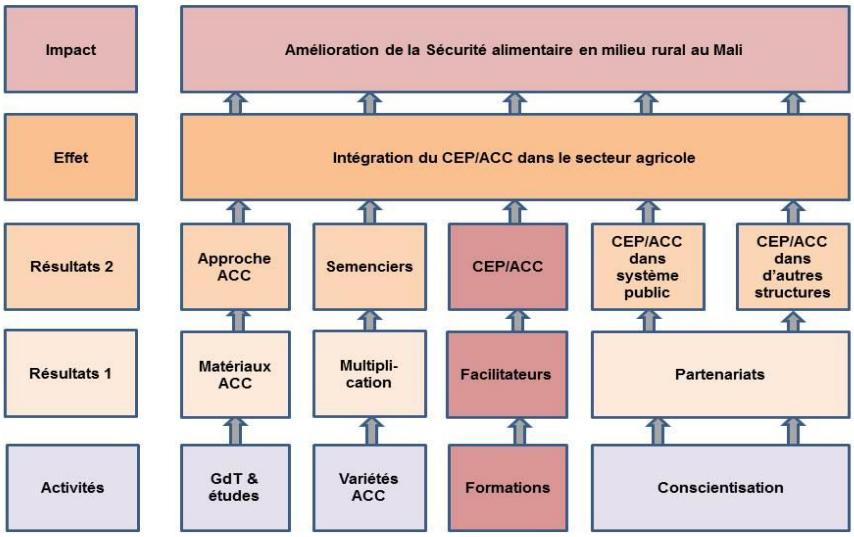
- strengthen inter-sectoral coordination mechanisms
- strengthen the institutional capacity in CCA
- integration of CCA in policies and programming in the agricultural sector.

Component 4: Monitoring and management of the project:

- create a cross-sectoral Steering Committee for the follow-up of the project;
- create a project management cell for the implementation of the project;
- set up a monitoring and evaluation system.

39. The Theory of Change of project GCP/MLI/033/LDF is shown in Figure 3. The project aims to improve food security in rural areas by integrating CCA methods and techniques and the Farmer Field School (FFS) approach in the agricultural sector. Partners in the project consider the FFS to be the most effective and efficient training method for sharing practices, techniques and appropriate technology among producers. The FFS is believed to contribute to social cohesion at a village level as a result of the intensive and sustained cooperation of members of the FFS during the agricultural campaign.[19]

Figure 3: The Theory of Change of project GCP/MLI/033/LDF



[19] See, for example: FAO (2016), Part I: Key principles of Farmer Field School, 14p.

2.4 Project funding

40. The project budget amounted to a total of USD 6.6m of which USD 4.5m of co-financing is from the Government of Mali (USD 3m) and from the FAO (USD 1.5m). However, the effective budget of project GCP/MLI/033/LDF was USD 2.1m, which is the equivalent of the LDCF managed by GEF[20], object of this evaluation.

41. The evaluation team was not able to access detailed financial reports from the project, and is therefore not able to judge on the financial management of the project. From interviews with some FAO key informants, it is clear at least that the financial and administrative management of this project merits internal discussion in order not to repeat the same mistakes in other projects. On the one hand, the disbursement of funds did not follow the pace of agricultural campaigns on several occasions, which slowed down or blocked some seasonal activities – because of their rural nature. Besides, the internal rules of the FAO (on the maximization of the funds managed by the FAO representation in Mali) in fact led to significant delays in disbursement.[21]

42. The policy of the FAO and GEF regarding "co-financing" is not well understood by the evaluation team.[22] Co-financing was supposed to have been made in kind by the Government of Mali and a number of international projects[23]. The last *Project Implementation Review* (PIR) of the FAO states that in 2014, half-way through, only 10% co-financing payments had been made.[24] However, according to the PIR, at the end of the project in December 2016, more than USD 4.8 million had been paid, which is 7% more than planned. This raises issues to be clarified.

43. With regard to co-financing, the GEF said the following[25] [26]: "*In the context of adaptation projects financed by the Least Developed Countries Fund (LDCF), co-financing refers to the cost that would be incurred for a normal development scenario. This amount is considered as the* ***base case*** *for the project and it constitutes co-financing; above this amount, the full cost of adaptation represents the* ***additional cost****, which is supported by the special fund. The idea behind the concept of co-financing is to use the resources of the LDCF to facilitate adaptation to climate change in the context of a greater intervention intended to aid development. In this case, co-financing may include development aid (from a bilateral or multilateral source) governmental budget lines, and contributions from NGOs and local*

[20] The GEF-funded activities are supposed to be "additional", in terms of adaptation to climate change, to activities already undertaken at field level. The activities already undertaken are considered as "co-financing" for the project subject to this evaluation. However, it should be noted that there were no financial flows from these programs and projects to the evaluated project. The effective budget of the project amounted to USD 2,106,818, which is the contribution made by the GEF regarding LDCF funds.

[21] See: SC (2013), Summary of the work of the second session of the Steering Committee for project GCP/MLI/033/LDF, National Board of Agriculture, Bamako. March 2013, 16p.

[22] The team received the annual *Project Implementation Reviews* (PIR). Although PIRs include the amounts of co-financing per organization, they do not clarify what the contributions have been for the project.

[23] Co-financing can come from other projects/initiatives that use and share a similar approach, and/or that are implemented in the same areas of intervention as the GEF project, and/or during the same period. Co-financing can be also provided in-kind, for example by making available the time of FAO staff in the country. Co-financing is not therefore about a disbursement of money, but is rather about integrating and finding synergies with other initiatives or projects.

[24] See: FAO (2017), Project Progress Report (PIR). Trust fund program. Period: July-December 2016. FAO, Rome. Italy. January 2017, 11p.

[25] See: GEF (2011), Access to Resources of the Fund for Least Developed Countries (LDCF). GEF, May 2011, 36p.

[26] According to the team in Mali, the only working language of the GEF is English. This has complicated the management of the project: all reports in Mali for the GEF were first written in French and then translated into English. There was also no uniformity between the FAO and GEF reporting formats and so two reports were prepared for each reporting period.

groups in cash – or in the form of grants, loans, flexible loans – or in kind. By using funding from the LDCF to systematically integrate adaptation measures into large-scale investment projects, it is possible to achieve a greater impact by leveraging synergies and taking advantage of economies of scale."

44. However, the project coordination team assured the evaluation team that the co-financing regulations of the GEF differ from those of other funding bodies. As co-financing, the GEF would accept all efforts provided by other projects aimed at climate change adaptation, and which work in the same areas as the GCP/MLI/033/LDF project. The GEF would therefore be based on a joint implementation with other projects ("*co-implementation"*), rather than on "co-financing" by other projects.

45. The fact remains that the evaluation team remains uncertain regarding the merits of the co-financing amounts calculated and reported in the progress report (PIR). It is recommended that the FAO hold a discussion among the units involved in the management of project GCP/MLI/033/LDF to reassure themselves that the rules of the GEF have been completely understood and implemented.[27]

2.5 Mid-term evaluation

46. The mid-term evaluation was held at the end of 2014.[28] It gave light to a number of weaknesses in terms of the design and implementation of project GCP/MLI/033/LDF, including:

- the lack of integration of component 3 – integration of CCA in the policies, programs and projects running in the agricultural sector in Mali;
- the need to update the project in light of political changes; this includes taking into account the decentralized authorities (municipality, PDSEC, etc.) and the implementation of CCA policies in Mali;
- the way in which the activities planned with Mali-Météo were not implemented, as well as the creation of a fund to support local CCA initiatives;
- the low level of integration of the gender dimensions in the project;
- the lack of an awareness-advocacy strategy and communications that highlight the achievements of the project on a political and technical level.

47. The conclusions and recommendations of the mid-term evaluation were well received by the project partners. All recommendations have been accepted by the management board for the project.[29]

[27] This is particularly the case with a view to the development of a joint FAO/GEF collaboration in the future.
[28] See: FAO (2014), Mid-term evaluation for Project GCP/MLI/033/LDF. December 2014, 52p.
[29] See: FAO (2015) Response of the Management to the Mid-term evaluation of the "Integration of Climate Resilience in Agricultural Production for Food Security in Rural Areas in Mali" project (GCP/MLI/033/LDF) March 2015, 10p.

3 Evaluation questions: key results

3.1 Evaluation Question 1: To what extent does the design of the project and its activities meet the needs of Mali and the Malian population in terms of climate change adaptation?

Key result 1:

- *The project design meets the needs of Mali in terms of guiding adaptation to climate change. Project GCP/MLI/033/LDF has favored an holistic and inter-sectoral approach to identify, document, train and inform the various partners in the agricultural sector about climate change adaptation.*
- *The growing techniques recommended to deal with climate change can, in principle, be actioned by everyone who has access to the land.*

3.1.1 The CCA approach

48. The aim of project GCP/MLI/033/LDF is to integrate climate change adaptation (CCA) into the Farmer Field School (FFS) approach and into policies and agricultural programs in general. Within the project activities, the emphasis has mainly been on the integration of CCA in the decentralized system of agricultural extension, at a national, regional, sectoral, and sub-sector level. In addition, the project looks to build CCA partnerships with semi-autonomous and public organizations and with other programs and agricultural development projects. However, the CCA partnership with civil society and the private sector was not favored.

49. In light of the continuation of the IPPM/FFS program, which for the last decade has been led in Mali by the FAO and the National Board of Agriculture (NBA), project GCP/MLI/033/LDF has focused on the extension and development of Farmer Field Schools (FFS) throughout all of Mali. The FFS approach is perceived by many stakeholders as the most effective and preferred approach to agricultural extension. The institutionalization of CCA in the agricultural sector therefore takes place by disseminating the FFS approach.

50. The project is part of the National Policy on Climate Change (NPCC)[30], which aims to contribute to sustainable development and the fight against poverty by providing appropriate solutions to the challenges of climate change in several areas, including in particular, agriculture, water resources, forests, energy, transport, land management, health, the environment, industry and mining. As a strategic planning tool, the NPCC is designed to encourage a synergy of actions so that interventions consistent with the effects of climate change can be undertaken.

51. The project design meets the needs of Mali in terms of guiding adaptation to climate change. In terms of technology, the needs of Mali are clear and can be summarized in two points: (A) How can retention of water and moisture be improved to make them available to crops, livestock and humans at the right time? (B) How is it possible to adapt to a more restricted agricultural calendar?

52. Project GCP/MLI/033/LDF has favored a holistic and inter-sectoral approach to identify, document, train and inform the various partners in the agricultural sector about

[30] See: AEDD (2011), National Policy on Climate Change. July 2011, 44p.

CCA. A list of 37 Good Agricultural Practices (GAP) was defined, which serve as adaptation measures on the basis of accommodating a more restricted agricultural calendar and the retention of rainwater.[31] The list includes any practice which causes an increase in agricultural production without harming the environment. The approach followed in composing the list has been inclusive of different State structures.

53. The final evaluation team acknowledges the efforts made by project coordination to take into account the recommendations of the mid-term evaluation. The team believes that the project was able to remedy the majority of weaknesses identified in the design and implementation of the project (which had been stated in 2014), and they had been able to obtain edifying results, both in terms of quantity and quality.

3.1.2 Target groups

54. The project is based on the achievements of the IPPM/FFS program in Mali, which already had its own policy for identifying and involving target groups, including women and vulnerable groups. It should be noted that one of the admission criteria for facilitators is the ability to read and write, making this role harder to access for women and producers who are capable but illiterate. The issue of gender aspects will be revisited in section 3.4.

55. In the project, emphasis was placed on the decentralized system of agricultural extension, by strengthening the existing core of Farmer Field School trainers and facilitators. The evaluation team deems this choice to be pertinent in the context of Mali. Farmer organizations (OPs) have been involved "from the top" via the Permanent Assembly of the Chambers of Agriculture in Mali (APCAM) and locally on-site through collaboration with specific OPs that are well-established in their area (for example, in Bla). In addition, capable individual producers have been trained as producer-facilitators, regardless of their affiliation to the OPs. Civil society and the private sector were not targeted by this project explicitly; this could change in the future.

56. The cultivation techniques recommended to deal with climate change can, in principle, be actioned by everyone who has access to the land. At the heart of it, are farming practices that do not require large monetary investments. However, certain practices are restrictive with regard to workload (especially organic fertilization of fields) and/or regular observation of crops (analysis of the agro-ecological system within a framework of IPPM practices). Some other practices require community efforts (such as setting up stone barriers) making them more applicable in some places than in others, depending on the social cohesion of the village or hamlet.

57. All stakeholders met at field level were clear and unanimous in stating that this project is welcome, useful, productive and adapted to the context (technical, social, economic, financial, environmental), and that it merits a follow-up so that a greater number of male and female producers are trained in Good Agricultural Practices and climate change adaptation.

58. The evaluation team notes that if a project of this kind is intended to focus on women producers, it is appropriate to place special emphasis on market gardening (rainy season

[31] See: DNA (2015), Inventory of Good Agricultural Practices in Mali. May 2015, 7p.

and off-season) as this is traditionally an areas in which the key players to be involved and interested are women.

3.2 Evaluation Question 2: To what extent have the actions of the FAO, within the context of this project, contributed to reaching the overall objective of "enhance the capacity of Mali's agricultural sector to successfully cope with climate change, by incorporating climate change adaptation (CCA) concerns and strategies into on-going agricultural development initiatives and mainstreaming CCA issues into agricultural policies and programming"?

Key result 2:

- *The actions deployed by the FAO in this project effectively contributed to building the capacity of the agricultural sector in dealing with climate change. This strengthening took place on several levels: (A) at a national level, for the National Board of Agriculture and in an inter-sectoral way; (B) at the level of the decentralized system for agricultural extension; (C) at a regional level, through the networks of facilitators and partnerships with other organizations; and D) at a local level, through the creation of a critical capacity of knowledge and expertise in participatory agricultural extension that is adapted to the situation. The impact of the actions deployed by the FAO on programs and policies in the agricultural sector will be discussed in section 3.3.*

3.2.1 Letters of Agreement

59. The implementation of project GCP/MLI/033/LDF has been very well documented. (See Appendix 1 – Bibliography of major list of documents produced.) The reports were generally clear, detailed and of good quality. The project coordination has clearly tried to quantify the project activities and outcomes as much as possible. However, the financial reports were not shared with the evaluation team.

60. For the implementation and management of the project, the Letter of Agreement were signed between the Regional FAO Office in Accra (Ghana) and the project partners in Mali; namely the governing structure of the National Board of Agriculture (NBA)[32], and the Agency for Environment and Sustainable Development (AEDD)[33]and the Institute of Rural Economy (IER)[34] (see Figure 4). Out of the total budget for project GCP/MLI/033/LDF (namely USD 2.1m), approximately USD 1m then was made available to partners for the implementation of the project. This includes fees paid to technician-facilitators from the decentralized system of agricultural extension, who were paid for each FFS on a monthly basis.

[32] See: FAO/DNA (2012), Letter of Agreement 2012. July 2012, 20p.; FAO/NBA (2013), Plan proposed to modify the Letter of Agreement2013. December 2013, 10p + appendices; FAO/NBA (2014), Letter of Agreement 2014. October 2014, 10p + appendices; FAO/NBA (2015), Letter of Agreement 2015. June 2015, 10p. + Appendices.; and: FAO/DNA (2016), Letter of Agreement2016. June 2016, 22p.

[33] See: FAO/AEDD (2012), Letter of Agreement 2012. August 2012, 14p.; FAO/AEDD (2014), Letter of Agreement 2014 (draft; not signed), 12p.; and: FAO/AEDD (2015), Letter of Agreement2015. October 2015, 15p.

[34] See: FAO/IER (2012), Letter of Agreement 2012. FAO & IER, Bamako. August 2012, 12p.; and: FAO/IER (2014), Letter of Agreement 2014. July 2014, 7p.

Figure 4: Amounts transferred to the partners in the project, according to the Letters of Agreement.

Structure	DNA		AEDD		IER		Total	
En	FCFA	USD*	FCFA	USD	FCFA	USD	FCFA	USD
Année								
2012	44.993.650	85.735	7.613.050	14.507	13.382.502	25.500	65.989.202	125.742
2013	77.780.700	153.985	-	-	-	-	77.780.700	153.985
2014	178.009.538	366.697	??	??	8.469.000	17.446	??	??
2015	217.937.778	299.000	7.500.000	12.703	-	-	225.437.778	311.703
2016	31.415.111	43.100	-	-	-	-	31.415.111	43.100
Total	**550.136.777**	**948.517**	**15.113.050**	**27.210**	**21.851.502**	**42.946**	**587.101.329**	**1.018.673**
* Taux d'échange USD/EUR au 1er juillet (www.x-rates.com).								

61. The remainder of the project budget (approximately USD 1.135m) would have been used by the FAO inter alia for the following expenses: payment of members of the project coordination (as consultations), costs of vehicles and travel, meetings and workshops at a national level, international technical assistance, communications, agricultural equipment, consultations, impact assessment, mid-term and final evaluations, etc.

62. During the first few years, the implementation of project GCP/MLI/033/LDF suffered from cumbersome administrative procedures and delays in the disbursement of funds.[36] This negatively affected activities, especially in 2012 and 2013.

3.2.2 CCA teaching materials

63. Under component 1, the project initially developed, in a participatory way through the working group on information and knowledge in adaptation to climate change (WG/CCA) and various national workshops, an approach to climate change adaptation (CCA). The CCA approach is based on good agricultural practices already used in places to deal with hazards and climate change; these include farming practices (fertilization of the soil, soaking of seeds, agro-ecological analysis of the production system, etc.), land development (Zaï system, stone barriers, grassed strips, reforestation, assisted natural regeneration etc.) and improved varieties of dry crops and horticulture.[37] The CCA approach developed was driven, among others things, by a study of endogenous knowledge of CCA.[38] On the other hand, the project could have saved time and money if we had known and exploited the USAID manual that had already been released in 2014

[35]The amount in the text is a deduction.

[36] See: FAO (2014), Mid-term evaluation for Project GCP/MLI/033/LDF. December 2014, 52p.
According to the SC (2013): the reported difficulties consisted of: i) the late signing of protocols, which took place in July 2012 for the NBA, August 2012 for the AEDD and September 2012 for the IER, and the slowness in dealing with requests from the partners. These factors weighed heavily on the smooth running of the activities. (...); (ii) the specificities of the financial management of the FAO, which limit the level of funds that can be authorized by an FAO representative upon signing. This factor has slowed the implementation of the activities.

[37] See: NBA (2015), Proceedings of the workshop on capitalization of Good Agricultural Practices in Mali. National Board of Agriculture, Bamako. May 2015, 4 p.

[38] See: NBA (2015), Study on the selection of endogenous knowledge of CCA in the three agricultural-climatic project intervention zones. Interim report. September 2015, 79p.

"*Profiles of Agricultural Management Practices*." *Agricultural Adaptation to Climate Change in the Sahel.* ».[39]

64. The project summed up the CCA approach in four technical data sheets.[40] Technical data sheets were circulated among the partner organizations, as well as during the Open-Door Days, etc. The evaluation team believes that the technical data sheets provide a good summary of a number of methods and techniques available in rural areas for climate change adaptation. However, the presentation of the technical data sheets and the list of CCA practices for VAC seemed poor. The lack of visualization made the information difficult to access for the target groups, and especially to those who were partially or fully illiterate.

3.2.3 Early seed multiplication

65. The project initiated seed multiplication of early and resilient varieties that were identified beforehand by the Institute of Rural Economics (IER); especially in terms of corn, sorghum and off-season tomato. These varieties are well adapted to an effective shortening of the agricultural calendar as they had demonstrated a certain tolerance compared to climatic variations.[41]

66. The project contributed to building the capacity for multiplications of varieties at field level. The multiplication of early varieties was conducted by seed producers who were trained[42] and certified in this by the National Seed Service (SSN) of the National Board of Agriculture (NBA). Altogether, 70 seed producers have been trained by the project in order to have enough quality seeds to hold different FFS under this project. A total of 872 seed producers has also been listed by the project in three agro-ecological areas of intervention for the following crops: millet, sorghum, sesame, rice, maize, cowpea, groundnut and market gardening.[43]

3.2.4 Training of facilitators

67. Facilitation of the Farmer Field Schools (FFS) has been the most important activity of project GCP/MLI/033/LDF in terms of time and money invested (component 2). Firstly, twelve (12) IPPM trainers were retrained in adaptation to climate change. Then, the project has trained and retrained facilitators from their organization; either technician-facilitators employed by the public system of agricultural extension, or producers-facilitators that were identified and appointed for this purpose by their FFS group or Farming Organization (OP). Facilitation of the FFS was then supported by a financial contribution to the project to the

[39] See: USAID (2014), Profiles of Agricultural Management Practices. Agricultural Adaptation to Climate Change in the Sahel. USAID, Washington DC, USA. August 2014, 68p.
[40] See: WG/CCA (2014), Measures of Adaptation to Climate Change. Distribution Sheet No. 1: Soil erosion: some control measures, 1p.; and: NBA (2014), Identification notes of Measures of Adaptation to Climate Change. Sheet No. 1: Improved deforestation or controlled clearing, 1p.; Sheet No. 2: Assisted Natural Regeneration (RNA), 1p.; Sheet No. 3: Non-timber forage production system (SPFNL) for efficient integration of agriculture and livestock farming. October 2014, 2p.
[41] See: IER (2013), Annual Report 2012/13. Project GCP/MLI/033/LDF. August 2013, 27p.
[42] See: DIARRA, I.A. (2015), Guide for Seed Manufacturers. Technical Guide to the Multiplication of Seed Grains (rice, millet, corn, sorghum) adapted to climate change. National Seed Service (SSN), Regional Board of Agriculture (RBA), Ségou. April 2015, 18p.
[43] See: FAO (2017), Final Report for Project GCP/MLI/033/LDF. FAO. February 2017, 31p. The evaluation team could not verify these results on the ground in the absence of information prior to the interviews.

amount of FCFA 25,000 per month per FFS for the duration of the campaign (3-5 months depending on the crop), and with a maximum of 2-3 FFS per facilitator per campaign.

68. The GCP/MLI/033/LDF project relied, as planned, on using master-trainers, FFS facilitators and Focal Points created as part of the IPPM/FFS project (2006-2010). A total of 880 key actors (master-trainers, facilitators, Focal Points), including 85 women (10%), received refresher training through the project on tools for setting up and monitoring the FFS/CCA.[44]

69. The different retraining and training sessions for facilitators were based on the FFS/CCA training manual, which had been prepared by the project coordination team.[45] The manual consists of 30 forms of 1-3 pages each; these summarize the essence of the training module.[46] The manual is quite simple; it only sets out the outlines for each module (introduction, objective, educational objectives, equipment required, method, keywords to remember, summary, area of application). As such, it is not a stand-alone document for dissemination beyond those people participating in the facilitator training. The manual would not be followed from A to Z by the facilitator; the modules are optional. The topics are diverse and relevant. They include, among others: the agricultural calendar, erosion control, fertilization of soils, agro-ecological analysis, management of crops, economic analysis, gender and conflict management. The manual was written in French and then translated into Bamanakan for producers-facilitators.

70. In total, project GCP/MLI/033/LDF has trained 295 new facilitators, of which 166 (56%) are technicians from a public organization and 129 (44%) are producers who have become producer-facilitators in their area (see Figure 5). In addition, and as co-financing to this project, another 118 facilitators were trained by other projects and programs, bringing the total of FFS/CCA facilitators trained to 413 people.[47]

Figure 5: The number of facilitators trained – by type and gender.

Facilitateurs formés	Par le projet			Par d'autres projets			Total		
en CEP/ACC	Hommes	Femmes	Total	Hommes	Femmes	Total	Hommes	Femmes	Total
Technicien-Facilitateurs	147	19	166	?	?	?	?	?	?
Producteurs-Facilitateurs	125	4	129	?	?	?	?	?	?
Total	**272**	**23**	**295**	**101**	**17**	**118**	**373**	**40**	**413**
% du total	92%	8%	100%	86%	14%	100%	90%	10%	100%

Source: FAO (2017), Final Report for Project GCP/MLI/033/LDF

71. The project data regarding the training of facilitators and producers differentiates between men and women. Women constituted only 10% of the total (40 of 413) FFS/CCA facilitators who were trained. This is disappointing since it is well below even the percentage of female facilitators (18%) in the previous IPPM/FFS program (2006-2010).[48]

[44] See: FAO (2017), Final Report for Project GCP/MLI/033/LDF. FAO. February 2017, 31p. The evaluation team could not verify these results on the ground in the absence of information prior to the interviews.
[45] See: NBA (2015), Training Manual for FFS Facilitators. Training modules (30) on good practices for climate change adaptation. IPPM/CCA program, 60p.
[46] The manual for project GCP/MLI/033/LDF is in addition to the Guide for Facilitators of Farmer Field Schools, published by the FAO in 2014.
[47] See: FAO (2017), Final Report for Project GCP/MLI/033/LDF. FAO. February 2017, 31p.
[48] See: FAO (2010), Final Evaluation of the Sub-Regional Program in Participatory Training in IPPM/FFS (GCP/RAF/009/NET). August 2010, 123p.

The percentage of women among producer-facilitators is even lower (3%) (4 of 129). See also paragraph 3.4.

72. It should be noted that facilitator-technicians are quite often moved around by their organizations, which does not help maintain the FFS approach in the place where they have left. However, they are often not "lost" in terms of the project, since they can be used to support the "winning over" of new intervention municipalities. The situation is the same for political decision-makers who are trained in FFS, such as the Focal Points of the organizations and the heads of sectors and sub-sectors.

3.2.5 Training of producers

73. Over the course of the project, FFS/CCA facilitators in turn trained a total of 33,646 producers through the intermediary of 1,335 FFS (see Figure 6).[49] Other projects and programs have also trained another 7,471 producers in 374 FFSs, thereby raising the total to 41,117 producers trained through the intermediary of 1,709 FFSs.[50]

Figure 6: The number of facilitators trained – by gender.

Producteurs formés	Par le projet			Par d'autres projets			Total		
en CEP/ACC	Hommes	Femmes	Total	Hommes	Femmes	Total	Hommes	Femmes	Total
2012	697	350	1.047	?	?	?	?	?	?
2013	4.090	957	5.047	?	?	?	4.090	957	5.047
2014	6.140	4.003	10.143	?	?	?	6.140	4.003	10.143
2015	6.667	3.433	10.100	1.869	5.172	7.041	8.536	8.605	17.141
2016	6.174	1.135	7.309	?	?	?	6.174	1.135	7.309
Total	**23.768**	**9.878**	**33.646**	**1.912**	**5.559**	**7.471**	**25.680**	**15.437**	**41.117**
% du total	71%	29%	-	26%	74%	100%	62%	38%	100%

Source: Annual reports for project GCP/MLI/033/LDF

74. Two-thirds of producers trained by the project were trained in two years alone (2014 and 2015; about 10,000 a year) out of the five (5) years of the project. This points to the fact that the project had a very slow start.[51] However, in 2016, the project had no more budget for the payment of allowances to FFS/CCA facilitators. The FFS held in 2016 were mainly thanks to the goodwill of facilitators who made their time available to producers, while sometimes paying the fuel for their means of transport out of their own pocket.

75. Women represent 29% of the producers trained by the project and 74% of producers trained by other projects. This large percentage difference is probably due predominantly to the even more pronounced orientation of the other projects to market gardening, where women are still largely in the majority.

3.2.6 The impacts of the FFS approach

76. The project has endeavored to track and quantify the differences in yields between Farmer Field School (FFS) plots and the Farming Practice (FP) plots. This is commendable. It shows convincingly that the FFS plots result in a better, or even much better yield. The project reported an improved average crop yield of between 21% and 77% for sorghum, millet, rice, corn, sesame and cotton; and of 97% for hybrid seeds of sorghum, in relation

[49] The data in the Figure differs slightly from the totals presented in the final report.
[50] See: FAO (2017), Final Report for Project GCP/MLI/033/LDF. FAO. February 2017, 31p.
[51] See: FAO (2014), Mid-term evaluation for Project GCP/MLI/033/LDF. December 2014, 52p.

to seeds of local varieties. This can be explained by the use of improved varieties, certified seeds and the good agricultural practices applied to the FFS plots. However, there could be still other explanations, such as the care given to the FFS plot in comparison to the FP parcel; in other words, the time effort spent and the amount of input set up.

77. To ensure a correct comparison of the impact of the techniques learned in FFS on crop yields, the impact on producer fields must be studied. This is where the methods and techniques learned must first give rise to evidence. Are they applicable to the actual scale of the field of the producer – in effort, time and money invested? Are the results as good in the field of the producer, as they are on the FFS plot? In any case, what are the reasons, and what implications should this have for a regular review of a training system in FFS/CCA, for the manual, and for the facilitation of the FFS/CCA?

78. However, project GCP/MLI/033/LDF collected data in 2016, through the various Regional Boards of Agriculture (RBA) and the FFS networks, on the performance of crops in so-called "adoption" fields at a producer level. The final report thus referred to the adoption of FFS/CCA "by 11,414 producers over 9,144 ha, all crops included, with rates of improvement in yields of 16% for corn in Banamba, 24% for millet in Togou and 19% for sorghum in Cinzana". The evaluation team takes note of this positive data, but considers it to be relatively unreliable due to the lack of a clear and impartial methodology in collecting the data. The team is of the opinion that the project does not have an appropriate mechanism to monitor the development and performance of the FFS producers in respect of their own fields. A true impact study by the IER for the duration of the project, for example, would have been timely.

79. On the other hand, a final impact study was running at the time of the final evaluation. The team was not informed of the research protocol. However, it notes that there was no baseline study that could serve as a reference for the interpretation of quantitative data collected by the impact study. The baseline study[52] that is available is rather a descriptive study of the contexts and features of different villages that have been subjected to contextual analyses; it does not, for example, contain basic data on base yields from producer fields.

3.3 Evaluation Question 3: To what extent has the project integrated climate change aspects and/or issues into national agricultural programs and policies?

Key result 3:

- *Since 2011, Mali has had a Climate Change Action Plan (NPCC), which led to the creation of a dedicated organization (the AEDD) and the creation of the Mali Climate Fund. Today, Climate Change Adaptation (CCA) is integrated into all programs and projects concerning agricultural development.*
- *The Farmer Field School (FFS) approach is not always declared to be a privileged extension approach, but a lot of stakeholders at field level promote and support it through FFS facilitators. Monitoring of FFS in semi-autonomous organizations requires evaluation and support.*

[52] See: DJOUARA, H. (2012), Baseline study for project GCP/MLI/033/LDF, 251p.

3.3.1 Integration of CCA approach in policies

80. The final goal of the project is the integration of climate change adaptation in all policies, programs and agricultural projects in Mali (component 3). The project therefore provided specific activities for the integration of CCA. These were not only aimed at the National Board of Agriculture (NBA), but also at many other organizations and stakeholders in the agricultural sector.

81. The project document took into account the integration of CCA in the agricultural sector, but did not explicitly cover the integration of the Farmer Field School (FFS) approach. However, it was implied by the FAO and proponents of the FFS approach that this approach is the most effective in training the rural world in agricultural practices and techniques. In all cases, it is as a result of the mid-term evaluation, which recommended a better liaison between components 1 and 2 of the project on the one hand, and component 3 on the other, that the project has also favored the integration of the FFS approach in the policies, programs and agricultural projects in Mali – in order to facilitate adaptation to climate change.

82. Since the formulation of the project in 2008, much has changed in Mali in respect of integrating climate change adaptation in policies. The main reference document for the old agricultural policy, the Framework Law on Agriculture (LOA), approved in 2006, made no reference to climate change or adaptation.[53] However, as part of the 2007 implementation of the National Action Program for Adaptation to Climate Change (PANA), Mali created the Agency for Environment and Sustainable Development (AEDD) in 2010, and then in 2011 adopted a National Policy on Climate Change (NPCC).[54] Since then, the CCA approach is considered in all programs and projects concerning agricultural development. The operationalization of the CCA approach was carried out in a participatory and cross-sectoral manner. It resulted in a list of Good Agricultural Practices (see sections 3.2.2 and 3.2.3).

3.3.2 Integration of FFS approach in policies

83. In addition to the CCA approach, project GCP/MLI/033/LDF worked to improve recognition of the FFS approach at a national level; one way was by organizing Open Door Days in different regions, a workshop at the National Assembly in 2014, and a workshop on Extension Strategies for the FFS approach, held in April 2016.[55] Given the comparative advantages of the FFS approach, it was agreed at the last workshop "to retain the FFS developed by the FFS/IPPM/CCA program and to disseminate them on a wider scale". It was recommended that managerial level staff had access to documents on the FFS/IPPM/CCA approach, and that a synergy of action was developed with other stakeholders to better disseminate the FFS/IPPM/CCA approach. The Director of the NBA urged all involved "to continue in the dynamic of the FFS, to adopt it, disseminate it, and to ensure that it is consistent with the mechanism that has been commonly defined."

84. Nevertheless, the Farmer Field School (FFS) approach is not always declared formally to be a favored or a unique extension approach in Mali. To date, the National Board of Agriculture has not dared impose the approach on other parties involved. This creates

[53] See: ANM (2006), Framework Law on Agriculture (No. 06-40/AN-RM). August 2006, 30p.
[54] See: AEDD (2011), National Policy on Climate Change (PNCC). July 2011, 45p.
[55] See: NBA (2016), workshop on the extension strategy for the FFS/IPPM/CCA approach (April 18-19, 2016).

uncertainty around the proper use of the denomination 'FFS'. In fact, at field level, several programs and projects 'copy' the FFS approach, sometimes using the same name and sometimes using another. In the first instance, the quality of the FFS approach must be ensured. In the second case, the multitude of approaches and/or terminology makes it confusing, both to producers and decision makers. A formal statement pertaining to the FFS approach as being a unique or favored extension approach would allow better follow-up by the NBA and the RBA on the quality of implementation.

85. The FAO Country Office in Mali actually considers the FFS approach today to be the favored approach for agricultural extension. In all FAO projects, the FFS approach is inserted in one way or another; either in the form of a field school for producers, an agropastoral field school, a field school for production and life, a forester field school, etc.

3.3.3 Integration of FFS approach in programs and projects

86. The team for project GCP/MLI/033/LDF was involved in several programs and projects; for example, in the project to improve Resilience and Nutrition of vulnerable groups in Bandiagara (GCP /MLI/041/GER), and the second FAO/GEF project on agro-pastoralism (GCF/MLI/038/LDF). This ensures a certain continuity of capacity in facilitating FFS in Mali after the project for the benefit of the dissemination of Good Agricultural Practices in adaptation to climate change across the country.

87. The FFS approach has also been incorporated in several programs and development projects without specific consultation with the NBA and IPPM/FFS program. ICRISAT and World Vision programs are such examples. In fact, many programs and projects rely today at a field level on the capability to facilitate that was meanwhile created by the IPPM/FFS program and project GCP/MLI/033/LDF. This is evidenced by the Head of sector at DRA in Kayes: "In general, we find a clear difference in performance between technicians who have been trained in the FFS approach and those who have not. Our best technicians all went through the FFS approach. It shows at a field level."

3.3.4 Integration of FFS approach in ON and ORS[56]

88. To better understand the ownership and sustainability of the FFS approach by partners of various FFS projects supported by the FAO in Mali, it is important to review the experience of semi-autonomous organizations, such as the Office of Niger (ON), Office Riz Ségou (ORS) Office and the Malian Company for the Development of Cotton and Textiles (CMDT).

89. However, thanks to efforts supported by the FAO in Mali for nearly 20 years, the FFS approach has become one of the agricultural extension methods for these three semi-autonomous development organizations. These organizations now have their own teams of FFS facilitators.

[56] The project evaluated below promotes CCA mainly through the implementation of FFS. Paragraphs 3.3.4 and 3.3.5 are used to analyze, at the level of semi-autonomous organizations of agricultural development in Mali, the impacts of this dissemination approach (the FFS approach) on Good Agricultural Practices associated with adaptation to climate change (CCA). Sections 3.3.4 and 3.3.5 are case studies.

90. Partnership with the Office of Niger, for example, involved campaigns from 2009/10 to 2011/12[57], but the impact is still visible in the reports and activities of the ON. In 2015/16, the ON trained a total of 541 rice producers in CEP (including 115 women; 21%) in 41 FFS, and 450 market gardeners (including 354 women; 79%) in 27 FFS.[58] These numbers are important, but still low given the fact that the ON works with 70,000 family farms. "Yes, the FFS have been disseminated, but is not easy without means. The FFS continue at their own expense." Among the advantages of the FFS, the ON cites: (A) reduced quantity of seeds; (B) control of natural enemies; (C) control of the use of inputs; (D) greater yields; (E) lower cost production. Among the constraints of the FFS, the ON cites: (A) lack of labor, especially for transplanting; and (B) lack of funds to finance facilitation of FFS by producer-facilitators.

91. The Office Riz Ségou also leads FFS.[59] About 90% of its agents (22 of 25) have been trained in FFS by projects supported by the FAO. As part of project GCP/MLI/033/LDF, the ORS has trained a total of 2,164 producers (including 1,148 women; 53%) in a total of 63 FFS (45 rice; 18 market gardening) between 2013/14 and 2016/17. The evaluation team notes, however, that the number of FFS is declining for reasons unknown: 24 in 2014/15, 15 in 2015/16, and 6 in 2016/17. In addition to the FFS, the ORS also reported other results pertaining to CCA and promoted by the project; namely, the recovery of degraded lands, erection of stone barriers, living hedges and eucalyptus. Through the various activities, the submersion rice yield would have improved from 1.5 to 3.5 tons per hectare.

3.3.5 The partnership with the CMDT in terms of cotton

92. The partnership with the CMDT has evolved in a different way. This partnership began at the time of the IPPM program (2006-2010), and was then expanded as part of two projects funded by the European Union (EU)[60] and the African Development Bank (BAD)[61]. The CMDT also works with the Better Cotton Initiative (BCI), which promotes the training of cotton producers in IPPM, and then sells the cotton from these producers via the CMDT as "Better Cotton".

93. An internal evaluation of the cotton project funded by the EU concluded that producers trained in FFS have increased their income 38% compared to producers who have not been trained. "Trained producers have expressed almost complete satisfaction with the training. It has enabled them to improve their knowledge, but above all their practices in terms planning, exploitation practices, management of soil fertility, pest management, quality management of cotton seed, all things having contributed to the increase in yields and incomes." [62] [63]

94. However, the CMDT always advocated calendar control and the use of synthetic insecticides. It also experimented with pest management ('Lutte sur Seuil'); this is a method

[57] See: ON (2010), Rice cultivation-Market gardening, 2009/10 campaign. March 2010, 8p.; ON (2011), rice cultivation, 2010/11 campaign. March 2011, 4p.; and ON (2012), Training of producers in IPPM. March 2012, 4p.
[58] According to an excerpt from the Activities Report 2015/16 of the Niger Office.
[59] See: AG HAMBA, A. (2017), Situation of producers trained in FFS (2013/14-2016/17). March 2017, 2p.
[60] See: FAO (2016), Annual Report 2015. Project: "Contribute to competitiveness and sustainable development of African cotton sectors through the development of Industry capabilities" (2013-2016) (GCP/RAF/482/EC). FAO, Bamako, Mali. Draft, January 2016, 15 p.
[61] See: PAFICOT (2014), Annual Activity Report, 2013/14 campaign. Support Project for the Cotton/Textile Sector (PAFICOT) January 2014, 10 p.
[62] See: FAO (2015), Internal evaluation of the effects of IPPM training on cotton producers through FFS in Mali. Final report of the investigation into the effects of FFS from 2009 to 2012. November 2015, 57p.
[63] Those findings correspond with those of FFS/CCA training through project GCP/MLI/033/LDF.

that requires a standard treatment of fields at the beginning of the season, before treating them according to the evolution of crop pests. The CMDT is not in favor of the IPPM approach to pest management based on AESA and/or control by biological treatment, which makes its adoption difficult for producers, even though they are convinced of its benefit.

95. Indeed, there is a conflict between the CMDT and the IPPM/CCA cotton producers. IPPM cotton producers, especially those organized within the Union Niéta de Bla, claim that the CMDT requires them to take cotton insecticides. Those who do not, will lose access to synthetic fertilizers. The CMDT criticized IPPM producers for a decrease in the quality of the cotton, which they said was due to poor control of cotton pests. In fact, the cotton produced by IPPM producers has always ranked first choice according to the project coordination team. Yet, IPPM producers confirm that there was a spontaneous diffusion of biological control methods by people who were not trained in them, which could have had a negative effect on the quality of the cotton. However, they are asking the CMDT not to penalize the IPPM cotton farmers by forcing them to buy a product they do not want to. So far, this problem has not yet been resolved.

96. With a view to the above, the evaluation team made a recommendation to the National Board of Agriculture to start dialogue between the CMDT and the cotton producers so that this conflict is resolved soon. In fact, the CMDT and IPPM producers have a common interest in guaranteeing the quality of seed cotton by channeling the spontaneous spread of IPPM practices. A future joint training program in FFS and CCA could ensure the quality of what is IPPM and make the cotton more profitable for producers, while adapting to climate change and maintaining the quality of the cotton.

3.4 Evaluation Question 4: To what extent have women and indigenous peoples, as well as vulnerable and marginalized groups, participated in the project?

Key result 4:

- *The evaluation team recognizes that project GCP/MLI/033/LDF operates in a context where gender equality is not a principle that is already established, and that very few women are active in management structures in rural areas. The team considered that taking responsibility for gender issues in the entire project has been slow and limited. Without a pre-established project strategy for gender issues, the number of women among the project coordination, the Steering Committee, the Focal Points, master-trainers and facilitators has remained very low.*
- *Women were better represented in field schools (38% of the total) due mainly to FFS in market gardening. Women involved in the project felt strengthened by the training. Some were able to increase their status with the authorities.*

3.4.1 Policy on gender

97. "Gender" is, in a broad sense, taking into account different groups and layers of the population in the design, formulation, decision-making, implementation and distribution of income or profits. Gender concerns women and men, but also groups defined by age, ethnicity, socioeconomic status, disability, disease, etc. As part of this final evaluation, the

team focused mainly on aspects of the involvement of women in all activities of project GCP/MLI/033/LDF.[64]

98. The FAO aims to achieve equality between men and women in sustainable agricultural production and rural development in order to eliminate hunger and poverty. Five objectives have been formulated for 2025[65]:

- Women participate equally with men as decision-makers in rural institutions and in shaping laws, policies and programs;
- Women and men have equal access to and control over decent employment and income, land and other productive resources;
- Women and men have equal access to goods and services for agricultural development, and to markets;
- Women's work burden is reduced by 20 percent through improved technologies, services and infrastructure;
- The share of total agricultural aid committed to projects related to women and gender equality is increased to 30 percent.

99. The Government of Mali has also, since 2010, implemented a National Gender Policy. Pursuant to this policy, the Department of Agriculture recommends that all R&D projects and programs should ensure 30 to 40% of women are included as beneficiaries and that 10 to 20% of managed land is awarded to women and young people. See Annex 5 for further information on gender issues in Mali.

100. Following recommendations of the project mid-term evaluation , the coordination team for GCP/MLI/033/LDF made the following diagnosis in relation to gender:[66]

- "There are very few women in management. Some prefer to stay in the cities than ride mopeds and go out and advise producers;
- At OP levels, very few women can read or write so that does not facilitate their capacity-building to be able to share their knowledge with others;
- Housework and the remoteness of the FFS sites from the village mean that women are unable to participate in any early activities of the FFS. The choice criteria for the FFS remind us to consider the accessibility of the FFS for women;
- Customs or tradition or any other social burdens mean that women don't speak or only speak very little in the presence of men: it is a long-term task in some circles to bring about this change of behavior."

101. The first planning document for project GCP/MLI/033/LDF on gender was dated 2015/16.[67] Orientation was on the inclusion of gender in various teaching materials (manual, modules, etc.), and the participation of women in training, workshops and exchange visits. The document makes explicit mention of different lines of production

[64] In the area of intervention, there are no so-called special "indigenous" groups to take into account. The notion of "vulnerable" would go beyond women to include the disabled, the elderly, etc. However, in general, it is certain (and understandable) that intensive and costly training must be directed towards able-bodied individuals, young adults, and people of average age.

[65] See: FAO (2013), Policy of the FAO on gender equality. Achieving food security objectives in agriculture and rural development. FAO, Rome, Italy. March 2013, 28p.

[66] See: FAO (2017), Gender Strategy for Project GCP/MLI/033/LDF. March 2007, 6 p.

[67] See: FAO (2016), Gender Plan. "Integration of Climate Resilience in Agricultural Production for Food Security in Rural Areas in Mali" project (GCP/MLI/033/LDF) January 2016, 2 p.

aimed at the strong presence of women; namely, horticulture, some crops (for example: baobab, Moringa, gourd), small livestock and the marketing of products. There was then a focus on alleviating the workload of women through donations of agricultural equipment.

3.4.2 The achievements of the project with regard to gender

102. The evaluation team used a list of indicators to analyze project GCP/MLI/033/LDF in terms of gender. The following was determined:

a) The project reports specifically on the participation of women compared to men;

b) There was no analysis of the needs of women prior to the project;

c) The project did not have clear objectives (targets) regarding gender;

d) The project team did not include any women – except for the admin team;

e) The group of master-trainers did not include women;

f) The Focal Points were all men;

g) Among the facilitators trained in FFS, only 10% were women (40 of 413). The preceding IPPM/FFS program (2006-2010) accounted for 18% of female facilitators;[68]

h) Women were better represented in the FFS: 38% of the total FFS participants (15.437 out of 41.117); proportion equal to that of the IPPM/FFS program (2006-2010). Note that the participation of women has been lower during the training sessions held by project GCP/MLI/033/LDF (29%) than those of the project partners (73%). The choice of crop (cereal vs. vegetables) could be one explanation for this;

i) The project promotes equal participation of women in the FFS. The evaluation team noted that this was not always evident on the ground; on the one hand, because of habits and customs, but also sometimes because of the behavior of the facilitator. Facilitators should actively use the room for maneuver that they have in order to increase participation of women;

j) The training manual includes a module on gender. It is a separate module (number 24 out of 30), which is also fairly theoretical. It does not provide the facilitator with real tools to integrate gender into the FFS;

k) The Support Fund for Local Initiatives, implemented by the project, seems to have especially benefited women through FFS on market gardening. The support consisted of agricultural equipment (carts, wheelbarrows, watering cans etc.). Sometimes the support included a water pump or the construction of wells for market gardening;

l) Equal mixed groups are not usual in Mali at field level. However, a deliberate policy of the project to encourage groups of mixed

[68] See: FAO (2010), Final Evaluation of the Sub-Regional Program in Participatory Training in IPPM/FFS (GCP/RAF/009/NET). August 2010, 123p.

composition (women and men) in cereal FFS has resulted in women being clearly involved and participating in these FFS.

m) Traditionally, the market gardening FFS consist mainly of women. Their training, as well as the granting of farming equipment has been much appreciated by the women, who were able to improve their access to the means of production, increase their production, develop transformation of the products, and improve marketing of the products.

n) The project has contributed in a very positive way at a local level, in each place, by allocating administrative titles to women for assigned plots (10 cases reported).[69]

103. The evaluation team recognizes that project GCP/MLI/033/LDF operates in a context where gender equality is not a principle that is already established, and that very few women are active in management structures in rural areas. The team considered that taking responsibility for gender issues in the entire project has been slow and limited. Any follow-up of the project should include a clear gender strategy, from the design of the project through to its conclusion.

104. The evaluation team is of the opinion that project GCP/MLI/033/LDF was generally accessible to different groups and segments of the population. The team listened to some testimonies that the multi-year IPPM program[70] would have favored in particular large producers and managers of organizations and farmers organizations (OPs). The team considered it likely that better trained people were more interested in participating in the FFS and the training sessions. The selection criterion for facilitators being able to read and write well, certainly played a role. However, on the basis of the interviews and information collected, the team does not believe that only the affluent members of the village would have been eligible for the FFS.

3.5 Evaluation Question 5: What other impact has the project had, and what is the sustainability of project interventions?

Key result 5:

- *The methods and techniques recommended for Climate Change Adaptation are customized to suit the localities and are usually accessible to the population. The FFS promotes a more intensive use of locally available resources at a lower cost. It also promotes the empowerment of producers. Producers trained in FFS state an increase in their crops at home, a reduction of monetary costs associated with production, and an improvement in their net income.*
- *Through this, the FFS then contributes to the local economy, social cohesion and food security. However, the project was lacking an appropriate mechanism to analyze the real impacts of CCA and IPPM/FFS methods and techniques on field producers.*

[69] See: FAO (2017), Final Report for Project GCP/MLI/033/LDF. February 2017, 31p.

[70] With the IPPM program following the same approach to dissemination as project GCP/MLI/033/LDF, the evaluation team considered this evidence to be relevant and important in terms of involving the different groups of the population.

3.5.1 Impact and sustainability of agricultural practices

105. The methods and techniques recommended for Climate Change Adaptation are customized to suit the localities and are usually accessible to the population. Erosion control and good agricultural practices should be distributed among all male and female producers, regardless of their socio-economic, cultural or political affiliation, or their ability to read and write.

106. The evaluation team is of the opinion that the "former" groups who have benefited from IPPM/FFS training, are more organized and better prepared than groups who have just started with FFS through this CCA project. Whilst on one hand, learning takes time. On the other, the dissemination of the FFS approach on a large scale could have compromised the quality of facilitation and the content of the training for "new people" if it is not matched by a good monitoring system for quality checks on the FFS.[71]

3.5.2 Impacts and sustainability in economic terms

107. The FFS promotes a more intensive use of locally available resources at a lower cost. The FFS is investing in human capacity so that it produces in a "more advanced" way. The FFS aims to add value to available resources (soil, water, organic matter, etc.), for the benefit of the local economy.

108. On the FFS plots, there is good proof of best performance of early seeds and Good Agricultural Practices. Producers trained in FFS also testify to an increase in their crops at home, a reduction of monetary costs associated with production, and an improvement in their net income.

109. With thousands of producers trained in FFS, the Union Nieta de Bla claims that the application of the IPPM/FFS approach helped massively reduce the use of synthetic pesticides (8,697 liters used instead of the expected 181,408 liters). This translates into a reduction of costs in cotton treatments of about FCFA 40m over nearly 26,000 ha[72] – all of which benefits the local economy.

110. However, there remains very little known about the real impact of CCA and IPPM/FFS methods and techniques on the fields of producers. To what degree are they applied in the fields? Why? What does this mean for dissemination of FFS and the FFS mechanism? Project GCP/MLI/033/LDF did not have a true monitoring-evaluation tool at their disposition, compared with adoption in an actual field; the only one used to be self-reporting. Studies such as the internal evaluation of project GCP/RAF/482/EC on cotton[73] helps to see things more clearly. It would be better to provide a monitoring and evaluation mechanism for their impacts in the project and compare it with an external evaluation.

111. The promotion of market gardening, through training and agricultural equipment granted by project GCP/MLI/033/LDF, has helped many women to increase their market

[71] For example, in one case, the team came across a can of herbicides on a market gardening perimeter. In another case, the FFS group spent two years consecutively analyzing the effects of fertilizer micro-dosing on an FFS plot. These are clues that the IPPM/FFS approach is not always well understood everywhere.

[72] See: FAO (2015), Annual Report 2014. Project: "Contribute to competitiveness and sustainable development of African cotton sectors through the development of Industry capabilities" (GCP/RAF/482/EC).

[73] FAO (2015), Internal evaluation of the effects of IPPM training on cotton producers through FFS in Mali. Final report of the investigation into the effects of FFS from 2009 to 2012. EU cotton project. November 2015, 57p.

gardening income. The project usually worked with groups of established market gardeners who had access to a perimeter. The focus on Good Agricultural Practices and the calculation of profitability help producers better create and manage their resources. None of the market gardening groups feared problems of selling the product in the event of increased production. Some groups and female producers spoke of their need for a storage location, while others voiced a desire to be trained in conservation and product transformation.

112. The support fund for local initiatives established by project GCP/MLI/033/LDF has supported a total of 34 local initiatives amounting to FCFA 28,551,825 (USD 41,082), with FCFA consideration of 3,250,680 (10% of the total). It is about investing in the effective implementation of the lessons learned in FFS. Agricultural equipment was made available to a group or cooperative, which guarantees a certain degree of sustainability. However, technical support provided for motor-driven pumps has not been on point; several groups who met testified that their motor pump broke down without the capacity required to draw water (from the surface or underground).

3.5.3 Impact and sustainability on a social level

113. The FFS approach is a very participatory approach and includes methods of adult literacy and tools to strengthen the dynamics of the group. FFS participants are motivated and willing to learn in order to improve or even to professionalize their management of the agricultural holding. The repetitive nature of the field-school sessions during the campaign created specific links between its members. These new links will also influence the social dynamic outside of the FFS, between members and villagers.

114. The training of facilitator-technicians and producer-facilitators also has more direct social impacts. There are many managers who have gone through IPPM training and who today occupy other positions elsewhere. A good number of producer-facilitators have also assumed other responsibilities, either in their municipalities or within a Farming Organization. IPPM training is appreciated by participants, and the skills and personal qualities created during the training are also shared by the community and by third parties.

3.5.4 Impact and sustainability on an environmental level

115. The methods and techniques promoted by project GCP/MLI/033/LDF are sustainable in environmental terms. The project promotes the development of production and – depending on the case in question – a decrease in planted acreage. The project facilitates the recovery of degraded lands and encourages people to fight against soil erosion.

116. IPPM cultivation practices are compatible with the health of producers, their families, their animals and the ecosystem. They avoid pollution of soils, areas and water with synthetic pesticides. The approach promotes the use of non-harmful biological treatments.

117. IPPM cotton producers, trained in FFS, testify that their health has improved thanks to the abandonment of synthetic pesticides. Female market gardeners claim that their health and that of their children has improved significantly, thanks to the consumption of vegetables and fruit, which are now brought into the homes. Garden produce gives them more energy and strength, and their children fall sick less often.

3.5.5 Impact and sustainability on an institution level

118. Climate change adaptation is integrated today in policies and programs in the agricultural sector. Project GCP/MLI/033/LDF has significantly contributed to the identification and inter-sectoral definition of ways and methods of adaptation. The big challenge now is the implementation of these activities by the Government, the decentralized organizations, municipalities and communities; the fact that the financing of activities is generally not insured.

119. The FFS approach is recognized today as the most effective method to train facilitators and producers in the knowledge and know-how of good agricultural practices. Its independent dissemination through organizations, programs and projects is limited by costs related to the facilitation of FFS, and then by how cumbersome certain practices are. In addition, semi-autonomous organizations still do not promote diffusion of the FFS approach to equity, as evidenced by the case of ON and the ORS. The conflict between the CMDT and IPPM producers regarding access to cotton fertilizers, requires rapid consultation and resolution.

3.5.6 Dissemination of the approach

120. The FFS approach is recognized today as the most effective and efficient method to train facilitators and producers in the knowledge and know-how of good agricultural practices. Its independent dissemination through organizations, programs and projects is limited by costs related to the facilitation of FFS, and then by how cumbersome certain fertilization and crop protection practices are.

121. Project GCP/MLI/033/LDF first look at a public and decentralized agricultural extension system. However, dissemination of the IPPM approach by technician-facilitators (TF) is dependent on the funds available for agricultural extension. None of the people contacted could tell us about the percentage of the budget or the amount available annually in the national budget for agricultural extension.

122. At a field level, it was clear to the evaluation team that the decentralized structure of agricultural extension is lacking in resources at all levels and working conditions are often wretched. The lack of public funds available at field level meant that public technicians often rely on the funding of various projects and programs of other organizations in the area to be functional. Technician-facilitators are not able, today, to guarantee the sustainability of their public service over public funds.

123. For example, other, complementary solutions should be looked for in order to make the FFS/CCA approach more sustainable at field level. The FFS/CCA program should consider focusing on the training of producer-facilitators (PF) in the future; for example, in the ratio of 3 PF for each TF (at the moment the ratio is 1: 1). In principle, the PF may better ensure the sustainability of the approach at field level. Information is often best passed from one producer to another, and they are stable and better integrated in their communities. The PF give a better perspective of sustainability and the FFS approach at a local level.

124. In the future, Farmers Organizations would be the most appropriate structures to ensure the sustainability of the approach. Union Niéta de Bla is showing the way, taking into account the cost of facilitation of a number of FFS by facilitator-producers in the area.

125. Self-diffusion of methods and IPPM techniques is not to be encouraged. Some methods and techniques are easy to learn, such as seed drilling or soaking the seeds before sowing. However, so-called 'wild' (without prior training and monitoring) diffusion of techniques such as the production of manure and biological treatment of cotton, risks compromising the desired impact in the producer fields and therefore product quality, thus also impacting on relationships with the organizations responsible for product sale.

4 Conclusions and recommendations

4.1 Conclusions

<u>Conclusion 1:</u> Realization of the objectives of project GCP/MLI/033/LDF "Integrating climate resilience into agricultural production for food security in rural areas of Mali" was satisfactory. The project has been implemented over the period 2011-2016 according to the pre-established logical framework and it produced the expected results with regard to the development and integration of Climate Change Adaption (CCA) policies and agricultural programs. Today, CCA is an integral part of all programs and projects in the agricultural sector[74].

126. Project GCP/MLI/033/LDF was designed as a continuation of the GCP/RAF/009/NET program on "Integrated Production and Pest Management through Farmer Field Schools" (IPPM/FFS) (2006-2010). The project effectively integrated CCA into the IPPM/FFS approach and increased the capacity in IPPM and FFS on a large scale; namely in 180 municipalities (out of 708), with 413 facilitators (technicians and producers), who trained a total of 41,117 agricultural producers in 1,709, predominantly looking at dry crops and market gardening. Of these, 28% of facilitators and 17% of producers were trained by partner projects and programs.

<u>Conclusion 2:</u> The GCP/MLI/033/LDF project has meant that those responsible for partner organizations in the project, as well as third parties, could be well informed about CCA and FFS approaches in order that they could support the implementation and application of these approaches in the field.

127. The project has trained a good number of officers in the divisional structure of agricultural extension, technicians in semi-autonomous organizations (such as the ON, the ORS and the CMDT), Focal Points, and leaders of farming organizations. The Steering Committee (SC) and the Working Group on Information and Knowledge in CCA (WG/CCA) were cross-sectoral in terms of composition. However, representation and participation of the producers and their organizations in these bodies could have been higher.

128. The participation of stakeholders has been satisfactory. Implementation of the project with AEDD and IER partners has experienced some problems, especially in terms of administration at the beginning of the project.[75] On the other hand, the GCP/MLI/033/LDF project made a very satisfactory effort to develop partnerships with various programs and

[74] It is important to remember that between the formulation of the project in 2008 and its launch, policies in Mali have changed – see paragraph 3.3.1.

[75] See the Mid-term evaluation report (December 2014): "*The constraints found at an administrative management level are shared between the FAO and institutional partners (NBA, IER and AEDD), and have caused delays that have had a negative impact in respect of the timetable for activities to be carried out, as they were often delayed over the winter (for example, IER and NBA coordination). As for the AEDD, these delays have contributed to a halt in some funding for continuing advocacy and climate proofing in the municipalities.*"

projects. This has resulted in partnerships with at least eight (8) large programs and projects: IESA, Cotton EU, GIZ/Resilience and Nutrition, IFDC, PAFICOT, APROCA, BCI and FAO/GEF Agropastoral. Moreover, the FFS approach was adopted by several programs and projects in the field without a true prior consultation at a national level (for example, ICRISAT, World Vision, PASSIP). In fact, the diffusion of the approach was carried out in these cases by the intermediary for FFS facilitators at field level. Regional networks of facilitators, who were supported by the project, played an important role in consolidation.

Conclusion 3: The cost effectiveness of the implementation of the program was adequate, since the project has far exceeded the expected results, both in terms of the number of facilitators and producers trained, and number of partnerships established. However, the situation of co-financing for the GCP/MLI/033/LDF project was not understood well by the evaluation team.

Conclusion 4: Ownership of the project by the country is very satisfactory in technical and operational terms, and moderately satisfactory in political and financial terms.

129. Approaches to the dissemination of CCA practices, including through the FFS, are very strong, as are relationships with the numerous partners. The capacity of CCA and FFS has increased significantly. However, ownership of the project is moderately satisfactory in political and financial terms. The FFS approach has still not been designated a unique or favored agricultural extension approach.

130. Financial planning for the project is moderately satisfactory. Planning, financial reporting, as well as the aspect of co-financing for GEF were not clear in the medium-term and final assessment to the evaluation teams.

131. The Monitoring and Evaluation System has been satisfactory with regard to the follow-up and documentation of activities, and the reporting of results. Monitoring of the impact of field training for producers was not well covered.

Conclusion 5: Development and training in CCA and FFS approaches are medium and long-term investments, that also benefit from the setting up of many other programs and projects. The evaluation team interlocutors were almost unanimous in stating that there should be a sequel to this well-conceived, well established and well-coordinated program.

132. Reproducibility of the actions of the project is satisfactory. CCA, FFS and IPPM approaches may well be scaled up. Many of the organizations, programs and projects are interested in them and adopt them. However, the financing of costs related to the facilitation of the FFS and the maintenance of quality requires an institutional solution that ensures sustainability, with a strong multi-year contribution from the Government of Mali based on the National Budget and national and international climate funds.

4.2 Recommendations

Recommendation 1: for the FAO Mali Country Office in support of the Government, on the importance of agricultural extension in Mali

In the context of the Maputo and Malabo agreements in terms of the budget for agriculture, the Government of Mali should become more involved so that there is more transparency regarding the available budget for agriculture (as a % of the national budget)

and in terms of the allocation of these funds at the level of all stakeholders. For certain, it is recommended that a fixed percentage in the agriculture budget is earmarked for public agricultural extension, but on the other hand, the FAO could support the Government in studying and understanding how the Climate Fund (available in Mali and internationally) could be made available for agricultural extension – on the basis of CCA FFS approaches – and used for municipalities, farming organizations and communities at a local level.

Recommendation 2: for the technical division of the FAO AGPM and all project partners regarding the FFS approach in Mali

Considering the importance of the FFS approach for agricultural extension in Mali, the FAO and its partners in project GCP/MLI/033/FLA should consider expanding what has been gained from the Climate Change Adaptation (CCA) and Farmer Field School (FFS) approaches, which have been proven on the ground in Mali. These activities deserve to be disseminated to all producers and agricultural producers, through public and private organizations.

Recommendation 3: for FAO Mali in support of the National Board of Agriculture regarding quality assurance of Farmer Field Schools

In order to support the different frameworks, organizations and networks of facilitators, as well as to ensure the quality of their services in the Field Schools, it is recommended that the FAO, through the Country Office in Mali, as well as through technical support in other offices at regional level and Headquarters if necessary, support the National Board of Agriculture in the development and implementation of a multi-year national plan for agricultural extension on the basis of Farmer Field Schools (FFS), and that a National Centre for FFS Extension (CNCEP) is created. Furthermore, the dissemination of the FFS approach should be supported by an appropriate monitoring mechanism that can help assess the quality of the facilitator training implemented, of the FFS held, and of the performance of FFS participants in the producers' fields. Impact monitoring should be integrated into such monitoring mechanism, with external validation.

Recommendation 4: for FAO Mali regarding aspects related to gender in the FFS

The evaluation team recommends that FAO Mali supports the National Board of Agriculture, in the formulation of Gender Strategy for the FFS that should be developed and integrated in the FFS multi-year national plan for agricultural extension. Such a strategy would set clear targets for the number of women at all levels of the implementation system (% of personnel, % of facilitators, % of producers, % of Focal Points, etc.), and would help intensify the training received by facilitators on gender issues and dynamics and the need for positive gender transformation.

Recommendation 5: for the FAO and the National Board of Agriculture regarding adaptation of the FFS approach to different contexts

As a result of the various interventions in the dissemination of the FFS approach in different contexts (rice, cotton, etc.) achieved by the various stakeholders in Mali, the FAO should take part in a capitalization and assessment exercise with autonomous organizations (such as the ON, ORS and CMDT), farming organizations, and the National Board of Agriculture, in order to work together and identify lessons to be learned from their respective multi-year experiences. On the other hand, these same actors should further consider how to adapt the approach to the characteristics of the specific contexts of their interventions, as

well as developing a strategy in mutual agreement to deal with the challenges related to the (self-) dissemination of IPPM practices.

Recommendation 6: for the FAO/GEF liaison office for projects in francophone countries

In the case of projects funded by the GEF in francophone countries, the FAO/LFE liaison office should ensure that project teams have documents in French at their disposal (for example, guidelines and procedural documents, follow-up reports, etc.) to allow the projects to report in French as one of the official languages of the United Nations. Compared to co-financing issues, the FAO/GEF liaison office ensures that the financial management approach employed is in accordance with GEF rules. In this regard, the evaluation team suggests FAO stakeholders involved in the project work together to clarify the financial aspects that currently remain obscured (including co-financing), through, for example, an internal discussion, especially in the eventuality of scaling-up the project GCP/MLI/033/LDF in the country. In all cases, it should be ensured that managers of FAO projects co-financed by GEF are informed about the financing and administrative procedures of the lender.

Appendices and Annexes

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Appendix 2: Program of the Evaluation Mission in Mali (March 12-24, 2017)

Sunday, March 12	The Evaluation team meeting in Bamako. Review of documentation.
Monday, March 13	Meeting with the Coordinator and the Technical Assistant for the FAO/IPPM/CCA Program. Courtesy visit to the FAO Mali. Security briefing at the UNDSS. Meeting with the Permanent Assembly of the Chambers of Agriculture in Mali (APCAM).
Tuesday, March 14	Courtesy visit to the National Director of Agriculture (NBA). Meeting with the manager for rice at the NBA. Meeting with Coordinator for the FAO/IPPM/CCA Program. Meeting with the Working Group on Management of Information and Knowledge in Adaptation to Climate Change (WG/CCA) Meeting with the Institute of Rural Economics (IER). Meeting with the GIZ technical advisor for the National Program for Sustainable Small-Scale Irrigated Agriculture (PASSIP). Meeting with the representative of the FAO in Mali and their assistant.
Wednesday, March 15	Meeting with Coordinator of the FAO/IPPM/CCA Program Meeting with the Secretary General and the Technical Assistant of the Ministry of the Environment, Sanitation and Sustainable Development (MEAD) Meeting with the Technical Assistant of the Secretary-General for Agriculture at the Ministry of Rural Development (MDR). Meeting with the Director of the Agency for the Environment and Sustainable Development (AEDD) Meeting with the Secretary General of the Association of African Cotton Producers (APROCA). Meeting with the National Director of Agriculture (NBA).
Thursday, March 16	Trip to Bamako-Kita. Meeting with the Head of the Agriculture Sector, a master-trainer and two facilitators. Visit to FFS/CCA in the village of Berela. Lunch at Kita. Visit the Association of Women Market Gardeners in the village of Mananko. Debriefing with the Head of the Agriculture Sector and the master-trainer in Kita.
Friday, March 17	Trip: Kita-Oualia-Kounda-Komantra-Kayes. Meeting at Oualia with the mayor of Oualia, the head of the sector for Bafoulabé, the agent for the sector, and the president of market gardeners for Oualia. Visit a market garden area on the river, together with 3 groups of members of the FFS market gardeners. Meeting at Kounda with the Regional Focal Point IPPM /CCA of Kayes, the Secretary General of the municipality, the Village Chief, the Focal Point of the PASSIP project, the sector leader and Local Focal Point of Kounda, the head of the sub-sector of Lontou, facilitators and members of the market gardening and grain FFS in Kounda. Meeting at Komantra with the Regional Focal Point IPPM/CCA of Kayes, the sector head, the Village Chief and members of the market gardening and grain FFS in Komantra.

	Quick look at the market gardening perimeter, which looks over the Senegal River and the Manantali hydroelectric dam at Mahina. Meeting in Kayes with the Regional Director of Agriculture and the Regional IPPM/CCA Focal Point.
Saturday, March 18	Trip: Kayes-Kolokani-Bamako. Meeting with the head of the sector of Kolokani and with the facilitator and representative of the Kolokani Chamber of Agriculture. Meeting at Dankorola with the Village Chief, the facilitator, and a representative of the Chamber of Agriculture, and the members of the dry crop FFS and Dankorola market garden.
Sunday, March 19	Reading time for project documentation. Work at the hotel on the analysis of the data, the interim report and the debriefing at the FAO.
Monday, March 20	Meeting with the Agri-business advisor for the 2SCALE project and then a courtesy visit to the IFDC country representative and the person responsible for monitoring-evaluation of the FDP micro-dose project. Trip: Bamako-Dioïla. Meeting with the head of the sector of Dioïla, the president of the network of producer-facilitators, the Focal Point of the producer-facilitators and a technician-facilitator. Visit to the market garden perimeter of the Balemaya Ton association at Dioïla Socoura North. Trip: Dioïla-Ségou. Meeting with the Regional Director of the National Seed Service (SSN) in Ségou.
Tuesday, March 21	Meeting with the Regional Director and the Focal Point of the National Board of Agriculture (NBA) in Ségou. Meeting with the Zanabougou facilitator, six students on placements and approximately 45 representatives of FFS members from ten (10) villages in the Zanabougou area who have benefited from technical support from a producer-facilitator. Meeting with the Deputy Director, the head of the Outreach Division, and the Focal Point of the Office Riz Ségou (ORS), Ségou. Meeting with the Director of Support for Rural Society (DAMR), the Chief and Deputy Chief of the Extension-Training Division of the Niger Office (ON), Ségou.
Wednesday, March 22	Trip: Ségou-Cinzana-Bla-Zoumanabougou-Koutiala. Meeting with the technician-facilitator of the Cinzana sub-sector, seven (7) producer-facilitators and five (5) IPPM/CCA producers from different villages in the Cinzana sub-sector. Visit the market perimeter of the village of Kondogola. View of the market perimeter at Cinzana Centre North. Meeting with the Mayor of Cinzana and his support adviser for development. Meeting. Meeting with the Secretary General of the Union Niéta de Bla, facilitator-producers and IPPM/CCA producers in the village of Zoumanabougou.
Thursday, March 23	Trip: Koutiala-Konséguela-Koutiala-Ségou-Bamako. Meeting with the Mayor of Konseguela. Visit the Sabaliton Cooperative of women market gardeners in the Niantiola district in Konseguela. Visit the 2nd market garden perimeter. Meeting with the Secretary General of Konseguela Municipality. Meeting

	with the head of the Koutiala sub-sector from the Regional Board of Agriculture. Return to Bamako.
Friday, March 24	Meeting of the Steering Committee (SC) for project GCP/MLI/033/LDF on climate change adaptation. Presentation of the preliminary results of the final evaluation of the CCA project. Debriefing with the representative of the FAO Mali and their deputy. Meeting with the Head of Planning and Research for the Environment and Sustainable Development Agency (AEDD) Working meeting between members of the evaluation team. Travel back to the Netherlands.

Appendix 3: List of people met (in chronological order)

Italy - by Skype:

Ms. Anne-Sophie POISOT, Senior Expert in Sustainable Production and project coordinator, Production and Plant Division (AGP), FAO, Rome

Mr. Stefano MONDOVI, Agricultural Officer, assistant to the project coordination, Production and Plant Division (AGP), FAO, Rome

Ms. Geneviève BRAUN, Programme Officer, FAO GEF Coordination Unit, Investment Centre Division, FAO, Rome

Mali

Mohamed SOUMARÉ, National coordinator, FAO/IPPM/CCA project. FAO-Mali, Bamako

Souleymane COULIBALY, Technical Assistant, FAO/GIPD/ACC project. FAO-Mali, Bamako

Moustapha SISSOKO, Head of Communication, FAO/IPPM/CCA project. FAO-Mali, Bamako

Maciré TOUNKARA, driver, FAO/GIPD/ACC project, FA-Mali, Bamako

Yahaya KANE, Point Focal IPPM/CCA, Permanent Assembly of the Chambers of Agriculture of Mali (APCAM), Bamako

Abdoulaye KEITA, Head of the Training Department, Permanent Assembly of the Chambers of Agriculture of Mali (APCAM), Bamako

Siaka FOFANA, National Director, National Board of Agriculture (NBA), Ministry of Agriculture, Bamako

Oumar SANOGO, Head of the Riz APRAO project, National Board of Agriculture (NBA), Ministry of Agriculture, Bamako

Meeting with the Working Group on Management of Information and Knowledge in Adaptation to Climate Change (WG/CCA), Ministry of Agriculture (17 people; 2 women)

Mama KONÉ, Focal Point IPPM/CCA, Institute of Rural Economy (IER), Bamako

Mamourou DIOURTÉ, Director of Research & Head of Dry Crops, Institute of Rural Economy (IER), Bamako

Modibo SYLLA, Head of Research and Development (R&D), Institute of Rural Economics, (IER), Bamako

Adama BALLO, Manager of economics courses, Institute of Rural Economics (IER), Bamako

Amadou GADCON, Head of Scientific Publishing, Institute of Rural Economy (IER), Bamako

Daniel Siméon KELEMA, technical advisor for the GIZ National Program for Sustainable Small-Scale Irrigated Agriculture (PASSIP), Bamako.

Ms. Fatouma DJAMA SEID, meeting with the FAO in Mali, Bamako.

Youssouf Djimé SIDIBÉ, Permanent Secretary, Association of African Cotton Producers (APROCA)

Modibo TOURÉ, head of representative programs at the FAO in Mali, Bamako.

Abdoulaye BERTHE, Secretary General, Ministry of the Environment, Sanitation and Sustainable Development (MEAD), Bamako

Drissa TRAORÉ, Technical adviser, Ministry of the Environment, Sanitation and Sustainable Development (MEAD), Bamako

Seydou Idrissa KEITA, Technical adviser, Ministry of Agriculture, Bamako

Boureïma CAMARA, National Director, Agency for the environment and development sustainable (AEDD), Bamako

Youssouf Djimé SIDIBÉ, General Secretary, Association of African Cotton Producers (APROCA), Bamako

Siako FOFANA, National Director, National Board of Agriculture (NBA), Ministry of Agriculture, Bamako

Issa SAMANKÉ, Head of Agriculture, Ministry of Agriculture, Kita

Hamady BAH, Master-Trainer IPPM/CCA and Technical Agent of the Ministry of the Environment, Kita

Amadou TOURÉ, Head of monitoring, Agricultural sector, Kita

Abdoulaye DIÉBA, CCA facilitator, Agriculture sector, Kita

Aboubakar SIDIKI SYLLA, CCA facilitator, Agriculture sector, Kita

Meeting with members of the FFS/CCA at Béréla; 35 people including about 15 women. Trials on sorghum in 2015/16 and 2016/17; improved variety and micro-dose fertilizer. Recipient of 10 carts.)

Meeting with members of the Association of Women Market Gardeners at Mananko; about 33 people including about 25 women. Established in 2001, then market gardening since 2006 with the support of 3 wells of the Association for Global Development (ADG). Trained by the IPPM program in rice and market gardening. Trained by the CCA project. Beneficiary of agricultural equipment from the CCA project; including a motor pump, carts, ploughs, etc. Total number of members of the Association: 54 persons.)

Sambou Mariko SISSOKO, Mayor of Oualia, Bafoulabé, Kayes

Mady DEMBELE, Chief of sector Bafoulabé, National Board of Agriculture (RBA), Kayes

Moustapha DEMBELE, Sector agent, Regional Board of Agriculture, Kayes

Sambou SISSOKO, President of market gardeners of Oualia, Bafoulabé, Kayes

Meeting with members of three (3) market gardening FFS/CCA at Oualia; about 25 people, including 20 women. One of the FFS was also the beneficiary of a pump).

Moussa N'Golo TRAORÉ, Regional IPPM/CCA Focal Point for Regional Board of Agriculture (RBA), Kayes

Oumar COULIBALY, Secretary General of the municipality of Kounda

Idrissa JAFFA, first deputy of the Mayor of Kounda

Boukary COULIBALY, Head of Division Bafoulabé and PASSIP Focal Point, Regional Board of Agriculture, Kayes

Nousanbi DIALLO, head of the village of Kounda

Demba DABO, Head of Sub-sector Lontou + FFS/CCA facilitator

Abdou TOURÉ, CCA facilitator at Kounda

Meeting with facilitators and members of market gardening and cereal FFS in Kounda; total of 20 people, including 8 women

Meeting with the Association of Market Gardeners in Komantra; about 20 people, including 11 women. The two FFS in Komantra received for CCA, a pump (needing repair), 2 ploughs, 4 oxen, 2 asses, 2 carts, 6 wheelbarrows, 20 rolls of chicken wire, 6 shovels, 10 buckets, 10 sprinklers, peaks.)

Yaouba KONÉ, Regional Board of Agriculture (RBA), Kayes

Kita LANSANI, Head of Sector Kolokani, Kayes

Djori KONÉ, IPPM/CCA facilitator, Kolokani, Kayes

Meeting with the local authorities, facilitators and members of FFS dry crops (sorghum/corn) and market gardeners at Donkorola; about 45 people including 30 women

Baba TOGOLA, Agri-business councilor, project 2SCALE, International Fertilizer Development Centre (IFDC), Bamako

Amadou OUADIDJE, Country representative & coordinator for project 4C Cotton, International Fertilizer Development Centre (IFDC), Bamako

Cheickh Amadou DIARRA, Monitoring and Evaluation specialist, FDP micro-dose project, International Fertilizer Development Centre (IFDC), Bamako

Salif KONARÉ, Head of Sector Dioïla, Koulikoro

Sambou SIDIBÉ, President of the producer-facilitator network, Dioïla

Adama Diouma DOUMBIA, producer-facilitator, Dioïla

Lassina SOUNTOURA, Focal Point and producer-facilitator, Dioïla ….??.... Technician-facilitator, Dioïla

Meeting with the Balemaya Ton cooperative of women market gardeners in Dioïla Socoura North; 26 people, including 24 women. The market gardening FFS at Balemaya was the CCA beneficiary of fences, pails, watering cans, ploughs and carts. The cooperative has a water tower and solar panels donated by the NGO Sécours Saoudien (Saudi Aid). The water tower does not provide sufficient water, perhaps due to lack of capacity of solar panels (SP). There is also a borehole of drill diameter of 8-10 meters of depth, and 7 traditional wells.

Issa DIARRA, National Seed Service (SSN), Ségou

Arouna SANGARÉ, Regional Director of Agriculture (RBA), Ségou

Ségou Idrissa SÉRÉ, Focal Point, Regional Board of Agriculture (RBA), Ségou.

Amadou DEMBELE, Zanabougou facilitator, Ségou

Meeting with the FFS facilitator in Zanabougou, representatives of 10 villages in the area with FFS implemented in their locality under the support of a producer-facilitator, then six students doing an internship with the FFS facilitator (total: about 50 people, including 30 women

Amedé KAMATE, deputy director of the Office Riz Ségou (ORS), Ségou

Moussa KASSOGUE, Head of extension, Office du Riz Ségou (ORS)

Alhassane AG HAMBA, Focal Point of the Office du Riz Ségou (ORS), Ségou

Djimé SIDIBÉ Director of Support for the Rural World, Niger office (ON), Ségou

Sékou Ibrahima BARRY Head of Extension-Training Division, Niger Office (ON), Ségou

Mamadou Issa MAÏGA, deputy head of Extension-Training Division, Niger Office (ON), Ségou

Meeting with the technician-facilitator of the Cinzana sub-sector, seven (7) producer-facilitators and five (5) IPPM/CCA producers from different villages in the Cinzana sub-sector. Total 13 people, including 2 women-producers

Saïdou TRAORÉ, Mayor of the municipality of Cinzana, Ségou

Seydou TRAORÉ, Adviser for Development Support, Cinzana municipality

Néguésama TRAORÉ, technician-facilitator, Cinzana municipality, Ségou

Meeting with the Secretary General of the Union Niéta de Bla, four (4) facilitator-producers three (3) IPPM/CCA producers and four (4) IPPM/CCA producers in the village of Zoumanabougou. Total: 12 people, including 4 women

Siaka DIONÉ, Secretary General of the Union Niéta de Bla, Ségou

Zéba MALLÉ, mayor of Konséguela, municipality of Koutiala

Meeting with the mayor of Konséguela and the Sabaliton Cooperative of women market gardeners in the Niantiola district in Konseguela. Total 25 people, including 19 women. Visit the 2nd market garden perimeter they have put in place.

Yaoua COULIBALY, Secretary-General, Konseguela Town Hall, municipality of Koutiala

Amadou SOCOBA, head of the Koutiala sub-sector, Sikasso

Jean Pierre RENSON, Deputy Representative, FAO-Mali, Bamako

Steering Committee (SC) for project GCP/MLI/033/LDF on CCA, National Board of Agriculture (18 people; 2 women

Abdrahmane DÉMÉ, Head of Planning & Research + Focal Point IPPM/CCA, Agency for Environment and Sustainable Development (AEDD)

*** Plus all the other technician-facilitators, producer-facilitators, and producers met at Béréla and Mananko (Kita group), Oualia (Bafoulabé group), Kounda and Komantra (Kayes group), Dantorola (Kolokani group), Dioïla (Dioïla group), Zanabougou and Cinzana (Ségou group), Zoumanabougou (Bla group) and Konséguela (Koutiala group).

Annex 1: Evaluation Terms of Reference[76]

« (….)

Purpose of the Evaluation

This evaluation was planned at the time of the design of the project, as shown in the Project Document, in Section 6.[77] The final evaluation will review the impact of the project, will analyze the sustainability of results and whether the project has achieved its adaptation and benchmark objectives. The evaluation will provide further recommendations for follow-up action. The final evaluation is intended to provide an assessment to the Government and to national authorities, donors of funds, as well as the FAO itself, of the results achieved by the project, including the desired impacts and those not intended. The evaluation could also contribute to an assessment of the implementation of the recommendations made by the Steering Committee on a new phase of the project. The final evaluation had the double objective of responsibility and reporting to all stakeholders, and contributing to organizational learning.

The results of this exercise will help define the strengths of the project as well as the aspects which could be improved; the conclusions, recommendations and lessons from the evaluation can thus be taken into account in the design and implementation of future similar programs in the country.

The project team and the Government of Mali are the main audience for most of the lessons and recommendations of this evaluation. Other important users of the evaluation will be the FAO as a whole, with its divisions at head office and other decentralized offices, as well as the lessor (GEF). FAO partners who belong to the broader development community will also benefit from it and draw upon the lessons learned and best practices identified. In addition, the evaluation also responds to a duty to account for resources used on behalf of the Government and the donor.

Scope of the evaluation

The final evaluation covers all aspects related to the implementation of the project since its inception in 2012 through to its conclusion in December 2016. Special attention will be paid to the analysis of efforts made since the mid-term evaluation to increase the capacity of adaptation to climate change in the agricultural sector in Mali.

The evaluation identified and analyzed progress made and the results of the project in the intervention zones, covering all the main activities undertaken within its framework and those described in the project documents, as well as the causes of success and failure. The evaluation will consult with key informants of the project, according to their availability after the end of the project, the Working Group of the project at head office, the national and regional offices of the FAO, as well as all categories of beneficiaries and stakeholders

[76] Excerpt from the Terms of Reference of the final evaluation of project GCP/MLI/033/LDF – a document totaling 24 pages.

[77] "An independent final evaluation will take place three months prior to the terminal review meeting of the project partners and will focus on the same issues as the mid-term review. In addition, the final evaluation will review project impact, analyze the sustainability of results and whether the project has achieved its adaptation objectives and benchmarks. The evaluation will furthermore provide recommendations for follow-up actions" (Page 44, project document).

involved in the implementation of the project, including government officials at a national and provincial level.

The overall evaluation will look if the project in its design and implementation has contributed to the following aspects:

- Promotion of the understanding of a wide range of knowledge on climate change and its effects on the environment, agriculture and food security for male and female farmers and producers in Mali.
- Demonstration of sustainable production alternatives in economic and ecological terms. The project contributes to the increase in the ability to adapt and respond to the impacts of climate change as a result of the support it receives in strengthening the capacities of stakeholders at the base, namely officers providing technical support services and also producers in respect of resilient practices, while also supporting local CCA initiatives.
- Improving the skills of national policy makers to improve national documents through the integration of CCA approaches and practices in policy and the national strategic programs.
- Promotion of adaptation FFS. Indeed, the FFS are an effective tool for educating people about climate-intelligent agriculture and adaptation and the local co-construction of agricultural innovations with the main users, who are the male and female producers in the rural environment. It also supports institutions and NGOs involved in these areas.

Objectives and Evaluation Questions

The evaluation will look at the work of the FAO on the integration of climate resilience in agricultural production for food security in rural areas in Mali, in terms of its relevance, effectiveness, sustainability and its impact compared to the objectives of the project.

The objective of the evaluation is to evaluate the changes that have occurred following the intervention of the FAO both at a micro and macro level, including all planned and unintentional effects. The final evaluation will try to determine to what extent the project was able to achieve its objectives and identifies any design and implementation issues that need to be improved to guide future actions in this area.

The evaluation will be structured around the following areas of analysis: (i) the relevance of the concept and approach of the project; (ii) the achievements and contributions of the project to its objectives; (iii) the application of the common principles of the United Nations with regard to country programming and cross-cutting themes; and (iv) sustainability. BY referring to on the above objectives, the evaluation will be guided by the following evaluation questions:

- To what extent does the design of the project and its activities meet the needs of Mali and the Malian population in terms of climate change adaptation?
    - To what extent are the partnerships encouraged by the FAO (with the government, civil society and the donors) complementary and synergistic?

- To what extent have the actions of the FAO, within the context of this project, contributed to reaching the overall objective of "strengthening the capacity of the agricultural sector to successfully respond to climate change through the

integration of concerns and strategies into ongoing agricultural initiatives, as well as adaptation issues in agricultural programs and policies"?

- To what extent has the FAO contributed to the integration of CCA agricultural practices in farming production systems?
- To what extent are the Farmer Field Schools effective in disseminating improved agricultural practices and developing the capacities of communities in resilient livelihoods in the face of climate?

- To what extent has the project integrated climate change aspects and/or issues into national agricultural programs and policies?

  - To what extent has the project put in place the necessary mechanisms for inter-sectoral coordination and awareness raising on climate resilient production and food security?
  - To what extent has the project strengthened the capacities of policymakers and other stakeholders to improve policies, strategies and CCA programs?

- To what extent have women and indigenous peoples, as well as vulnerable and marginalized groups, participated in the project?

  - To what extent did the project integrate gender mainstreaming for equality between men and women during its various stages (project design, identification of beneficiaries, implementation and results)?
  - How have the needs of vulnerable groups been factored into the design and the implementation of the program at different levels?

The evaluation matrix, indicating the sub-questions and/or the information needs for each evaluation question, as well as methods of data collection, will be finalized by the evaluation team during the preparatory phase of the evaluation.

On the basis of this analysis, the evaluation draws specific conclusions and makes recommendations for a follow-up project run by the government, the FAO and/or other parties to ensure sustainable development, including monitoring and expansion activities if necessary. The evaluation will draw attention to good practices and specific lessons that may interest similar activities. Any further aid proposal should specify the objectives and major products as well as the indicative contributions required. The findings are based on evidence. The documented practices and lessons will be presented in the form of recommendations based on the findings in a narrative format that will integrate, but also will fill, the traditional criteria OECD/DAC: relevance, effectiveness, impact, and sustainability.

(…)"

Annex 2: The Evaluation Matrix

Questions		Judging criteria / indicators	Documentary review	Interviews with management	Participant interviews	Community interviews
Objective 1: Assess the relevance of the intervention and the project approach						
Q1: To what extent does the design of the project and its activities meet the needs of Mali and the Malian population in terms of climate change adaptation?						
1.1	To what extent did the design of the project and its activities seem relevant and appropriate for meeting the needs identified?	• Analysis of the situation before the project • Analysis of the needs identified • Analysis of the project's process design and formulation	x	x	x	x
1.2	To what extent did the design of the project and its activities seem relevant and appropriate for meeting the needs identified?	• Analysis of the logical framework • Analysis of the institutional mechanisms of management and implementation • Analysis of procedures of implementation of training and FFSs • Analysis of the planned system of monitoring and evaluation	x	x		
1.3	Has the project adapted adequately to the changes in context that occurred during its implementation?	• Inventory of the major changes of context having favored the implementation of the project • Inventory of the major changes of context having complicated the implementation of the project • Analysis of the adaptation of the project to context changes	x	x	x	x
1.4	To what extent are the partnerships encouraged by the FAO (with the government, civil society and the donors) complementary and synergistic?	• Analysis of the situation before the project • Number of partnerships developed – by type of structure, (co-) funding, and the number of staff trained and involved in the project • Analysis of co-financing	x	x		

Questions		Judging criteria / indicators	Documentary review	Interviews with management	Participant interviews	Community interviews
		• Analysis of the situation at the end of the project				
Objective 2: Evaluate the effectiveness of the project in relation to its objectives and expected results						
Q2: To what extent have the actions of the FAO, within the context of this project, contributed to reaching the overall objective of "enhance the capacity of Mali's agricultural sector to successfully cope with climate change, by incorporating climate change adaptation (CCA) concerns and strategies into on-going agricultural development initiatives and mainstreaming CCA issues into agricultural policies and programming"?						
2.1	To what extent has the project contributed to the identification and management of agricultural practices adapted to climate change in the areas and systems targeted?	• Analysis of the situation before the project • Process begun by the project • Activities developed • Materials produced • Analysis of the situation at the end of the project	x	x	x	x
2.2	To what extent has the project contributed to capacity building agricultural in agricultural practices adapted to climate change?	• Number of training of trainer sessions by master-trainers – by topic • Number of trainers trained – by topic/culture, area and gender • Number of training sessions of facilitators – by topic/culture and area • Number of facilitators trained – by topic/culture, area and gender • Assessment of the training and activities by the facilitators – by gender • Other (non-FFS) activities for capacity-building in CCA practices	x	x	x	x
2.3	To what extent have the FFS been effective at contributing to capacity building in agricultural practices adapted to climate change?	• Analysis of the curricula of training of trainers, facilitators and FFS in terms of CCA practices	x	x	x	x

Questions		Judging criteria / indicators	Documentary review	Interviews with management	Participant interviews	Community interviews
		• Number of Farmer Field Schools held in the 1st and 2nd year – per topic/culture and area • Number of Farmer Field School participants trained in the 1st and 2nd year – per topic/culture and area • Other activities for capacity-building in CCA practices • Assessment of Farmer Field Schools by the producers – by gender • Adoption of CCA practices by producers in their own field				
Objective 3: Evaluate the impact of the project on agricultural programs and policies						
Q3: To what extent has the project integrated climate change aspects and/or issues into national agricultural programs and policies?						
3.1	How has the project contributed to the integration of climate change in agricultural programs and policies?	• Pre-project analysis of the situation • Process begun by the project • Activities developed • Analysis of the situation at the end of the project	x	x		
3.2	To what extent were communication and advocacy efforts initiated by the project were adequate and responded to the expectations of the stakeholders?	• Analysis of the communication plan • Number and grade of the manuals and technical data sheets • Number and quality of videos/documentaries • Number of radio programs • Number of Open Door Days organized - by area and culture • Number of other communication activities	x	x	x	x

Questions		Judging criteria / indicators	Documentary review	Interviews with management	Participant interviews	Community interviews
		• Appreciation of the equipment by the partners • Appreciation of the equipment by the facilitators • Appreciation of the equipment by the producers				
Goal 4: Evaluate the impact of the project on gender (in the broad sense)						
Q4: To what extent have women and indigenous peoples, as well as vulnerable and marginalized groups, participated in the project?						
4.1	To what extent has the design of the project and its activities integrated gender issues (in a broad sense)?	• Analysis of key elements related to gender in agricultural production • Analysis of key elements related to gender in agricultural extension • Analysis of taking into account gender in the logical framework and the activities	x	x	x	x
4.2	To what extent have women and indigenous peoples, as well as vulnerable and marginalized groups, participated in the project?	• No. of trainers trained - by crop, gender and area • No. of facilitators trained - by culture, gender and area • Number of Farmer Field School participants trained in the 1st and 2nd year – per topic/culture and area • Degree of participation of vulnerable and marginalized groups	x	x		
Objective 5: Evaluate other impacts and sustainability of the interventions of the project						
Q5: What other impact has the project had, and what is the sustainability of the project interventions?						

Questions		Judging criteria / indicators	Documentary review	Interviews with management	Participant interviews	Community interviews
5.1	To what extent has the project had other impacts?	• Impacts at field level – for producers and their communities • Impacts at field level – for trainers and their communities • Impact at an institutional level • Any other impact (social, economic, environmental, etc.)	x	x	x	x
5.2	To what extent are the interventions of the project sustainable?	• Sustainability in terms of agricultural practices • Sustainability in terms of gender • Economic sustainability • Social sustainability • Sustainability at a political level • Sustainability at an institutional level	x	x	x	x
5.3	What are the prospects for the project in the future?	• Needs and opportunities for scaling • Prospects for continuation with the Malian Fund • Prospects for continuation with GEF funds • Prospects for continuation with other funds	x	x		

Annex 3: Summary of logical framework (2011-2015) and project results (2012-2016)[78]

Objectives	Activities	Expected results (Project Document; 2011-2015)	Results of the project (2012-2016)	OBSERVATIONS
1. Steering of agricultural practices improved in terms of climate resilience	1.1 Partnerships in place with at least 4 projects and/or government programs involved in the steering of improved soil and crop management practices in three different ecosystems identified in NAPA and at least three production systems (dry grains, cotton/rice, "market gardening") 1.2 At least 10% of the total growing areas supported by partner programs have improved their CCA practices and strategies and integrated genetic material, resulting in more resilient production systems.	1.1 2 partnerships established with major projects in 1 ecosystem, over 2 production systems (including dry grains) at the end of the 2nd year. 1.2 4 partnerships in 3 ecosystems over 4 systems of production at the end of the project. 1.3 10% of areas (400,000 ha) supported by the partner projects by the 2nd year, and 30% at the end of the project.	1.1 See 1.2 1.2 Partnerships established in 3 ecosystems and 4 production systems (cotton-maize, rice, millet and sorghum and market gardening); with eight (8) projects, namely: IESA, Cotton EU, GIZ/Resilience and Nutrition, IFDC, PAFICOT, APROCA, BCI and FAO/GEF Agropastoral. 1.3 Multiplication of sowing seed and improved CCA. Use of 31 adapted varieties, application of CES/DRS measures, etc. over 123,168 ha (of a total of 400,000 ha); or 31% of the areas supported by the partners.	1.1 reached 1.2 reached (200%) 1.3 reached (103%)
2. Capacity-building and promotion of agricultural practices through	2.1 800 Farmer Field Schools that perfectly integrate CCA strategies and practices by supporting the farming adaptation process 2.2 At least 100 CCA Farmer Field Schools were supported by	2.1 200 Farmer Field Schools (including 125 existing and 75 new ones) incorporating CCA components by the end of the 2nd year 2.2 800 Farmer Field Schools (including 400 existing and 400 new ones) to be achieved before the end of the project	2.1 See 2.2 2.2 1,335 FFS set up (2 years through FFS); in addition, 374 FFS through partners; i.e. a total of 1,709 FFS have incorporated CCA.	2.1 reached 2.2 reached (213%) 2.3 reached (funds achieved on the

[78] See: FAO (2017), Final Report for Project GCP/MLI/033/LDF. February 2017, 31p.

Farmer Field Schools	the Adaptation Fund for Climate Change.	2.3 A pilot support fund for CCA applications was put in place at the end of the second year and has supported 20 field school initiatives and CCA by using GEF funding 2.4 The fund was fully operational at the end of the project, mobilizing additional funding to the amount of at least USD 20,000 from partners in 4 years and it has supported at least 100 Farmer Field Schools and CCA initiatives	2.3 A support fund was created to support the FFS with materials and CCA equipment. 2.4 Altogether, 34 local initiatives were supported to the tune of USD 41,082 (i.e. FCFA 28,551,825), with a return of FCFA 3,250,680 (10% of the total)	project budget) 2.4 Number of initiatives not reached; volume of the fund reached (206%)
3. Constitution of strong urge based around considerations of climate change in agricultural sector policies and programs	3.1 Mechanisms established for cross-sectoral coordination and increased awareness of resilient production and food security 3.2 Institutional capacity strengthened at national levels to develop policies, strategies and programs, moving from a reactive attitude to a proactive and informed approach	3.1 Mechanisms were defined before the end of year 2 of the project to involve agencies, decentralized territorial administration and the departments concerned, including an inter-sectoral working group. Recurring mechanisms were in place before year 4 and the Steering Committee and the inter-sectoral working group were taken on permanently and budgeted for so that they could coordinate CCA in the agricultural sector 3.2 20% of agricultural policies incorporate climate change considerations before the end of year 2; 10% of the operational projects in sectoral programs have incorporated a budget for CCA components 3.3 50% and 30% respectively by the end of year 4.	3.1 The Steering Committee (SC) and the Working Group on Information and Knowledge in CCA (WG/CCA) were cross-sectoral and fully functional. The National Assembly and the High Council of the Territorial Authorities became involved in the project. Municipalities were involved at a local level. 3.2 All policies, projects and programs take into account CCA. The FFS approach is seen as the best approach to agricultural extension. 3.3 See 3.2.	3.1 reached (100%) 3.2 reached (100% for CCA; partial for FFS approach) 3.3 See 3.2

Annex 4: Evaluation according to GEF criteria

In order to facilitate a comparison of GEF with the routine reports and to contribute to the learning program, the final evaluation commented as follows on the success of the project on the six-point scale of the GEF: very satisfactory (VS), satisfactory (S), marginally satisfactory (MS), moderately unsatisfactory (MU), unsatisfactory (U) and very unsatisfactory (VU). Each of the items listed below is evaluated separately:

Evaluation criteria	Rating	Comments
Achievement of the objectives	S	The CCA is well integrated into the policies and agricultural programs. The FFS approach has gained a lot of ground, but is still not the preferred approach for control of the project – NBA.
Achievement of results and activities	VS	The number of facilitators and producers trained in FFS/CCA exceeds the expected results. The realization of components 1 and 2 is very satisfactory; component 3 is satisfactory.
Progress toward the achievement of GEF–4 areas of intervention priorities/objectives	VS	The strategic objective of the GEF-4 is part of the "Climate change" intervention area, which supports the pilot projects and CCA testimonies.
Cost-efficiency	MS	The team failed to exploit the financial reports. The situation of co-financing is not well understood. Otherwise, the expected results of the project have been exceeded.
Risks and risk management	S	After a difficult start, the project was performed satisfactorily.
Sustainability	VS	Training will be used in the medium and long term. The large number of partnerships established is due to CCA and CEP being integrated today in several structures, programs and projects.
Participation of stakeholders	VS/MS	The project has followed a good participatory approach at all levels. The joint implementation of activities with the AEDD and IER has not been as fluid – mainly for administrative reasons.
Country-led ownership	VS/MS	IPPM, FFS and CCA approaches are solid as are all relationships with the many partners. The capacity of CCA, FFS and IPPM in Mali has increased significantly. The co-financing aspect is not well understood.
Approach to implementation	S	The project has followed a very participatory and inter-sectoral approach at all levels. The NBA has appropriated CCA. The FFS approach is still not preferred.
Financial planning	MU	Planning and financial reporting was not clear in the medium-term and final assessment to the evaluation teams. The co-financing aspect is not well understood.
Reproducibility	S	CCA, FFS and IPPM approaches may well be scaled up. Many of the organizations, programs and projects are interested in them and adopt them. The financing of costs

Evaluation criteria	Rating	Comments
		related to the facilitation of the FFS and the maintenance of quality requires a sustainable solution.
Follow-up and evaluation	MS	The Monitoring and Evaluation System has been satisfactory with regard to the follow-up and documentation of activities, and the reporting of results. Monitoring of the impact of field training for producers was not well covered.

Annex 5: Gender dimension in the Malian agricultural sector

Context

In sociological terms, Malian society is composed of different ethnic, nomadic or sedentary groups spread throughout the country. All these groups evolve in four systems of production, namely agriculture, fisheries, livestock and pastoralism, through which are found crafts, trade and services. These ethnic groups are traditionally characterized by a strong social hierarchy in which the woman, as a mother and wife, takes on a diverse spread of roles and situations.

Customary and religious practices still remain the main references for the management of the relationship between women and men in the family. They often result in behaviors and practices in which women are victims in economic, social and/or political terms. This limits their access to economic opportunities to grow and gain more independence.

With the social division of labor, women's roles are essentially recognized at the level of social reproduction and men in the areas of productive activities. These inequalities and disparities in the sexual division of labor cause more work for women than men, for girls than boys and have negative impacts on their health, their productivity and their condition of existence. Also, sociocultural factors weigh heavily on the status of women in the family and in society, limit their ability to make decisions and participate in the life of the community with equal opportunities as those of men. Thus, Mali ranks 150th out of 155 countries in the index of gender inequality.

However, since 2010 a national gender policy has been developed and adopted in order to reduce gender inequalities, but its implementation is still slow. This policy in theory offers a conceptual and operational framework that will ensure coherence, harmonization and a better impact of the actions related to equality between women and men through national reforms and sectoral policies in Mali.

Women and agriculture

Women represent more than 70% of the agricultural workforce in Mali, and they are present at all levels (production, processing and marketing). But they face many constraints (illiteracy, lack of access to land, credit, agricultural equipment, technology, and the weakness of their financial base), which hampers their empowerment and development within the sector.

The access conditions to land according to the land and dominical code are equal for both sexes (men and women), but in reality, it is customary law that prevails, giving great privileges to the man. The proportion of women with access to land was around 20% in 2009.79 In urban areas there is no discriminatory measure in terms of plots for residential use; the only handicap is the financial ability of women, which is generally lower than that of men. In rural areas, the current customs and tradition consider men to be the head of the household and priorities them in the allocation of plots, for in terms of accommodating the household and agriculture to meet the consumption needs of the household. The woman usually accesses crop lands through the conjugal family channel or if she is a member of a cooperative.

[79] See: MEF (2010), Rapport 2009 de mise en œuvre du Cadre Stratégique pour la Croissance et la Réduction de la pauvreté (CSCRP). Summary document. Ministry of Economy and Finance, Bamako.

According to the 2007 agricultural census data, inequalities still exist regarding access to land because less than 20% of women are responsible for agricultural plots and less than 20% of rural women have access to farm equipment. However, in some areas like Niéna, certain types of land, including the paddy fields in undefined lowlands, are exclusively operated by women. The latter customarily enjoy the management of these plains, handing them down from generation to generation between mothers-in-law and daughters-in-law. This opportunity allows women to supplement the food needs of the family, especially in times of drought. In other areas, as in Kidal, where there are large areas to exploit, the land belongs to those who want to work it. In these areas, there is no difficulty in getting the plots to cultivate and women as well as men have access to the land, because few people are engaged in agriculture. Once acquired, however, it is passed from family to family.

Women are usually active on most agricultural sectors (such as, for example, sesame) and, with obvious professionalism, they drive forward transformation, even on the small scale of agricultural products and they remain in a good position between the various different currents of trade on agricultural products, both inside and outside the country. This is no small thing when it comes to generation of wealth in rural areas and in the formation of the country's GDP.

As reported earlier, in the exercise of their production activities, women and especially those rurally, unfortunately face today those fundamental constraints which are, essentially: illiteracy, lack of access to land, credit, agricultural equipment, technology, and the weakness of their financial base. This reality has led the Ministry of Agriculture to put in place strategies and actions to promote the development of rural women. Today, it is admitted that all R&D projects and programs being executed should ensure 30 to 40% of women are included as beneficiaries and that 10 to 20% of managed land is awarded to women and young people.

Project GCP/MLI/033/LDF and gender approach

In accordance with the recommendations of the mid-term evaluation, the project undertook a number of actions for the empowerment of women and to increase their capacity for resilience in the face of climate change:

- 15,437 women out of 41,117 producers trained on climate change adaptation techniques;
- The training of 2,343 women beneficiaries on specific themes (marketing and quality, nutrition, livestock feed, agroforestry, calabash, seed production sector);
- Support equipment (wire for securing PPM, platform-mill, carts, wheelbarrows, garden wells, ploughs, donkeys, oxen for ploughing, rain gauges) that benefited 2,626 women;
- The project managed to hire some local officials to issue ten (10) administrative titles of plots attributed to the use of market gardening, to women;
- Support in breeding units for small stocks (sheep) for 10 female beneficiaries;
- Training a very limited number of facilitator-producers (413 new facilitators including 40 women) because of significant levels of illiteracy among women and the non-consideration of the specificities of this when they present the necessary intellectual skills;

- The implementation of a gender strategy has, among other things, enabled the creation of a monitoring and evaluation system that takes into account gender-disaggregated data and the intensification of actions specific to women;
- The participation of 700 women out of 1,685 people in experience exchange visits and 452 women out of 1,300 people involved in the Open Door days;
- The inclusion of the Minister for Women and Family in the Steering Committee to ensure gender integration in the actions of the project.

These achievements in terms of project assets, which may seem modest, are actually significant, especially if you know the sociocultural context in which the project takes place. The above actions have helped lighten housework for women and therefore supports their involvement in development activities, increases their income through active participation in family spending (schooling, nutrition and health of children) and strengthens social cohesion. Inter-village visits and Open Door days also helped women to see other realities and exchange their experiences.

The obstacles to increasing women's resilience to climate change include:

- The under-representation of women at the level of: the project coordination, the training team, technician-facilitators, facilitator-producers, the Focal Points, and the structures established by the project such as the Steering Committee or the Working Group with regard to endogenous knowledge and information;
- Low number of women participating at the level of the FFS/CCA, especially dry crop FFS;
- The direction of the FFS/CCA towards the reproduction of the traditional division of roles and responsibilities bestowed on women and men (men – grain and cotton crops; women – gardening and sesame) while they are dominant in all the same crops even if they are not owners or managers;
- Low land security and the smallness of the areas at the level of grain crops. They are often exposed to land set-aside arrangements in the case of conflict;
- The lack of resources: Women do not have their own tools and equipment with which to work on their collective field or individual piece of land. They must therefore wait for the men to complete their work before having access to the tools and equipment;
- The increased crowding of line of production where the project works with women (gardening and sesame) through men. The project should ensure that it does not have a negative impact;
- The lack of training for facilitators on gender issues. They must not only have technical skills, but skills in advocacy to assist the integration of women in development.