

Terminal evaluation of the project "Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through the farmer field school approach"

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“Integrating climate resilience into
agricultural and pastoral production for
food security in vulnerable rural areas
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Abstract

This is the final evaluation report of project “Integration of climate resilience in agricultural and pastoral production for food security in vulnerable rural areas through the farmer field school approach” (GCP/NER/043/LDF) financed by the Global Environment Facility (GEF) and jointly executed by the Food and Agriculture Organization of the United Nation (FAO) and the Government of Niger between 2015 and 2021. The project aimed to strengthen the agricultural and pastoral sectors’ climate change adaptation (CCA) capacities. The evaluation used a participatory and systemic approach (documentary analysis, interviews with stakeholders) to establish findings and provide information on the performance, conditions of sustainability and lessons learned from the project.

The project targeted Government, FAO, GEF and population priorities with regard to CCA, generated national technical expertise on the agro-pastoral field school (APFS) and CCA approach and supported the formulation and implementation of the APFS-CLC (community listeners’ clubs) component of the Climate-Smart Agriculture Support Project (PASEC). The master trainers of the project strengthened the capacities of project facilitators and others (PASEC, GCP/RAF/516/EC and ProDAF). The farmer organizations involved in the project delivered quality work and both the Village Savings and Credit Associations (VSLAs) and the Local Adaptation Investment Fund (FLIA) promoted by the project met with great interest among actors of the agricultural advisory chain in the Niger. The project reached 21 142 direct beneficiaries (or 106 percent of the target), including 51 percent women, and the project integrated gender concerns well. However, the project experienced shortcomings in terms of its management (from start-up to mid-term), its 3rd expected result (integration of CCA into development policies and plans) and its mobilization/accounting of co-financing partners. The expected 3rd result will be continued under the APFS-CLC component of PASEC.

The evaluation rates the effectiveness, efficiency and adaptive management of the project as moderately satisfactory while its integration of crosscutting concerns is satisfactory and deems its sustainability likely. FAO must nevertheless improve certain project management and mobilization of co-financing mechanisms, strengthen the capacities of partners based on their needs-analysis, and develop a long-term partnership with farmer organizations to strengthen their extension and advisory support capacities.

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Abbreviations and acronyms

APFS	Agropastoral field school
CCA	Climate change adaptation
FFS	Farmer field school
GEF	Global Environment Facility
INRAN	National Institute for Agricultural Research of Niger
LCCA	Local Investment Fund for Climate Change Adaptation
MFP	Municipal Focal Point
OECD	Organisation for Economic Co-operation and Development
PASEC	Climate-Smart Agriculture Support Project
PCU	Project coordination unit
RFP	Regional Focal Point
TOR	Terms of reference
VSLA	Village Savings and Loans Association

Executive summary

Introduction

1. This final evaluation concerns the project “Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through the farmer field school approach” (Project GCP/NER/043/LDF) funded by the Global Environment Facility (GEF) and jointly implemented by the Food and Agriculture Organization of the United Nations (FAO) and the Government of the Niger from January 2015 to March 2021.
2. The project aimed at: i) improving the capacity of the Niger's agriculture and pastoral sector to cope with climate change by integrating climate change adaptation (CCA) practices and strategies into ongoing agricultural development policies and programmes; ii) assisting stakeholders in adopting a pragmatic community-based learning process on the field that leads to better understanding, adaptation and eventual large-scale adoption of improved agro-pastoral practices.
3. The final evaluation used a participatory and systemic approach to find answers to the Evaluation Questions (EQs). The results of the final evaluation aim at informing stakeholders about the performance of the project, the conditions for sustainability of the results, and the lessons learned from the project implementation.

Main findings

The project is highly satisfactory in terms of its relevance and coherence.

4. It targets well the strategic priorities of the Government, FAO and GEF and its strategy is adequate to meet the needs of the populations and strengthen the CCA capacity of the Niger's agriculture and pastoral sector. The project is very well aligned with the Niger's Strategy for Sustainable Development and Inclusive Growth (SDDCI) and the Economic and Social Development Plan (PDES) 2017–2021. It contributes to achieving the United Nations (UN) Sustainable Development Goals (SDGs) 1, 2 and 13, FAO Strategic Objectives (SOs) 2 and 5 and Outputs 1.1, 2.2 and 3.2 of the FAO Country Programming Framework (CPF 2017–2020). Three GEF SOs (CC-A–1; CC-A–2; CC-A–3) are targeted by the project, which also complies with GEF policies and requirements for co-financing, public participation, stakeholder engagement, monitoring and evaluation (M&E), application of the incremental cost principle, gender equality, and GEF environmental and social safeguards.
5. The project's theory of change (TOC) and its results framework are based on coherent and realistic processes and targets. However, the targets for Effect 3 “integration of CCA strategies into agro-sylvo-pastoral sector policies, programmes and planning” are too ambitious. Given that decision-making processes regarding agriculture policies and their budgeting require more time and consistent advocacy, the project had to identify objectively achievable sub-indicators and targets for Outcome 3 over the time frame.
6. The project intervenes in coherence and synergy with the Climate-Smart Agriculture Support Project (PASEC) which is jointly financed by the World Bank and the Government of the Niger for the period 2017–2022 for the benefit of 60 municipalities vulnerable to climate change and food and nutrition insecurity in the regions of Dosso, Maradi, Tahoua, Tillabéry and Zinder. FAO provides technical assistance for the implementation of PASEC which aims at contributing to strengthen the capacities of the agro-sylvo-pastoral sector in the Niger to cope with the climate change consequences. Its expected outcomes include: i) setting up an effective facilitation

mechanism for agropastoral field school – community listeners’ clubs (APFS-CLC) in the target municipalities; the provision and dissemination of support documentation for the APFS-CLC approach; ii) integrating the APFS approach in the advisory strategy; and iii) implementing and supervising the APFS-CLC component of PASEC. They also concern the training of national experts on the Ex-Ante Carbon-balance tool (EX-ACT). The latter will help M&E to estimate the total biomass and to deduce the total carbon sequestered per year and per hectare. Thanks to this tool, service providers will prepare sub-projects with the Rural Invest methodology, and it can also be used in the implementation of the e-voucher system.

The effectiveness of the project is moderately satisfactory.

7. The project encountered several difficulties at its inception (lack of staff, frequent changes of National Project Coordinator (NPC) and FAO country office officials, delays in establishing partnerships, etc.) which caused significant delays in the implementation of activities and outputs.
8. At mid-term, the project was able to adjust its objectives (postponement, modification or deletion of certain activities) and apply corrective measures such as improving human resources (HR), project proactivity, decentralisation of implementation, and more formal involvement of farmers’ umbrella federations and organizations and decentralised services via Regional Focal Points (RFPs) and Municipal Focal Points (MFPs), to revitalise implementation.
9. The level of achievement of Outcome 1 "Creating an enabling operational environment for the promotion and adoption of Climate Change Adaptation (CCA) practices and technologies" is rated as Moderately Satisfactory. Three of the four planned outputs have been achieved but with delays, and the main indicator "Strengthening the capacities of project managers and stakeholders to transfer tested and selected CCA technologies and tools" has been partially achieved.
10. Outcome 2 "Training on the APFS approach and CCA tools to strengthen the resilience of beneficiaries" is rated as Moderately Satisfactory. Out of the six planned outputs, five have been achieved while integrating Village Savings and Loans Associations (VSLAs) which were not initially planned. However, Output 2.6 on micro-projects of the Local Investment Fund for Climate Change Adaptation (LCCA) has been significantly delayed because at the time of the final evaluation, the 60 selected micro-projects had not yet received the resources necessary for their implementation. These financial resources were finally granted in December 2020. In terms of indicators, the project affected 21 142 direct beneficiaries (106 percent of the target) of which 51 percent were women. About 72 percent of the learners who completed the APFS training between 2016 and 2018 adopted (applied two or more times in their field) at least two technologies, good practices or innovations thus approaching the target (100 percent), while 19 percent of the learners trained in 2019 applied them once. The project did not collect enough information to inform the 2nd indicator of Outcome 2. As a result, the area occupied by APFS and the plots cultivated with the improved practices and technologies learned, are not exactly known. An approximation based on data from the 2019 winter season APFS (an average of 1 010 m² of experimental area per APFS), estimates the total area improved by the 767 APFS set up by the project to be around 77 hectares. Also, considering that 72 percent of the 19 175 APFS learners (767 APFS x 25 participants) have all adopted and applied technologies, good practices or innovations on at least one-fourth of a hectare of their farm, we can estimate at 3 452 hectares the minimum surface area that has been sustainably managed thanks to the project.
11. Outcome 3 on the mainstreaming of CCA strategies into agro-sylvo-pastoral sector policies, programmes and planning is rated as Moderately Unsatisfactory. Outputs 3.1 and 3.3 respectively on the development of briefs and on the integration of the APFS and CCA approach into

programmes and policies, have been transferred to the PASEC project but are not yet achieved. Output 3.2 "strengthening institutional capacity for the mainstreaming of CCA in programmes and policies based on the APFS approach" as well as Outcome 3's indicator entitled "15 targeted municipalities, four government ministries and one research institute have increased their adaptive capacity ...", have been slightly achieved through training workshops. The evaluation did not find any capacity building activities targeting policy and strategy makers for better integration of CCA into sectoral and cross-sectoral policies, nor proposals for such integration at national and municipal levels.

12. However, the shortcomings noted are partially offset by several induced or unintended project outcomes that make the effectiveness of the project Moderately Satisfactory. The project has enabled the Government of the Niger to concretely assess the added value of the APFS approach. This has allowed the integration of an APFS component into PASEC, thus broadening the framework for the application and promotion of this approach. The technical assistance of the APFS-CLC component of PASEC, entrusted to FAO in May 2018, provides continuity to the innovation dynamics initiated by the project. The project has generated national technical expertise in the implementation of the APFS approach and CCA throughout the agricultural advisory support chain. The master trainers (MTs) have received quality training, the results of which have been used to strengthen the capacities of project facilitators and other projects such as: PASEC, the programme "Strengthening the resilience of cross-border pastoral and agro-pastoral populations in priority areas of the Sahel" (GCP/RAF/516/EC), the project for assistance to pastoralism in the Sahel through integrated development actions and the Family Farming Development Programme (ProDAF).

The project is Moderately Unsatisfactory in terms of efficiency and adaptive management.

13. Project management, which was weak at the outset, was improved at mid-term, but was unable to catch up or improve the efficiency and quality of outcomes. The project's delivery and implementation mechanisms did not function as planned. The project started with a small technical team and had three NPCs. The project coordination unit (PCU) was deficient and not very diligent on several management aspects (recruitment of experts and HR, formalisation of partnerships), before it later experienced a clear improvement yet without being able to overcome the difficulties linked to administrative bottlenecks involving the country office (drawing up and validating the terms of reference (TOR) of focal points' (FP) missions, monitoring of financial and procurement processes, etc.).
14. The project was unable to mobilise co-financing funds from the partners and to account for certain activities carried out under PASEC. Some shortcomings were also noted in the supervision and implementation of activities by the Directorate General of Agriculture of the Ministry of Agriculture and Livestock. The situation only improved with the decentralisation of implementation and the involvement of FPs and farmers' umbrella organizations. Indeed, the Directorate General of Agriculture has not succeeded in mobilising the Ministry of Agriculture and Livestock's divisions and its other partners (NGOs, farmers' umbrella organizations) at the regional and municipal levels. This has led to low rates of activity implementation and budget execution. As a result, the signing of the memorandum of understanding (MOU) with FAO and the provision of resources was only effective in July 2016, whereas the ideal period is generally April-May. Consequently, the Ministry of Agriculture and Livestock only set up 22 CLCs out of the 75 planned. In order to correct these shortcomings, the recommendations of the project steering committee in July 2017 and 2018 were implemented through the appointment of a National Project Focal Point, five project RFPs and 15 MFPs in July 2017 and the signing of MOUs with five farmers' umbrella organizations initiated in 2018 and continued in 2019 and 2020 for the establishment of

APFS and the facilitation of VSLAs in the five regions. This intervention strategy has significantly improved the rate of project implementation and alleviated the difficulties encountered in the monitoring and implementation of the APFS approach.

15. The project planning was based on annual work plans and budgets (AWPBs) that were regularly prepared, discussed, approved, implemented and monitored. However, the absence of a M&E expert until October 2018 and the delay in signing partnerships did not favour the use of the project results framework to really guide its management. Despite a relevant and realistic M&E plan, the project's M&E system did not work well for specific reasons detailed in the report.
16. The project regularly prepared the various semi-annual and annual reports which helped in reporting on implementation and guiding the decisions of the supervisory bodies regarding the directions to be given to the project. However, there were shortcomings in analysing the level of achievement of indicators and in their communication. Published indicators included a tendency to double-count or even exaggerate the outcomes actually achieved, and the narrative content rarely informed on their qualities. The lessons learned from the project have been used in the implementation of PASEC, but the lessons and good practices generated by the project are poorly capitalised and communicated. The main form of capitalisation of the project's good practices has been through the training of facilitators in the APFS approach and self-management in APFS. In addition, the documents mapping CCA projects and programmes in the Niger and the inventories of endogenous CCA know-how in five municipalities concerned by the project are being printed for sharing.
17. The project is managed in accordance with FAO rules and procedures under the direct execution modality. It has received continuous support from the technical unit - NSP, the GEF Coordination Unit and the Country Office. However, the Country Office, due to internal constraints (changes of representatives, limited HR), often lacked the flexibility and diligence to enhance its support and mitigate the project's shortcomings and difficulties.
18. The security crisis and the COVID-19 pandemic prevented the implementation of some activities planned for 2020. In addition, implementation risks regularly encountered in similar projects occurred and affected project performance (late project kick-off; low commitment of some co-financing partners; low interest of some stakeholders; to name but three). In the absence of an MOU committing their structures to the implementation of the project, the heads of the regional, departmental and municipal directorates and services of the three sectors concerned by the project (agriculture, livestock and environment) do not have sufficient flexibility to mobilise resources and additional staff for the project, and with the exception of FPs, the other agents do not feel truly concerned by the project.

The sustainability of the project is rated as Likely (L). The project has put in place a set of conditions to prevent and mitigate risks and ensure its sustainability.

19. The project has provided the Government with expertise that has assisted in the formulation and implementation of the APFS-DC (Dimitra Club) component of PASEC. The APFS, VSLA and Local Investment Fund for Climate Change Adaptation (LCCA) micro-projects tools promoted by the project have generated a great interest among stakeholders and final beneficiaries of the agricultural advisory chain in the Niger.
20. The project contributed to the revision of the National Guide for the implementation of APFS, which is a step towards the institutionalisation of the APFS approach foreseen in Deliverable 4 of PASEC. The long-term objective is to position the APFS approach as a flagship extension tool in the Niger.

The integration of cross-cutting concerns in implementation is rated as Satisfactory.

21. Gender has been mainstreamed in the implementation of the project, through the introduction of activities and technologies that address women's concerns, the establishment of incentive mechanisms to encourage their participation and the more or less satisfactory achievement of gender targets. Indeed, 51 percent of the 21 142 learners at APFS are women, as are 62 percent of LCCA beneficiaries at VSLA level (921 women against 570 men). However, some shortcomings were noted, and they deserve to be corrected in future projects. The strong presence of women among members of farmers' umbrella organizations should suggest to the project an increase of their quota for participation in APFS. In contrast, there is only one woman among the 15 FPs, which is very insufficient, and calls on the Government to further promote women in management positions through short-term actions (appointments) and long-term actions (encourage the training of more women in the field in order to improve their chances of occupying leadership positions). Similarly, the low presence of women facilitators in the project may have reduced the active participation of women producers in the discussions/facilitations of APFS, thus limiting the benefits they could derive from them.
22. The project strengthened the capacity of decision-makers and agents in the agricultural advisory chain in the Niger on the APFS and diversity field approach, and that of producers on good CCA practices and improved technologies. This is likely to enhance the resilience of vulnerable populations and agro-ecological systems to the effects of climate change and natural resource degradation. The integration of CCA measures into national and municipal plans and programmes, with adequate resources, remains a challenge to improve the environmental benefits of the project. Other cross-cutting concerns are also being mainstreamed and include health, nutrition and child labour in agriculture.

Lessons

The concept of co-financing applied to GEF projects remains poorly understood or dealt with by several projects. It deserves to be well explained and clarified to all stakeholders, including the Government and other partner projects, to avoid any misinterpretation that limits or hinders their achievement of objectives.

Overall, farmers' umbrella organizations have delivered quality work. It is necessary to support them over the long term and strengthen their extension and advisory support capacities. The project demonstrates that in the context of the Niger, working with farmers' umbrella organizations is more effective than subcontracting APFS to the Ministry of Agriculture and Livestock.

Conclusions

Conclusion 1. The project properly meets the strategic priorities of the Government, FAO and GEF, and the needs of the population in terms of climate change adaptation of the agriculture sector.

All stakeholders have confirmed the relevance of the targeted problem, the intended objectives and the approach used. PASEC was therefore developed to replicate the innovation support model initiated by the project, to strengthen it through the lessons and experience gained from the project, and to make the APFS and CCA approach the flagship tool for agricultural extension and advisory in the Niger. During its implementation, the project rightly integrated the VSLA activity which boosted APFS and which is a factor of sustainability for the project. In order to increase its effectiveness and generate more effects on final beneficiaries, the project could have incorporated in its design indicators that could have encouraged a wider adoption of the APFS approach by other projects and advisory support organizations and

indicators to encourage the implementation of LCCA micro-projects, so as to measure the first effects on final beneficiaries before the end of the project.

Conclusion 2. In addition to strengthening the capacity of agricultural advisory stakeholders in the Niger, the project has also equipped final beneficiaries with the necessary knowledge and tools to enhance their resilience to climate change and improve their household production, income and food security.

The project has generated national technical expertise in the implementation of the APFS approach and CCA throughout the agricultural advisory support chain. It has enabled the Government of the Niger to take ownership of the APFS approach in order to enhance the CCA capacity of the agro-sylvo-pastoral sector, food security and the resilience of populations. The Government has integrated into PASEC an APFS component whose technical assistance has been entrusted to FAO. The MTs trained by the project have accompanied other projects. The local facilitators trained by the project have demonstrated good working capacities and are a quality resource to improve the number and quality of advisory and extension agents at the local level. As a result of the project, producers have adopted resilience-building tools based on VSLAs, the adoption of CCA practices, technologies and innovations, and LCCA micro-projects. In this way, the project contributed to strengthening social cohesion through regular meetings that promoted information and knowledge sharing, consensual decision making, understanding and mutual support. Producers applied or adopted good practices or new technologies based on productive and early seeds, three-plant millet thinning, assisted natural regeneration (ANR) of soil, composting and localised application of organic and mineral manure, preparation and application of bio-pesticides and aqueous extracts, etc. The project contributed to the revision of the farmer field school guide in the Niger to integrate the APFS approach. The effects could have been better and more visible if not for the constraints and inadequacies encountered by the project; for example, the poor quality of some APFS (poorly designed experimental schemes due to lack of adequate supervision, delay in carrying out the experiments with negative effects on production and productivity and on test results interpretation), and the delay in setting up the selected micro-projects which were supposed to generate income for the beneficiaries and encourage greater adoption of the technologies tested and proposed. In addition, the adoption of certain technologies requires significant financial means to acquire inputs and equipment.

Conclusion 3. Project management has been weak in several areas and the mid-term adjustments made have not been able to fully get the situation back on track.

Failures mainly concerned the lack of diligence and proactivity in anticipating and solving problems and difficulties related to delays in recruiting experts and other HR, formalising and managing partnerships, monitoring-evaluating project activities and indicators, mobilising co-financing, and in the financing and procurement processes. In addition, there have been frequent changes of leadership at FAO and project level, resulting in discontinuity in the leadership, negotiation and monitoring of files and certain activities. The project was unable to mobilise co-financing funds. The Regional Focal Points (RFPs) did not carry out most of the planned supervision missions because their terms of reference (TORs) were not approved on time by FAO.

Conclusion 4. Despite the security risks and delays that affected the implementation of some activities (APFS, LCCA micro-projects, institutionalisation of the APFS approach, etc.), the project achieved outcomes that met beneficiaries' needs, and put in place the necessary conditions to consolidate them, make them sustainable and promote the achievement of impacts.

The APFS, VSLA and LCCA micro-projects tools promoted by the project have generated great interest among the stakeholders of the agricultural advisory chain in the Niger and producers. The collaboration between MFPs, farmers' umbrella organizations supervisors and local facilitators was smooth. The project

contributed to the development of the APFS-DC component of PASEC and provides technical assistance thereof. The project contributed to the revision of the national guide for the implementation of APFS, which is progress towards the institutionalisation of the APFS approach foreseen in Deliverable 4 of PASEC. The project involved state, regional and municipal technical services and farmers' organizations in the implementation of activities, and the local facilitators demonstrated good facilitation capacities which are pillars of sustainability.

Conclusion 5. The project has successfully integrated gender equity and environmental safeguard concerns and achieved its objectives in this area.

The project has well integrated and implemented activities to generate outputs that adequately meet the concerns of women and vulnerable populations and contribute to environmental safeguarding; it has put in place incentive mechanisms to encourage their participation in the project. Thus, VSLAs, three seedling-millet thinning per seed hole, composting and organic fertilisation, the cultivation of squash, the manufacture of aqueous extracts based on local products (neem, chilli pepper, tobacco), the manufacture of multinutrient blocks, and exclusive breastfeeding from 0 to 6 months, have been strongly supported by women. Although the amounts contributed are still modest, VSLAs have made it possible to set up a savings, credit and solidarity fund, and to submit 89 micro-project applications, 60 of which were selected for funding. The average budget of each of the 60 micro-projects financed was XOF 953 808, of which 19 percent was contributed by the VSLA and 81 percent by the GEF grant. These VSLAs have enough room for improvement in terms of self-financing and attracting new partners to develop future micro-projects and income-generating activities (IGAs).

Recommendations

Recommendation 1. The design of research-action-pilot projects and support projects for climate change adaptation (CCA) policies must incorporate conditions that provide sufficient incentives to promote scaling up and the generation of effects and impacts.

More generally, recent evaluations from the Office of Evaluations (OED) show that the missing link in initiatives to eliminate hunger, food insecurity and malnutrition often concerns support in policy implementation and evaluation. However, the need for new policies is not always justified, for example in an environment where existing policies are not implemented due to lack of capacity or priority. From this perspective, the concerns are institutional and are related, beyond the texts adopted, to the quality and performance of the country's extension system and to its capacity building needs in order to raise awareness on CCA.

In the specific case of this project, the aim was to demonstrate an approach and encourage its scaling up. In this regard, FAO-executed projects must, from their conception, ensure a better balance between quantitative indicators (which are often the priority of development projects) and the quality of outcomes. Indeed, it is more relevant to target a reasonable number of beneficiaries and put in place sufficient conditions to generate visible effects and changes on producers and thus ensure scaling up. Also, in order to stimulate the search for efficiency during implementation, FAO should integrate in its resilience and CCA projects a specific indicator to really stimulate the wider adoption of the approach by other projects and advisory organizations. Such an indicator lacked in this project. The indicator on LCCA micro-projects also deserves to be reformulated and refocused on the effect. In the project, the LCCA indicator is formulated as follows: "Local Investment Fund for Climate Change Adaptation established and operational in each region (5)". In its current form, the indicator and its target do not provide enough incentives for project managers to accompany the implementation of micro-projects until the effects or impact on final beneficiaries are achieved. That is unfortunate because LCCA micro-projects are a means of large-scale application of improved technologies and income generation, thus improving the income and resilience of final beneficiaries.

Recommendation 2. FAO Niger should integrate into its project planning and implementation mechanism adequate measures to timely and diligently anticipate and address capacity weaknesses and constraints in human resources, partnerships and the project enabling environment.

Better planning, more appropriate choice of partners and better risk management and implementation mechanisms are needed to support the implementation of activities, the delivery of outputs and the achievement of expected outcomes. If the project had sufficiently anticipated and found solutions to the difficulties related to the recruitment and retention of quality human resources, the mobilisation and empowerment of partners and the specificities of the organizational and institutional context, then APFS, VSLAs and micro-projects would have been set up in time, thus promoting a wider adoption of the approach and technologies, good practices or innovations before the end of the project. Similarly, the project would have had sufficient hindsight to correct its own weaknesses and consolidate its outcomes.

Recommendation 3. FAO needs to improve its project management and co-financing mobilisation mechanisms and strengthen the capacity of stakeholders in this regard, taking into account context-specific constraints and needs.

During project design, the organization could integrate a specific indicator on co-financing mobilisation into the results framework, and, during implementation, build the capacity of project managers and partners on the principles and mechanisms of co-financing mobilisation, and results-based management. FAO should also use the project task force to ensure continuity of leadership in the project and improve its response to administrative constraints encountered by the project during its implementation.

Recommendation 4. FAO should promote and strengthen the capitalisation and appropriation of the project's achievements by PASEC and other resilience support projects.

Successful technical and methodological experiences should be collected in a toolkit and transferred to PASEC and other resilience support projects. This transfer should include at least the APFS database, the APFS special topics document, a description of the APFS implementation system through farmers' umbrella organizations, the APFS M&E tools (the journal, etc.), a description of the supervision and reporting system through the structure based on regional and municipal focal points.

Recommendation 5. In order to better generate effects and impacts and ensure their sustainability, FAO should develop a long-term partnership with the farmers' umbrella organizations, and integrate in the design of future CCA projects several elements, including activities, incentives to truly strengthen the capacities of partners and beneficiaries and empower them.

In the continuity of the project, it seems logical to combine an institutional approach (ministries, etc.) and a private/organizational approach by supporting farmers' umbrella organizations to develop their own advisory function alongside public extension services. It would be necessary to go beyond the project approach with a list of APFS to be established each year, and move more towards a qualitative technical support to farmers' umbrella organizations and their APFS. The development of a long-term partnership with farmers' umbrella organizations should aim primarily at strengthening them and truly empowering them for building the capacities of their member associations in the APFS-CCA approach, and in the organization, implementation and monitoring of APFS. Indeed, these farmers' umbrella organizations and their member associations are potential vectors of extension and CCA, which can compensate for the operational shortcomings of the public sector.

In addition to capacity building and empowerment of farmers' umbrella organizations on the APFS approach, transparent management, gender mainstreaming, the provision of the three-pronged approach APFS-VSLA-micro-projects and other social mobilisation tools such as CLCs in line with FAO's

resilience funds, are some of the incentive factors that FAO should integrate in its projects to boost APFS and generate concrete positive effects on beneficiaries. APFS are the place to learn improved technologies and practices whose adoption by the producers requires a minimum of resources for their implementation. VSLAs offer a framework for savings and mutual aid between members and possibilities of financing IGAs. LCCA micro-projects can be a first pilot step to the implementation of large-scale IGAs and become a factor for the sustainability of the approach.

GEF criteria rating table

GEF criteria and sub-criteria	Rating ¹	Comments ²
A. Strategic relevance		
A1. Alignment with GEF and FAO Strategic Priorities	HS	See 3.1.2.
A2. Relevance to national, regional and global priorities	HS	See 3.1.1.
A3. Complementarity with existing interventions	HS	See 3.1.1.
A4. Overall strategic relevance	HS	See 3.1.
B. Effectiveness		
B1. Overall evaluation of project outcomes	MS	See 3.2.
B1.1 Output delivery	MS	Out of the 13 expected outputs, seven were almost fully delivered, two partially delivered, two postponed and one cancelled.
B1.2 Progress towards project outcomes and objectives	MS	The achievement of Outcomes 1 and 2 was rated as Satisfactory and Outcome 3, Moderately Unsatisfactory.
B1.3 Probability of impact	ML	Delays in the establishment of APFS and other factors are likely to prevent the achievement of the impact.
C. Efficiency		
C1. Efficiency ³	MU	See 3.3.
D. Sustainability of project outcomes		
D1. Overall probability of sustainability	L	See 3.4.
D2. Sustainability in relation to financial risks	ML	See 3.4.3.
D3. Sustainability in relation to socio-economic risks	L	See 3.4.3.
D4. Sustainability in relation to institutional and governance risks	L	See 3.4.3.
D5. Sustainability in relation to environmental risks	L	See 3.4.3.
D6. Catalysis and replication	L	See 3.4.3.
E. Factors affecting performance		
E1. Project design and preparation ⁴	S	See 3.1.3.
E2. Quality of project implementation	S	See 3.3.1.
E2.1 Supervision of the project (FAO, Steering Committee)	S	See 3.3.1.3. See 3.3.3.
E3. Quality of project execution	S	See 3.3.3. See 3.3.4. See 3.3.5.
E3.1 Project management and execution arrangements (PCU, Financial Management, etc.)	S	See 3.3.1
E4. Co-financing	U	See 3.3.6.
E5. Project partnerships and stakeholder involvement	S	See 3.3.2.
E6. Communication and knowledge management	MS	See 3.3.8
E7. Overall quality of monitoring and evaluation (M&E)	MS	See 3.3.7.

¹ See rating scheme at the end of the document.

² Including reference to the relevant sections in the report.

³ Includes cost efficiency and timeliness.

⁴ Refers to factors that affect the ability of the project to start at the planned time, such as the presence of sufficient capacity among implementing partners at the start of the project.

GEF criteria and sub-criteria	Rating¹	Comments²
E7.1 Design of M&E	S	See 3.3.7.
E7.2 Implementation of the M&E plan (including financial and human resources)	MS	See 3.3.7.
E8. Overall evaluation of factors affecting performance	MU	See 3.3.
F. Cross-cutting concerns		
F1. Gender and other equity dimensions	S	See 3.5.
F2. Human rights issues	HS	See 3.5.
F3. Environmental and Social Safeguards	HS	See 3.5.
Overall evaluation of the project	MS	

1. Introduction

1.1 Purpose of the evaluation

23. This final evaluation concerns the project “Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through the farmer field school approach” (Project GCP/NER/043/LDF). The project was funded by the Global Environment Facility (GEF), jointly implemented by the Food and Agriculture Organization of the United Nations (FAO) and the Government of the Niger from January 2015 to March 2021 (see Box 1).

Box 1. Background information on the project

GEF Project ID: 4702
Beneficiary country: Niger
Implementing Agency: FAO
Budget: USD 17 758 871
(USD 3 800 000 from GEF LDCF and USD 13 958 871 in co-financing)
GEF focal area: Climate change adaptation (CCA)
GEF Strategic Objectives: SCCF: CCA-1, CCA-2, CCA-3
Approval date of the PIF:
Approval date by the CEO (GEF): 28/07/2014
Expected start date: 15/01/2015
Effective start date: 14-15 June 2015
Expected closing date: May 2018
Revised closing date: 30/06/2020; then extended following COVID-19 to 31/03/2021
Date of mid-term review: 14/04/2018

24. The final evaluation is required by GEF to determine the performance of the project, the conditions for sustainability of results, and the lessons to be considered for the design and implementation of future interventions. The purpose of the final evaluation of the project is to inform the Government of the Niger, GEF, FAO, co-financing partners, the Steering Committee, the project coordination unit (PCU), implementing partners, beneficiaries and other interested parties on the project outcomes, the conditions to be put in place in order to consolidate them, promote their sustainability and impact.

1.2 Target audience

25. The results of the final evaluation are intended for GEF, FAO and the Government of the Niger to assess project performance, draw lessons from project implementation and guide future interventions. They will allow GEF to assess project performance and guide support, and FAO to assess its performance and continuously improve it in implementing GEF-funded projects. The Government of the Niger will use it to assess the performance of governmental and non-governmental organizations involved in the execution, co-financing and project implementation, to establish the added value of the agropastoral field school (APFS) and climate change adaptation (CCA) approach, and to determine what efforts need to be pursued to consolidate achievements and promote scaling up.
26. The results of the final evaluation are also intended for use by government and non-government structures at the decentralised levels (region, department, municipality), local implementing partners, and agricultural advisory organizations to assess their contribution to the project and to identify the roles they should continue to play in building the CCA capacity and resilience of producers and their organizations and umbrella organizations.

1.3 Scope and objective of the evaluation

27. The final evaluation covers the project implementation period (29 October 2015 – 31 March 2021) and addresses all project components, intervention areas and stakeholders. The final evaluation aims at identifying and assessing the outcomes achieved by the project, the effects and changes (potentially) generated on the beneficiaries, and the crucial issues and lessons that deserve to be considered after the end of the project and during the design and implementation of future projects. The approach of the final evaluation is to answer the evaluation questions (EQs) formulated beforehand (see Box 2) and detailed in the evaluation matrix (see Appendix 7 of the French version.)
28. The EQs are based on the OECD Development Assistance Committee (DAC) criteria (relevance, coherence, effectiveness, efficiency, impact, sustainability), and integrate cross-cutting issues (gender, environmental safeguards, co-financing, stakeholder involvement), as well as partners' concerns (OECD, 2019). In line with the new FAO and GEF project cycle, the final evaluation also verifies compliance with the United Nations (UN) common country programming principles, namely: human rights-based approaches (HRBA); the right to food and the right to decent work; gender mainstreaming; sustainability (financial, socio-political, institutional and environmental); capacity building and results-based management.

Box 2. Evaluation questions

EQ 1. Is the project relevant and coherent in addressing the strategic priorities of the Government of the Niger/its partners (FAO and GEF) and in addressing the adaptation needs of the agriculture sector to climate change?

EQ 2. To what extent have the capacities of the Niger's agricultural and pastoral sectors been strengthened to cope with climate change in a sustainable manner? To what extent have good agropastoral practices and technologies been adopted to increase production, livelihoods and food and nutrition security?

EQ 3. To what extent have the project implementation and management mechanisms, including activity planning, financing and co-financing, monitoring and evaluation, stakeholder involvement and communication, affected the effectiveness of the project and the quality of the outcomes?

EQ 4. Did the project put in place the necessary conditions to ensure the sustainability of the outputs and outcomes achieved?

EQ 5. Have gender, vulnerable or marginalised groups and environmental sustainability related concerns, been integrated into project implementation?

1.4 Methodology

29. The final evaluation process complied with the norms and standards for evaluation of the United Nations Evaluation Group (UNEG), the terms of reference (TOR), the measures prescribed by the Government of the Niger, and the United Nations System contingency plan for COVID-19 and for the unstable security situation in the Niger. The final evaluation adopted a systemic and participatory approach.

1.4.1 Preparatory phase

30. The preparatory phase of the final evaluation took place in September 2020 and allowed, through virtual meetings between the Evaluation Team, the project supervisors at FAO in Niamey and Rome and the PCU team to clarify the objectives of the evaluation, collect documentation, discuss the methodology and plan the survey phase. During this phase, the following documents were analysed: the project document (ProDoc); the Niger, GEF and FAO strategy documents; PCU and partners' activity reports; project steering committee reports; project progress reports (PPR); mid-

term evaluation report; and internal project implementation reports (PIR). Besides, the Evaluation Team reconstructed the project's theory of change (TOC)⁵ and developed the evaluation matrix⁶ specifying the evaluation questions (EQs), sub-questions and indicators.

1.4.2 Survey phase

31. Resource persons and project managers in implementing and executing partner structures as well as direct beneficiaries of the project were interviewed (Table 1). These stakeholders were selected in a reasoned manner by the Evaluation Team from a database of stakeholders provided by the PCU. Each interview session lasted one to two hours and involved one to several stakeholders from the same organization or department. (See Appendix 1 of the French version.)

Table 1. Categories of stakeholders interviewed

Stakeholders	Organisations and stakeholders concerned
Implementing stakeholders	<u>FAO</u> : Lead Technical Officer (LTO); Funding Liaison Officer (FLO); Programme Officer at GEF Coordination Unit; Deputy Representative; Country Office Programme Officer. <u>Ministry of Agriculture and Livestock</u> : National Director of Extension and Technology Transfer, National Focal Point (NFP) of the project.
PCU	National Project Coordinator (NPC) and Assistant Agronomist, Livestock, Finance and Procurement, Monitoring and Evaluation.
Implementing partners	<u>Government institutions</u> : One advisor from the National Council for Environment and Sustainable Development; two officials from the Directorate of National Meteorology. <u>Directorates and decentralised technical services</u> : Regional Director of Agriculture of Tillabéry, Regional Focal Points (Tahoua and Dosso), Departmental Director of Agriculture of Ouallam; Municipal Focal Points and Heads of Municipal Livestock and Environment Services of Tébaram and Abalak (Tahoua), Tondikiwindi, Say and Simiri (Tillabéri), Djiratawa (Maradi), Sakorbé and Falwel (Dosso), Kantché (Zinder) <u>Farmers' umbrella organizations</u> : Managers and supervisors of the SA'A Federation (Maradi), CSA/OCP (Zinder), FRUPOAM/ANFO (Tillabéri).
Co-financing partners	Partner projects and programs: Climate-Smart Agriculture Support Project (PASEC); IESA Project
Beneficiaries	<u>Intermediate beneficiaries</u> : One Master trainer and two RFPs; 12 MFPs and heads of municipal agriculture, livestock and environment departments; 17 facilitators <u>Final beneficiaries</u> : 15 leaders and members of APFS and VSLA groups

1.4.3 Data analysis and report writing

32. The analysis was based on five evaluation criteria: i) relevance and coherence; ii) effectiveness; iii) efficiency and management; iv) cross-cutting themes; and v) sustainability.
33. The relevance and coherence analysis focused on examining the quality of the design to assess the soundness of the target problem, the realism of the basic assumptions and the alignment of the project with country priorities. The quality of the results framework and the TOC was assessed by questioning the relevance and feasibility of the planned activities, the quality and role of the stakeholders involved, of the decision-making and operational processes, and of indicators and targets.

⁵ The project TOC developed by the Evaluation Team is presented in Figure 2 and will be discussed with key stakeholders.

⁶ The project evaluation matrix is presented in Appendix 7 of the French version.

34. Effectiveness was analysed by comparing expected and achieved outcomes. The results achievement rating was based on GEF's rating scale (See Appendix 3 of the French version): Highly Satisfactory (HS), Satisfactory (S), Moderately Satisfactory (MS), Moderately Unsatisfactory (MU), Unsatisfactory (U) and Highly Unsatisfactory (HU). The achievement of the indicator targets was assessed following the "traffic lights" principle: green (achieved), yellow (in progress), red (not in progress). Factors likely to affect the consolidation of outcomes and progress towards the achievement of impacts after the end of the project were identified.
35. The quality of project management and implementation was analysed by assessing the effectiveness of financing, co-financing, supervision, management, planning, stakeholder participation, monitoring and evaluation (M&E), and internal and external communication mechanisms. The analysis of supervision focused on the quality of support provided to the project by FAO and the Steering Committee.
36. The analysis of cross-cutting themes focused on the quality and effectiveness of integrating concerns related to gender, vulnerable groups and environmental protection in project implementation, with FAO and GEF policies as a reference framework.
37. The sustainability analysis focused on assessing the conditions for sustainability put in place by the project and identifying the level of control over financial, socio-economic, environmental, institutional and governance risks that were likely to threaten the consolidation and sustainability of the project outcomes. Besides, the measures put in place by the project to prevent or mitigate these risks were analysed. A four-level scale was used to rate this sustainability (See Appendix 3 of the French version.): Likely (L), Moderately Likely (ML), Moderately Unlikely (MU), and Unlikely (U).
38. The final evaluation report was prepared on the basis of the information collected, triangulated and analysed. This report presents the project outcomes, the strengths and weaknesses of its implementation, conclusions and recommendations for stakeholders, and lessons to be considered in the design and implementation of future GEF and FAO projects.
39. The Evaluation Team was made up of two consultants: an international consultant specialised in project evaluation and research and development on integrated agriculture-livestock-environment systems in Africa, and a national consultant experienced in local development support and evaluation in the Niger. The team was supervised by the officer of this final evaluation at the FAO Office of Evaluation (OED).

1.5 Limitations

40. The final evaluation was disrupted by the COVID-19 pandemic and the resurgence of security risks in the Niger which did not allow field visits to be conducted. To mitigate this limitation, the final evaluation conducted many telephone interviews and had in-depth discussions with key resource persons in the project intervention regions/sites.

2. Background and context of the project

2.1 General context

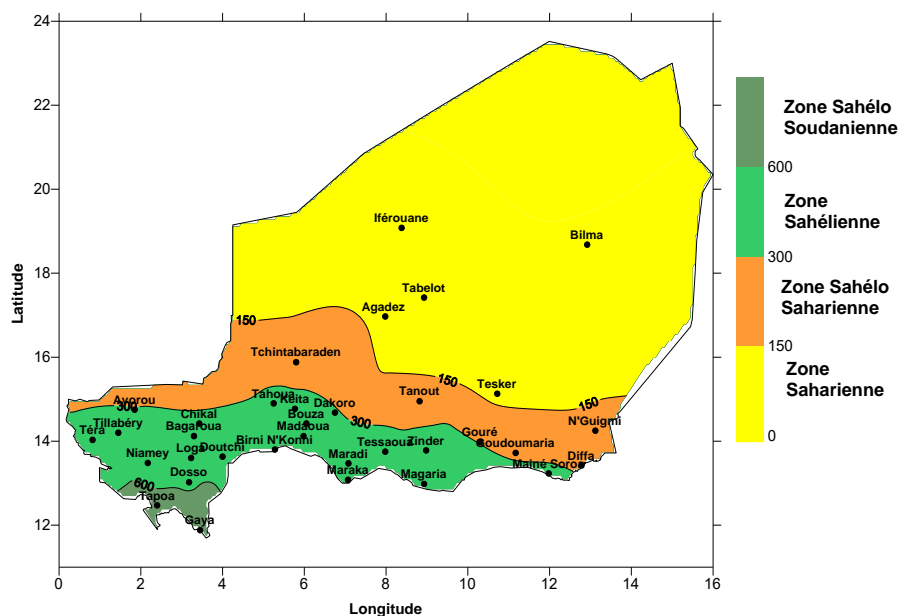
41. The Niger is a landlocked country in West Africa covering 1 267 000 km² of which three-fourths is desert (Republic of the Niger, 2006) (Figure 1). Its population in 2019 was estimated at 23 310 715 inhabitants with a population growth rate of 3.8 percent. The literacy rate is 28.40 percent (2017) (Population Data, 2018a) and the country is ranked last (189th) on the Human Development Index (HDI 2018: 0.377) (UNDP, 2019). Despite the progress made over the past decade to alleviate poverty, the level of extreme poverty remains very high (41.4 percent in 2019), affecting more than 9.5 million people (World Bank, 2021a).
42. After a period of low growth (1.2 percent on average per year between 1960 and 2004) insufficient to improve the standard of living (Republic of the Niger, 2017a), the Niger's economy has been doing better in recent years (gross domestic product (GDP) growth of +11.8 percent in 2012, reducing by around +5 percent per year since then), boosted by industrial investments from abroad and those made by the government (Population Data, 2018b). Between 2004 and 2018, GDP (constant since 2010) has increased from USD 4.253 billion to USD 9.055 billion and GDP per capita from USD 324 to USD 403 (World Bank, 2021b). The Niger has maintained good economic growth in 2019 (6.3 percent according to the World Bank) driven by agriculture, thanks to favourable weather conditions and investments made to improve agricultural productivity.
43. The agriculture sector accounts for 43 percent of GDP and employs 83 percent of the population (Ministry of Agriculture and Livestock, 2016a). With more than 10 million tropical livestock units (TLUs), the country has the largest herd in the Sahel region. The soils are generally poor and the 15 million potentially cultivable hectares represent less than 12 percent of the country's surface area (Directorate of National Meteorology, 2005). These soils, mostly dunes, are not very productive and are very sensitive to water and wind erosion. The potential irrigable land is estimated at 270 000 hectares, of which 140 000 hectares are in the Niger River valley, while the area actually irrigated (under total water control) was estimated at 10 580 hectares in 2011, mainly on the banks of the Niger River (Niamey and Tillabéry regions) and in the Maradi, Diffa, Tahoua regions (IPCC, 1997).
44. The share of the industrial sector (excluding oil and mining) has changed little over the last 20 years and represents 10 percent of GDP. The share of oil and mining has declined steadily, from 4 percent of GDP in 1995 to less than 2 percent in 2008, before increasing from 2009 onwards to reach 6 percent of GDP in 2012, following oil exploitation.
45. The Niger's development is threatened by a number of risks and dangers, including: climate change, falling oil prices, fluctuations in international prices of non-oil commodities, terrorist attacks and armed groups and since 2020 the COVID-19 pandemic. For some, these threats increase government spending, while for others they reduce the state's resources and its ability to strengthen people's livelihoods.⁷

⁷ The Niger is a member of the G5 Sahel created in 2014 by five Sahel states (Chad, Mauritania, Mali, Burkina Faso and the Niger).

2.2 Vulnerability to risks and climate change

46. The Niger's climate is tropical and semi-arid, with two seasons: a dry season from October to May and a rainy season from June to September (unimodal rainfall regime) with maximum rainfall around August (Sarr & HOUNGIBO, 2015).
47. The country is divided into 4 climate zones (Figure 1). The Sahelo-Sudanian zone (1 percent of the surface area, 600 to 800 mm of rain per year) is suitable for agriculture and livestock. The Sahelian zone (10 percent of the territory; 300 to 600 mm) is adapted to agro-pastoralism. The Sahelo-Saharan zone (12 percent of the surface area, 150 mm to 300 mm) is suitable for transhumant pastoralism. Finally, the Saharan zone (77 percent of the territory, 150 mm of rain per year), which is desert, is suitable for irrigated crops.

Figure 1. Map of the Niger's climatic zones



Source: Directorate of National Meteorology, 2003, complies with UN. 2020. [Map of Niger](#) [online].

48. Most of the population is concentrated in the south of the country, a region favourable to the cultivation of basic cereals (millet and sorghum) as well as irrigated market gardening and various cash crops (FEWS NET, 2019). The agriculture sector is dominated by small-scale farms (one hectare maximum) that practice extensive agriculture and pastoralism, the success of which depends closely on climatic and edaphic conditions, particularly the regularity of rainfall and flooding of the Niger River, and the level of soil fertility (Abdoul Habou *et al.*, 2016). Irrigation is mainly applied to rice production (winter, rainy and dry seasons) and market gardening (winter season and/or off-season). The performance of the production systems is generally low and irregular due to erratic rainfall, recurrent droughts, the progressive decline in soil fertility and a shortage of land in the most productive areas that limits the following of land and leads to the cultivation of marginal land. The inhabitants of the northern regions that border and comprise the Sahara desert practice transhumant pastoralism as their main livelihood.
49. Agriculture is the sector most affected by climate risks and changes in the Niger (Republic of the Niger, 2006). Droughts are strongly correlated with certain plant and animal pests and diseases that reduce production and productivity. Almost a third of the losses during the food crisis of 2004 and 2005 were due to locusts. Striga (*Striga hermonthica*) and various fungal pathogens are a chronic problem for most crops. Grain losses caused by grain-eating birds (*Quelea quelea*) and

millet stem borers (*Coniesta ignefusalis*) are more serious. Additional risks include bush fires in pastoral areas and windstorms that damage young plants.

50. The main adverse effects related to climate risks and changes are: the decrease in agricultural production; fodder deficit; insufficient water points; decrease of the water table; reduction in the area of forest formations; decrease in fish production; decrease in biological diversity (disappearance of certain species, degradation of wildlife habitats); increase in the prevalence of certain climate-sensitive diseases (measles, meningitis, malaria and respiratory diseases); formation of sand dunes; etc. These adverse effects have a direct impact on reducing food security, decreasing people's livelihoods and accelerating environmental degradation.

2.3 Need to operationalise the new National Agricultural Advisory System

51. In order to deal with the persistent food production deficits that subject the population of the Niger to food insecurity year after year, the authorities of the Niger have decided to implement the 3N Initiative "Les Nigériens Nourrissent les Nigériens" (Republic of the Niger, 2012). The main objective of this strategic framework, adopted in 2012, is to "contribute to the sustainable protection of the population of the Niger from hunger and malnutrition and to guarantee them the conditions for full participation in national production and the improvement of their income". Its specific objective is to "strengthen national capacities for food production, supply and resilience to cope with food crises and disasters".
52. The 2015 review of the 3N Initiative implementation identified agricultural advisory services as a weak link. The Niger lacks a genuine National Agricultural Advisory System (NAAS). Consequently, most of the cross-cutting functions contributing to agricultural advisory services are currently not fulfilled, or are fulfilled only to a very limited extent (Republic of the Niger, 2017b). In fact, a plurality and diversity of advisory mechanisms in the field have emerged in the agricultural profession and during certain projects, which provide, in some places, quality advisory services and which have a strong potential for development. However, these are not very well coordinated and remain very compartmentalised. Despite an increasing involvement of farmers' umbrella organizations, the advisor/farmer ratio estimated at about one advisor for every 1 000 farming households (in 2016) aims at reaching about one advisor for every 250 farmers according to FAO recommendations.
53. Besides, the advisory offer is not in line with needs. Technical advice remains dominant and economic considerations at the plot, at the herd and even more so at the farm levels are poorly or not taken into account. Specific needs, such as those of nomadic pastoralists, are also poorly taken into account. Advisory services depend mainly on external funding, with the exception of a few cases such as service provision centres or private veterinary services of proximity.
54. To overcome these shortcomings, a new, plural and integrated NAAS, enhancing the specific mechanisms of different stakeholders (state, agricultural profession and private) was adopted by Decree on 2 August 2017. It gives the state a role in creating the conditions for these plural mechanisms to grow, with the prospect of definitively refocusing the state's role on steering and control. The development of a virtuous and sustainable financing system is at the heart of this NAAS.
55. The principles and institutional models of the NAAS are based on the plurality of stakeholders and mechanisms, a concerted cross-sectoral approach, co-piloting (state, agricultural profession), light coordination ensured by a specialised and autonomous institution which will only intervene on the transversal functions of the agricultural advisory services and will not have its own advisory

agents. They also include progressivity based on the strengthening of professional and private arrangements, the development of cross-cutting functions and, in the long run, a gradual and planned withdrawal of the state from the operational board in the field, and a refocusing on its regalian and cross-cutting functions. Another institutional factor of NAAS is regionalisation to adapt to local specificities, and the taking into account of decentralisation following the transfer of competences to the local authorities. Equity is also planned for all categories of farmers and should compensate for the absence of the private sector in certain areas or among certain categories of farmers, in order to guarantee equity of access to advice throughout the country.

56. The principles and technical models of NAAS favour: i) a comprehensive and diversified advisory service that links advice to farmers and advice to their organizations; ii) complementarity that links agricultural advisory services to other services and farmers; and iii) innovation based on a new approach to knowledge management. It attaches importance to relay farmers or endogenous facilitators, whose existence contributes to improving the rate of advisory coverage, in the sense that they multiply the actions carried out by salaried advisors of farmers' umbrella organizations. According to NAAS, significantly increasing the number of relay farmers seems to be the most efficient way of meeting basic advisory needs and is also a guarantee of proximity to farmers and of the sustainability of advisory systems.
57. Achieving the objectives of NAAS is one of the priority challenges to be taken up by the Government of the Niger and its partners, in order to promote the processes of adoption and the scaling up of good practices and technologies.

2.4 Project description

58. The project had a twofold objective: i) improving the capacity of the Niger's agricultural and pastoral sector to cope with climate change by integrating CCA practices and strategies into ongoing agricultural development policies and programmes; and ii) assisting stakeholders in adopting a pragmatic community-based learning process on the field that leads to better understanding, adaptation and eventual large-scale adoption of improved agro-pastoral practices. This second objective seeks to contribute to increased production and improved livelihoods as well as food and nutrition security.
59. The project was structured in four components: i) development and pilot testing of improved climate-resilient agro-pastoral practices; ii) capacity building and promotion of improved agricultural practices through farmer field schools; iii) integration of climate resilient agro-pastoral and agricultural systems into sectoral policies and local development; and iv) M&E and information dissemination.
60. The project intervened in 15 municipalities in five regions (Tahoua, Maradi, Zinder, Tillabéri and Dosso). The initial implementation period of four years was extended to 31/03/2021 (Box 1). Its budget was USD 17 758 871, including USD 3 800 000 from the Least Developed Countries Fund (LDCF) managed by GEF and USD 13 958 871 in co-financing. (See Appendix 2 of the French version).
61. The project is executed by FAO in partnership with the Ministry of Agriculture and Livestock. The PCU based in Niamey includes a National Project Coordinator (NPC) and technical and administrative assistants. Other governmental stakeholders of the project are the National Council for Environment and Sustainable Development, the Directorate of National Meteorology; the National Institute for Agricultural Research of the Niger (INRAN), regional governments and regional, departmental and municipal technical services of ministries. Non-governmental

stakeholders include non-governmental organizations (NGOs) (Biodiversity International) and farmers' umbrella organizations providing advisory and extension services to rural areas of the Niger. These farmers' umbrella organizations are: i) the Fédération des Unions des Groupements Paysans du Niger (FUGPN-Mooriben) for the municipalities of Dosso; ii) the Centre de Services en Appui aux Organisations Coopératives Paysannes (CSA/OCP) for the municipalities of Zinder; iii) the Fédération des coopératives maraîchères du Niger (FCMN-Niya) for the municipalities of Tahoua; iv) the Fédération régionale des unions des producteurs d'oignons et autres activités maraîchères (FRUPOAM/ANFO) for the municipalities of Tillabéri; And v) the Fédération des Unions des Organisations Professionnelles Agricoles du Niger (FUOPAN/SA'A) for the municipalities of Maradi and Tahoua.

3. Findings

3.1 Relevance and coherence: *Is the project relevant and coherent in addressing the strategic priorities of the Government and its partners (FAO, GEF) and in addressing the adaptation needs of the agriculture sector to climate change?*

Finding 1. The project is overall Highly Satisfactory in terms of its relevance and coherence. The project's objective is well aligned with the needs of the people of the Niger and with the strategic priorities of the Government of the Niger, FAO and GEF. Moreover, the project's strategy, including its theory of change and results framework, is perfect to strengthen the capacity of the Niger's agricultural and pastoral sector to cope with climate change. However, the targets for Effect 3 "integration of CCA strategies into agro-sylvo-pastoral sector policies, programmes and planning" are too ambitious. Given that decision-making processes regarding agricultural policies and their budgeting generally require a longer time frame and consistent advocacy for resource allocation, the project needed to circumscribe the steps and targets that it could objectively achieve within the time frame.

3.1.1 Alignment with agricultural development and climate change adaptation priorities in the Niger

62. The project is very well aligned with the Niger's Strategy for Sustainable Development and Inclusive Growth (SDDCI)⁸ and particularly with Strategic Axis IV. It targets actions aimed at: i) revitalising traditional rain-fed agriculture by overcoming constraints linked to climate risks, poor access to technologies, advisory services and financing, which limit productivity; ii) restructuring livestock systems by improving sanitary coverage and access to zootechnical advice and inputs, and to fodder crop development; iii) contributing to the improvement of vulnerable groups' resilience to climate change, crises and disasters and to the promotion of a local economy based on sustainable environmental management, with a view to increasing production in the rural sector; and iv) developing innovative decentralised approaches in rural areas to contribute to community development actions.
63. The project is aligned with the objectives of the Economic and Social Development Plan (PDES) 2017–2021, which is the second five-year plan for the operationalisation of the SDDCI – Niger 2035. It contributes to the following programmes: Programme 6, which focuses on the implementation of the 3N Initiative; Programme 10, one of whose objectives is the improvement of sustainable land management; and Programme 11, one of whose targeted outcomes is the strengthening of CCA, resilience and mitigation capacities.
64. The project contributes to the operationalisation of the 3N Initiative's 2016–2020 Action Plan, whose overall objective by 2035 is to "sustainably protect the people of the Niger from hunger and malnutrition and guarantee them the conditions for full participation in national production and the improvement of their incomes" and whose specific objective is to "strengthen national capacities for food production, supply and resilience to cope with food crises and disasters". More specifically, the project targets the areas of intervention relating to the integrated and sustainable management of natural resources and environmental protection, the reduction of vulnerability to

⁸ SDDCI replaced in 2017 the Accelerated Development and Poverty Reduction Strategy (SDRP) which had been the main national reference document since 2012.

food and nutrition insecurity, and the promotion of agro-sylvo-pastoral and fisheries sectors and value chains.

65. The project is consistent with the Niger's National Climate Change Policy (NCCP) (Republic of the Niger, 2012). It targets objectives that concern: i) improvement of knowledge and the promotion of research and development, to produce and disseminate climate change information; ii) strengthening and development of the populations' adaptive capacities of and the resilience of ecological, economic and social systems to climate change; iii) integration of the climate change issue into national, regional and local planning tools; iv) strengthening of stakeholders' capacities.
66. The project is in line with the objectives of the National Adaptation Plan (NAP) which aim at reducing vulnerability to climate change impacts and integrating adaptation at all levels of development planning (UNDP, n.d.), in line with the objectives of the Strategic Framework for Sustainable Land Management (2015–2029) (Republic of the Niger, 2014).
67. The project adequately meets the expectations of local stakeholders for whom climate change is a daily reality. Indeed, it has many negative effects on their livelihoods, creating needs in terms of knowledge and capacity building for a better adoption of CCA technologies, practices and strategies.
68. The project intervenes in coherence and synergy with the Climate-Smart Agriculture Support Project (PASEC) which is jointly financed by the World Bank and the Government of the Niger for the period 2017–2022 for the benefit of 60 municipalities vulnerable to food and nutrition insecurity in the regions of Dosso, Maradi, Tahoua, Tillabéry and Zinder. Technical assistance to the implementation of PASEC is provided by FAO according to the agreement signed in May 2018. Its objective is to contribute in improving the capacities of the agro-sylvo-pastoral sector in the Niger to cope with the consequences of climate change. Eight outcomes are expected: i) the setting up of an effective facilitation mechanism for agropastoral field school – community listeners' clubs (APFS-CLC); ii) availability and dissemination of APFS-CLC support documentation; iii) strengthening of APFS impact and the facilitation of PASEC actions by CLCs; iv) mainstreaming of APFS approach into the advisory strategy; v) M&E of APFS-CLC implementation; vi) preparation and analysis of carbon balances with Ex-Ante Carbonbalance tool (EX-ACT); vii) preparation of sub-projects by service providers with the Rural Invest methodology; and viii) implementation of the e-voucher system.

3.1.2 Alignment with Sustainable Development Goals (SDGs) and FAO-GEF strategic frameworks

69. The project is consistent with Sustainable Development Goals (SDGs) 1, 2 and 13 which are respectively: End poverty in all its forms everywhere; End hunger, achieve food security and improved nutrition and promote sustainable agriculture; Take urgent action to combat climate change and its impacts.
70. The project contributes to two FAO strategic objectives (SO 2 "Make agriculture, forestry and fisheries more productive and sustainable" and SO 5 "Increase the resilience of livelihoods to disasters") and to many targets of the FAO Country Programming Framework (CPF 2017–2020) in the Niger.
71. The project contributes to achieving the objectives of FAO's CPF 2017–2020 in the Niger. It is in line with the targets of CPF's Outputs 1.1 and 2.2: "Building the technical capacities of 40 000 producers through farmer field schools by 2020"; "Strengthening the capacities of sectoral technical ministries in the formulation and implementation of specific policies/strategies, with FAO technical support by 2020". It also aims at the following targets of output 3.2: "Popularisation

of at least five climate-smart agro-sylvo-forestry technologies through farmer field schools by 2020"; "Management, restoration and development of at least 12 000 hectares of land by 2020"; "Achievement of at least 100 km of firebreaks and marked animal corridors by 2020".

72. The project meets the requirements of the FAO capacity building strategy. It aims at promoting long-term change, encouraging the implementation of activities and the ownership and sustainability of results by national stakeholders (government and civil society). The project's approach takes into account the three dimensions of capacity building: individual and organizational capacities; technical and functional capacities; and the enabling environment. The project is based on the basic principles and guidelines of the APFS approach, which allows it to better take into account the issues of CCA and the challenges of farmers, agro-pastoralists and pastoralists. The project integrates recommendations from the FAO gender policy.
73. The project contributes to three GEF strategic objectives on CCA: CCA-1 "Reduce vulnerability to adverse impacts of climate change, including variability, at local, national, regional, global level"; CCA-2 "Increase adaptive capacity to respond to climate change impacts, including variability, at local, national, regional, global level"; and CCA-3 "Promote transfer and adoption of adaptation technologies".
74. The project in its design complied with the requirements and guidelines of GEF policies and requirements for co-financing (Policy: FI/PL/01; GEF/C.31/12), public participation (1996), stakeholder engagement, M&E, application of the incremental cost principle, gender equality, and GEF environmental and social safeguards. Indicative information on the amounts, sources and types of co-financing expected was well detailed in the approved project document. The latter serves as a basis for assessing the level of mobilisation of this co-financing. In January and February 2014, letters of commitment to co-finance the project were signed by partners, including FAO (the Niger Representation), the National Council for Agricultural Research (CNRA, WAAPP/4877NE), the Delegation of the European Union in the Republic of the Niger (PADSR Project) and the African Development Bank in the Republic of the Niger (PROMOVARE Project).
75. The Government, FAO, implementing partners including farmers' organizations, ensure specific responsibilities regarding the mobilisation and participation of the public and the strengthening of the social, environmental and financial sustainability aspects of the project. The project proposes, through the APFS approach, a method and activities that raise the interest of the Government, farmers' organizations, other development partners and the populations, and promote their adhesion and participation.
76. In its design, the project complied with the requirements of the operational guidelines for the application of incremental cost (GEF, 2007). The baselines for each expected output and outcome are well presented indicating challenges, constraints and weaknesses that affect/underlie them. Besides, indicators and targets to solve/mitigate them are also well defined. The adaptation and development objectives are visible through the planned activities.

3.1.3 Theory of change and results framework quality

77. The project's TOC (reconstructed by the Evaluation Team), is based on three key processes with coherent and realistic activities linked to the three project components (Figure 2).
78. Process 1 aims at creating an operational framework conducive to the implementation of the APFS approach and to the adoption of CCA practices and technologies through capacity building of decision makers and partners and the formalisation of partnerships. Its proper functioning is necessary to ensure a good start and the smooth running of the other processes. The nature and

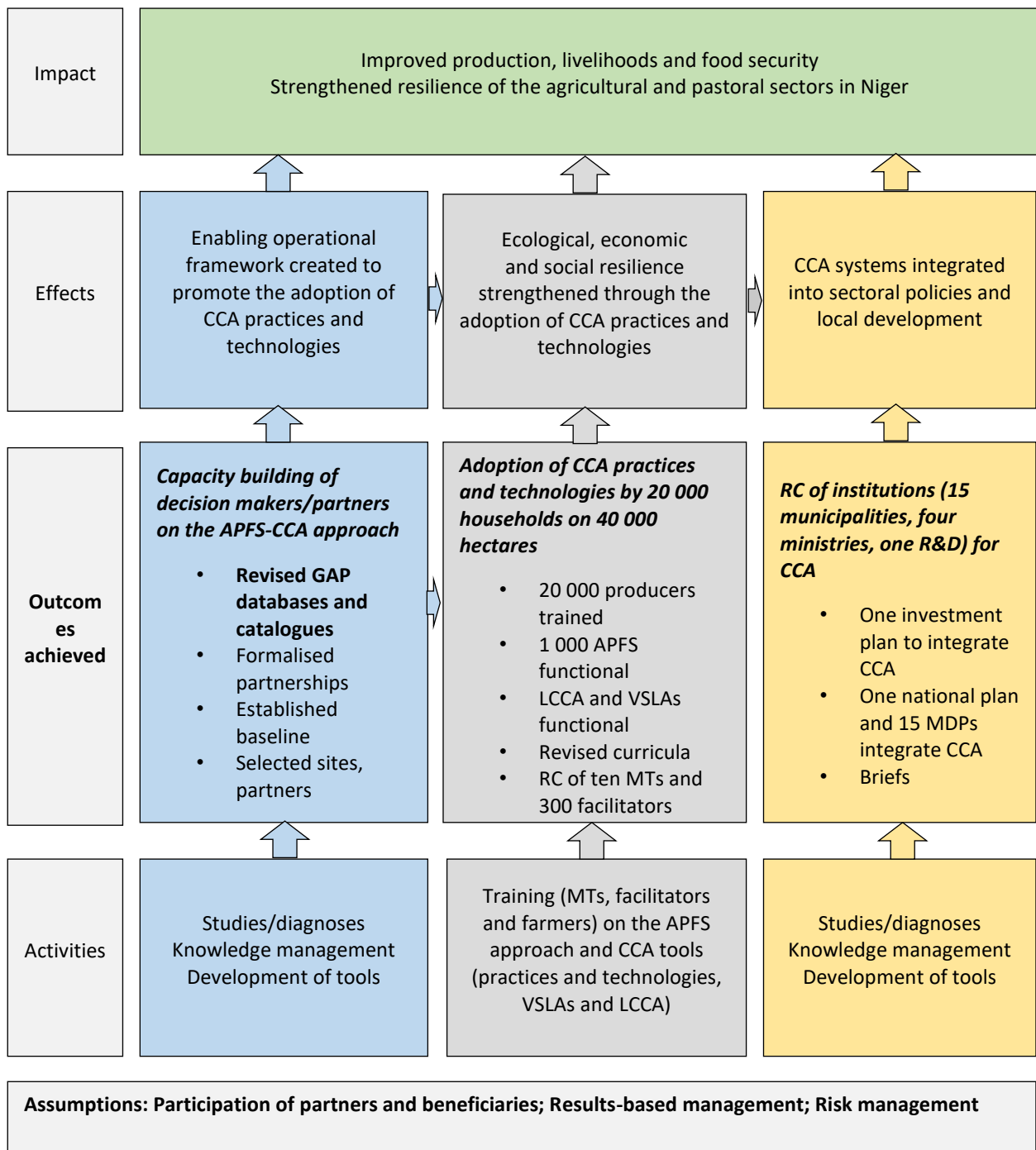
quality of the formalised partnerships and updated knowledge will for example influence the timeframe and quality of the trainings planned in process 2 which is dedicated to strengthening the resilience of production systems and households, through the adoption of CCA practices and technologies and other CCA tools (Village Savings and Loans Associations (VSLA), LCCA micro-projects) proposed by the APFS approach. Process 3 aims at integrating and budgeting for CCA in sectoral policies and local development, through awareness raising and capacity building of institutions and decision makers at national and local levels. Ultimately, the three TOC processes should lead to a double impact: improving food security and strengthening climate change resilience.

79. The activities foreseen in the three processes are coherent and appropriate to achieve the overall objective of the project. The project has also placed efficiency and sustainability at the heart of its strategy, by planning to strengthen pre-existing farmer field schools (FFS)⁹ (set up by previous projects) and transform them into AFPS and to involve, through well formalised partnerships, direct stakeholders (central and decentralised government directorates and technical services, NGOs, farmers' organizations, farmer groups).
80. However, the main weakness noted in the project TOC concerns Effect 3, which is too ambitious from its formulation, given the limited duration of the project. Indeed, even if the APFS approach has convincing technical and socio-economic benefits, its integration in policy and strategy documents requires a longer timeframe and advocacy actions to demonstrate its effectiveness and added value and to get the buy-in of decision-makers at the highest sectoral and cross-sectoral level. Further on, the evaluation will take this contextual reality into account during the analysis of effectiveness and will focus on measuring efforts and progress towards the achievement of this Effect 3.
81. The project has identified the risks that may affect its implementation and proposed appropriate mitigation measures. One of the risks identified is that "local institutions are slow to agree on project initiatives and may be reluctant to participate due to the innovative nature of the project and/or the need to cooperate with a wide range of partners". The proposed mitigation measure is that "the establishment of specific cooperation agreements and letters of understanding detailing responsibilities and defining joint work plans will be approved by the implementing partners". However, the analysis of the project's effectiveness and efficiency shows later that the proposed mitigation measures were not well implemented.
82. Certain risks frequently encountered in the implementation of similar projects were not taken into account by the project. These include delays or difficulties in starting the project; weaknesses in results-based management; poor planning of activities; poor mobilisation of co-financing; etc.
83. The results framework of the project is generally satisfactory, but with shortcomings. The indicator "Strengthened capacity of project managers and stakeholders to transfer tested and selected adaptation technologies and tools" proposed in the project document for Outcome 1, partially reflects the content of Outcome 1 and the activities foreseen in the corresponding Component 1. Indeed, Outcome 1 focuses on creating an enabling operational environment for the promotion and adoption of CCA practices and technologies through the establishment of partnerships, the conduct and analysis of baseline surveys and the compilation and pilot testing of existing and proposed new technologies and methods. It is clearly a question of putting in place the conditions to encourage the testing and adoption of the APFS approach and the proposed improved technologies. In this perspective, it was judicious to add an indicator focused on partnerships

⁹ However, as presented later in the effectiveness analysis, these former FFS could not be found.

which could be formulated as viz.: “number and quality of partners formally engaged by the project to contribute to the implementation of the FFS/DC strategy”. This second indicator (currently hidden under Output 1.2), was more relevant to guide the project towards the achievement of Outcome 1. Indeed, partnerships are the key point that can boost or break the processes of adoption and implementation of the APFS approach by the project and the partners. The final evaluation recommends to highlight this indicator to help measure the achievement of the expected effect in Outcome 1.

Figure 2. Theory of change of the project



84. A shortcoming was also noted in the indicators of Output 3.3, which appear to be too ambitious given the duration of the project: “CCA is integrated into 15 municipal action plans, including a specific budget allocation for adaptation measures [AMAT Indicator 1.1.1.1 of LDCF]”; “Budget

allocation for adaptation actions in at least 50 percent of agricultural and pastoral sectoral policies [AMAT Indicator 1.1.1.2 of LDCF]". Nor has the project demonstrated how other partner projects and co-financing partners will contribute to the achievement of this ambitious target.

3.2 Effectiveness: *To what extent have the capacities of the Niger's agricultural and pastoral sectors been strengthened to cope with climate change in a sustainable manner? To what extent have good agropastoral practices and technologies been adopted to increase production, livelihoods and food and nutrition security?*

Finding 2. Difficulties encountered at start up (lack of staff, frequent changes in leadership, delays in establishing partnerships, etc.) have led to significant delays in the delivery of activities and outputs. However, the shortcomings noted are partially offset by several induced or unintended project outcomes that make the effectiveness of the project Moderately Satisfactory.

85. The project has enabled the Government of the Niger to concretely assess the added value of the APFS approach and to integrate an APFS component into PASEC, thus broadening the framework for the application and promotion of this approach. The technical assistance of the APFS-CLC component of PASEC, entrusted to FAO in May 2018, provides continuity to the innovation dynamics initiated by the project. CLCs are spaces that stimulate mobilisation, dialogue, experience sharing, collaboration and, above all, action between development stakeholders.¹⁰ In its conception, the project recommended that CLCs be used to implement the APFS approach in the areas where they exist;¹¹ however, it did not provide for any specific output or outcome related to them. With this objective, the project devoted about half a day to the presentation of the Dimitra approach and the methodological alliance between FFS and Dimitra Clubs during the 5th training session for FFS facilitators. Also, a "methodology workshop – FAO Dimitra Clubs and farmer field schools" was organized in Dosso in September 2016. A farmers' umbrella organization leader, existing FFS were used in some villages in the Maradi region to mobilise the community and raise their awareness around APFS. However, the final evaluation was not able to get informative documents on the actual contribution of FFS in the establishment and facilitation of APFS.
86. The project has generated national technical expertise in the implementation of the APFS approach and CCA throughout the agricultural advisory support chain. The master trainers (MTs) trained within the framework of the project have been used to support PASEC and other projects such as: GCP/RAF/516/EC (Strengthening the resilience of cross-border pastoral and agro-pastoral populations in priority areas of the Sahel), the Project for Assistance to Pastoralism in the Sahel through integrated development actions and the Family Farming Development Programme (ProDAF).

¹⁰ In 2011, Niger had 398 active clubs set up in 112 villages in the regions of Tillabéri and Dosso by the NGO VIE Kande Ni Bayra, through its network of literacy centres with the technical and financial support of FAO-Dimitra with co-financing from the United Nations Development Programme (UNDP), the United Nations Development Fund for Women (UNIFEM), the United Nations Population Fund (UNFPA) and the Canadian Cooperation (FAO, 2011).

¹¹ According to the ProDoc, a partnership was set up under the European Union-funded "CooPequity" programme to link FFS (implemented by FAO) and CLCs (implemented by FAO-Dimitra in collaboration with the local NGO Vie Kande Nie Bayra). The aim was to set up CLCs in the same locations and alongside FFS in order to introduce technical issues and new practices tested in FFS to a wider audience and other communities, and to allow for discussions and progress on non-agricultural concerns, such as gender mainstreaming, nutrition and land tenure.

87. At mid-term, the project was able to adjust its objectives (postponement, modification or deletion of certain activities) and apply corrective measures (improving HR, project proactivity, decentralisation of implementation, and more formal involvement of decentralised services via RFPs and MFPs and farmers' organizations), to boost implementation.
88. Outcome 1 "Creating an enabling operational environment for the promotion and adoption of climate change adaptation (CCA) practices and technologies" is rated as Moderately Satisfactory. Three of the four planned outputs have been achieved but with delays, and the main indicator "Strengthening the capacities of project managers and stakeholders to transfer tested and selected CCA technologies and tools" has been partially achieved.
89. The project arranged for the participation of decision-makers in workshops and experience exchange trips (Mali, Burkina Faso, Senegal, Kenya and Uganda), which strengthened their interest in the APFS and CCA approach. Regional databases and catalogues of genetic resources have been developed and best practices identified (FAO-INRAN, 2018a; 2018b). The mapping of CCA programmes in the Niger for 2012–2024 was also updated.
90. However, as stated above, there has been a significant delay in formalising partnerships. This affected the completion deadline of several preliminary products that were to guide and support the implementation of the APFS approach. The permanent working group in charge of undertaking multi-stakeholder and participatory evaluations of knowledge systems and adaptive capacities focusing on rapid appraisal of agricultural knowledge systems (RAAKS) was set up but never functioned. Similarly, the potential of endogenous crop varieties and agricultural/pastoral practices identified as relevant to CCA could not be tested. Also, the relevant recommendations presented in the mapping of CCA programmes in the Niger could not be used to improve project implementation.
91. Outcome 2 "Training on the APFS approach and CCA tools to strengthen the resilience of beneficiaries", is rated as Moderately Satisfactory. The project achieved five of the six planned outputs, while integrating the VSLA activity which was not planned at the beginning. On the other hand, the 60 micro-projects selected out of the 80 developed by the VSLA groups to benefit from LCCA funding (output 2.6) only started to receive resources for their implementation in December 2020. Regarding the indicators of Outcome 1, it appears that about 72 percent of the learners who completed the APFS training between 2016 and 2018 adopted (applied two or more times in their field) at least two technologies, good practices or innovations thus approaching the target (100 percent) of the first indicator, while 19 percent of the learners trained in 2019 applied them only once.
92. The technologies, good practices or innovations applied or adopted are related to: sowing density, three-seedling thinning per seed hole, compliance with the dates of cultivation operations, the use of improved varieties, the alternative fight against crop pests with the preparation and use of bio-pesticides based on aqueous extracts from leaves or neem (*Azadirachta indica*) or tobacco seeds, composting and the application of the micro dose of NPK. In the environmental field, these technologies, good practices or innovations concerned improved land clearing and assisted natural regeneration (ANR). In livestock, they are related to: the treatment of straw with urea, the manufacture of lickstones, the grinding of crop residues (millet and *sorghum* stalks, groundnut and cowpea hay) for the manufacture of densified multinutrient blocks, and fodder harvesting and conservation techniques.
93. However, the project did not collect data to inform the 2nd indicator of Outcome 2 relating to the surface area benefiting from improved practices and technologies, targeted at 40 000

hectares. Based on data from the 2019 rainy season APFS, the Evaluation Team estimated that 77 hectares of land was directly improved through the 767 APFS established, and 3 452 hectares was the minimum area improved among learners who adopted technologies, good practices or innovations. This estimated area is based on the assumption that “72 percent of the 19 175 APFS learners (767 APFS x 25 participants) have each adopted and applied technologies, good practices or innovations on at least one-fourth of a hectare of their farms”.

94. Despite the shortcomings noted, the project trained 18 MTs (180 percent of the target) including four women (22 percent compared to a target of 25 percent); 302 facilitators (100 percent) including 54 women (18 percent compared to a target of 30 percent); 125 Technical Focal Points (including five Regional Focal Points, 15 Municipal Focal Points and 105 executives from decentralised technical services of the ministries of rural development and municipal officials) on the APFS approach. The capacities acquired have fostered the installation and facilitation of 767 APFS, including 599 between 2018 and 2020, compared to a target of 1 000 functional APFS.
95. The project also trained 58 local facilitators and 19 technical focal points on the VSLA/LCCA approach, which fostered the setting up of 101 VSLAs and the development of 80 micro-projects, of which 60 (12 per region) were selected to benefit from LCCA funding and support from the project in their implementation. The VSLAs integrated in the approach contributed in (re)boosting APFS groups, strengthening social links between members, and developing solutions initiated by the groups for their needs in savings, credit and investment.
96. The project affected 21 142 direct beneficiaries (106 percent of the target) of which 51 percent were women. About 72 percent of the learners who completed the APFS training between 2016 and 2018 adopted at least two technologies, good practices or innovations, while 19 percent of the learners trained in 2019 applied them. The capacities of five farmers' umbrella organizations were strengthened through the training of their APFS facilitators and their involvement in the setting up and supervision of APFS and their training on governance and gender equity.
97. Participatory decision support tools for local planning and risk reduction related to climate change were developed and shared with farmers. Over the period from 01 July to 31 August 2020, the Directorate of National Meteorology developed and disseminated 295 weather forecast messages including 25 alerts on rainfall activities for the benefit of the five targeted municipalities.
98. In sum, the project has generated national technical expertise in the implementation of the APFS approach and CCA throughout the agricultural advisory support chain. The MTs trained within the framework of the project have been used to support PASEC and other projects such as: GCP/RAF/516/EC (Strengthening the resilience of cross-border pastoral and agro-pastoral populations in priority areas of the Sahel), the Project for Assistance to Pastoralism in the Sahel through integrated development actions and the ProDAF. Several achievements and lessons learned from the project have been capitalised on for the benefit of PASEC. One example is the development of the APFS Guide with the support of FAO experts mobilised by the project.
99. However, behind these good results are several shortcomings, such as the glaring delay in the implementation of LCCA micro-projects, as mentioned above. There were also shortcomings in the supervision and monitoring of APFS, reducing the quality and timeliness of setting up and running some APFS, and affecting technical and pedagogical outcomes. In some APFS, experimental schemes were poorly designed and did not allow objective conclusions to be drawn from the special studies and experiments carried out. Besides, the project did not put in place in a timely manner an appropriate mechanism to monitor, collect data and inform on the level of achievement of the two indicators of Outcome 2. The first indicator “10 percent of the municipal

cultivated area supported by partner programmes (40 000 hectares) integrate strategies, CCA practices and adapted genetic material" cannot be assessed due to lack of data. The second indicator "100 percent of target groups (1 000 APFS/20 000 households) adopt at least two of the proposed new technologies..." was assessed only on the basis of data from the adoption survey conducted in 2020 by the project.

100. Outcome 3 on the mainstreaming of CCA strategies into agro-sylvo-pastoral sector policies, programmes and planning is rated as Moderately Unsatisfactory. Outputs 3.1 and 3.3 respectively on the development of briefs and on the integration of the APFS and CCA approach into programmes and policies, have been transferred to the PASEC project but are not yet achieved. Output 3.2 "strengthening institutional capacity for the mainstreaming of CCA in programmes and policies based on the APFS approach" as well as Outcome 3's indicator entitled "15 targeted municipalities, four government ministries and one research institute have increased their adaptive capacity ...", have been slightly achieved through training workshops. The evaluation did not find any capacity building activities targeting policy and strategy makers for better integration of CCA into sectoral and cross-sectoral policies, nor proposals for such integration at national and municipal levels.

3.2.1 Creating an enabling operational environment for the dissemination, learning and adoption of CCA practices and technologies

3.2.1.1 Awareness raising of stakeholders and development of tools and partnerships

101. The project identified the 15 beneficiary municipalities, carried out awareness-raising campaigns among 200 officials and 629 local authorities on the APFS approach, and conducted the socio-economic and community self-assessment surveys as well as baseline studies and diagnoses. Under the leadership of the second project coordinator, a permanent multi-stakeholder working group was set up by ministerial order. This group aimed at ensuring the evaluation and management of new technical and scientific knowledge on CCA and resilience practices and at providing advice to the project on technical activities. Unfortunately, this working group never functioned, due to the departure of its promoter and also to the priority given by the third coordinator to catching up with the project's targets.
102. Exchanges of experience were made with country experts from West Africa (Burkina Faso, Mali, and Senegal) and a study tour on the APFS approach was made to Kenya and Uganda. These activities helped to raise awareness among stakeholders and enabled decision-makers to see for themselves the interest and benefits of the APFS approach as well as the minimum requirements and conditions for its successful implementation. A government official who participated in the study tour expressed his satisfaction to the Evaluation Team in the following terms: "The trip to Kenya was a trigger because I participated in field visits that convinced me of the interest and benefits of the APFS approach. Better than the FFS approach, it allows us to identify the priority needs of farmers, whatever the technical domain, and to propose appropriate responses."
103. Nevertheless, the project experienced significant delays in establishing the partnership agreements needed to implement the preparatory and main activities of the APFS approach. As a result, several studies/diagnoses and action research activities were postponed in time, and some were cancelled, thus limiting the documentation and capitalisation of results to guide and support the field implementation of the APFS approach.
104. In August 2015, the project signed a partnership agreement with the National Council for Environment and Sustainable Development to promote better consideration of climate resilience in agricultural and pastoral production in the Niger. Meanwhile, the two flagship activities of this

agreement – i.e. the mapping of programmes related to CCA in the Niger for 2012–2024 and the awareness raising of local municipal stakeholders on CCA planning – were only carried out in 2018 and 2019 respectively. The results and recommendations of the study were shared with the main stakeholders in the development of the agricultural sector in the Niger, but due to delivery delays, they could not be used to guide project implementation.

105. Also, the MOU planned with the Directorate of National Meteorology to develop participatory decision support tools integrating climate change was only signed in June 2019. This was also the case for the MOU with INRAN for the development of relevant and adopted scientific tools for better knowledge, analysis and adoption of climate change practices and the development of five catalogues of endogenous varieties; its signing was significantly delayed and its expected outputs were only achieved by the end of 2018 - early 2019. The formalisation of the MOU between FAO and Biodiversity International for the setting up of diversity fields and the training of MTs and facilitators on diversity fields, also required a year-long discussion to agree on the activities to be developed from 2018.
106. All these delays are due on the one hand to divergent procedures and rules between FAO and government agencies (Directorate of National Meteorology, INRAN) regarding applicable mission allowances, and on the other hand, to insufficient proactivity/mobilisation of the PCU to initiate, negotiate and conclude these partnerships. Indeed, the Directorate of National Meteorology considered the amounts proposed for this agreement to be rather insufficient. The disagreements persisted to the point where the fourth project Steering Committee held in June 2018 recommended that the project involve the Ministry of Agriculture and Livestock at the highest level of responsibility to unblock the situation. The intervention of the FAO Representation and the new Directorate of National Meteorology management finally allowed the partnership agreement to be signed in August 2019.
107. The Ministry of Agriculture and Livestock – the main implementing partner of the project directly responsible for the technical implementation of the project activities – encountered difficulties in deploying its mechanism on the ground, which resulted in low rates of activity completion and budget execution. The Ministry has sensitised 33 villages and installed only 22 FFS out of the 75 planned under the MOU signed in July 2016 with FAO for the project. According to the Ministry, this underperformance is due to delays in signing the MOU and in providing resources (in July) when the ideal period is April - May.
108. The poor results during the first implementation year of APFS (2016) led the project to opt for a decentralisation of the implementation by the Ministry of Agriculture and Livestock. Thus, it was envisaged to establish MOUs with Regional Directorates of Agriculture for supervising and monitoring the implementation of project activities, including those related to APFS. However, this option proved to be unrealistic because of the government law prescribing the centralisation of government project resources at the public treasury. In this context, signing partnership agreements was likely to extend the availability of financial resources to the regional directorates by almost six months. The most realistic option was to designate focal points at the national (NFP), regional (RFP) and municipal (MFP) levels to supervise and implement project activities.
109. Thus, in July 2017, the Ministry of Agriculture and Livestock signed orders appointing a National Focal Point (NFP), five Regional Focal Points (RFPs) and 15 Municipal Focal Points (MFPs) for the project. The TORs of the focal points and the modalities of their deployment within the framework of the project were drawn up and then shared, amended and validated during a workshop between the NFP, RFPs and MFPs. In addition to the clarification of each person's missions, it was agreed that the project would pay the NFP and RFPs monthly allowances in accordance with their

respective salary scales and mission expenses, according to the activities foreseen in their TORs to be submitted to FAO and approved beforehand. Similarly, MFPs would receive a monthly flat rate of XOF 25 000 as travel expenses, XOF 5 000 as communication expenses, and an allowance of XOF 25 000 per APFS set up during the agricultural season.

110. Still with a view to overcoming the shortcomings noted in the supervision and implementation of the APFS approach, the third meeting of the project Steering Committee, held in Niamey on 18 July 2017, recommended that the project adopt simple and effective procedures, sign conventions with farmers' umbrella organizations, formalise co-financing and ensure that the group of MTs is a permanent working group. This recommendation was reiterated at its fourth meeting held in July 2018.
111. Giving effect to Steering Committee recommendations, the project signed MOUs with farmers' umbrella organizations for the establishment of APFS in the rainy season and the facilitation of VSLAs in the five regions. These MOUs concern the conduct of activities in Maradi and Zinder municipalities by the SA'A Federation during the 2018 winter season. They also concern the conduct of activities in the rainy and dry seasons of 2019–2020 by i) the Fédération des Unions des Groupements Paysans du Niger (FUGPN-Mooriben) for the municipalities of Dosso; ii) the Centre de Services en Appui aux Organisations Coopératives Paysannes (CSA/OCP) for the municipalities of Zinder; iii) the Fédération des coopératives maraîchères du Niger (FCMN-Niya) for the municipalities of Tahoua; and iv) the Fédération régionale des unions des producteurs d'oignons et autres activités maraîchères (FRUPOAM/ANFO) for the municipalities of Tillabéri.

3.2.1.2 Carrying out activities to support the implementation of the APFS approach

112. In October 2019, INRAN carried out an inventory of endogenous know-how on CCA in Bagaroua (Tahoua Region), Sokorbé (Dosso Region), Simri (Tillabéri Region), Djirataoua (Maradi Region) and Tarka (Zinder Region) municipalities. In this context, 26 practices and strategies that help communities to live in harmony with their environment were inventoried. These are mainly: three-seedling thinning/seed hole; the use of mineral fertiliser; the use of fungicides for seed treatment; the use of early varieties; the use of organic fertiliser; vaccination; food supplementation; fodder conservation and storage; poultry farming; assisted natural regeneration and improved clearing; etc. Organisational structures (unions, groups), the sale of poultry, the sale of firewood and the making and sale of secko were also identified as socio-economic practices for building resilience in the communities.
113. Besides, a catalogue of endogenous varieties specifying the different varieties used by the communities for each crop, as well as the cycle length, average yield and reasons for its use in the village, was developed through an iterative process of identification and analysis by the population willing to research. The inventory of local knowledge and the creation of the catalogue of varieties were carried out at the beginning of 2019, and validated only on 7 October 2019, whereas these two activities were intended to identify interesting agroforestry technologies and good practices to be tested and promoted in APFS. To compensate for this delay, government officials at the regional level were called upon to identify good agricultural practices that were later integrated into the training programme of APFS.
114. The main consequence of this delay is that the participatory field trials planned in the diversity of agro-ecological and socio-economic conditions of the five intervention regions on the relevant endogenous and exogenous practices and materials inventoried (Output 1.3) were not carried out. To compensate for this shortcoming, the project then planned to select five good practices and test them in the five sample municipalities concerned, but this activity was cancelled following

the occurrence of the COVID-19 pandemic. The budget was redirected to strengthen LCCA and to create new APFS during the 2020 winter season.

115. In November 2018, the National Council for Environment and Sustainable Development updated the mapping of projects and programmes involved in CCA in the Niger. This mapping was validated during a workshop organized in Niamey in February 2019 (which was late in view of the initial end date of the project planned for June 2020 to adjust the project's strategy), whereas its relevant results and recommendations could guide the development of partnerships including co-financing of the project. It recommended that projects target their interventions on one or two neighbouring regions, favour structuring support likely to encourage efficiency and sustainability, set a reasonable number of beneficiaries to be reached per region, set up project coordination units in the intervention regions to ensure proximity monitoring and also organize exchange trips for beneficiaries in order to strengthen their capacities and encourage emulation at their level. The study also recommended setting up an operational system for capitalising on CCA experiences in the Niger, highlighting successful practices, those to be avoided and those to be improved. The document is being edited for wide dissemination to partners.

3.2.2 Strengthening ecological, economic and social resilience through the adoption of improved CCA strategies, practices and technologies based on APFS

3.2.2.1 Curriculum revision and training/retraining of master trainers and facilitators

116. The project ensured the revision of the facilitators' training curriculum by integrating CCA and nutrition (FAO, 2018; 2019b). The collection of 23 learning themes broken down into 74 special themes for APFS was developed by the network of FFS trainers (REFOCEP-Niger) with the technical and financial support of FAO, as a didactic support to facilitate APFS associated with the training of local facilitators. The themes developed are as follows: Millet, *sorghum*, maize, cowpea, tomato, pepper, cabbage, army worm, spiders and vegetable crops, aphids on vegetable crops, white flies on vegetable crops, phytosanitary treatments, livestock feed, Newcastle disease, pasteurellosis in cattle and sheep, ticks, fattening, *Sida cordifolia*, agroforestry, conservation techniques and soil restoration. For each crop, special topics are developed on: the interest of the crop; the choice of variety; the whole cropping system including rotation and fertilisation; pest management; harvesting and conservation; and the use of crop residues. For other themes, special topics focus on identifying the core problem, the causes and proposing ways to solve it. The project has also made good use of the trainers' training manual on diversity fields and the facilitators' training tool on VSLA (FAO, n.d.).
117. The project has shown that with adequate and comprehensive initial training and targeted support of technical facilitators, local facilitators are a great opportunity to improve the number and quality of advisory and extension agents at the local level.
118. The majority of MTs and facilitators confirm that they have successfully acquired and passed on new knowledge, and now feel better equipped and valued in their advisory role. They are more open to cross-sectoral collaboration and have mastered the facilitation of VSLAs and micro-projects, etc.
119. The local facilitators recruited among farmers and trained on the APFS approach represent about 71 percent of facilitators. They proved to be a good choice to reduce the insufficient number of advisory and extension agents at local level (municipalities and villages). In addition, these local facilitators are less expensive than government facilitators. In the field, these local stakeholders have shown themselves to be much more involved and available to ensure the extension and facilitation of APFS than government agents. They have demonstrated good learning and

facilitation capacities for APFS. Their geographical and sociological proximity to the beneficiaries, their commitment as well as the highly valorising perception they have of their new function as advisors, are positive efficiency factors, while the difficulties encountered on certain aspects of the approach such as the agro-ecosystem analysis (AESA) or the pastoral-ecosystem analysis (PESA), and the design of the experimental mechanism, are weak points which can nevertheless be improved. To remedy this, the project has supported facilitating technicians (government technical agents to support them in their weak points) to continuously and concretely strengthen their capacities. However, it is still advisable that refresher training be organized and that MFPs and farmers' umbrella organizations supervisors provide monitoring and targeted support on these facilitators' weak points, in order to continue building their capacities.

3.2.2.2 Capacity building of final beneficiaries

120. Through APFS, diversity fields and VSLAs, and farmers' umbrella organizations' involvement, the project has built the capacity of 21 142 beneficiaries, 51 percent of whom are women, thus achieving the "beneficiary" target of 106 percent. According to the survey conducted in 2020 among farmers trained between 2016 and 2019 in APFS, 72 percent have adopted at least two of the technologies, good practices or innovations demonstrated in APFS while 19 percent have applied it. A farmer is said to be "Implementing" when s/he uses technologies, good practices or innovations only once (one year) in his own field. A farmer is said to be "Adopting" when s/he uses technologies, good practices or innovations at least twice (two years) in his own field. The most adopted technologies, good practices or innovations were presented above to support Finding 2 and are detailed in Appendix 6 of the French version.**Error! Reference source not found.**
121. A total of 101 VSLAs were set up and implemented and 60 micro-projects were selected for support by LCCA funding. Partnership agreements are being prepared with umbrella organizations for the implementation and monitoring of LCCA-funded micro-projects.

Agropastoral field schools

122. A total of 767 APFS (i.e. 76.7 percent of the target) have been set up, of which 599 between 2018 and 2020. A total of 168 APFS were set up in 2016 by facilitating technicians (government agents) under the agreement with the Directorate General of Agriculture. These first APFS were then reinforced by the project between 2018 and 2019 within the framework of the MOU between the project and farmers' umbrella organizations. All the APFS facilitated by the project are new. In fact, the old field schools (set up by previous projects) that the project intended to strengthen could not be found. Indeed, most of the beneficiary groups concerned had ceased to function after the end of the projects concerned, and those that remained were neither geo-referenced nor listed in any database. In order to ensure the sustainability of APFS, the project has set up a database with information that allows for better identification of projects.
123. Overall, the APFS installed by the project between 2016 and 2020 have led to several positive socio-economic and community effects. Social cohesion has been strengthened through regular meetings that promoted information and knowledge sharing, consensual decision making, understanding and mutual support. Some members have developed initiatives that contribute to the group's self-financing and self-promotion, such as: i) lending a plot of land for APFS activities; ii) carrying out collective maintenance work on APFS crops; iii) developing cash crops on the non-experimental land of APFS; and iv) establishing tontine and periodic contributions. APFS has been a framework for fostering gender mainstreaming: 51 percent of the 21 142 direct beneficiaries are women.

124. Thanks to the APFS approach, it is possible to provide a local agricultural advisory support system close to the villages concerned and based on local facilitators who thus become community relay agents. Experiments have demonstrated the earliness of the varieties proposed by the management team compared to local varieties, as well as increased yields with the application of new cultivation techniques (organic and mineral fertilisation, three-seedling thinning, use of natural pesticides, etc.). In terms of quality and technical management, an internal evaluation of 2018 winter season APFS by the project concluded that out of 159 APFS evaluated, 89 percent were well managed and 11 percent moderately well managed, deserving to be consolidated (FAO, 2019a).
125. However, several constraints have hampered the implementation and facilitation of APFS and reduced their quality as well as their pedagogical and cognitive benefits. The late signing of MOUs with farmers' umbrella organizations and insufficient planning delayed the provision of APFS learning materials (June-July 2018). These delays resulted in lower yields in the 2018 rainy season APFS. This is because the plots initially granted for these APFS were finally planted by their owners as soon as they noticed that APFS were not starting, whereas the season had already started well. These delays also highlighted the importance of using early seeds. Learning materials were insufficient in some APFS (seeds, spring scales).
126. The low level of basic education of the majority of facilitators also reduced the mastery of some parts of the learning content, resulting in the absence of a learning programme and difficulties in filling in the APFS logbook. In some cases, support missions from MFPs and RFPs identified and addressed these gaps, but in most cases, these support missions did not match support needs. Stakeholders commonly agreed that RFP and MFP support missions were irregular and did not allow farmers' umbrella organizations to provide better service and facilitate timely decisions (e.g. choice or improvement of experimental schemes). These missions were subject to the approval of TORs by FAO and the provision of logistics. In 2020, for example, until the time of the final evaluation, no support and supervision missions had yet been carried out by RFPs. This was due to delays in mission planning (on the part of RFPs) and to the slow approval of TORs by FAO. According to stakeholders, it usually takes between one and three months for FAO to approve the submitted TORs. This reduces the usefulness of the mission in terms of the support it was intended to provide and the problems it was intended to solve or prevent. Here is the opinion of an RFP: "Since we were appointed as RFPs, we have never carried out the three missions planned for the agricultural season. We have never managed to submit TORs and have them validated in the same month. The first two years we only carried out one or two missions each. This year, for example, no RFP has yet carried out a monitoring mission, even though TORs were submitted four weeks ago. They are still to be approved by FAO." On FAO's side, the delays are explained by a lack of anticipation on the part of RFPs and the project, and by the fact that the TORs submitted by RFPs and forwarded by the project do not always comply with the minimum requirements of FAO procedures; they need to be corrected and all these back-and-forth cause delays. As with the processes of drafting and signing agreements and budget revisions (as noted and presented below), this situation demonstrates that it was necessary at the start of the project to build the capacity of project personnel in planning and procedures, and also to create the conditions for better support by the human resources of the country office (though these human resources of the country office are limited, as explained later in the report). It also questions the diligence and professionalism of some project managers (see Finding 3).
127. At the community level, the scarcity or even the absence of events around APFS (open days, guided tours or cross-site visits) were weak points of some APFS. The organization of cross APFS visits planned for the first quarter of 2020 was cancelled due to the COVID 19 pandemic. The remuneration of MFPs and local facilitators, as well as delays in their payment, were also factors

that demotivated some MFPs. Indeed, although negotiated and agreed during an initial workshop involving the NFP, RFPs and MFPs, MFP allowances were considered by public sector stakeholders to be below the rate applied by the Government of the Niger and most projects and programmes in the regions. The payment of focal points' (FPs) (including RFPs) allowances was delayed by two to three months.

128. In order to better appreciate the processes of setting up and supervising APFS by farmers' umbrella organizations as well as the results obtained and the determining factors, case studies are presented in Appendix 5 of the French version and some extracts are presented below.
129. The SA'A Federation set up 74 APFS in six municipalities for the 2018 rainy season, three of which were in the Maradi region and three in the Zinder region. The benefits obtained by APFS learners include: i) the generation and improvement of knowledge on crop varieties, friends and enemies of crops; ii) alternative methods of pest control; iii) the use of fertilizers and their usefulness for plants; iv) mastery of measurements made during AESA; v) a better understanding of plant evolution; vi) mastery of the advantages of three-seedling thinning; and vii) the introduction of the composting technique. In some APFS, community relays organized special discussions on phytosanitary product health and management. Social cohesion was also strengthened and, following the organized visits, neighbouring villages requested the creation of APFS in their areas. All APFS groups have carried out an income-generating activity (IGA) based on cowpea, millet or *sorghum* production.
130. During the 2019 winter season, CSA/OCP in Zinder established a total of 51 APFS out of the 54 planned rainy season APFS, because three of the trained facilitators were not available at the start of the season. CSA/OCP reckons 850 learners have mastered the maximum of the themes taught, i.e. 63 percent of the learners. Beneficiaries trained by CSA/OCP expressed their satisfaction with several new varieties of millet and cowpea and the cultivation techniques that convinced them. In fact, they intend to adopt and replicate these techniques to improve their yield. Preferences varied by area (See Appendix 5 of the French version). Some varieties (e.g. Chakti) were appreciated for their short cycle length (less than 65 days), others for the consistency of their ears (e.g. ICMV), and still others for the good compromise between short cycle length and ear consistency (e.g. SOSAT CT-6). By contrast, HKP and the local variety Ankoutess did not interest the learners. The three-seedling millet thinning per seed hole is more appreciated than the four-seedling and local thinning. According to beneficiaries, it allows for the production of larger grains.
131. During the 2019 rainy season in Tahoua, FCMN-Niya set up 51 functional APFS and 13 VSLAs. These APFS had 1 814 learners who were generally assiduous, 52 percent of whom were women. The 51 facilitators involved were active and productive despite their low monthly remuneration. A total of 77 guided tours were organized. All 51 APFS and 13 VSLAs carry out IGAs financed by members' contributions and the income from work in the neighbouring fields. The group also plans to engage in small-scale cereal trading, which is an activity that offers opportunities.
132. FUGPN-Mooriben was tasked with the installation, running and supervision of 53 APFS (41 in the winter season and 12 in the dry season) in the Dosso region during the 2019 winter and 2019/2020 dry seasons. The monitoring found that facilitators are generally active and that the majority of APFS (10 out of 12 dry season APFS) functioned well. The project organized five guided tours to two APFS in Falwel and Gaya municipalities and four exchange visits to APFS sites and collective fields that serve as IGAs. As concerns sustainability, 19 APFS have set up IGAs in the form of collective fields to cover the related expenses. However, the implementation of IGAs remains highly limited by the weak organizational and financial capacity of APFS.

133. FRUPOAM/ANFO has installed 65 APFS out of the 66 planned, of which 53 for the rainy season and 12 for the dry season, totalling 1 385 producers, of which 815 are women (59 percent) and 570 men (41 percent). Experiments concluded that the best methods of fertilising onions are organic manure and compost, which can be found locally without major investments, as opposed to chemical fertiliser, which is very expensive and often unavailable locally. According to these experiments, treatment with neem leaves is the best method of phytosanitary treatment for cabbage.

Village Savings and Loans Associations (VSLAs) and LCCA micro-projects

134. The project successfully introduced VSLAs to strengthen APFS and the savings and credit capacities of their members through the “Caisses de résilience” approach. Thanks to the introduction of VSLAs in the project, the three pillars necessary to strengthen the resilience of the community and CCA capacities were made available. The technical pillar focused on capacity building and support for good agricultural practices through APFS; the financial pillar focused on the establishment and running of VSLAs; and the social pillar focused on nutrition and strengthening social cohesion within the group. These three pillars support each other.
135. The project strengthened the capacity of 77 participants (including five RFPs, 14 MFPs and 58 local facilitators) on the methodology of setting up and running VSLAs during training sessions organized in Dosso and Say, with the support of the RAF/Accra resilience team in Dosso.
136. The project set up 101 VSLAs out of the 100 initially planned (20 per region): 23 in Maradi; 21 in Dosso; 13 in Tahoua (plus 4 VSLAs not counted that were installed at the initiative of other facilitators); 20 in Tillabéri and 20 in Zinder. The additional VSLAs set up in the regions were established at the initiative of facilitators following a request or an interest expressed by the communities concerned. In Tahoua, only 13 facilitators were trained and each of them set up a VSLA.
137. Farmers' umbrella organizations accompanied VSLAs in the elaboration of 89 micro-project documents, 60 of which were selected to benefit from an XOF 965 000 grant from LCCA. The recipients were selected on the basis of the relevance of their micro-project, operational criteria (organizational aspects), and their financial performance. The total cost of these micro-projects, initially estimated at XOF 81 653 400, was adjusted to XOF 70 594 100 and financed as follows: XOF 13 365 600 (i.e. 19 percent) from VSLAs' own contribution and XOF 57 228 500 (i.e. 81 percent) from LCCA support.
138. The development of micro-projects has highlighted the multifunctional character of the production systems at the community level, thus establishing that agricultural production is the main pillar of food security, while livestock and other support activities constitute adequate niches to generate income. Out of 60 micro-projects supported, 45 are related to livestock, four to crop production, and 11 to marketing and post-harvest management activities. Livestock micro-projects concern poultry farming (2), goat breeding (9), breeding combined with fattening (8), sheep breeding (2), cattle fattening (8), sheep fattening (16), while the crop production micro-projects concern market gardening (2), seed multiplication (1) and rice production (1). Cross-cutting micro-projects concern agricultural product processing (1), cereal bank development (3), shops for agricultural inputs and materials (5), onion conservation (1) and agricultural product marketing (1). However, the disbursement of the funding granted to these micro-projects was still awaited by the beneficiaries. Arrangements are underway with farmers' umbrella organizations to ensure supervision and support for the implementation of these micro-projects after the end of the project. Given that these micro-projects strongly focused on livestock, it is necessary to

provide for technical service and/or livestock expert support, as farmers' umbrella organization partners are very much oriented towards crop production.

139. All stakeholders agree that the APFS-VSLA-micro-projects triptych is relevant and effective to truly strengthen their capacities. According to a Director of the Department of Agriculture, "the VSLA tool is a relevant and very useful organizational component to boost APFS because it meets the needs of farmers. VSLAs provide beneficiaries with the opportunity to mobilise their members' funds and to attract funds from other partners. These funds can be used to create a cereal bank for example." He agrees with FRUPOAM stakeholders that: "VSLAs can be used to attract funds from other projects and partners, in particular by allowing them to finance their own contributions which would be requested by these partners/projects. We plan to set up VSLAs in some onion conservation sites. FRUPOAM has ten onion conservation shops. At harvest time, a bag costs less than XOF 10 000, but after six months of storage, the price can reach XOF 50 000. In these conditions, it is preferable to use VSLAs rather than microfinance institutions (MFIs), which have very high loan rates and penalties in the event of late repayment of the loan, as well as low interest rates." According to CSA/OCP, "VSLAs have a large participation of women. Loans are also distributed during the lean season and help to buy seeds and pay for labour. Unlike the traditional tontines, VSLAs operate on a transparent basis and benefit from the advice of facilitators. VSLAs have improved trust and solidarity between members through three types of contributions (savings, credit and social/assistance). One of the factors of transparency is the fact that "the fund is always open in the presence of everyone."

Diversity fields and seed banks

140. The project has set up six diversity fields and two seed banks (Gaya/Dosso and Say/Tillabéri). Indeed, following the trainings given in 2018 to RFPs and facilitators, two diversity fields have been set up in Gaya and Say. In 2019, these same farmer groups had set up a diversity field for the second year, while two new farmer groups have been created in Tahoua and Zinder sites, to set up a diversity field. Each diversity field has an average of 31 members (of which an average of 30 percent are women). To address some of the shortcomings identified in the first year, facilitators received refresher training on important concepts related to the use of Excel and data collection and management. It should be noted that the creation of diversity fields always emanates from a prior discussion of farmers to decide which crops and varieties will be implemented. Every diversity field is facilitated through weekly meetings with the group of farmers directly in the plots to monitor the crop cycle, give technical advice and collect data on crop performance.
141. The project organized a seed fair in Abalak/Tahoua on 26 November 2019 which was attended by members of the Inwissili village diversity field, technical partners (FAO, Biodiversity International), administrative authorities (prefect, mayor of the town of Abalak), regional, departmental and municipal agriculture officials of Tahoua and Abalak and the population. Despite a low public turnout and the fact that the products presented came from a single cooperative (diversity field group), this fair was a source of satisfaction for the Abalak zone, which had never before experienced such large-scale agricultural events. It provided the opportunity to showcase the diversity and richness of farmers' gene pool. The interest aroused by this event led stakeholders to recommend in the future the organization of a single fair bringing together the different diversity field groups of the project's intervention zone, in order to allow for more exchanges and sharing of experiences between stakeholders. Concerning the running of diversity fields, it was also recommended that sufficient means be provided to RFPs for monitoring/supervising diversity fields in order to overcome certain shortcomings. This same fair was organized in Haoukan Sara (Zinder), Tara (Dosso) and Say (Tillabéry) in December 2019.

142. After two years of experience and accompaniment by facilitators, the members are eager to carry out and perpetuate this activity. The two diversity field groups have set up and monitored community gene banks in 2020. Community gene banks are a community strategy to guarantee, manage and sustainably use the genetic diversity of plant species in the field. In Tara, 28 varieties of all species, including 16 improved and local varieties of millet, six varieties of *sorghum* and six varieties of cowpea were grown on an area of one hectare. The Tara community gene bank also set up a VSLA to mobilise financial resources and mutual aid. In Louga Banda, 13 varieties of crops were planted: seven varieties of millet and six varieties of cowpea. In addition, three hectares were allocated to millet (HKP and Chakti), *sorghum* (Mota Maradi and IRAT 204), cowpea (IT 90K and IT 89K) and vouandzou varieties for seed production.
143. Each community gene bank has set up a management committee. The one in Tara participated and presented 16 varieties of millet at the seed fair organized by the Ministry of Agriculture and Livestock, during which they established collaborations (ICRISAT and CD de Dansaga) that led to a study trip to the community gene bank of Dansaga (Maradi region), which has proven expertise in this area. The Dansaga community gene bank, created in 2002 with the support of the International Fund for Agricultural Development (IFAD), currently has 25 members, including three women. It has trained 2 000 farmers on farm advisory support in 2019 and 4 000 in 2020. Diversity fields and community gene banks are set up under an MOU with the international NGO Bioversity International.

Farmers' umbrella organizations

144. The capacities of farmers' umbrella organizations (SA'A Federation; FUGPN-Mooriben; CSA/OCP; FCMN-Niya; FRUPOAM/ANFO) have been strengthened through their involvement in the implementation and supervision of APFS. A training on governance and gender equity took place in Maradi from 26 to 28 April 2019 for the benefit of 32 participants distributed among the partner farmers' umbrella organizations working in the project intervention area. The vast majority of participants were satisfied with the training. A total of 30 people (including 14 women) from women's groups, unions and farmers' organizations benefited from training on the processing of agricultural products (millet, cowpeas, tomatoes, cabbage and onions), post-harvest activities (marketing, storage and conservation) of agricultural products and the basic concepts of agricultural marketing.
145. Farmers' umbrella organizations actively participated in the capacity building of farmers by mobilising 215 local facilitators (71 percent) out of a total of 302 facilitators trained in the APFS approach and mobilised by the project. Farmers' umbrella organizations also provided support and supervision of the process by mobilising their regional and national technical staff. With the exception of one whose work was rated as Unsatisfactory,¹² farmers' umbrella organizations successfully carried out their tasks: purchase and provision of training kits composed of inputs and didactic materials (notebooks for learners and facilitators, AESA/PESA equipment); general supervision of activities; monthly monitoring of sites and preparation of reports.
146. The setting up and facilitation of APFS were overall in conformity with the planned procedures. The beneficiary villages were well defined by APFS facilitators, taking into account the criteria defined by the project, such as: the motivation of farmers, the food security situation, the state of production systems, the decline in performance of local varieties, soil degradation and the decline in soil fertility, the accessibility of the sites, etc. Information and awareness-raising was carried out

¹² The project terminated the contract with FCMN-Niya because of several technical and material shortcomings, including delays in the provision of inputs and payment of facilitators. Thus, in 2020, the project entrusted the setting up and facilitation of the APFS in Tahoua to the SA'A Federation (originally from Maradi).

by facilitators and CLCs (DIMITRA Clubs) when such clubs existed. Baseline diagnoses were carried out to identify constraints and solutions to address climate change and improve livelihoods. However, delays in starting APFS installation campaigns (delays in signing the conventions, in defining the number of APFS to be set up and in triggering the process) led to shortcomings in the process, so that some diagnoses were not conducted in depth, leading to a questionable prioritisation of the problems to be addressed. Indeed, given the short timeframe for setting up APFS, some facilitators, under pressure, somewhat overlooked certain stages of the process or influenced the choice of priorities by directing them towards issues they were more familiar with or towards those that were usually recognised as priorities by the supervisory services or farmers in the area concerned.

147. Farmers' umbrella organizations have experienced delays in providing inputs and equipment to install APFS, as well as monitoring tools (logbook). These delays are not only linked to the shortcomings of farmers' umbrella organizations, which often do not have a sufficiently high pre-financing capacity in relation to the mission entrusted to them. They also stem from the project and the complexity of the procedures that require input needs to be quantified on the basis of the experiments that are actually to be set up. However, as the project does not timely provide sufficient information on APFS to be set up by region (number and location), this has an impact on the time required to carry out diagnoses and to report input and material needs to farmers' umbrella organizations which have to place orders on the basis of real needs.
148. Another shortcoming noted in the supervision and support provided by farmers' umbrella organizations is the fact that their leaders have not been trained in the APFS approach. Being trained and empowered in the APFS approach could have helped these officials address some of the absences and shortcomings of the focal points in monitoring APFS in the field. As a result, field visits were not regular and the facilitators did not receive the necessary support at the right time, especially during the development of diagnoses and curricula. It is at this point that local facilitators need closer supervision to reframe ideas, identify themes that really address community concerns, and develop them clearly. Despite these shortcomings, the commitment of the local facilitators was noteworthy and enabled them to develop several themes. The important role played by MFPs and departmental services should also be highlighted, as they often provided inputs and other facilities to compensate for delays, and thus helped in setting up APFS before being reimbursed.

Some testimonies and satisfaction of beneficiaries

149. During the evaluation of the 2018–2019 agricultural season, a woman from the Sakorbé municipality (Dosso region) commended VSLAs, which enabled her to pay for her children's entertainment, to support other members during ceremonies, to promote mutual aid and to improve social cohesion. This evaluation also reports a better social cohesion and a greater fluidity of information in APFS that have VSLAs compared to those that do not have them.
150. In the village of Sinsan Koira, Sakoïra municipality, Tillabéri region, the producers had never experienced a field school before the project intervention. After two years of running APFS in this village, learners have assimilated the different themes taught and have ended up forming a group, by imposing contributions and fines for those who do not respect mutually agreed rules. The funds generated have enabled the initiation of IGAs such as groundnut production and groundnut oil extraction.
151. In the village of Kalgon Gigayi, Kantché municipality, Zinder region, VSLA members rented a piece of land for XOF 82 000 during the 2020 agricultural season to produce sesame and cowpeas in

order to sell them and increase the VSLA funds. Also, in the village of Zongon Issoumouf, in the same municipality, VSLA members built up a fund of more than XOF 300 000 from their 2020 contributions. They have developed a collective field of sesame and cowpea to increase their funds. All members benefited from loans, which they all repaid within the agreed timeframe. These funds were redistributed to the contributors and a new campaign has been planned.

152. As concerns the APFS of the village of Tassaou Peuhl, Kantché municipality, Zinder region, in 2020, its members benefited from a loan of XOF 7 000 during the lean season which was worsened by the effects of the anti-COVID-19 measures. These loans were used to purchase seeds for the most vulnerable households and to buy food. The importance of this initiative led many villages to adopt the VSLA model initiated by the project; they asked the facilitator to support them in setting up and facilitating their VSLA. At the time of the final evaluation, the local APFS facilitator of Tassaou Peuhl was facilitating five VSLAs, two in the village where she is facilitating the APFS and three in her own village for the benefit of women who are not members of APFS.
153. In Sarkin Yara Koira, Falwel municipality, Dosso region, learners found that the use of bio-pesticides based on neem leaves was more efficient than chemical products in terms of accessibility and yield improvement. To this end, they learned to make their own neem leaf-based bio-pesticides as an effective alternative to chemicals which are very expensive and difficult to access.

3.2.2.3 Development and dissemination of decision support tools for climate change adaptation

154. The project has developed participatory decision support tools for local planning and activity implementation, taking into account climate change, to reduce risks for farmers, pastoralists and communities in the project area. These tools, which have proved their worth in other projects (e.g. with the World Food Programme) involving the Directorate of National Meteorology, have been found to be relevant in helping technical services and facilitators in advisory support and communities in the strategic and tactical management of the agricultural season: choice of crops and varieties; decisions on the daily or weekly conduct of certain agricultural operations; etc. However, the project experienced delays in signing an agreement with the Directorate of National Meteorology and in the actual start of activities. These delays dampened the results (see analysis of shortcomings at the end of the section). Despite this, the project successfully implemented the planned activities and achieved outcomes that are very likely to positively affect production systems and productivity after the end of the project.
155. The project acquired and used rainfall data collected over the last 38 years from five project municipalities (Simiri and Say, Tillabéry region; Sokorbé, Falwel and Gaya, Dosso region), to develop decision support climate products. Rainfall anomalies, early, normal and late start dates of the rainy season, cases of false starts of the rainy season, anomalies in the start and end dates of the rainy season, the decadal evolution of the start and end of the rainy season, and the variability of the maximum dry sequences at the start and end of the season were highlighted in each municipality.
156. The capacities of RFPs, facilitating technicians (agriculture, livestock and environment), local facilitators and radio station managers were strengthened through travelling seminars. In addition, two farmer representatives per village, for ten villages per municipality, were trained in rainfall observation, local facilitators were trained to fill in rainfall logbooks, and the foundations were laid to improve communication between stakeholders and the meteorological service.
157. The project has strengthened the rainfall observation network in the five target municipalities by installing 55 SPIEA rain gauges, 50 of which are in the 50 villages concerned and five on the sites

of the municipalities concerned. These are rain gauges suitable for professional use. They are direct-reading with a test tube and a ground mounting support. They have good accuracy for rainfall of less than 10 mm and an interesting life span (ten years). Local facilitators were specifically trained/retrained in the use and maintenance of the instrument and in filling in observation books.

158. The project has set up a system for collecting and analysing data (rainfall and crop information) at the local level to strengthen and refine climate information and inform farmers. Thus, 100 mobile phones and 25 smartphones with SIM cards were given to beneficiaries (23 for facilitator technicians, 100 for farmers, three for Directorate of National Meteorology agents). All facilitators' lines and 50 percent of producers' lines (one per rainfall station) were integrated in the fleet. Through this system, the Directorate of National Meteorology collects data from WhatsApp messages or phone calls. A WhatsApp platform has been created by facilitating technicians to disseminate daily weather information and other early warnings. This platform brings together all APFS facilitating technicians and some project and Directorate of National Meteorology officials. The project facilitated the activation of another Directorate of National Meteorology platform called Messaging Pro which can reach, without an internet connection, a producer anywhere in the Niger thanks to mobile phone network coverage. This system is dedicated solely to the transmission and dissemination of climate information to all project stakeholders.
159. Over the period from 01 July to 31 August 2020, the Directorate of National Meteorology developed and disseminated 295 weather forecast messages including 25 alerts on rainfall activities for the benefit of the five targeted municipalities. These messages are sent via internet connection through the Directorate of National Meteorology's messaging Pro platform in the form of text messages limited to 150 characters and 60-second voice messages. Text messages are intended for the various mayors, agents of municipal technical services and community radio managers, while voice messages are for local facilitators who are less literate.
160. Among the shortcomings, it appears that in the relatively short time available, the project, through the Directorate of National Meteorology, was unable to develop and disseminate two other important agro-climatic advisory products. It was planned to use the climate data collected to contribute to the development of the agro-meteorological bulletin by the multidisciplinary technical group and the ten-day agro-meteorological bulletin for farmers. This latter bulletin aimed at providing farmers with more precise and localised information, based on rainfall and agricultural data (phenology, date of operations, health situation, etc.) collected locally by the agriculture MFP and forwarded to the Directorate of National Meteorology. The evaluation considers this activity to be important for increasing the project's impact, but has not noted any prospect for its continuation after the end of the project. This is also the case for the restitution of the annual seasonal forecast, which should have been done at the level of the municipalities concerned to share outcomes with local stakeholders and facilitate their reading, ownership and use by decision-makers and technical managers to guide strategic decisions relating to the agricultural season. FAO should consider a way forward for these activities after the end of the project and thus strengthen the use and sustainability of other outcomes and achievements of the project in the field of agro-climatic advisory.

3.2.3 Strengthening institutional capacities and cross-sectoral coordination for the mainstreaming of climate change adaptation strategies into agro-sylvo-pastoral sector policies, programmes and planning

161. Outcome 3 on the mainstreaming of CCA strategies into agro-sylvo-pastoral sector policies, programmes and planning was only partially achieved. Outcome 3's indicator entitled "15 targeted municipalities, four government ministries and one research institute have increased

their adaptive capacity to reduce risks and respond to climate variability” was achieved only through training workshops, which seems insufficient. Indeed, under Output 3.2, the project has built the capacity of 67 stakeholders on climate-sensitive local planning, climate resilience M&E tools and the integration of these tools into the M&E system for climate-sensitive local planning.

162. However, due to numerous delays, the project cancelled the implementation of Output 3.1 on the development of briefs based on resilience analyses, and focused its efforts on the establishment of APFS. Also, Output 3.3 on integrating the APFS and CCA approach into programmes and policies was transferred to the PASEC project for which FAO provides technical assistance.
163. More specifically, the implementation of these outputs has been transferred to Deliverable 4 “Adoption of a national strategy by the Government for scaling up a harmonised field school approach in the agro-sylvo-pastoral sector” of the APFS-DC component of PASEC, which benefits from FAO technical assistance and project support. This deliverable will contribute to the harmonisation of the APFS approach and ensure its sustainability and scaling up. According to the PASEC 2020 Report, the APFS-DC approach will be integrated into the advisory strategy through a national consultation process (including the various government services, extension services, farmers’ organizations, NGOs, development partners, research institutes and FAO). Consultation frameworks for regional APFS will also be strengthened and integrated into the advisory strategy (including extension services, farmers’ organizations, NGOs, persons in charge of projects in regions) and the definition of a strategy for APFS-CLC scaling up will be supported within the framework of advisory services (including agriculture, livestock, environment, vocational training and university).
164. Beyond this ultimate Outcome 3 (PASEC Deliverable 4), it is worth noting that the project has generated a number of outcomes not foreseen in the project document. The project, with the assistance of FAO, supported the introduction of the APFS-DC component in PASEC, and mobilised experts to support the achievement of PASEC Deliverables 1, 2 and 3. Similarly, the updating of the APFS Guide by PASEC – with technical support from FAO and the project – and the adoption of the APFS approach by the ProDAF are among the project's spin-off effects. The signing of a decree establishing APFS as an agricultural extension and advisory tool is planned. A database has been developed at government level to integrate local facilitators as extension and advisory agents that can be mobilised by the government and partners to support sustainable agricultural development through the APFS approach.
165. The project did not achieve Outcome 3 as envisaged in the project document, but the outcomes achieved mitigate this shortcoming somewhat. The level of achievement of Outcome 3 is rated as Moderately Unsatisfactory.

3.3 Efficiency: To what extent did the project implementation and management mechanisms affect the effectiveness of the project and the quality of outcomes?

Finding 3. Project management, which was weak at the outset, was improved at mid-term, but was unable to improve the efficiency and effectiveness of outcomes. The efficiency of the project is rated as Moderately Satisfactory. The project is managed in accordance with FAO rules and procedures under the direct execution modality. It has received continuous support from the technical unit - NSP, the GEF Coordination Unit and the Country Office. However, the Country Office, due to internal constraints (changes of representatives, limited HR), often lacked the flexibility and diligence to enhance its support and compensate for the project's shortcomings and difficulties.

166. In sum, the project's delivery and implementation mechanisms did not function as planned. The project started with a small technical team and had two changes of NPCs.
167. The PCU was deficient and not very diligent on several management aspects (recruitment of experts and HR, formalisation of partnerships), before it later experienced a clear improvement yet without being able to overcome difficulties linked to administrative bottlenecks involving the Country Office (drawing up and validating TORs of FP missions, monitoring of financial and procurement processes, etc.).
168. The project planning was based on annual work plans and budgets (AWPBs) that were regularly prepared, discussed, approved, implemented and monitored. However, the absence of an M&E expert and the delay in signing partnerships did not favour the use of the project results framework to really guide the project's management.
169. Some shortcomings were noted in the supervision and implementation of activities by the Directorate General of Agriculture of the Ministry of Agriculture and Livestock. The situation only improved with the decentralisation of implementation and the involvement of FPs and farmers' umbrella organizations. However, the project has not been exemplary in providing farmers' umbrella organizations with resources and this affected the quality of their operations. The project is also late in paying the balance of the activities carried out by farmers' umbrella organizations in the previous year. The payment of facilitators' allowances was three months late. Farmers' umbrella organizations were asked to pre-finance the purchase of inputs for the establishment of APFS.
170. The M&E system of the project did not work well as described below in the relevant section. Indeed, the project's M&E system was well designed with a detailed project monitoring plan and stakeholder responsibilities. It was appropriately structured around the following bodies: the Steering Committee, executing partners (FAO project supervision team, Ministry of Agriculture and Livestock), the PCU and activity implementation partners. In December 2015, the PCU organized a workshop bringing together different stakeholders (agriculture, livestock, environment, plan, etc.), with the aim of sharing and refining the project's M&E plan. However, it did not work as planned and the M&E tasks and responsibilities foreseen in the ProDoc were not carried out. Some indicators and targets in the results framework were not clarified (including the appropriate means of verification as well as the assumptions and risks that might affect them) with all project stakeholders.
171. Semi-annual and annual reports were regularly prepared and communicated. However, the accounting system and the values of the published indicators are rarely explained and

documented. Little attention is paid to the quality of achievements. However, as already mentioned in the M&E section, the project carried out a comprehensive evaluation of APFS for the 2018 rainy season, which allowed it to assess the quality of APFS in place (Good for 89 percent of APFS and Average for 11 percent), identify shortcomings in the process of setting them up, and formulate relevant recommendations for improving interventions.

172. Although the visibility of the project was ensured by the media coverage of some activities and the broadcasting via various advertising solutions, the management of external communication and knowledge was not really focused on the dissemination of the approach and the scaling up of outcomes. The communication strategy has been initiated but not finalised. The main reasons for satisfaction are the document capitalising on the project's experience, which was drawn up in January 2019 by the project, and the APFS guide whose provisional version was drawn up by PASEC with the support of project experts. Besides, despite the delay, the reports on the mapping of CCA projects and programmes and the inventory of endogenous CCA know-how are being published for sharing.
173. The security crisis and the COVID-19 pandemic were well managed by the security plans, however they prevented the implementation of some planned activities. In addition, implementation risks regularly encountered in similar projects occurred and affected project performance (late project kick-off; low commitment of some co-financing partners; low interest of some stakeholders).
174. The project was unable to mobilise co-financing funds from the partners and to account for certain activities carried out under PASEC.
175. The project regularly prepared the various semi-annual and annual reports which helped in reporting on implementation and guiding the decisions of the supervisory bodies regarding the directions to be given to the project. However, there were shortcomings in analysing, interpreting and reporting the level of achievement of indicators. As a result, quantitative targets were highlighted while the quality of achievement was overlooked.
176. The lessons and good practices learned from the project have been used in the implementation of PASEC, and have been valorised in various ways as outlined above. But there is still room for improving the capitalisation and communication of the project's lessons and good practices.

3.3.1 Project implementation strategy

3.3.1.1 Implementation mechanisms

177. At the national level, project implementation relies on the Ministry of Agriculture and Livestock, which according to the ProDoc was directly responsible for the implementation of activities and project monitoring. The Ministry of Agriculture and Livestock in turn relied on a PCU, Institutional Focal Points (regional directorates of agriculture and livestock, municipalities), operational partners (local development agents, service providers and farmers' organizations), and reported to the Steering Committee. The implementation mechanism also included a working group made up of representatives of key project stakeholders to provide technical advice to the PCU on managing new technical and scientific knowledge on CCA and resilience practices. However, at the time of implementation, this mechanism was modified and adjusted to better fit the realities of the context and budget. Some choices have proven to be ineffective, so the project made mid-term adjustments that helped get the situation back on track.
178. The MOU initiated in 2015, on which the services of the Directorate General of Agriculture were to be based, proved to be inappropriate as it did not allow FAO to make payments to the Directorate General of Agriculture and to the people involved. It was replaced by an MOU that

was signed in June 2016 between FAO and the Directorate General of Agriculture for setting up and supervising 75 FFS in the five regions. At the same time, no MOU has been signed with the regional directorates and with the municipalities. The Directorate General of Agriculture has only set up 22 out of the 75 expected APFS (Ministry of Agriculture and Livestock, 2016b). This poor performance led to the suspension of the MOU.

179. Following the low efficiency and difficulties encountered in the monitoring and supervision by the Directorate General of Agriculture, the project opted for a decentralisation of the mechanism by genuinely involving stakeholders at different levels. Thus, an order appointing the NFP, the five RFPs and 15 MFPs of the project was signed in July 2017. Their TORs and deployment modalities were discussed, amended and approved during a workshop. Farmers' umbrella organizations were effectively involved in the project through MOUs signed from 2018 with operational partners including farmers' umbrella organizations in charge of advisory services to farmers, INRAN, the Directorate of National Meteorology and Biodiversity International. This update of the implementation mechanism has had positive effects on the management and efficiency of the project.

3.3.1.2 Project Coordination

180. The project's human resources were mobilised very late and underwent frequent changes (coordinator, socio-institutional expert, gender expert, M&E expert). The project started with an incomplete technical team consisting of the NPC, two administrative and financial assistants and two technical assistants (one agronomist and one zootechnician).
181. The project had a total of three NPCs. Under its first coordinator, the project did not obtain convincing results in the management of administrative files and the formalisation of partnerships, despite good contacts with development partners. Under the second NPC, recruited midway through the project, the project had renewed momentum, which unfortunately faded away when he left for a position in the sub-region. The second NPC stayed less than two years on the project but managed to formalise several essential partnerships. He recruited the specialists that were lacking (agro-economist, M&E expert, gender specialist), defined responsibility charters, established periodic meetings to share programming, defined TORs and systematically drafted periodic reports. Under the third NPC (the last one), the project followed the same trend, giving more responsibility to stakeholders at the decentralised level and continuing the partnership with farmers' umbrella organizations. However, delays continued, especially in the approval of the TORs for RFPs, and given that some RFPs were sometimes unavailable, their timely deployment in the field was considerably limited.

3.3.1.3 Project Steering

182. **The Steering Committee met regularly once a year instead of twice as foreseen in the ProDoc.** During these meetings, they reviewed activity reports, approved AWPBs and made recommendations to improve project implementation. The first Steering Committee meeting held in June 2015 also served as a kick-off meeting for the project. At the second Steering Committee meeting, the under-consumption of the budget was identified as a weak point. The Steering Committee recommended that a partnership be signed with three farmers' umbrella organizations for setting up APFS. The fourth and fifth Steering Committee meetings made relevant recommendations that boosted the implementation (see section 3.2.1.1).
183. The fourth meeting of the Steering Committee held on 31 July 2018 called for greater proactivity of stakeholders to ensure effective implementation of project activities. More specifically, it recommended that the project team do everything possible to improve the low implementation

rate of the project, involve the Ministry of Agriculture and Livestock at the highest level in the formalisation of the partnership with the Directorate of National Meteorology, and improve visibility, communication and information sharing, especially from the regional focal points to the administration. The Steering Committee requested an 18-month extension of the project from the financial partners, without additional costs.

3.3.2 Partner involvement

184. As highlighted in the previous sections, there were delays in the negotiation and formalisation of partnerships, such that the involvement of these partners was only effective in the second half of the project implementation period.
185. The partnership, which was initially very centralised on the Directorate General of Agriculture, had its limits and was from the outset perceived by other partners as exclusive. The project tried to correct this by integrating regional directorates, but this option proved to be inefficient as it was likely to lengthen the time needed to transfer financial resources to the regional directorates because of a law in force in the Niger which requires all resources to be centralised in the public treasury. The NFP, RFPs and MFPs were designated by an order signed in July 2017 and farmers' organizations and rural development NGOs were also fully involved through the signing of MOUs. However, with the exception of RFPs and MFPs, the regional, departmental and municipal directorates and services of the three areas concerned (agriculture, livestock, environment) were not formally involved; this sometimes limited regional managers' flexibility to mobilise staff (apart from FPs) for the project. Because of the actual operational arrangements, regional directorates (with the exception of RFPs) do not feel truly involved in the project. Similarly, the technical working group that was supposed to provide technical advice to support the implementation of the project was set up by a decree but has never functioned.
186. The environment sub-sector did participate in the development of the project and remains an important stakeholder in the project. It was involved through the CNEED at the national level and through MTs from regional directorates of environment. The same is true of the livestock sub-sector, one of whose representatives is in the Steering Committee. The involvement of livestock was somewhat timid at the beginning because of the historical perception that FFS concerned only crop production. Overall, APFS benefited from the support of a pair of sectoral experts from the three sub-sectors. However, the unattractive amounts of the facilitators' bonuses often limited the commitment of the livestock and environment facilitators.
187. At the local level, the project mobilised the leaders of partner farmers' organizations and especially final beneficiaries, as evidenced by the rate of learners' attendance at APFS and VSLAs and the interest generated by the micro-projects. The proposed tools (APFS, VSLAs, LCCA micro-projects) were very well received by the beneficiaries and the topics covered took into account the problems raised by the population.

3.3.3 FAO technical assistance

188. The project was managed in accordance with FAO rules and procedures under the direct execution modality. The Country Office worked in collaboration with the Project Technical Management Unit (based in Rome) to carry out its tasks: approval and monitoring of AWPB plans; technical support and monitoring missions; provision and proper management of project resources; management, operational monitoring of activities and proposal of corrective measures; follow-up of the recommendations of the mid-term review; etc. The Lead Technical Officer (LTO) provided the necessary technical guidance to the project and was proactive in assisting the project team to address constraints that threatened the delivery of quality outputs. The LTO supported

and assisted FAO's participation in the development of the APFS-CLC component of PASEC, which was subsequently handed over by the Government to FAO for technical assistance. The LTO participated in numerous meetings with the Government on PASEC and also advocated for the need to implement the approach in line with all its principles. FAO's technical expertise was mobilised to contribute to the updating of the National Implementation Guide for Field Schools (APFS regional expert), and also to ensure the coaching of PASEC MTs (headquarters experts).

189. On the other hand, there were difficulties and shortcomings in the support to the contracting, procurement and acquisition processes, and submission of budget revisions. The project task force did not function. These dysfunctions were favoured by a project implementation context marked by the regular change of country representative which negatively affected the operational, administrative and financial management, although the support of the Country Office never stopped. The support to the PCU, already weakened by the lack and mobility of HR and in the establishment and monitoring of partnerships (Directorate General of Agriculture, Directorate of National Meteorology, INRA, Biodiversity International, etc.), proved to be insufficient and was not able to prevent or resolve these shortcomings in a timely and effective manner. Numerous meetings initiated for this purpose¹³ were unsuccessful. The only solution found was the investment at the highest level of the Country Office and Government officials, and changes in the project implementation strategy. The regular change of country representative negatively affected the operational, administrative and financial management. The project task force was not mobilised.
190. Relations between the PCU based at the Ministry of Agriculture and Livestock and the administration of the FAO Country Office were not very productive, raising questions as to the organization set up to support the project. The opinion of a project officer on the matter is quite thought-provoking: "We don't have the impression that we are followed up by the administration of the Country Office on what we do. There is no feedback in some actions undertaken that require action or follow-up from the administration".
191. Indeed, the administration of the Country Office has shown sluggishness in several processes including: recruitment of HR; payment of services, procurement and budget revision; issuance of purchase orders; approval of missions; payment of facilitators and participants in training workshops organized by the project; and payment for supervision missions. Budget revisions initiated by the project have not been completed. The signature of TORs submitted to the Country Office were often significantly delayed. For reasons not clearly explained, four budget revisions were initiated without success by the PCU including the last one in April 2020 with the support of the LTO (after the extension of the project) to adjust and balance the budget lines. Although this situation has no impact on the effectiveness of the project, it questions the efficiency and quality of the collaboration between the stakeholders responsible for this process.
192. At the procurement level, delays were observed in the preparation of purchase orders and in the payment of contractors. Sometimes, 30 days after providing the necessary information, the order form was still not released, whereas it should be done in five days. This was the case for the workshops organized in 2015 and 2016. Sometimes, suppliers' purchase orders are still not issued a few days prior to the training workshop and even on the same day, which leads to an uncomfortable situation with the supplier. As a result, some suppliers refuse to work with FAO, while others increase their prices after waiting for the purchase order in vain. Some product

¹³ In the case of the Directorate of National Meteorology, the Deputy Representative met twice with the former Director and once with the current Director. The current Representative has been proactive in finding solutions. On the issue of co-financing, the former Programme Officer regularly followed up on these funding agreements with officials, but to no avail.

deliveries have been delayed by one to two months. Sometimes the supplier delivers the product but is not paid on time.

193. The Country Office on its part reports that it manages a project portfolio consisting of several small projects that are time-consuming but whose resources do not allow for the recruitment of additional personnel. The Country Office does not have sufficient HR to handle all urgent cases in a timely manner. Work is underway, with support from headquarters, to increase staffing levels.
194. At the operational level, the project carried out a large number of field trainings in areas where wire transfers were difficult. This incurred significant costs and mobilised personnel to pay participants in accordance with procedures. Where wire transfers were possible, there were other challenges. Indeed, some of the banks and MFIs involved tried to make the most of the funds transferred for several days before returning it, creating delays of up to three days. This situation obliged the office to often mobilise two to three people to ensure payments. Reflections and meetings were necessary to find payment mechanisms that comply with FAO procedures and to study possible solutions, such as the possibility of contracting certain types of payment with certain service providers in the financial sector. Insufficient collaboration between the project and personnel of FAO sub-offices in three regions (Maradi, Tahoua and Zinder) also contributed to the inefficiency of the project. This collaboration was limited to office visits during missions to the region or to the involvement of finance/purchasing officers in the organization of workshops. Closer collaboration would allow for better monitoring of project activities in the regions and good information sharing with regional partners.
195. The GEF Coordination Unit regularly reviewed and approved project progress reports, annual project implementation reviews, financial reports and project monitoring. However, the final evaluation had no evidence of its participation in the annual project supervision missions and steering committee meetings. Also, its contribution to the budget revisions initiated by the project was not demonstrated. The GEF Coordination Unit mobilised three Funding Liaison Officers (FLOs) (the current FLO has only been mobilised on the project for one and a half years), and this limited its support to the project.

3.3.4 Planning

196. The project was implemented with reference to the results framework on the basis of the approved AWPBs, implemented, monitored and evaluated by the relevant bodies (implementing and executing partners, FAO, Steering Committee). However, their implementation was compromised by many of the difficulties already mentioned (lack of personnel, delays in signing MOUs, poor strategic choices regarding implementing operators, establishment of protocols, etc.). Besides, the absence of an M&E expert and delays in signing partnerships did not favour the use of the project results framework/logical framework to really guide management (see details in the section on monitoring and evaluation).
197. The signing of agreements and the setting up of field schools were often carried out late (May, June, July), at the start of the season, leaving little time for the preliminary processes and support for the installation of the crops. Thus, the diagnoses, prioritisation of problems and definition of the training programme, as well as the provision of financial resources, the quantification of real needs, and the acquisition and provision of inputs and teaching materials were carried out with great difficulty, leading stakeholders to develop different adaptation strategies to successfully set up and run APFS. Indeed, the planning chain of APFS is crucial for their success. Good planning makes it possible to: carry out diagnoses in a timely and methodical manner in line with the APFS approach; get inputs in time; put APFS in place early enough and thus promote the technical and pedagogical success of APFS; and increase the chances of adoption by farmers.

198. The GEF Coordination Unit did facilitate the provision of funds; it reviewed and approved financial reports related to the activities carried out (Table 2). However, the dissatisfaction lies in the fact that the budget revision proposals initiated on several occasions by the PCU to endorse changes in the allocation and use of funds, were not adopted. This situation reflects PCU's insufficient mastery of the procedures applied to GEF projects and/or a lack of adequate monitoring/accompaniment by the relevant officials of the project supervision team.

Table 2. Budgetary situation as of 31 October 2020

Designation	Amount (USD)
Cumulative transfers received from GEF (i.e. total budget)	3 800 000
Cumulative actual expenditure as of 31 October 2020	3 424 453
Cash available as of 31 October 2020	375 547
Overall budget execution rate of the project	90.12%

Source: Project data.

199. The last budget revision proposal initiated by the project (dating from April 2020, Table 3) aimed at correcting discrepancies related to the reallocation of funds from some deleted or underused activities to those deemed more relevant, after approval by FAO and the Steering Committee. The costs of Outputs 1.1 (Identification of intervention areas, stakeholders and awareness raising on the project), 2.2 (Training of MTs and Facilitators), 2.4 (Decision support tools for climate change analysis), 2.6 (on LCCA) and 4.1 (Data collection system to monitor the project's effect indicators) have been exceeded by +16.16 percent, +99.16 percent, +87.16 percent, +62.66 percent and +14.58 percent respectively. This is also the case for the project management cost (+10.2 percent). These overruns are compensated by a low budget consumption expected on Outputs 1.3 (on-farm testing of agricultural and pastoral varieties and practices), 2.1 (revision of training programmes), 2.3 (training of farmers/pastoralists in APFS), 3.1 (development of policy briefs), 3.2 (institutional capacity building strengthened for CCA integration in programmes and policies), 4.3 (development of communication strategy) with respectively -43.44 percent, -17.83 percent, +37.74 percent, -24.58 percent, -10.78 percent, -21.82 percent savings.

Table 3. Budgetary situation reviewed in April 2020 and proposed for revision

Designation	Initial budget (USD)	Budget (situation in April 2020) (USD)	Deviation from initial budget
Output 1.1	157 100	182 484	+16.16%
Output 1.2	311 240	296 424	-4.76%
Output 1.3	240 960	136 287	-43.44%
Output 1.4	189 300	193 811	+2.38%
Total for Component 1	898 600	809 006	-9.97%
Output 2.1	84 300	69 269	-17.83%
Output 2.2	333 700	664 606	+99.16%
Output 2.3	1 268 100	789 482	-37.74%
Output 2.4	250 200	468 276	+87.16%
Output 2.5	127 000	122 544	-3.51%
Output 2.6	110 000	178 931	+62.66%
Total for Component 2	2 173 300	2 293 107	5.51%
Output 3.1	98 500	74 285	-24.58%
Output 3.2	114 300	101 975	-10.78%
Output 3.3	81 100	77 733	-4.15%
Total for Component 3	293 900	253 994	-13.58%
Output 4.1	30 700	35 176	+14.58%
Output 4.2	110 700	111 666	+0.87%
Output 4.3	78 800	61 608	-21.82%
Total for Component 4	220 200	208 450	-5.34%
Project management	214 000	235 442	+10.02%
Total	3 800 000	3 800 000	0.00%

Source: Project data.

Note: Two non-conformities in the original budget table are rectified here. These are Activity 5023-5905 Workshops for capacity building of stakeholders and decision-makers, on M&E tools for resilience (assigned to Output 3.1 in the original budget table whereas it falls under Output 3.2 in the ProDoc). The same goes for Activity 5023-5905 Workshops for needs assessment and identification of CCA measures to be incorporated into policies (assigned to Output 3.2 in the original budget table whereas it falls under Output 3.1. in the ProDoc).

3.3.5 Risk management

200. The deepening of the security crisis identified as a potential risk in the ProDoc and the occurrence of the health crisis were adequately managed in line with Government and FAO contingency/emergency plans. In contrast, the project did not prevent the occurrence of several other risks identified in the ProDoc risk matrix and the corrective measures applied were slow to mitigate/eliminate them. For example, specific cooperation agreements and MOUs were signed very late, significantly slowing down the implementation of the project. Besides, other risk factors regularly affecting projects in the sub-region were not considered in the ProDoc but occurred with negative effects on project performance. These risk factors are: late start of the project; low commitment of some co-financing partners; low interest of some stakeholders.

3.3.6 Co-financing

201. The project encountered major difficulties in designing, mobilising and managing co-financing, due to a lack of exemplary initiation and monitoring of co-financing processes at the appropriate time. According to the project, a meeting of co-financing partners was held at the start of the project, but the final evaluation could not get this document and was therefore unable to see the

conclusions of this first meeting. Furthermore, the project missed the opportunity to plan, quantify and account for some of the activities carried out with PASEC, as co-financing.

202. The project was only able to mobilise 20.6 percent of the expected USD 13 958 871 in co-financing, and only 30.5 percent of the expected USD 17 758 871 in total funding. Apart from the Government co-financing to support PMU accommodation, which was documented, the final evaluation did not obtain evidence to confirm the other co-financing amounts.
203. On the other hand, GEF's grant (USD 3 800 000) has been effectively disbursed and implemented at 90.1 percent as of 31 October 2020, with a forecast of 100 percent at the end of the project (Table 2).

3.3.7 Monitoring and evaluation

204. The project ran for about three cumulative years without any M&E expertise. During this period, M&E was limited to the monitoring of field activities by the technical assistants. The first M&E assistant was recruited in August 2016, 14 months after the start of the project, but did not stay for long. Then, the project ran for about two years without an M&E assistant. The latter was recruited in September 2018 for the remaining period.
205. One of the consequences of the delay in M&E is that the results framework was not really used as a management tool for the project. For example, the indicators for project Outcome 2 were being properly monitored and evaluated. The project is not able to report on the area improved by CCA good practices, and has not monitored in real time the replication and adoption processes of technologies and good practices learned by farmers in APFS. The Evaluation of the 2018 rainy season agropastoral field schools (APFS) carried out in 2019 was a good action that deserved to be conducted throughout the project. At the end of 2020, the project carried out an evaluation of the adoption rate of the practices, technologies or innovations tested among the farmers who were trained between 2016 and 2019. Thanks to this, the adoption rate could be established at 72 percent of the learners.
206. The designation of project focal points and the involvement of farmers' umbrella organizations in the supervision and implementation of activities has also improved project monitoring. Despite this progress, shortcomings continue to exist in the data production and transmission/consolidation chain: some facilitators have difficulty filling in the logbook and transmitting reports to the MFPs. Reports from MFPs are submitted to the PCU without being consolidated by RPFs; the latter only report on their own missions and do not consolidate reports from MFPs in their region. As a result, reports from MFPs arrive at the national level without being consolidated at the regional level. Also, APFS supervisors have little knowledge of the APFS approach and have not been trained. Some are therefore not sufficiently equipped to monitor and supervise, and feed into the M&E.

3.3.8 Communication

207. To develop PPRs and PIRs on a regular basis, the project used information gathered from field activity monitoring by partners, workshop reports, consultants' and partners' reports, internal evaluations, financial reports, and FAO mission reports.
208. However, PIRs are not narrative; consequently, the content and calculation of the percentage achievement of some indicators are not sufficiently justified. Some achievement percentages of indicator targets are well over 100 percent but not well documented, raising questions about the approach to accounting and calculation. It is clear that the calculations are geared towards demonstrating that indicators have been achieved, whereas the primary purpose of monitoring

indicators during implementation is to encourage management geared towards achieving the final objective. This cannot be done without informing and learning from the quality of indicator achievement.

209. To this end, some of the target achievement rates announced in the 2019–2020 PIR are a cause of concern. Indeed, for Output 1.1, the PIR mentions an achievement rate of 366 percent based on the fact that 22 partnerships have been established. However, it fails to point out that several of these partnerships concern the same activities renewed during a year. For this same output, the rate of 150 percent is mentioned for awareness raising, the only justification being that a total of 150 awareness-raising campaigns were conducted. Moreover, under Output 1.2, an achievement of 100 percent is attributed to the sub-indicator relating to the permanent multi-stakeholder working group focusing on the RAAKS analysis, set up by ministerial order. However, this group never functioned. This should have been indicated and should have even lowered this achievement rate. Another dissatisfaction concerns the indicator for Output 2.2, for which one of the achievement rates is estimated at 179 percent, thanks to a double counting of facilitators who have received additional refresher training. This is also the case for the indicator of Output 2.3 (training of farmers/pastoralists) for which the project does not clearly specify that farmers/pastoralists who participated in two different APFS training sessions are counted twice. In addition, the focus is rarely on the quality of the training, whereas the project would benefit from transparently explaining that some beneficiaries have been trained more than once and explaining the reasons for this double training and their added value. Furthermore, the indicator for Output 2.5 “Farmers’ organisations strengthened through the adoption of CCA practices” is considered to be 100 percent achieved, but once again no document has been produced by the project to explain and capitalise on the gains made on these aspects thanks to the project.
210. The reservations expressed about the accounting, calculation and presentation of the achievement rate of output indicators, draw more generally the project and FAO’s attention on the priority given to quantitative objectives during project design and during implementation. Considering that FAO projects are meant to test models of technologies & innovations and CCA support by highlighting all the conditions necessary for their success and scaling up, it was necessary to communicate on and document the good practices and lessons learned from the training process in APFS. And this requires a fine qualitative understanding of the adoption phenomena.
211. Despite these shortcomings in data management and reporting, there were points of satisfaction. The project has developed and maintained a database that provides basic information on APFS that have been set up and on facilitators that accompany them. The project carried out the evaluation of winter season APFS as of 2018. In January 2019, the project also developed a document to capitalise on its experience, which is useful for promoting and disseminating the approach (FAO-GEF, 2019). This guide capitalises and formalises the information, knowledge and know-how generated by the project during the four facilitator training cycles, provides an overview of the APFS concept and its implementation methodology, informs on the process and content of the APFS facilitator training cycle. The evaluation of the adoption rate of the APFS approach and proposed technologies has been carried out but the results are not yet available. Similarly, the mid-term evaluation of the project was a strong and decisive moment and means of communication on the project. Indeed, it had the merit of pointing out the shortcomings of the project and formulating recommendations which were taken into account to put the project back on the right track.
212. The project communicated on these activities through audiovisual and written media. Actually, it produced two kakemonos on diversity fields, a factsheet on the APFS approach and a video on

the fair organized on diversity fields. Advertising objects were produced, such as t-shirts and caps. Good practices were communicated through media coverage, photo albums, image exhibitions and collection of testimonies. The project also participated in events organized at the national level such as the FESTIMIL 2020 edition.

213. A communication strategy has been initiated but was not yet finalised at the time of the evaluation. According to the final evaluation, external communication and knowledge were not well managed.

3.4 Sustainability: To what extent have sustainability conditions as well as financial, socio-economic, environmental, institutional and governance risks that may affect sustainability been identified and managed?

Finding 4. The project has put in place a set of conditions to prevent and mitigate risks and ensure its sustainability. This sustainability is overall rated as Likely (L). The APFS, VSLA and LCCA micro-projects tools promoted by the project have generated great interest among stakeholders and final beneficiaries of the agricultural advisory chain in the Niger. The project provided expertise to the Government to assist in the formulation and implementation of the APFS-DC component of PASEC and provided technical support in training facilitators for the PROACT project GCP/RAF/516/EC entitled "Strengthening the Resilience of Cross-Border Pastoral and Agro-Pastoral Populations in Priority Areas of the Sahel". The project contributed to the revision of the National Guide for the implementation of APFS, which is a step towards the institutionalisation of the APFS approach foreseen in Deliverable 4 of PASEC. The long-term objective is to position APFS as a flagship extension approach.

3.4.1 Entry points for capacity building

214. The project has adequately focused on the three dimensions of capacity building recommended by FAO. At the individual level, policy makers and regional and municipal officials were sensitised; technical officers from public agricultural advisory services and farmers' organizations (only local facilitators) responsible for facilitating APFS, were trained on the APFS approach and farmers on GAP and improved CCA technologies. The large number of trained facilitators and their inclusion in the database of advisors that can be mobilised by the government, are likely to give continuity to their work and to the use of their know-how on the APFS approach and associated tools (VSLAs, diversity fields) to train other farmers.
215. At the organizational level, the involvement of farmers' umbrella organizations in the implementation and facilitation of APFS, the technical managers of the farmers' umbrella organizations (responsible for supervising the implementation process of the APFS approach in the field), did not benefit from capacity building on this approach. This did not facilitate their work and also limited the capacity of farmers' umbrella organizations to continue the training of their facilitators after the end of the project. Consequently, in order to correct the poor performance observed in the implementation of activities, the project designated and empowered RFPs and MFPs to supervise the process of setting up and facilitating APFS. This choice, which was supposed to simplify¹⁴ the public mechanisms necessary for the supervision of APFS, reduced the involvement of regional technical directorates and municipal services to a single person (the focal point). As a result, officials in regional directorates and public agricultural advisory services other

¹⁴ If the project signed MOUs with regional directorates for the supervision of APFS, the related financial resources would be channelled through the public treasury at the central level before being redirected to the beneficiary directorates, with the risk of accentuating the delays already experienced by the project in the implementation of activities.

than FPs did not feel directly involved in the project. They had no leeway to positively influence the supervision of APFS and were not entitled or able to mobilise other competent agents to make up for the absence of focal points.

216. At the level of the enabling environment, the project has postponed several activities that should contribute to the integration of CCA strategies into policies and programmes and the planning of the agro-sylvo-pastoral sectors, but has found ways to compensate. The PASEC project has worked on the development of the APFS and DC component for the World Bank-funded PASEC, and provides technical assistance to the Government, which gives continuity to the actions undertaken and to the consolidation of results. The project's MTs participated in the training of PASEC facilitators, and the project's expertise was mobilised to revise the FFS Guide in order to integrate the APFS approach. The project transferred activities of Output 3.3 to PASEC. These aimed at developing a national and municipal CCA investment plan based on APFS for programmes and policies related to the agriculture sector. The project updated the mapping of projects and programmes involved in CCA in the Niger for the 2012–2024 horizon and made relevant recommendations to ensure the sustainability of results and better impact of these initiatives.

3.4.2 Conditions put in place to ensure sustainability

217. The issue of project sustainability was crucial from the onset, as it was noted that previous project FFS to be reinforced with the APFS approach through the Project GCP/NER/043/LDF were non-existent or could not be found. Indeed, previous FFS did not survive because of the low capacity of communities to self-finance learning activities. The appropriation of the VSLA tool by the project contributes to the creation of conditions to ensure sustainability. Part of the profits generated by VSLAs will be used to finance APFS (inputs, equipment, facilitator allowances, etc.) after the project. Also, the project has integrated the motivation of farmers when choosing communities and groups of beneficiaries. It has also created a database geo-referencing the APFS groups created by the project and collecting a minimum of information on them.
218. The VSLA tool added to APFS fostered solidarity, saving and mutual aid within the group and between APFS members. These VSLAs have developed 60 micro-projects for a total budget of XOF 70 594 100, 81 percent of which is financed by LCCA from the GEF grant and 19 percent by their own contribution. The implementation of these micro-projects, which constitute IGAs based on improved CCA technologies, are factors of sustainability for the APFS and VSLA groups set up by the project. The success stories and adoption cases reported will also serve as a showcase and as a visiting and exchange card with other stakeholders, and thus promote a wider dissemination and sustainability of the project outcomes. Similarly, the Field School Guide, once finalised and validated, will be translated into local languages. The Government has planned to sign a decree to establish the APFS Guide as an agricultural extension and advisory tool in the Niger, which is an important factor in the sustainability of the project.
219. The involvement of farmers' umbrella organizations in the implementation of project activities as well as the training of local facilitators and their empowerment in establishing and facilitating APFS, are an important factor for the sustainability of the project and a point to be further developed in the future. The facilitators are mainly from farmers' umbrella organizations in a context marked by the severe lack of extension agents. These local facilitators are less costly to support than state facilitators/agents, and the state is considering recruiting them.
220. The project has raised awareness at different levels on the benefits of the APFS approach for the government, communities and people. It also increased the knowledge of key decision-makers and planners on the APFS approach and CCA strategies. It fostered the establishment and

functioning of PASEC, which ensures continuity by drawing lessons from the project. Failing to formalise MOUs with regional directorates of agriculture and failing to train farmers' umbrella organizations managers are the main risks that could affect sustainability. However, the first risk is mitigated by the fact that PASEC collaborates directly and harmoniously with these bodies.

3.4.3 Risks affecting sustainability

221. There are risks that could threaten the sustainability of project outcomes, but some are already mitigated by the establishment of PASEC in pursuit of the project's objectives. However, no environmental and social risks other than those that justified the formulation of the project have been identified as likely to threaten the sustainability of outcomes. No environmental factors were identified as potential threats to the sustainability of the project. On the contrary, the APFS approach and complementary tools proposed by the project contribute to strengthening climate change resilience of production systems and communities and also to reducing the risks of food insecurity and livelihood reduction. The establishment of seed banks contributes to securing and conserving biological diversity.
222. There is a financial risk regarding the management of funds for the implementation of micro-projects as they are released just before the end of the project. However, the project has planned to involve public technical services and farmers' umbrella organizations in monitoring the management of these micro-projects. At the institutional and governance level, the formulation of PASEC and the revision of the Field School Implementation Guide to introduce the APFS approach, are important steps towards the institutionalisation of the approach and therefore a factor of sustainability of the project. Risks related to insecurity and the COVID-19 pandemic were major threats to the implementation of activities at the national level or in some areas, but the project had to adapt by mobilising security and contingency plans. In addition, the decentralisation of the project's implementation approach, henceforth relying on local focal points and facilitators, greatly reduces the likelihood of these sustainability-threatening risks.

3.5 Cross-cutting themes: To what extent have the issues related to gender, vulnerable or disadvantaged groups and environmental sustainability, been effectively taken into account during project implementation?

Finding 5. Gender has been mainstreamed in the implementation of the project, through the introduction of activities and technologies that address women's concerns, the establishment of incentive mechanisms to encourage their participation and the more or less satisfactory achievement of gender targets. However, some shortcomings were noted and they deserve to be corrected in future projects.

3.5.1 Mainstreaming of gender equity

223. Women represent 31 percent, 22 percent, 18 percent and 51 percent respectively of the combined national staff of the PCU, MTs, facilitators and final beneficiaries trained by the project. These achievement rates are close to the targets which were 25 percent, 30 percent, 30 percent and 25 percent of women among project managers/partners, MTs, facilitators and final beneficiaries trained respectively.
224. Within the 4 farmers' umbrella organizations studied,¹⁵ 50 to 60 percent of the members are women as well as 41 percent, 40 percent, 14 percent and 25 percent of the members of the Board of Directors of the Mooriben, CSAOP/OP, Frupoam and SA'A farmers' umbrella organizations

¹⁵ Results of the gender analysis conducted by the project in 2019.

respectively. A good representation of women in farmers' umbrella organizations fosters their mobilisation and active participation in the project activities.

225. The project organized various workshops during which it deployed a strategy to increase women's participation based on predefined criteria or quotas. Thus, 46 percent of women participated in the training on marketing and processing of agricultural products, and 31 percent in the training (governance and gender equity) organized for partner farmers' umbrella organizations. On the other hand, the training on nutrition organized for regional and municipal focal points and facilitators included only 12 percent women among the learners, which calls on the Government to increase the percentage of women among the trainers.
226. Several technologies and good practices proposed were well received by women and young people (girls and boys), namely: i) three plant-millet thinning per seed hole; ii) composting; iii) the cultivation of squash; iv) the manufacture of aqueous extracts based on local products (neem, chilli pepper, tobacco); v) the manufacture of multinutrient blocks; and vi) exclusive breastfeeding from 0 to 6 months.
227. The integration of VSLAs around APFS has been strongly supported by women. These associations have created not only a savings, credit and solidarity fund that allows members to help each other but also a source of funding to obtain the necessary inputs and working materials in order to replicate some of the interesting CCA technologies learned in APFS. The project encouraged VSLA groups to develop micro-projects based on IGAs with a view to increasing the purchasing power of members and strengthening their livelihoods and resilience. A total of XOF 57 228 500 was granted to support the micro-projects of 60 VSLA groups benefiting 1 491 farmers, 62 percent of whom are women. The total budget of these micro-projects was XOF 81 653 400, of which VSLAs contributed XOF 13 365 600. However, the expected final results of this gender mainstreaming process on resilience and the improvement of women's livelihoods are not yet tangible because the project has delayed in making funds available and no micro-projects have yet been implemented. Agreements have been reached with implementing partners (farmers' umbrella organizations and government technical services) to ensure the implementation and monitoring of LCCAs before and after the end of the project.
228. However, efforts are needed at all levels to reflect reality and reduce imbalances. The strong presence of women among members of farmers' umbrella organizations should suggest to the project an increase of their quota for participation in APFS. At the level of technical focal points, there is only one woman among the 15 FPs, which is very insufficient and calls on the Government to further promote women in management positions through short-term actions (appointments) and long-term actions (encourage the training of more women in the field in order to improve their chances of occupying leadership positions). As concerns MTs and facilitators, the low presence of women facilitators in the project may have hampered the active participation of women farmers in the discussions/facilitations of APFS, thus limiting the benefits they could derive from them. Besides, micro-projects should have been implemented in the second year of the project to allow women to benefit from a better support and follow-up by the project.

3.5.2 Environmental and social safeguard

229. The project by its nature, its objectives and its activities contributes de facto to the environmental and social safeguard. The APFS approach – better than the FFS approach – integrates CCA which is a consequence of environmental degradation, but which is also a factor of acceleration when appropriate practices and strategies are not proposed. Without sustainable CCA practices and strategies, farmers continue and expand extensive farming systems that contribute to environmental degradation. The APFS approach associated with VSLAs and micro-projects

proposes a global approach to meet households' CCA priority needs and to reinforce the resilience of farmers.

230. Thanks to most of the good practices and technologies experimented in APFS and adopted by farmers, it is now possible to: i) limit or reverse resource degradation; ii) limit the decline in soil fertility; iii) improve the value of natural resources; iv) reduce livestock mortality; v) improve the use of organic manure; vi) ensure the use of improved varieties/breeds; and vii) improve productivity and farmers' incomes (see Appendix 6 of the French version). The project has contributed to a better knowledge and use of endogenous CCA practices and strategies, and to the promotion and conservation of genetic diversity (diversity fields, community gene banks, organization of a seed fair). However, the delay in setting up APFS, VSLAs and micro-projects did not allow the social and environmental effects actually generated to be observed.
231. The project was affected by the deterioration of the security and health situation (COVID-19) and applied the preventive measures dictated by the Government and the United Nations contingency plan.

4. Lessons learned

232. The concept of co-financing applied to GEF projects remains poorly understood or dealt with by several projects. It deserves to be well explained and clarified to all stakeholders including the Government and other partner projects, to avoid any misinterpretation that limits or hinders their achievement of objectives.
233. Overall, farmers' umbrella organizations have delivered quality work. It is necessary to support them over the long term and strengthen their extension and advisory support capacities. The project demonstrates that in the context of the Niger, working with farmers' umbrella organizations is more effective than subcontracting APFS to the Ministry of Agriculture and Livestock.

5. Conclusions and recommendations

5.1 Conclusions

Conclusion 1. The project properly meets the strategic priorities of the Government, FAO and GEF, and the needs of the population in terms of climate change adaptation of the agricultural sector.

All stakeholders have confirmed the relevance of the targeted problem, the intended objectives and the approach used. PASEC was therefore developed to replicate the innovation support model initiated by the project, to strengthen it through the lessons and experience gained from the project, and to make the APFS and CCA approach the flagship tool for agricultural extension and advisory in the Niger. During its implementation, the project rightly integrated the VSLA activity which boosted APFS and which is a factor of sustainability for the project. In order to increase its effectiveness and generate more effects on final beneficiaries, the project could have incorporated in its design indicators that could have encouraged a wider adoption of the APFS approach by other projects and advisory support organizations and indicators to encourage the implementation of LCCA micro-projects, so as to measure the first effects on final beneficiaries before the end of the project.

Conclusion 2. In addition to strengthening the capacity of agricultural advisory stakeholders in the Niger, the project has also equipped final beneficiaries with the necessary knowledge and tools to enhance their resilience to climate change and improve their household production, income and food security.

The project has generated national technical expertise in the implementation of the APFS approach and CCA throughout the agricultural advisory support chain. It has enabled the Government of the Niger to take ownership of the APFS approach in order to enhance the CCA capacity of the agro-sylvo-pastoral sector, food security and the resilience of populations. The Government has integrated into PASEC an APFS component whose technical assistance has been entrusted to FAO. The MTs trained by the project have accompanied other projects. The local facilitators trained by the project have demonstrated good working capacities and are a quality resource to improve the number and quality of advisory and extension agents at the local level. As a result of the project, producers have adopted resilience building tools based on VSLAs, the adoption of CCA practices, technologies and innovations, and LCCA micro-projects. In this way, the project contributed to strengthening social cohesion through regular meetings that promoted information and knowledge sharing, consensual decision making, understanding and mutual support. Producers applied or adopted good practices or new technologies based on productive and early seeds, three-plant millet thinning, ANR of soil, composting and localised application of organic and mineral manure, preparation and application of bio-pesticides and aqueous extracts, etc. The project contributed to the revision of the farmer field school guide in the Niger to integrate the APFS approach. The effects could have been better and more visible if not for the constraints and inadequacies encountered by the project: for example, the poor quality of some APFS (poorly designed experimental schemes due to lack of adequate supervision, delay in carrying out the experiments with negative effects on production and productivity and on test result interpretation), and the delay in setting up the selected micro-projects which were supposed to generate income for the beneficiaries and encourage greater adoption of the technologies tested and proposed. In addition, the adoption of certain technologies requires significant financial means to acquire inputs and equipment.

Conclusion 3. Project management has been weak in several areas and the mid-term adjustments made have not been able to fully get the situation back on track.

Failures mainly concerned the lack of diligence and proactivity in anticipating and solving problems and difficulties related to delays in recruiting experts and other HR, formalising and managing partnerships,

monitoring-evaluating project activities and indicators, mobilising co-financing, and in the financing and procurement processes. In addition, there have been frequent changes of leadership at FAO and project level, resulting in discontinuity in the leadership, negotiation and monitoring of files and certain activities. The project was unable to mobilise co-financing funds. The Regional Focal Points (RFPs) did not carry out most of the planned supervision missions because their TORs were not approved on time by FAO.

Conclusion 4. Despite the security risks and delays that affected the implementation of some activities (APFS, LCCA micro-projects, institutionalisation of the APFS approach, etc.), the project achieved outcomes that met beneficiaries' needs, and put in place the necessary conditions to consolidate them, make them sustainable and promote the achievement of impacts.

The APFS, VSLA and LCCA micro-projects tools promoted by the project have generated great interest among the stakeholders of the agricultural advisory chain in the Niger and producers. The collaboration between MFPs, farmers' umbrella organizations supervisors and local facilitators was smooth. The project contributed to the development of the APFS-DC component of PASEC and provides technical assistance thereof. The project contributed to the revision of the National Guide for the implementation of APFS, which is progress towards the institutionalisation of the APFS approach foreseen in Deliverable 4 of PASEC. The project involved state, regional and municipal technical services and farmers' organizations in the implementation of activities, and the local facilitators demonstrated good facilitation capacities which are pillars of sustainability.

Conclusion 5. The project has successfully integrated gender equity and environmental safeguard concerns and achieved its objectives in this area.

The project has well integrated and implemented activities to generate outputs that adequately meet the concerns of women and vulnerable populations and contribute to environmental safeguarding; it has put in place incentive mechanisms to encourage their participation in the project. Thus, VSLAs, three seedling-millet thinning per seed hole, composting and organic fertilisation, the cultivation of squash, the manufacture of aqueous extracts based on local products (neem, chilli pepper, tobacco), the manufacture of multinutrient blocks, and exclusive breastfeeding from 0 to 6 months, have been strongly supported by women. Although the amounts contributed are still modest, VSLAs have made it possible to set up a savings, credit and solidarity fund, and to submit 89 micro-project applications, 60 of which were selected for funding. The average budget of each of the 60 micro-projects financed was XOF 953 808, of which 19 percent was contributed by the VSLA and 81 percent by the GEF grant. These VSLAs have enough room for improvement in terms of self-financing and attracting new partners to develop future micro-projects and income-generating activities (IGAs).

5.2 Recommendations

Recommendation 1. The design of research-action-pilot projects and support projects for climate change adaptation (CCA) policies must incorporate conditions that provide sufficient incentives to promote scaling up and the generation of effects and impacts.

More generally, recent OED evaluations show that the missing link in initiatives to eliminate hunger, food insecurity and malnutrition often concerns support in policy implementation and evaluation. However, the need for new policies is not always justified, for example in an environment where existing policies are not implemented due to lack of capacity or priority. From this perspective, the concerns are institutional and are related, beyond the texts adopted, to the quality and performance of the country's extension system and to its capacity building needs in order to raise awareness on CCA.

In the specific case of this project, the aim was to demonstrate an approach and encourage its scaling up. In this regard, FAO-executed projects must, from their conception, ensure a better balance between

quantitative indicators (which are often the priority of development projects) and the quality of outcomes. Indeed, it is more relevant to target a reasonable number of beneficiaries and put in place sufficient conditions to generate visible effects and changes on producers and thus ensure scaling up. Also, in order to stimulate the search for efficiency during implementation, FAO should integrate in its resilience and CCA projects a specific indicator to really stimulate the wider adoption of the approach by other projects and advisory organizations. Such an indicator lacked in this project. The indicator on LCCA micro-projects also deserves to be reformulated and refocused on the effect. In the project, the LCCA indicator is formulated as follows: "Local Investment Fund for Climate Change Adaptation established and operational in each region (5)". In its current form, the indicator and its target do not provide enough incentives for project managers to accompany the implementation of micro-projects until the effects or impact on final beneficiaries are achieved. That is unfortunate because LCCA micro-projects are a means of large-scale application of improved technologies and income generation, thus improving the income and resilience of final beneficiaries.

Recommendation 2. FAO Niger should integrate into its project planning and implementation mechanism adequate measures to timely and diligently anticipate and address capacity weaknesses and constraints in human resources, partnerships and the project enabling environment.

Better planning, more appropriate choice of partners and better risk management and implementation mechanisms are needed to support the implementation of activities, the delivery of outputs and the achievement of expected outcomes. If the project had sufficiently anticipated and found solutions to the difficulties related to the recruitment and retention of quality human resources, the mobilisation and empowerment of partners and the specificities of the organizational and institutional context, then APFS, VSLAs and micro-projects would have been set up in time, thus promoting a wider adoption of the approach and technologies, good practices or innovations before the end of the project. Similarly, the project would have had sufficient hindsight to correct its own weaknesses and consolidate its outcomes.

Recommendation 3. FAO needs to improve its project management and co-financing mobilisation mechanisms and strengthen the capacity of stakeholders in this regard, taking into account context-specific constraints and needs.

During project design, the organization could integrate a specific indicator on co-financing mobilisation into the results framework, and, during implementation, build the capacity of project managers and partners on the principles and mechanisms of co-financing mobilisation, and results-based management. FAO should also use the project task force to ensure continuity of leadership in the project and improve its response to administrative constraints encountered by the project during its implementation.

Recommendation 4. FAO should promote and strengthen the capitalisation and appropriation of the project's achievements by PASEC and other resilience support projects.

Successful technical and methodological experiences should be collected in a toolkit and transferred to PASEC and other resilience support projects. This transfer should include at least the APFS database, the APFS special topics document, a description of the APFS implementation system through farmers' umbrella organizations, the APFS M&E tools (the journal, etc.), a description of the supervision and reporting system through the structure based on regional and municipal focal points.

Recommendation 5. In order to better generate effects and impacts and ensure their sustainability, FAO should develop a long-term partnership with the farmers' umbrella organizations, and integrate in the design of future CCA projects several elements, including activities, incentives to truly strengthen the capacities of partners and beneficiaries and empower them.

In the continuity of the project, it seems logical to combine an institutional approach (ministry, etc.) and a private/organizational approach by supporting farmers' umbrella organizations to develop their own advisory function alongside public extension services. It would be necessary to go beyond the project approach with a list of APFS to be established each year, and move more towards a qualitative technical support to farmers' umbrella organizations and their APFS. The development of a long-term partnership with farmers' umbrella organizations should aim primarily at strengthening them and truly empowering them for building the capacities of their member associations in the APFS-CCA approach, and in the organization, implementation and monitoring of APFS. Indeed, these farmers' umbrella organizations and their member associations are potential vectors of extension and CCA, which can compensate for the operational shortcomings of the public sector.

In addition to capacity building and empowerment of farmers' umbrella organizations on the APFS approach, transparent management, gender mainstreaming, the provision of the three-pronged approach APFS–VSLA–micro-projects and other social mobilisation tools such as CLCs in line with FAO's resilience funds, are some of the incentive factors that FAO should integrate in its projects to boost APFS and generate concrete positive effects on beneficiaries. APFS are the place to learn improved technologies and practices whose adoption by the producers requires a minimum of resources for their implementation. VSLAs offer a framework for savings and mutual aid between members and possibilities of financing IGAs. LCCA micro-projects can be a first pilot step to the implementation of large-scale IGAs and become a factor for the sustainability of the approach.

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