

PROJECT EVALUATION SERIES

**Terminal Evaluation of the Project
“Reducing vulnerability and increasing
adaptive capacity to respond to impacts
of climate change and variability for
sustainable livelihoods in agriculture
sector in Nepal”**

**GCP/NEP/070/LDF
GEF ID: 5111**

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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Acronyms and abbreviations

BH	Budget holder
CCA	Climate Change Adaptation
CCO	Climate Change Officer
DADO	District Agriculture Development Office/Officer
DHM	Department of Hydrology and Meteorology
DLSO	District Livestock Services Office/Officer
DoA	Department of Agriculture
DDC	District Development Committee
DoLS	Department of Livestock Services
DTC	District Technical Coordinator
DTT	District Technical Team
ETL	Evaluation team leader
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School
FLO	Funding Liaison Officer
GEF	Global Environment Facility
LTO	Lead technical officer
LTU	Lead technical unit
MoALD	Ministry of Agriculture and Livestock Development
MoF	Ministry of Finance
MoFE	Ministry of Forest and Environment
MTR	Mid-term Review
NARC	National Agriculture Research Council
NPC	National Planning Commission
OED	FAO Office of Evaluation
PFC	Project Steering Committee
PMU	Project Management Unit
PTC	Project Technical Coordinator
SO	FAO Strategic Objective
SRO	Sub-regional office
SSI	Semi-Structured Interview
TCI	FAO Investment Centre
TCSR	Donor Liaison and Resource Mobilization Team
ToC	Theory of Change
ToR	Terms of Reference

Executive Summary

The main purpose of this terminal evaluation of the project "*Reducing vulnerability and increasing adaptive capacity to respond to impacts of climate change and variability for sustainable livelihoods in agriculture sector in Nepal*" GCP/NEP/070/LDF was to document the important lessons which could guide the formulation and implementation of future projects that may use similar approaches. An underlying purpose was to provide strategic recommendations for maximizing the institutionalization and appropriation of this project's results by stakeholders, and for disseminating the information to authorities who could benefit from it.

The project's goal was to support Nepal's agriculture sector become climate resilient by promoting urgent and immediate adaptation measures and integration of adaptation priorities outlined in the National Adaptation Programme of Action (NAPA) into agriculture sectorial policies, plans, programmes and local actions. The project's overall objectives were "to strengthen institutional and technical capacities for reducing vulnerability and promoting climate-resilient practices, strategies and plans for effectively responding to the impacts of climate change and variability in agriculture sector."

The intended users of this report are the Food and Agriculture Organization (FAO) in Nepal, region and headquarters, as well as the Global Environmental Facility (GEF). who will get informed for making strategic investment decisions. It will be useful for all agriculture sector institutions of Nepal for their future planning and investment decision in agriculture. Nepal's development partners and non-governmental organizations (NGOs) planning to support the agriculture sector may equally benefit from the findings and lessons of this evaluation.

This evaluation covered all aspects of this project's implementation at national level, and in all four project districts since its inception in December, 2015 until its completion in September, 2019. The focus was maintained on the assessment and analysis of efforts made since the beginning of the project to reduce vulnerability and increase the capacity to respond to the impacts of climate change and variability in agriculture sector in Nepal.

All relevant stakeholders in four project districts and in relevant federal, provincial and local governments were consulted including the selected members of the Project Steering Committee, the Technical Committee and the relevant professionals in the Ministry of Agriculture and Livestock Development (MoALD) including its two departments, the National Agriculture Research Centre (NARC) and the Department of Hydrology and Meteorology (DHM), and national, regional and head office of FAO including the Fund Liaison Officer (FLO) of the GEF Coordination Unit.

The evaluation was structured around i) the relevance of project objective and outcomes including adequacy of design, ii) effectiveness of project outcomes iii) efficiency of project implementation and execution including monitoring and evaluation, and iv) sustainability of achieved results. Information

on i) progress, challenges and outcomes on stakeholder engagement, ii) gender-responsive measures adopted by the project, iii) knowledge activities and products, and iv) co-financing situation of the project.

Information was collected from seven farmer field school (FFS) groups comprising approximately 210 vulnerable farmer members located in 7 project village development committees (VDCs) out of 120 FFS groups in 24 VDCs of four project districts. Information was also generated from relevant and available provincial, district and local level agriculture sector staff, local and central level government beneficiaries and stakeholders including the staff members of the project executing agency and relevant staff members of FAO located in country and regional offices and in headquarters.

Main findings

Relevance and project design

The project outcomes and objectives were fully relevant to Nepal's national efforts and to the global efforts aimed at improving awareness on climate impacts and adaptation, strengthening capacities and reducing climate risks in agriculture. They were formulated based on a climate change focus needs assessment of the agriculture sector as per the country's Priority Framework of Action, and build on the learning of a previously implemented TCP.

The project design was a little complex and could have been simplified by using the four components as four project outcomes and defining a few outputs to deliver each of the expected outcomes, instead of multiplying the number of outputs, which were not always clearly related to the outcome.

Effectiveness, Achievement of project results

MoALD, DoA, DoLS, and NARC are now technically capable of incorporating climate change adaptation in agriculture sector decision-making. Indeed, consultations and interviews revealed that a climate change adaptation perspective of agriculture development although was not totally new yet an eye opener in many ways for the recipients of the projects training events.

However, project districts could not benefit from strengthened district level agriculture sector staff capacity due to scattering of institutional memory caused by staff transfers and relocation in federal, provincial and local governments. At the district and local government level, only 5 out of 234 trained officers could be located and interviewed.

Integration of CCA elements in to agriculture sector training programs is likely, but yet to be achieved. The project has developed and submitted two training manuals on climate change adaptation, to be integrated into agriculture sector training programs. At the time of the evaluation, it was not possible to articulate when and how the intended integration will take place.

Mainstreaming of climate change adaptation into Nepal's agriculture sector policies, plans and programs is likely in due course of time. While this evaluation report was being prepared, the Federal

Government of Nepal had revised and published its "Climate Change Policy, 2019". This policy has mainstreamed one policy and six strategy level recommendations made in a report submitted by the project.

The project developed various crop modelling and yield forecasting systems and procedures, which are now institutionalized in the MoALD. The MoALD is committed to give continuity to these technical functions.

Originally, the project had intended to develop 24 local Adaptation Plans of Action (LAPAs) in 24 project VDCs. This became irrelevant when the project VDCs got merged into 36 wards, due to government restructuring. The project adapted to the changed governance structure and strengthened the capacity of relevant office bearers and agriculture sector staff in Local governments of eight Palikas, and enabled them to undertake vulnerability and risk assessment.

Agro-advisory bulletins were being developed and shared with FFS facilitators, social mobilizers, DTCs and relevant agriculture district level staff through an android-based mobile app. FFS group members found these bulletins useful to a larger extent in safeguarding their crops and livestock against likely risks and vulnerabilities. Enabling FFS group members read and use some basic agro-meteorological devices was instrumental in concretizing their learning under FFS approach. Yet, providing them with a set of devices could not so much be justified given the up-keeping, maintenance and repair which was neither possible nor expected from the vulnerable farmers groups.

Finalization of the comprehensive and multi-stakeholder awareness raising, knowledge management and communication strategy got delayed, despite commendable work undertaken in awareness raising and knowledge management among stakeholders and beneficiaries. Evidence of climate change adaptation related awareness raising and knowledge management activities were apparent in project districts. However, wider dissemination of knowledge and awareness raising products for replication and up-scaling of the project remains yet to be achieved adequately.

Project has succeeded in preparing a cadre of CCA practitioner farmers and facilitators in four project districts. Local governments of 8 Palikas (Municipalities and Gaunpalikas) are highly likely to consider implementing their RR/CCA Plans under their local development initiatives.

Climate adaptive approaches and practices are nicely interwoven in diversified livelihoods strategies and community assets protection, and the FFS approach proved effective to enabling farmers accept, adopt and adapt to affordable location specific climate adaptive crop varieties and associated technologies.

Efficiency, project implementation and execution

The project activities were well planned and efficiently implemented despite some circumstantial disturbance and delays. In particular, delays in support for alternative livelihoods and protection of community assets could have been mitigated through timely procurement planning.

Project's institutional arrangement was adaptive and able to deliver and achieve intended outcomes and objectives even in the transitional governance situation. In addition, partnership between MoALD, NARC and DHM was instrumental in achieving project's intended outcomes and objectives.

Sustainability and progress to impact

Most of the achieved results of the project are highly likely to sustain. However, the sustainability of many adaptive agriculture practices to some extent will depend on the support available to farmers in terms of fertilizers, seeds and irrigation facilities from local and provincial government agencies.

The project has meaningfully contributed in protecting scarce natural resources such as water and soil and in enhancing the environmental, social and financial sustainability of agriculture sector in project districts. It has, to a possible extent contributed in economic and social empowerment of most vulnerable FFS group members and specifically the women. However, a robust agriculture sector support mechanism will be required to sustain the impact in future.

The project is likely to contribute to local, provincial and national level policy making to a larger extent.

Stakeholder Engagement

The project engaged only with government stakeholders at multiple levels. Local and provincial government entities emerged in the middle of the project once the VDCs and district offices of agriculture were dissolved and merged in to municipalities, palikas, and AKCs and VHLSCs respectively. The project adapted to the situation and engaged with these new government entities in best possible manner and ensured the achievement of project outcomes and objectives.

Gender responsive measures

Project worked with 3484 most vulnerable farming households organized into 120 FFS groups and located in the remotest part of the project districts. 74% FFS group members were female. The community adaptation plans prepared for each of these groups and the social and gender analysis undertaken ensured that all project activities are undertaken in a gender responsive manner. Project took all possible measures to empower and capacitate the most vulnerable FFS members throughout its implementation.

Knowledge activities/products

Apart from knowledge, awareness and capacity development activities in FFS groups, the project organized a range of training needs based training activities and trained above 300 staff of agriculture sector at national and district level. It also organized many sensitization, orientation and consultation workshops and training events at multiple levels. It has developed diverse range of knowledge products including climate adaptive good practices yet to be published and/or disseminated online. It has however, uploaded on you tube 8 videos on project intervention and achievements.

Conclusions

Conclusion 1: This project was a relevant initiative for Nepal's agriculture sector geared at strengthening institutional and technical capacities at multiple levels to reducing vulnerability and promoting climate-resilient practices, strategies and plans.

Conclusion 2: The project contributed remarkably in strengthening institutional and technical capacities at national, district and local levels, but the project districts could benefit to a limited extent only due to relocation and scattering of trained staff.

Conclusion 3: Project has made remarkable contribution in improving assessment, monitoring and providing advance early warning information on vulnerabilities and risks of climate change and agro-meteorological forecasts to assist better adaptation planning.

Conclusion 4: Project was instrumental in improving awareness, knowledge and communication on climate change impacts and adaptation.

Conclusion 5: Project has contributed to a larger extent in prioritizing and implementing local investment by promoting community based adaptation to strengthen livelihood strategies and transfer of adaptation technology in targeted areas.

Conclusion 6: Project's institutional arrangement was conducive with adaptive project management and meaningful partnership that contributed in result oriented implementation of project activities.

Conclusion 7: Project's M&E system was structured, systematic, budgeted and clear on monitoring mechanisms and reporting timelines, yet at times the project suffered from delays in procurement.

Conclusion 8: The project was able to meet most of the indicators of sustainability to a larger extent.

Conclusion 9: Project took all possible measures for social and economic empowerment of most vulnerable female and male members in FFS groups.

Conclusion 10: Informed-based replication of climate adaptive agriculture practices attributable to project is taking place. Project is highly likely to contribute in local policy making.

Conclusion 11: The stakeholders and beneficiaries have demonstrated the success of capacity building initiatives to a larger extent by adopting and engaging in climate change adaptation in agriculture sector.

Recommendations

To the Implementing Agency - MoALD

Recommendation 1 - Maintain, up-grade and strengthen the technical, technological and institutional capacity of the division responsible for crop modelling, crop assessment and yield forecasting in MoALD.

Recommendation 2 - Institutionalize a cross-sectoral coordination mechanism in MoALD and strengthen partnership between NARC, DHM and interested provincial governments to give continuity to production and dissemination of farmer friendly agro-advisory.

Recommendation 3 - Provide policy, institutional and technical support to provincial governments to institutionalize well-resourced training and extension wing in newly established AKCs and VHLSCs to promote climate adaptive agriculture practices.

To Provincial Governments

Recommendation 4 - Institutionalize FFS Approach in AKCs and undertake phase wise implementation in districts or pocket areas in close coordination with and support from local governments to support intensive promotion and replication of climate adaptive agriculture practices.

To the eights Municipality and Gaunpalika Governments having their RR/CCA Plans

Recommendation 5 - Allocate resources and undertake phase-wise implementation of RR/CCA Plan with technical assistance from AKCs and VHLSCs.

To DHM

Recommendation 6 - Continue to work with NARC, MoALD and develop partnership with Provincial Governments to give continuity to agro-meteorological forecasts production and dissemination.

To Project Executing Agency FAO

Recommendation 7 - Assist the Federal Government of Nepal and the interested Provincial Governments to develop and implement a longer term project at a wider scale on climate change adaptation in agriculture sector building on the achievements of the FFS approach in this project.

Recommendation 8 - Simplify the procurement policies and procedures for expendable and non-expandable commodities procurements in case of projects.

To GEF Project formulators

Recommendation 9 - Ensure the project design is simple and the result framework has a logically justifiable cause and effect relationship to the best possible manner.

GEF Rating Table

FAO - GEF Rating Scheme	Rating	Summary Comments
1) RELEVANCE		
Overall relevance of the project	S	Fully relevant, design little complex
2) ACHIEVEMENT OF PROJECT RESULTS (EFFECTIVENESS)		
Overall assessment of project results	S	Achieved as expected with minor shortcomings
Outcome 1.1	MS	Achieved more or less as expected with minor shortcomings (refer to Finding 4, 5)
Outcome 1.2	S	Achieved as expected (Finding 6)
Outcome 2.1	S	Achieved as expected (Finding 7, 8)
Outcome 2.2	S	Achieved as expected (Finding 9, 10)
Outcome 3.1	S	Achieved as expect (Finding 10)
Outcome 3.2	MS	Achieved more or less as expected with minor shortcomings (Finding 11)
Outcome 4.1	S	Achieved as expected (Finding 12, 14)
Outcome 4.2	S	Achieved as expected (Finding 15, 16)
3) EFFICIENCY, PROJECT IMPLEMENTATION & EXECUTION		
Overall quality of project implementation & adaptive management (implementing agency)	S	Quality of implementation met the expectation (Finding 17 -19)
Quality of execution (executing agencies)	S	Quality of execution met the expectation with minor shortcomings
Efficiency (incl. cost effectiveness and timeliness)	S	Efficient with minor shortcomings
4) MONITORING AND EVALUATION		
Overall quality of M&E	S	Designed as per GEF and FAO standard guidelines (Chapter 4 Para 96-99)
M&E design at project start up	S	Supportive to quality and standard
M&E plan implementation	MS	Met expectation with minor shortcomings (paragraph 99,100)
5) SUSTAINABILITY		
Overall sustainability	L	Negligible risk to sustainability (Finding 21, 22)
6) STAKEHOLDER ENGAGEMENT		
Overall quality of stakeholder engagement	S	Met the expectation with minor shortcomings

1. Introduction

1.1 Purpose of the evaluation

1. This report presents the findings of the terminal evaluation (TE) of the project GCP/NEP/070/LDF implemented in Nepal. This evaluation is carried out as a mandatory requirement of the Global Environment Facility (GEF). It is also demanded by the Food and Agriculture Organization (FAO) for its project monitoring and reporting purposes. This evaluation has been conducted for both accountability and learning purposes of GEF, FAO and other participating institutions.
2. The main purpose of the TE is to provide a comprehensive and systematic account of the performance of the project GCP/NEP/070/LDF scheduled to be completed in Sept. 2019 by assessing its design, implementation, and the achievement of its objectives. They are expected to promote accountability and transparency, and facilitate synthesis of lessons learned. An underlying purpose is to provide strategic recommendations for maximizing the institutionalization and appropriation of this project's results by stakeholders, and for disseminating the information to authorities who could benefit from it.
3. This TE report is structured around eight sections. Following this introduction, section 2 provides the country background and context of the project. Section 3 reviews and analyses the findings on the relevance of the project and the effectiveness and efficiency of its implementation and execution. Section 4 assesses the planning and implementation of the monitoring and evaluation, Section 5 evaluates the various aspects of sustainability and section six presents the conclusions and recommendations based on the findings. Lastly section 7 documents the learning and the last section includes the appendices.

1.2 Intender users

4. As specified in the terms of reference (ToR) of this TE, the main audience and intender users of this TE report are:
 - The FAO Nepal Country Office, Project Management Team, members of Project Task Force and Technical Units in the FAO Headquarters and Bangkok Regional Office who will use the findings and lessons identified in the evaluation for similar projects;
 - The GEF, who will use the findings to inform the strategic investment decisions in future;
 - The Ministry of Agriculture and Livestock Development (MoALD), the Department of Agriculture (DoA), the Department of Livestock Services (DoLS) and the Department of Hydrology and Meteorology (DHM) of the Federal Government of Nepal including its relevant Provincial Governments, Nepal's National Agriculture Research Council (NARC), and all relevant local governments of four project districts who were involved in the project implementation, and could potentially use the evaluation findings and conclusions for future planning.

- Other donors, organizations and institutions interested in supporting and/or implementing similar projects.

1.3 Scope and objectives of the evaluation

5. This evaluation covers all aspects of the implementation of the project GCP/NEP/070/LDF at national level, and in all four project districts since its inception in December, 2015¹ until its completion in September, 2019. Special attention was given to the assessment and analysis of efforts made since the beginning of the project to reduce vulnerability and increase the adaptive capacity to respond to the impacts of climate change and variability in agriculture sector in Nepal.
6. This TE evaluates and analyses the progress made against the intended results of the project in four project districts and at national level covering all the major activities undertaken within its framework.
7. The evaluator consulted all relevant stakeholders in project districts, and in relevant federal, provincial and local governments including selected members of the Project Steering Committee (PSC), the Technical Committee and the relevant professionals in MoALD including DoA, DoLS, NARC and DHM, and national, regional and head office of FAO including the Fund Liaison Officer (FLO) of the GEF Unit.
8. The objectives of this TE are i) to examine the extent and magnitude of both intended and unintended results to-date, and to determine the likelihood of future impacts especially relating to climate change adaptation (CCA) in agriculture, natural resource management, and institutional and technical adaptive capacity strengthening of the vulnerable communities following the approaches introduced; ii) to assess the project performance and the implementation of planned project activities and outputs against actual results; and iii) to synthesize lessons learned that might help in designing and implementing future FAO and FAO-GEF projects in relevant areas;
9. The evaluation was structured around i) the relevance of project objective and outcomes including adequacy of design, ii) effectiveness of project outcomes iii) efficiency of project implementation and execution including monitoring and evaluation, and iv) sustainability of achieved results.
10. It also provides information on i) progress, challenges and outcomes on stakeholder engagement, ii) gender-responsive measures adopted by the project, iii) knowledge activities and products, and iv) co-financing situation of the project.
11. In light of the above objectives, this evaluation was guided by the following evaluation questions (Box 1).

Box 1 – Key Evaluation questions by area of analysis

Relevance	<ol style="list-style-type: none"> 1. How relevant were the project outcomes and objectives to national and global efforts aimed at improving awareness on climate impacts and adaption, strengthening capacities and reducing climate risks in agriculture? 2. Was the project design adequate for delivering the expected outcomes?
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¹ Inception report was approved in March, 2016

Effectiveness, Achievement of project results	<p>3. To what extent has the project contributed to strengthening institutional and technical capacities for reducing vulnerability and promoting climate-resilient practices, strategies and plans for effectively responding to the impacts of climate change and variability in agriculture sector?</p> <p>3.1(component 1) <i>To what extent has the project contributed to Strengthening technical capacity in the Ministry of Agriculture and Livestock Development (MOALD), Department of Agriculture (DOA), Department of Livestock Services (DLS) and Nepal Agricultural Research Council (NARC) and local stakeholders on climate change adaptation?</i></p> <p>3.2(component 2) <i>To what extent has the project contributed to improving assessment, monitoring and providing advance early warning information on vulnerabilities, risks of climate change and agro meteorological forecasts to assist better adaptation planning?</i></p> <p>3.3(component 3) <i>To what extent has the project contributed to improving awareness, knowledge and communication on climate impacts and adaptation?</i></p> <p>3.4(component 4) <i>To what extent has the project contributed to prioritizing and implementing local investment by promoting Community Based Adaptation (CBA) to strengthen livelihood strategies and transfer of adaptation technology in targeted areas?</i></p> <p>4. Did the project produce any unintended results, either positive or negative?</p>
Efficiency, project implementation and execution	<p>5. How did the project activities, the institutional arrangements, the partnerships in place and the resources available contribute to, or impede, the achievement of the project's results and objectives?</p> <p>5.1. <i>To what extent has the management been able to adapt to changing conditions to improve the efficiency of project implementation?</i></p> <p>5.2. <i>To what extent did the expected co-financing occur?</i></p>
Monitoring and Evaluation	<p>6. Did the project count on a structured M&E system? Was the information from this system used to make timely decisions during project implementation?</p>
Sustainability	<p>7. To what extent has the project created ownership among counterparts and stakeholders?</p> <p>8. How sustainable are the results achieved at the environmental (also in agricultural perspective), social and financial levels?</p> <p>9. <i>9.1. How sustainable are the achieved results on capacity development? What mechanisms are in place to ensure sustainability?</i></p> <p>10. How did the project contribute in sustainable usage of natural resources?</p>
Stakeholder engagement	<p>11. To what extent has the project engaged stakeholders?</p> <p>12. <i>12.1. To what extent have the partnerships established provided complementarity and synergy to the project interventions? Have they contributed to the results achieved?</i></p>
Gender	<p>13. To what extent and how did the project include social issues, including gender, in its design? Did the project contribute to the empowerment and capacity development of vulnerable groups throughout its implementation?</p>
Progress to Impact	<p>14. To what extent is the project likely to contribute to local policymaking?</p> <p>15. <i>15.1. Is there any evidence of informed-based decision making on climate change adaptation and agriculture sector that can be attributed to the project?</i></p> <p><i>15.2. Are there any barriers or other risks that may prevent future progress towards this result?</i></p>

Capacity Development and Knowledge Management	<p>16. Were the topics targeted by the capacity development activities based on the real needs and relevant to the sector and the beneficiaries?</p> <p>17. Do the beneficiaries show enhanced capacities to collect and analyse, apply information learned about climate change adaptation in agriculture?</p> <p>18. Have knowledge management products and activities been produced and shared, and has this enhanced the contribution to results?</p>
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1.4 Methodology

12. This evaluation adhered to the UNEG Norms and Standards² and followed the OED Manual³, procedures and methodological guidelines throughout its process. It followed an interactive and transparent approach in the process of consultation with all internal and external stakeholders. Special attention was given to the triangulation of evidences and information gathered to ensure its validation and analysis.
13. This evaluation moved through the following stages: i) project relevant literature review, ii) evaluation inception report submission and clearance, iii) field visits, iv) focus group discussions (FGDs) and semi-structured interviews (SSIs), v) consultations/interviews (including on-line), vi) analysis of data and information, vii) presentation of preliminary findings, and viii) report writing.
14. The review work included the review of project document, inception report, seven bi-annual project progress reports (PPRs), three annual GEF project implementation reviews (PIRs), mid-term evaluation report, >20 technical backstopping and supervision mission reports including Back to Office reports (BTORs) of project and FAO staff, five minutes of the meetings of PSC, and project's documented outputs such as training manuals, risk reduction and climate change adaptation (RR/CCA) plans, VRA guidelines, report on mainstreaming of CCA in agriculture sector policies and awareness raising and knowledge management and communication strategy. The OED Guidelines for the Assessment of Gender Mainstreaming, and the Capacity Development Evaluation Framework were also looked into⁴.
15. A baseline survey focussing on socio-economy and livelihoods condition of four project districts including the 24 village development committees (VDCs) of project intervention was undertaken at the beginning of the project and a mid-line survey was also taken during mid-term review. Accordingly, an end-line survey was also on-going during this TE. The draft version of the end-line survey report came out while the TE draft report was being prepared and it was also reviewed. The end-line survey aimed at generating data on project's outputs and outcomes and drawing inferences by comparing these data with mid-line and baseline survey data. This end line survey undertook household survey in randomly selected 600 households of 120 FFS groups (@150 per district) and 240 households in control areas (@ 60 per district).
16. As a preparatory work for the terminal evaluation, a detailed inception report including a reconstructed theory of change (ToC), an evaluation framework matrix with evaluation questions and sub-questions including indicators, respondents and data sources, methodology, site mapping and sample (farmer field

² Available at: <http://www.unevaluation.org/2016-Norms-and-Standards>.

³ Available at: <http://www.fao.org/evaluation/resources/manuals-guidelines/en/>

⁴ Available at: <http://www.fao.org/evaluation/resources/manuals-guidelines/en/>

school - FFS groups) selection was developed. It was shared with and validated from the National Technical Coordinator (NTC) of the project management unit (PMU) and submitted for OED clearance.

17. Over the project implementation period, the 24 working VDCs of four project districts got merged into 36 wards of 12 Municipalities and 7 Gaunpalikas⁵ (rural municipalities) owing to the change in governance structures⁶. So two wards (previous project VDCs) per district (total 8) were selected using purposive sampling technique and giving due consideration to the i) ease of accessibility, ii) intent to capture diverse ecological zones and beneficiaries, iii) successful and no so successful project interventions and iv) required minimum travel time.
18. In every ward, one out of five FFS groups (each comprising around 30 male/female primary project beneficiaries dependent on agriculture for livelihoods) was selected for information collection⁷. One alternative FFS group per ward was also selected keeping in mind the possible inaccessibility to the selected FFS group due to likely natural/climatic hazard in monsoon season. Random sampling technique was used for this purpose. In total 8 main and 8 alternative FFS groups were randomly selected (Table 1).

Table 1: Sample FFS groups in four project districts selected for field work

District	Selected VDC/(Palika ward) 1/FFS group	Selected VDC 2/FFS group
Arghakhanchi	Narapani (Sandhikharka) Main: Rataphale FFS group Alternative: Bhuwandanda FFS group	Patauti (Panini) Main: Bhathana FFS group Alternative: Dahapokhari FFS group
Kapilbastu	Sihokhore (Yashodhara 8) Main: Banganga FFS group Alternative: Namuna FFS group	Chanai (Shivaraj 3,4) Main: Milijuli FFS group Alternative: Hariyali FFS group
Siraha	Gadha (Lahan 13,14, 23) Main: Krishna FFS group Alternative: Saraswati FFS group	Chatari (Kalyanpur 2) Main: Makamala FFS group Alternative: Omshanti FFS group
Udaypur	Hardeni (Katari 3,4,5,11,12) Main: Saptarangi FFS group Alternative: Hlmchuli FFS group	Sundarpur (Chaudandigadhi 5) Main: Rajaji FFS group Alternative: Gherkhola FFS group

19. At field level, FGD with FFS groups (2/3 hours per FFS group) and SSIs (0.5 to one hour each) with one female and one most vulnerable FFS member (as indicated by the FFS group and the facilitator), the FFS facilitator and the social mobilizer including SSIs with randomly chosen one poorest household and/or one single-woman household was organized. At district level, SSI was undertaken with available district technical team members, relevant and available district agriculture and livestock officers and other stakeholders. Two field visits were undertaken - one in western districts (Arghakhanchi and

⁵ Gaunpalikas and Municipalities (also called Nagarpalika in Nepali language) have been termed "Palikas" in this report.

⁶ Prior to federal governance restructuring in early 2016, Nepal had a centralized governance structure comprising 5 development regions, 14 administrative zones, 75 districts and approximately 4000 VDCs. The departments of agriculture and livestock development under the MoALD had their district level offices and sub-district level service centers to provide agricultural services to farmers. After the federal governance restructuring, Nepal now comprises one central/federal government, 7 provincial and 757 local governments in 77 districts. The VDCs got merged into 757 "Palikas" (local governments). Other than MoALD now the provincial governments have AKCs and VHLSCs and local governments have agriculture and livestock units.

⁷ Figure 2 in section 2 provides the Map showing selected Palikas ("Palika" used for both the local governments e.g., Nagarpalika and Gaunpalika).

Kapilbastu, from July, 17 to 24, 2019), and one in eastern district (Siraha and Udaypur from July 28 – to August 03, 2019) for this purpose.

20. Out of 8 FFS groups selected in 4 districts, one in Udaypur district had to be dropped due to road block caused by severe landslide and flooding. At national level, relevant government stakeholders were identified and consultation meetings were undertaken. From within the project executing agency Food and Agriculture Organization (FAO), the Lead Technical Officer (LTO), the budget holder and selected national project staff were interviewed and Skype consultation with Fund Liaison Officer (FLO) and the Climate Change Officer (CCO) was undertaken from August 07 – 27, 2019 (Appendix: 4 List of people interviewed/consulted).
21. The focus of field visits, FGDs, interviews and consultations at multiple levels was to generate information/evidences, and assess and evaluate the activities undertaken, outputs generated, issues and challenges faced, learning accumulated, livelihoods benefits realized, skills, capacities and technologies acquired and whether the new knowledge, skills and capacities were being replicated and are likely to sustain and benefit farming communities in future.
22. The degree of participation of FFS group members in FGDs varied from one FFS group to another. In all most all FDGs, above 90% of FFS group members participated. As regards the sharing of views, in general the FFS groups in hill communities and specifically the female members in FFS groups were relatively more open to sharing their learning and views rather than those in relatively conservative societies of down south terai districts.
23. The evaluation specialist ensured during FDGs and SSIs that the women and the marginalized members speak out, share and exchange their views/concerns. FFS group members in down south Kapilbastu and Siraha districts had difficulty in communicating in Nepali language. The evaluation specialist communicated with them in their local languages, which was helpful in making them speak out.

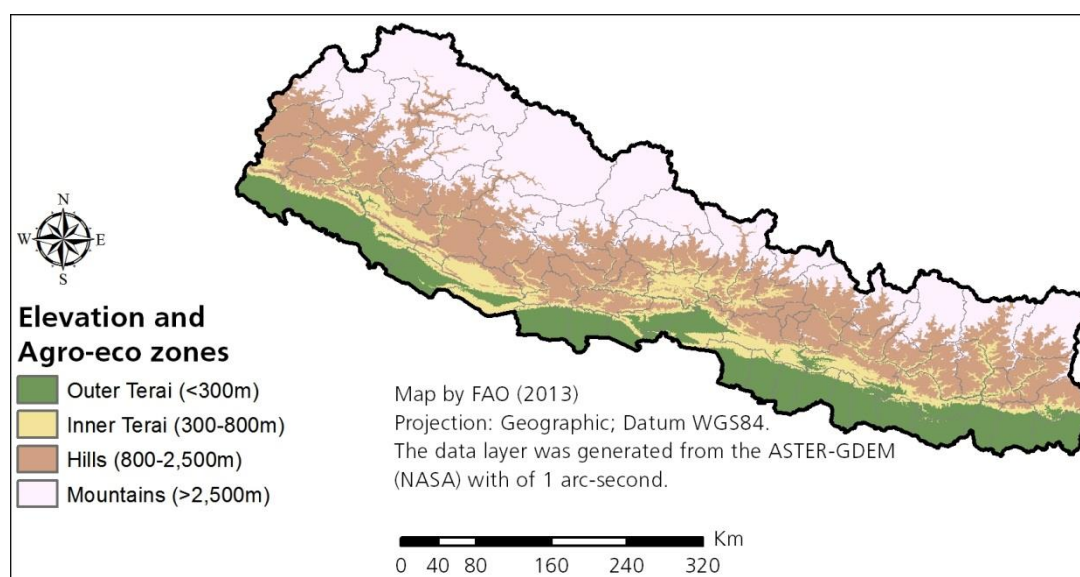
1.5 Limitations

24. This terminal evaluation had following limitations:
 - The time of evaluation (June –September) overlapped with rainy season in Nepal. Farmers including share croppers and land poor/less farm labourers remain intensively occupied in this season. It was not a good time to ask them for their time for meetings and interviews. Hence, extra effort was to be made to ensure that required information is generated without taking much time of the respondents. Furthermore, most of the project VDCs were located in remotest part of the project districts with limited accessibility, and the situation gets further worst during monsoon. A selected sample FFS groups including its alternative in Udaypur district was dropped due to road block caused by flooding and landslide.
 - The district offices of agriculture development and livestock services (DADO and DLSO) were dissolved and their staff trained and meant to play a pro-active role in project implementation were transferred and relocated in the newly established provincial and local government entities. So only those available in those entities within the district could be located and consulted in course of evaluation.

2. Background and context of the project

25. Nepal – a mountainous country situated in the central part of Himalayas, is climatically shaped up by monsoon rains with four distinct seasons: pre-monsoon (Mar-May), monsoon (Jun-Sep), post-monsoon (Oct-Nov) and winter (Dec-Feb). Country's eastern part gets relatively more and frequent monsoon rains, which gradually decreases while moving westwards. Nepal has intensive climatic variability due to sharp altitudinal variation along south to north agro-ecological zones from outer terai flat plains (<300m) to high mountains (>25,000m) within a short span of <200km.

Figure 1: Agro-ecological zones of Nepal



Source: FAO/Project Management Unit

26. Nepal has performed poorly despite 50 years of planned development efforts due mainly to unresolved political instability until the recent past. The country needs to address the economic and social structural problems such as low productivity, inequitable access to productive means and resources, social backwardness and lack of good governance. It has been struggling with increasing outmigration and declining natural resource base and agricultural production leading to unabated food insecurity and poverty.
27. Agriculture sector is the backbone of Nepal's economy with 27 percent contribution in gross domestic production (GDP) and 66 percent in employment generation. However, it is highly dependent on monsoon rains and thrives on insufficient or no use of fertilizers, limited or no irrigation facilities and lack of quality seeds.
28. Since last couple of decade, Nepal's agriculture sector has been facing climate related hazards like floods, draught, hailstorms, heat and cold waves, pests and diseases, soil erosion, deforestation, and desertification. Climate data observed from 1960s shows consistency in increasing maximum temperatures at an annual rate of 0.04 – 0.06° C. In comparison to the Terai and Siwalik regions, warming is more noticeable in high altitude regions. Also, pre-monsoon precipitation in far and mid-western

Nepal is generally declining according to the data on annual precipitation, with a few pockets of declining rainfall in the western, central and eastern regions. By contrast, the rest of the country shows a general trend of increasing pre-monsoon precipitation. Monsoon precipitation shows general declining trends in the mid-western and southern parts of western Nepal. Rural poverty rates in the above mentioned districts are high and increase the vulnerability of agricultural population to climate risks.

29. The challenges facing Nepalese farmers are inadequate knowledge and skills on improved farming techniques based on weather patterns, seed and nursery management, off-season vegetable farming, soil fertility management techniques and post-harvesting technologies. Poor market information and marketing skills further add to the challenges. Poor farming households and especially, the women, children and elderly find it difficult to cope with the situation and protect themselves against occasional shocks.
30. The project was designed in line with Nepal's priorities and needs identified under its National Adaptation Programme of Action (NAPA, 2010), National Strategy for Disaster Risk Management (NSDRM, 2008) and National Agriculture Sector Development Priority (NASDP) for the Medium-Term (2010/11 - 2014/15). The project corresponds to FAO Strategic Objective 2 (SO2) on increasing and improving provision of goods and services from agriculture, forestry and fisheries in a sustainable manner, and it aimed to contribute to the FAO Nepal Country Programming Framework outcome 4.3 (climate change) on Institutional and technical capacities for adaptation to climate change in agriculture strengthened and adaptive capacity of vulnerable communities enhanced. It also focuses on the key elements of GEF LDCF objective CCA-1 on reducing vulnerability to adverse impacts of climate change and objective CCA-2 on increasing adaptive capacity to respond to the impacts for climate change and CCA-3 on adaptation technology transfer.
31. This was a 4-year project which started in October 2015 and completed by September 2019. The project was funded by the Least Developed Country Fund (LDCF) which is administered by the Global Environment Facility (GEF). The total budget of the project was USD 12 990 000 of which USD 2 689 498 (20%) was granted by the LDCF. The remaining amount was co-financed; USD 8 620 000 from FAO/UTF (Unilateral Trust Fund), USD 1 170 000 from FAO/MTF (Multilateral Trust Fund) and USD 3 200 00 by the Nepalese government. The project was implemented by FAO and jointly executed by FAO and the Ministry of Agriculture and Livestock Development (MoALD), Department of Agriculture (DoA), Department of Livestock Services (DoLS), the National Agriculture Research Council (NARC) and Department of Hydrology and meteorology (DHM).

Box 2: Project Background Information

- GEF Project ID Number: 5111
- Recipient country: Federal Democratic Republic of Nepal
- Implementing Agency: FAO
- Executing Agency: Ministry of Agriculture and Livestock Development (MoALD), Department of Agriculture (DoA), Department of Livestock Services (DoLS), Nepal Agricultural Research Council (NARC) and Department of Hydrology and Meteorology (DHM)
- GEF Focal Area: LDCF
- GEF Strategy/operational program: CCA – 1, CCA – 2 and CCA - 3

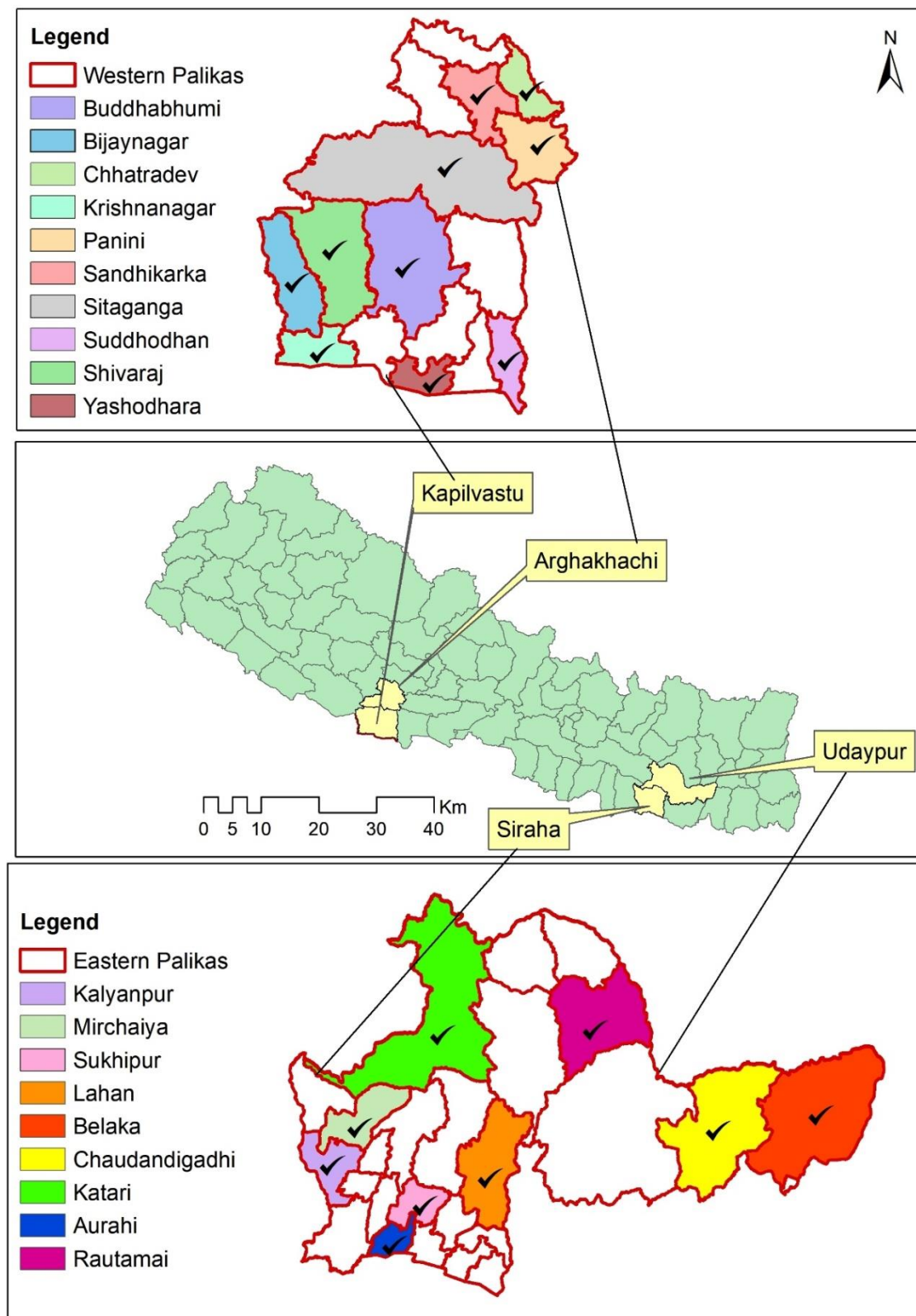
- PIF approved: May 02, 2013
- Date of CEO endorsement: March 18, 2015
- Date of PPRC endorsement: July, 01, 2015
- Prodoc signed: September 01, 2015
- Date of project start: October 01, 2015
- Planned date of project completion (original NTE): July 31, 2019
- Revised project implementation end date: September 30, 2019
- Date of Mid-Term Review: May 2018

32. The project's goal was to support Nepal's agriculture sector become climate resilient by promoting urgent and immediate adaptation measures and integration of adaptation priorities outlined in the National Adaptation Programme of Action (NAPA) into agriculture sectorial policies, plans, programmes and local actions. The project's overall objectives were "to strengthen institutional and technical capacities for reducing vulnerability and promoting climate-resilient practices, strategies and plans for effectively responding to the impacts of climate change and variability in agriculture sector." To achieve the objectives of the project, activities have been structured around four technical components and eight outcomes within them comprising 15 outputs. The four components are:

- **Component 1:** Strengthening of technical and institutional capacities and integrating adaptation into national food and agriculture policies, strategies and plans;
- **Component 2:** Assessment, monitoring and providing advance early warning information on vulnerabilities, risks of climate change and agro meteorological forecasts to assist better adaptation planning;
- **Component 3:** Improving awareness, knowledge and communication on climate impacts and adaptation;
- **Component 4:** Prioritizing and implementing local investment by promoting Community Based Adaptation (CBA) to strengthen livelihood strategies and transfer of adaptation technology in targeted areas;

33. At the local level, the project was implemented in 24 VDCs of four districts (@ 6 VDCs per district) namely Arghakhanchi and Kapilbastu (Province 5) in western Nepal, and Siraha (Province 2) and Udaypur (Province 1) in Eastern Nepal. The project worked with 120 FFS groups (comprising in average 30 farmer members per FFS and totalling 3484 members, of which 74% were women) employing a participatory action learning approach to reduce vulnerability and promote adaptive capacity to respond to climate change impact. The 120 FFS groups (@ five groups per VDC) located in 24 VDCs got merged into 12 Municipalities and 5 Gaunpalikas in early 2018. (Figure 1).

Figure 2: Map of Nepal showing the four districts targeted by the project



34. Once the PIF of this project was approved in May, 2013, a team of three national consultants deployed by the FAO for full-scale project development selected the 24 VDCs in four project districts based on a set of pre-determined criteria including i) least served area, ii) disaster-prone area, iii) negligible/no agricultural infrastructure, iv) vulnerable communities, and v) representation of agro-eco-zones etc. The team of consultants involved the respective District Development Committees (DDCs), the district Red Cross, the district agriculture and district livestock offices in the VDC selection process and undertook consultations in project districts and selected VDCs prior to finalizing the VDC selection in order to ensure that the selected VDCs are the most vulnerable areas exposed to climate impacts and with low access to information and education, lack of resources, assets and income sources, and that relied on marginal and climate risk-prone lands. Likewise, the respective district technical coordinators (DTCs) jointly with concerned VDC secretary, agriculture and livestock service centre personnel and local knowledgeable persons were involved in identification and selection of FFS group members from among the poorest, marginalized small-scale farmers vulnerable to climate risks. They were grouped into FFS groups based on their interest to join the FFS groups, inhabitation in same village and similarity in agriculture and livelihoods concerns and interests.
35. The project worked with the staff of MoALD, DoA, DoLS, NARC, DHM and DoI at national level and with the staff of DoA and DoLS at district level and with FFS groups at local level through its capacity building programs. At its later stage, the project also worked with the office bearers and agriculture sector staff of newly elected local governments for knowledge, awareness and capacity building on climate change impacts, risks and vulnerability assessment and climate change adaptation plan preparation.
36. A Mid-Term Review accomplished in May, 2018 had concluded that the project has made satisfactory progress towards achieving its objectives and is likely to meet its targets by the end of project period. It has been effective in bringing positive changes in the livelihoods of vulnerable farming households. The major recommendations were to i) coordinate with newly elected local governments and ii) focus on promoting water for drinking and irrigation purposes. A key challenge pointed out was how to inform and influence the agriculture sector policy making based on grass-roots level success.

2.1 Theory of Change

37. In the reconstructed ToC, five impact pathways were identified keeping in mind the final impact pathway leading to attaining the overall goal of the project that is in line with Nepal's agriculture sector climate adaptation priorities, and also embraces GEF LDCF objectives CCA 1 and 2, and FAO strategic objective SO2. These impact pathways were phrased based on the intended impact inherent in four project components and detailed in eight project outcomes. They are:
 - 1) *Strengthening of technical and institutional capacities of agriculture sector on climate change adaptation at national, district and local levels:* Outcome 1.1 contributes to achieving the intended result under outcome 1.2 and is complimented by outcomes 2.1, 2.2, 3.1 and 4.2 to make its desired impact towards the project objective. It however assumes the commitment of government institutions and involvement of government staff at multiple levels.
 - 2) *Integration of adaptation into national food and agriculture policies, strategies, plans and programs:* An intended result under outcome 1.2, its likely impact lies in its dynamism requiring sector's commitment to climate adaptation and continuity and replication of project interventions even after

the end of the project. Therefore, the extent to which the integration of adaptation into agriculture sector is achieved and mechanism institutionalized to give continuity to the mainstreaming of adaptation will be precursor for likely desired impact in this case.





- 3) *Technical support/assistance for better adaptation planning and execution at local level:* The intended results under outcomes 2.1 and 2.2 further complemented by the intended results under 3.2 enable the farmers to make informed decisions to maintain their farm production and productivity. Better adaptation planning and execution at local level will continue to remain dependent on a well institutionalized timely technical support and assistance mechanism. The extent to which this Institutionalization takes place during the project implementation will form the basis for likely impact in this case.
- 4) *Improvement in knowledge and awareness on climate change resulting in improved adaptation:* The intended results under outcome 3.2 supported by the intended results of outcome 3.1 provide the ground work for this desired impact. An institutionalized knowledge generation and dissemination mechanism is demanded under this impact pathway. The extent to which this mechanism is institutionalized during the project implementation will give an indication of the likely future impact under this pathway.
- 5) *Transfer of adaptation technologies and strengthening of livelihoods strategies through promotion of community based adaptation:* The intended results under outcomes 4.1 and 4.2 (backed up by the intended results of outcomes 2.1, 2.2 and 3.2) are expected to produce this desired impact. The likely future impact will depend on the extent to which the federal, provincial and local governments give priority to it and internalize it in their planning, programming and financing mechanism.

38. Figure 2 presents the reconstructed ToC matrix in which effort is placed on the identification of impact pathways implying that the activities generate outputs (light orange boxes) to achieve outcomes (blue) which transform into impacts (light green), which further contribute to achieving project's overall goal (dark green). Project outcomes are the intended results stemming from the outputs. In this case, outcome 1.1 (light blue box) although an intermediate state to achieving mainstreaming of climate change adaptation into agriculture sector policies, strategies, plans and programs (outcome 1.2), in totality is an intended impact in its own domain, given its accomplishment underscores the achievement of outcomes 2.1, 2.2, 3.1 and 4.2. However, outcome 3.1(light blue box) seems to be an output as it tends to be a work in progress towards achieving the intended result under outcome 3.2.

Figure 3: Reconstructed Theory of Change



Legend

	Supporting role of components
	Complimenting roles played by one component in achieving the intended results under other component
	Impact pathway
	Final impact

3. Findings

3.1 Relevance

Finding 1: Project outcomes and objectives were fully relevant to Nepal's national efforts and to the global efforts aimed at improving awareness on climate impacts and adaptation, strengthening capacities and reducing climate risks in agriculture.

39. Agriculture is Nepal's principal economic sector, yet it is subsistence-based and engages majority of small land holders, who generally do not have access to better income opportunities. Nepal's agriculture is largely monsoon rains dependent, poorly diversified and thriving on nominal input supply and support services. The situation is further exacerbated due to increasing climatic hazards such as temperature rise, untimely rains, floods, draught, landslides, hailstorms, frost, crop epidemics, livestock diseases and pests pushing the farm-dependents towards food scarcity and livelihood insecurity.
40. Need to enhancing awareness on climate change impacts and to strengthening capacities of agriculture sector at multiple levels to reduce climate risks is underscored in Nepal's key policy and strategies including National Agriculture Policy (NAP, 2004), National Adaptation Program of Action (NAPA, 2010), the National Agriculture Sector Development Priority (NASDP, 2010), Climate Change Policy (CCP, 2011) and Agriculture Development Strategy (ADS, 2013). The project contributes to the Priority Framework of Action (2011 – 2020) (PFA) on Climate Change Adaptation and Disaster Risk Management,
41. The outcomes and objectives of this project were formulated based on a climate change focused needs assessment of agriculture sector as per the country's Priority Framework of Action. They were also built on the learning of a previously implemented FAO Technical Cooperation Programme (TCP) project which had piloted the community-based adaptation approach and concluded that efforts are needed in all climate risk-prone districts to disseminate locally adaptive, innovative and gender-sensitive technologies for climate change adaptation in agriculture sector.
42. This project was designed to address the barriers to climate change adaptation in Nepal remaining unaddressed by other agriculture sector projects such as i) Insufficient institutional and technical capacity for adaptation to climate change in agriculture sector, ii) inadequate data and information on vulnerabilities, risks and lack of communication of timely risk information to users at all levels (including farmers); iii) inadequate awareness raising and knowledge management at all levels and iv) lack of enterprise diversification and inadequate linkages with supply chains and loss of livelihood activities due to climate related extremes⁸.
43. The high interest of project beneficiaries and partners observed during evaluation also revealed its relevance. At the national level, a general comment from majority of stakeholders was that this project has been categorically addressing the barriers posed by climate change at farmers' level. At the district and local community level, the FFS group members and facilitators, social mobilizers, agriculture sector technicians, newly elected local government office bearers and even those interviewed in the neighbourhood of FFS groups highly acknowledged what this project has been

⁸ Refer to the Project Document pp. 21 (1.1.1 b)

doing in improving the life and livelihoods of the poor farmers (Box 1: Respondent's reactions to the relevance of the project).

Box 3: Respondents' Reaction to the Relevance of the Project

In the past we used to get good harvest of local paddy varieties since there used to be timely rainfall. These days it either does not rain at all for long, or it rains untimely and too much to bring floods, and the duration of rainfall has also decreased. Our local paddy varieties suffer from lack of water or too much water. Our harvest has reduced drastically. Agriculture is no more productive and we are unable to feed our children round the year what to talk of their health and education.

- A farmer from Mirchaiya, Siraha

After I learned about Sukha-3 variety of paddy and cultivated it, which is generally harvested relatively earlier (in October) than our traditional variety, I did vegetable cultivation in the same land and could manage to earn about 5 times more than what I used to earn from vegetable cultivation before switching over to Sukha-3 paddy cultivation. My newly learned knowledge of preparing and using "Jholmol" and early harvesting of sukha -3 was instrumental in increasing my income from agriculture by manifold.

- A FFS group member in Gadha, Siraha

I had never realized before getting involved in this project that our livestock also suffer from climate variability related stress and that it negatively affects their health and milk and meat production.

-A Livestock Technician in Sandhikharka

44. The project fully embraces global efforts to improving awareness on climate impacts and adaptation strengthening capacities and reducing climate risks in agriculture as referred under GEF/LDCF/SCCF strategic objectives CCA 1 on reducing vulnerability to the adverse impacts of climate change, CCA 2 on increasing adaptive capacity to respond to the climate change impacts and variability and CCA 3 on transferring the adaptation technology. The project is also aligned with the executing agency FAO's strategic objective 2 (SO 2) and the country programming framework outcome 4.3 on climate change which stipulates *institutional and technical capacities for adaptation to climate change in agriculture strengthened and adaptive capacity of vulnerable communities enhanced*.

Finding 2: Project design was complex but satisfactorily adequate for delivering the expected outcomes.

45. The project has a result oriented design. It has embraced a cross-sectoral approach to delivering the outcomes. At the farmers' level it has facilitated "learning by doing" under farmer field school (FFS) approach. There are four technical components that are framed to align the project with GEF/LDCF outcomes. The project is designed around eight outcomes at the rate of two per component and fifteen outputs under eight outcomes.
46. Outcomes 1.1, 2.2 and 3.1 have only one output each, outcomes 3.2 and 4.1 have three outputs each, and remaining three outcomes have two outputs each making it altogether fifteen outputs. Outcomes 1.1 and 2.2 could have been better justified as outputs. Outcome 3.1 with one output looks like a "work in progress" towards achieving outcome 3.2, yet justifies as an outcome as well since it intends to deliver an implementable communication strategy implementation plan. Outcome 1.2 intends to "mainstream climate change concerns in to government's agriculture sector policy and plans", which basically is something beyond the control of a project. The project

should have intended to "support and/or contribute" in policy mainstreaming" rather than to do so by itself. Only the governments can update and improve country policies and plans.

47. An alternative approach to simplifying the project design could have been taking up the existing four components as four project outcomes and defining outputs for each one of them to deliver intended results under each outcome.
48. Project design had envisaged a pro-active role of district level staff of the DoA and DoLS in project implementation. This was a tested and pragmatic approach leading to institutionalization of project efforts and success into the government's delivery mechanism. However, it also had a risk attached to it at the face of already foreseen likely federal governance restructuring. Ultimately, the DADO and DLSO could not fully assume their pro-active role throughout the project implementation. There was uncertainty among them about whether the district level institutions will exist during the first half of the project. In the second half, the DADO and DLSO and their service centres got dissolved and their staff was relocated in newly instituted federal, provincial and local governments.
49. Overall the relevance of the project is evaluated **Satisfactory** as it was well taken at all levels and more so at local level.

3.2 Achievement of Project Results

49. In this section the achievement of project results is evaluated by outcomes under each component based on the review of the performance reported by the project (PPRs and PIRs) and further validation through assessment of information and evidences supported by interviews and consultations at multiple levels.

3.2.1 Component 1: Strengthening of technical and institutional capacities and integrating adaptation into national food and agriculture policies, strategies and plans.

Table 1: Project reported performance under component 1

Outcome	Outputs	End of Project Outcome Target	Achievement (as of June, 2019)
1.1: Strengthening technical capacity in the MoALD), DoA, DoLS, NARC and local stakeholders on climate change adaptation	1.1.1: Capacity development program implemented at national and district level to enhance technical capacity on climate change adaptation	Technical capacity of government institutions and local stakeholders strengthened in climate change adaptation;	On climate change adaptation, <ul style="list-style-type: none"> At national level, 53 professionals (17 female) trained; At district level, 234 Ag. Sector staff (49 female) trained; CCA training manuals one for national and one for district level developed;
1.2: Climate change adaptation mainstreamed into national agriculture and livestock policies, plans and programmes	1.2.1: Technical capacity and cross-sectoral coordination mechanism strengthened to facilitate integration of climate change adaptation into agricultural plans and programs	Climate change adaptation mainstreamed into selected national policies, programs and Plans;	<ul style="list-style-type: none"> 24 national level staff (8 female) trained for mainstreaming CC in to selected policies; NAP-Ag supported for accommodating learning of this project; Relevant policy docs reviewed, necessary revisions identified and a
	1.2.2: Updated national agriculture strategies and district adaptation/risk reduction plans available with climate		

	change adaptation priorities of NAPA, investment plans and budget (at least 5 strategies/ plans with budget allocation for adaptation actions prepared and endorsed by the Government)	report on policy reform submitted to MoALD; <ul style="list-style-type: none"> • 120 Community-based Adaptation plans prepared and implemented following FFS Approach; • NAP-Ag supported to accommodate learning of this project
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50. The cumulative assessment as indicated in the findings under this component shows that the project has been successful to a larger extent in contributing to the FAO Nepal Country programming Framework outcome 4.3 on institutional and technical capacities strengthening for climate change adaptation in agriculture sector. It has also made meaningful contribution in GEF LDCF objective CCA 2 on increasing adaptive capacity to respond to the impacts of climate change.

Finding 3: MoALD, DoA, DoLS, and NARC are technically capable of incorporating climate change adaptation in agriculture sector decision-making.

51. By the end of June, 2019, altogether 53 central level staff of MoALD, DoA, DoLS, NARC and DHM and 234 district level agriculture and livestock officers and technicians were trained on climate change adaptation through systematically designed training events (two at the central level and 2 per district) based on training needs assessment. Those trained and many other relevant staff from relevant institutions also participated in project-organized many relevant national and district level workshops. Consultations and interviews revealed that a climate change adaptation perspective of agriculture development although was not totally new yet an eye opener in many ways for the recipients of these training events.
52. During consultations, it was revealed that presently, the policy makers and senior officials of the MoALD, its departments and NARC are engaged in policy dialogue and consultations with the Ministry of Forest and Environment and the National Planning Commission in the context of on-going work on review and updating of Nepal's Climate Change Policy, NAPA and the formulation of National Adaptation Program (NAP) and NAP for agriculture sector. The officials consulted made it explicit that the agriculture sector is keen to ensuring that climate change adaptation perspective and the learning accumulated in course of implementing this project are adequately captured in policies and programs to be updated and/or formulated in future.

Finding 4: Project districts could not benefit from strengthened district level agriculture sector staff capacity due to scattering of institutional memory caused by staff transfer and relocation in federal, provincial and local governments.

53. At the district and local government level, only five/six out of 234 could be located and interviewed. Majority of those consulted did not remember whether they were trained, but confirmed that they participated in few project organized workshops. Yet, some staff members in Siraha, Kapilbastu and Udaypur districts were reported to be disseminating CC approaches and adaptive methods in their working areas.

Finding 5: Integration of CCA elements in to agriculture sector training programs is likely, but yet to be achieved.

54. Project has developed and submitted two training manuals on climate change adaptation - one for national and one for district/local level training of agriculture sector staff for MoALD to endorse and integrate into agriculture sector training programs. Evidences from consultation indicate that integration of CCA in agriculture sector training programs is likely but not in immediate future due to changes in organizational structures and in roles and responsibilities at three tiers of the government. At the time of this evaluation, it is not possible to articulate when and how the intended integration will take place.
55. Implementation of technical capacity strengthening took a phased approach keeping in view the likely staff transfers and most of the training events were organized in first and third year of the implementation. The training events of third year also included available local government agriculture sector staff and office bearers, which was an added advantage. The effectiveness of outcome 1.1 is rated **Moderately Satisfactory**.

Finding 6: Mainstreaming of climate change adaptation into Nepal's agriculture sector policies, plans and programs is likely in due course of time.

56. Relevant national level institutions were identified, 24 policy level professionals from identified institutions were trained based on their training needs from policy perspective, and a cross-sectoral committee was constituted to facilitate policy reforms required to mainstream climate change issues and adaptation in agriculture sector.
57. Relevant agriculture sector policy documents were identified and reviewed by a technical task team comprising policy level professionals and it was further refined by a cross-sectoral committee. The task team prepared and submitted a report on "Mainstreaming Climate Change Adaptation concerns in Agriculture Sector Policy". The project has submitted this report to the MoALD which awaits government endorsement. National level consultations indicated that presently the government is working on the review and revision of NAPA and development of NAP and NAP-Ag. Many other climate change related policies are in the process of review and revision. So it is likely that "mainstreaming of CCA into existing agriculture sector policies and plans" will take some time.
58. While this evaluation report was being prepared, the Federal Government of Nepal has revised and published its "Climate Change Policy, 2019". This policy has mainstreamed one policy and six strategy level recommendations made in the report for policy mainstreaming in agriculture sector submitted by the project. This provides an indication of the commitment of the government regarding the mainstreaming of climate change concerns in to sectoral policies and plans.
59. For intervention at the farmers' level, the project had assisted 120 FFS groups to prepare their community-based adaptation plans (CBAs). In later stage of project implementation 8 palikas were assisted in developing their RR/CCA plans which also contribute to the intended results under outcome 1.2.
60. The project made best possible efforts to achieve both the outputs under outcome 1.2. Outcome 1.2, although slightly over ambitious has been well taken by the agriculture sector as

reflected in the recently published climate change policy. Hence, the achievement under outcome 1.2 is evaluated **Satisfactory**.

3.2.2: Component 2: Assessment, monitoring and providing advance early warning information on vulnerabilities, risks of climate change and agro-meteorological forecasts to assist better adaptation planning.

Table 2: Project reported performance under component 2

Outcomes	Outputs	End of Project Outcome target	Achievement
2.1 Improved vulnerability and risk assessment tools, FAOs crop situation and yield assessment methods introduced and implemented at the local level;	2.1.1: Improved tools and methods for assessment of climate change risks and vulnerability and crop yield assessment models introduced at the national level and core staff trained (>25 staff at MoALD, DOA, DLS and NARC trained) and linked with at least 4 districts.	<ul style="list-style-type: none"> Tools and methods adopted by the government; 	<ul style="list-style-type: none"> At national level, a crop yield forecasting committee was formed; 25 professionals from MoALD and relevant institutions trained on DSSAT ver. 4.7 for crop yield forecasting methods; 55 weather-based agro-advisory weekly bulletins were developed by NARC using agro-meteorological forecasts from DHM and crop-livestock status reports from project districts
	2.1.2: Improved risk and vulnerability assessment methods (from output 2.1.1) used to develop spatial risk and impact information on agriculture for 24 project VDCs in 4 districts	<ul style="list-style-type: none"> Vulnerable communities in 24 VDCs receive timely risk information; 	<ul style="list-style-type: none"> Government staff and office bearers of local governments trained on Vulnerability and Capacity Analysis (VCA) tools; In 8 Palikas, Risk and Vulnerability data base prepared; 108 individuals (21 female) trained on VRA and 8 VRA developed involving communities in the process;
2.2: Improved agro-meteorological forecast disseminated in 4 districts in close coordination with similar initiatives at the national level;	2.2.1: Improved agro meteorological forecast products from the Department of Hydrology and Meteorology (DHM) planned under the Climate Investment Fund's PPCR project disseminated to 120 farmer groups (at least 3000 men and women farmers) and wider rural communities in 24 VDCs of 4 districts and end-users trained using Farmer Field School (FFS) approach (new products introduced at the local level and sustainable mechanisms to interpret the forecasts established in 4 districts).	<ul style="list-style-type: none"> Usable forecast information relevant to local context is available in 4 districts; 	<ul style="list-style-type: none"> Selected FFS group members trained to interpret and use agro-advisory products; Agro-advisory (in Nepali language) shared through a mobile app -"FAO-CCA" and SMS messages to project beneficiaries in 120 FFS groups; 120 FFS groups provided with a set of agro-meteorological devices; Selected FFS group members and relevant stakeholders in Palikas trained to use agro-meteorological devices and interpret and use agro-advisory products;

61. Cumulative Assessment of the project's achievements and the findings under this component suggest that the project has made meaningful contribution in GEF's global objective CCA 3 on

technology transfer and CCA-2 on increasing adaptive capacity to respond to the impacts for climate change.

Finding 7: Crop modeling and yield forecasting systems and procedures are institutionalized in the MoALD.

62. The project developed various crop modelling and yield forecasting models. 25 professional agriculturists in MoALD, DoA and NARC interested and willing to learn crop modelling and yield forecasting methods were selected and trained. A crop yield forecasting committee comprising trained professionals was institutionalized in the MoALD. Evidences from interviews with MoALD and NARC professionals indicated that the technical aspects of crop modelling, crop assessment and yield forecasting are now institutionalized in the agriculture sector and the MoALD is committed to give continuity to these technical functions.

Finding 8: The project adapted to the changed governance structure and strengthened the capacity of relevant office bearers and agriculture sector staff in Local governments of eight Palikas, and enabled them undertake VRA.

63. Originally it was intended to develop 24 local Adaptation Plan of Action (LAPAs) of 24 project VDCs. Developing LAPAs became irrelevant once the project VDCs got merged into 36 wards of 12 municipalities and 7 Gaunpalikas. Given this changed context, the PSC took a decision⁹ to switch over to developing 8 Palika level RR/CCA plans with emphasis on covering as many previously existing VDCs as possible. A community-based and consultative approach was also developed and agreed for the purpose. Accordingly, the vulnerability and risk database for the identified four municipalities and four Gaunpalikas was updated and vulnerability and risks assessment was conducted by training and involving relevant provincial and local government staff and newly elected office bearers.

Finding 9: FFS group members found the disseminated weekly agro-advisories useful to a larger extent in safeguarding their crops and livestock against likely risks and vulnerabilities.

64. Agro-advisory bulletins were being developed and disseminated in partnership between DHM and NARC under an on-going World Bank funded pilot program for climate resilience (PPCR) in 25 districts, of which two districts of this project were overlapping. This LDF project pegged on PPCR and established partnership with DHM to develop and disseminate agro-advisory in four project districts. Accordingly, based on meteorological forecasting from DHM for a previous week and a coming week, and the existing agricultural crops and livestock status in project districts obtained from DADO and DLSO, an experts' team in NARC would develop an agro-advisory comprising relevant advice for farmers in project districts. This information would be shared through an android-based mobile app - FAO-CCA and SMS to FFS facilitators, social mobilizers, DTCs and other relevant agriculture staff in the district to be availed to all FFS group members. Project had provided an android cell phone set with SIM card to each FFS group for the purpose.

⁹ PSC Meeting Minutes March 19, 2018

65. Dissemination of agro-advisory was reported working well and many FFS group members confirmed its utility and usefulness during local level consultations. After July, 2019, the agro-advisory dissemination in four project districts was given continuity by the PPCR based on a decision from MoALD. However, the PPCR project is phasing out in December 2019. Interviews with NARC and DHM indicated that they are willing and ready to continue with production of agro-advisory provided the MoALD takes lead and makes necessary arrangements with relevant provincial governments to re-establish the communication network with districts for which the agro-advisory has to be produced for dissemination. It is worth noting here that the concerned districts need to provide the crop and livestock status so as to enable the NARC's expert team to relate it with DHM provided meteorological information to generate the agro-advisory. This tends to be up-ward and downward flow of information to make the agro-advisory meaningful.
66. FFS group members interviewed confirmed the regular sharing of agro-advisory during FFS sessions and otherwise as well. About the usefulness of agro-advisory, FFS members interviewed in Arghakhanchi and Udaypur were not so much convinced as the meteorological forecasts they received failed in some cases. It is however, not unlikely, given that the DHM makes meteorological forecasts for broader areas which might not apply in specific locations. Moreover, general meteorological forecasts often do not fully apply in micro-climatic pockets of Nepal's hilly areas. In Siraha and Kapilbastu however, many reported that it has been quite useful. Some of them also explained how they were able to safeguard their crops and livestock by taking measures as per the agro-advisory information.

Box 4: Reported instances of benefits realized due to agro-advisory forecasts

District	Agro-advisory/Red alert communicated	Measures taken by Farmers	Benefit realized
Siraha	Heavy rains and winds likely in next few days. If you have wheat in the field to be harvested, don't do it for next few days. In case you have harvested wheat stacked in the field, secure it from likely rains.	There were rains and wind. Those planning to harvest did wait. And those having harvested wheat stacked in the field transported it under shed.	Harvested wheat safeguarded from getting wet. Yet to be harvested were saved from getting wet in the field.
Arghakhanchi	Temperature is likely to rise in next 2 – 3 days. Protect your livestock from likely heat stress by covering their sheds with straw and give them plenty of water to drink as required.	Temperature rise happened in 2-3 days, the FFS group members not having proper sheds of their goats followed the advisory.	Goats were safeguarded from scorching heat.
Kapilbastu	Widespread occurrence of blight is likely. Protect your potato and tomato crops by spraying the advised dose of fungicide	FFS group farmers followed the agro-advisory as soon as they noticed the occurrence of blight.	Potato and tomato crops were safeguarded.

Source: Human Interest Story documented by the District Technical Coordinators

Finding 10: Enabling FFS group members to read and use some basic agro-meteorological devices was instrumental in concretizing their learning under FFS approach.

67. A set of agro-meteorological devices were provided to all FFS groups which was used in course of FFS sessions. During field visits, members of many FFS group demonstrated how to read those meteorological devices and android cell phones. They confirmed that the devices were regularly used during the FFS sessions and it was useful for them to learn how the change in temperature and humidity affects the crops in the field.
68. The use of agro-meteorological devices in FFS sessions was meaningful as it contributed in higher level of awareness raising required for changing farmers' perception. Yet, providing them

with a set of these devices could not so much be justified given the up-keeping, maintenance and repair or replacement with new ones of such devices is neither possible nor expected from the vulnerable farmers groups.

69. The review of project progress and assessment of the achievements under outcomes 2.1 and 2.2 and the evidences given by the project beneficiaries indicates that the intended results under these outcomes have adequately been achieved and hence evaluated **Satisfactory**.

3.2.3 Component 3: Improving awareness, knowledge and communication on climate impacts and adaptation

Table 3: Project reported performance under component 3

Outcomes	Outputs	End of Project Outcome target	Achievement
3.1 Awareness raising, knowledge management and communication strategy drawn, agreed and implementation plan prepared	3.1.1: Comprehensive and multi-stakeholder awareness raising, knowledge management and communication strategy formulated and agreed with the Government and nongovernmental organizations at national, district and local levels and applied to fostering implementation of new and currently available adaptation practices outlined in Nepal's NAPA	Awareness raising, knowledge management and communication strategy drawn, agreed and implementation Plan prepared;	<ul style="list-style-type: none"> • Strategy drafted, finalized through 4 district level and 1 national level consultation and submitted to MoALD; • A provincial level consultation undertaken on request of MoALD, Strategy further refined and submitted;
3.2: Knowledge and awareness on climate change increased and improved adaptation practices and livelihood strategies disseminated for location specific context	3.2.1: At least 120 Farmer Field School (FFS) facilitators in 4 districts trained on climate change impacts and adaptation in agriculture as outlined in NAPA	Knowledge and lessons learned updated, compiled and published for wider replication and up-scaling;	<ul style="list-style-type: none"> • At local level, 127 FFS facilitators (68 female) and 24 social mobilizers trained and engaged in practice on all major crops seasons; • 3484 farmers (74%.female) engaged in 120 FFS groups trained on CC impacts and adaptation measures through learning by doing under FFS throughout diverse cropping seasons; • FFS Manuals prepared • 36 Good Practices on crops, livestock, poultry and fodder demonstrated through FFS got documented; Good practices include seeds and breeds, adaptation practices, nutrition, animal health and fodder management;
	3.2.2: At least 120 farmer groups involving a total of over 3000 farmers aware of climate change impacts, adaptation measures and alternative livelihood strategies by implementing Farmer Field School (FFS) by trained facilitators in 4 districts of Nepal.		
	3.2.3: Project-related good-practices (at least 25) elaborated and lessons-learned disseminated via publications, project website and others to facilitate up-scaling and integration into policies and plans by the Government and replication in similar situations by non-government organizations.		

70. The cumulative achievement as indicated by the findings under this component reveals that the project has contributed to a limited extent in GEF LDCF objective CCA 2 on increasing adaptive capacity to respond to the impacts of climate change and on CCA 1 on reducing vulnerability to adverse impacts of climate change.

Finding 11: Finalization of the comprehensive and multi-stakeholder awareness raising, knowledge management and communication strategy got delayed, despite commendable work undertaken in awareness raising and knowledge management among stakeholders and beneficiaries.

71. A project-recruited knowledge management and communication expert assessed the awareness, knowledge and communication management needs at multiple levels of agriculture sector from climate change perspectives. A comprehensive multi-stakeholder awareness-raising, knowledge management and communication strategy was drafted. The draft strategy was refined through intensive consultations in four project districts. A national level consultation contributed in its further refinement. Recently in September, 2019, this strategy was further reviewed in a provincial level consultation in province 5 as per the suggestion of MoALD. It still remains at the stage of finalizing. Nevertheless, evidences of climate change adaption related awareness raising and knowledge management activities on-going in project districts, among FFS groups and at national level were apparent. Yet, the implementation of this strategy is intended to ensure two-way communication of knowledge and information on CCA among stakeholders at multiple levels both horizontally and vertically.

Finding 12: Project has succeeded in preparing a cadre of CCA practitioner farmers and facilitators in four project districts.

72. Project trained altogether 127 FFS facilitators in two phases on climate change adaptation in agriculture. It also organized refresher training for them. All FFS facilitators technically backstopped by the agriculture and livestock technicians, and supported by DTCs and social mobilizers facilitated the FFS sessions in all major cropping seasons. In doing so, they had tremendous opportunity to practicing what they had learned in training sessions. The social mobilizers were also provided the technical training imparted to FFS facilitators, and were engaged in backstopping the FFS facilitators as required. In the process of FFS, 3484 farming household members became aware of climate change risks and impact. They were exposed to new knowledge and skills on adaptation and developed adaptive capacity to maintain their farm production, livestock and livelihoods.
73. In course of evaluation, many evidences of good practices adopted by farmers were visible. Majority of men and women farmers interviewed reported increase in production of crops, vegetables and livestock outputs. They expressed a high level of satisfaction using their newly learned adaptive skills and capacities. The results of the end-line survey also validate many of the achievements made on enhancement of production of crops and livestock, and perceived satisfaction of FFS groups and farmers in the neighbourhood regarding the performance under this outcome. Evidence from the field confirms most of the achievements documented under this outcome. There was commendable positive spill over effect among neighbouring area's farming households (Box 2: Reaction of respondents in project areas and in neighbourhood).

Box 5: Respondents' Reaction on the knowledge gained through FFS

Our arable land in the bank of Kamala river got sand-filled many years ago. We were unable to cultivate enough rice and wheat and the family used to suffer from food crises. Ultimately, my husband left me to work abroad. Later, getting associated with the FFS group here in 2017, I gained knowledge and skills and other support from this project to do vegetable cultivation in 0.167 ha. of my sand-filled land. I could earn NRS. 90,000 from vegetables. This newly acquired knowledge and skills did not only help me use that piece of land for livelihoods but also boosted my confidence. My husband once he arrived home, also got encouraged realizing the opportunities in river bed vegetable cultivation in otherwise useless land. So we continued vegetable cultivation in 0.5 ha in 2018 and earned 215,000. Now we are able to meet our livelihood needs and my husband does not have to go abroad to earn our living.

- A FFS group member, Chatari, Kalyanpur 2 Siraha

Maize is a staple diet for us who don't have land in valley plains for growing rice. We used to sow maize seeds without knowing its seed rate and spacing. We believed that sowing seeds densely is okay since after thinning out it would get desired spacing. We also believed that use of fertilizer is harmful. Our maize production was dwindling day by day. The plant will remain thin and will fall due to wind once the maize starts fruiting. In my group once we had FFS on maize we knew how to calculate seeds required, spacing to be maintained and balanced use of fertilizer. Now the maize production has increased significantly and the inter-cropping in maize has become relatively comfortable with the new knowledge and skills learned.

-A women farmer from Patauti Nigali, CCA FFS, Arghakhanchi

I live in the neighbourhood of Sihokhor FFS group. I learned the skills of making mineral blocks by observing the whole process when it was being demonstrated in the FFS group. The buffalo owners of that group claimed that the health and milk production of their buffalo was improving after they used this mineral block. I monitored their buffalo and got convinced. So I also prepared the mineral block with the help of FFS group members and used it. It really seems effective for the health and production of livestock and cost effective as well.

- a local farmer in Sihokhor, Kapilbastu

Finding 13: Wider dissemination of knowledge and awareness raising products for replication and up-scaling of the project achievements remains yet to be achieved adequately.

74. The project has documented 36 "CCA Good Practices" of crops, livestock, poultry and fodder demonstrated through FFS, validated and adopted, and being practiced by project beneficiaries in FFS groups and many others in the neighbourhood and control areas. Good Practices include seeds and breeds, adaptation practices, nutrition, animal health and fodder management. The knowledge management and lessons learned have been documented in the form of FFS and Technical manuals, success stories etc., and 8 VDOs are reported uploaded on you tube. All these awareness materials are yet to be disseminated from MoALD website and published as appropriate. The CCA good practices were visible in the FFS groups visited and those consulted also expressed their satisfaction.
75. It took longer for the project to develop the knowledge management and communication strategy basically because it had to be facilitated following a multi-stakeholder engagement approach. Moreover, the scope of this strategy under development got further modified demanding knowledge and information flow between units at local, provincial and federal government level after the establishment of three tiers of governments as a result of governance restructuring. The project had to go beyond its mandate and tackle the broader knowledge management and communication issues that had surfaced up with newly established governments. The strategy now is in place but needs to get finalized and endorsed by the MoALD for implementation. However, lot of awareness raising and knowledge development activities have been going on side by side which have supported the intended results under outcome 3.1. So outcome 3.1 is evaluated **Moderately Satisfactory**.

76. Evidences from the intensive work done by the project for achieving the outputs under outcome 3.2 and the reaction of the project beneficiaries of the FFS groups and other stakeholders suggests that outcome 3.2 has been able to meet its intended results to a desired quality and standard and therefore, is evaluated **Satisfactory**.

3.2.4 Component 4: Prioritizing and implementing local investment by promoting Community Based Adaptation (CBA) to strengthen livelihood strategies and transfer of adaptation technology in targeted areas.

Table 4: Project reported performance under component 4

Outcomes	Outputs	End of Project Outcome target	Achievement
4.1: Livelihood alternatives and climate resilient physical measures prioritized and implemented by promoting Community Based Adaptation (CBA) to climate change	4.1.1: Investment to strengthen livelihoods alternatives and small-scale climate resilient physical measures prioritized through LAPA by involving the community and farmers groups (at least 24 LAPAs prepared and endorsed)	24 LAPAs developed covering all selected VDCs and endorsed by the VDC council; 24 LAPA reports prepared and endorsed, climate resilient physical measures prioritized in LAPA strengthened;	<ul style="list-style-type: none"> 4 municipality and 4 palika level Risk Reduction and Community Adaptation Plan prepared and endorsed by respective local governments; CBA planning done in 120 FFS groups Printed plans yet to be handed over to 8 local governments;
	4.1.2: Diversified livelihood strategies and alternate sources of income (eg. Off-season vegetable cultivation, multi-purpose tree species, tree crop alley farming, livestock enterprises etc.) implemented in 24 Village Development Committees (VDCs) of 4 selected districts.	Livelihoods of 3000 farm households diversified and strengthened;	<ul style="list-style-type: none"> Most vulnerable among 120 FFS group members supported with livelihoods alternatives as per their choices and as identified in their respective CBAs
	4.1.3: Small-scale physical measures implemented to conserve and protect livelihood assets at the community level (eg. water conservation and harvesting, management of degraded community resources, bioengineering for erosion control etc.) in 24 VDCs of 4 districts	Livelihoods assets of 3000 farm households protected;	<ul style="list-style-type: none"> Financial support provided in locally identified community assets protection measures including i) shallow tube wells ii) pump sets, iii) electric motors, iv) plastic ponds, v) UMMB blocker machines, vi) Zero-till seed cum fertilizer drill;
4.2. Adaptation technology relevant to agriculture implemented and new stress tolerant varieties introduced to reduce climate risks;	4.2.1: Improved agriculture and livestock management technologies (eg. Improved cropping systems, improved seed storage, sloping land agriculture technology, crop and livestock management practices etc.) implemented to reduce climate risks in at least 24 VDCs of 4 selected districts	Outcome level target NA Improved crops and livestock technology adopted for CC adaptation;	<ul style="list-style-type: none"> FFS groups provided skills training; Diverse technologies demonstrated in FFS; Adaptation practices identified, tested, validated through FFS; FFS groups practiced and adopted technologies;
	4.2.2: New stress tolerant crop varieties of rice, wheat, maize and fodder (at least 10 varieties) introduced by Nepal Agriculture Research Council (NARC) in 4 districts and tested and validated	Stress areas identified and validated; At least 10 varieties of rice, wheat, maize and fodder adopted in stress tolerant areas;	<ul style="list-style-type: none"> Stress tolerant crop and fodder varieties already certified by NARC tested and adopted; Lessons learned compiled and documented;

involving farmer groups using FFS approach	
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77. A cumulative assessment of the projects' performance under this component as indicated by the findings elaborated below suggest that the project has meaningfully contributed in GEF LDCF objective CCA 3 on technology transfer and in CCA 2 on increasing adaptive capacity to respond to the impacts of climate change.

Finding 14: Local governments of 8 Palikas (municipalities and Gaunpalikas) are highly likely to consider implementing their RR/CCA Plans under their local development initiatives.

78. Based on the risk and vulnerability data base developed under outcome 2.1 (refer to point 59), the project developed 8 palika level RR/CCA plans. It followed a capacity building and consultative process and trained 192 individuals from relevant palikas on risk reduction planning and preparation of CCA plan. The draft plans went through a consultation process and the finalized plans were further reviewed by respective local governments. The finalized plan was endorsed¹⁰ by all eight Palikas. Consultations with two out of eight Palika office bearers confirms that a thoroughly consultative and knowledge and capacity building approach was adopted, communities involved felt highly sensitized and are likely to prioritize the activities included in the RR/CCA plans to be implemented by local governments. The ward leaders also expressed their commitments to including the recommendations of the CCA plans in local development planning process.

Finding 15: Climate adaptive approaches and practices are nicely interwoven in diversified livelihoods strategies and Community assets protection.

79. Livelihoods needs of 3484 households engaged in 120 FFS groups identified initially in their CBA planning process were further validated and prioritized through consultations. Farm based income generation training events were organized in all FFS groups, and households were supported for implementing their alternative livelihoods activities. During field visit, diverse income generation activities e.g. river-bed vegetable cultivation, poultry, goat and pig rearing being implemented by farmers were witnessed. Interviews with some of them revealed that slowly they are able to generate income especially from river bed vegetable farming, goat and poultry¹¹.
80. One shortfall reported during field level interviews was that the alternative livelihoods promotion started very late and the intended results of this intervention could not be adequately monitored within the project's life time. Consultation at national level revealed that the project followed a process oriented approach in implementation of activities and efforts were on ensuring that the primary beneficiaries are able to make best out of livelihoods promoting activities after they have had a good knowledge of the climate adaptive agricultural practices through FFS sessions, and they are able to identify what they could do confidently for securing their livelihoods. Nevertheless, the initial reaction from those supported with alternative livelihoods activities was promisingly positive. It is difficult to articulate at this stage, the extent to which the project succeeded in alternative livelihoods promotion.

¹⁰ Endorsement letters available in the PMU

¹¹ Box 2 provides one example of income from river-bed vegetable farming.

81. Potential climate resilient small scale physical measures in each village were identified taking transact walks together with FFS group members and community leaders for protection and development needs of existing and new community assets. Support and assistance was provided to harness ground water irrigation, water conservation and water harvesting. Plastic tunnels, UMMB mineral blockers, animal sheds, agriculture equipment were also provided in groups. FFS groups and individual farmers interacted with reported that these new assets were extremely useful for safeguarding and improving their livelihoods. Regarding the use and maintenance arrangement of those community assets, the FFS groups consulted reported that they follow a shared responsibility mechanism under which users in cluster protect and maintain their community assets. In case of any dispute the FFS group now registered as a CBO in local government is authorized to settle the dispute.
82. Special about alternative livelihoods promotion and community assets protection noted was that the supported alternative livelihoods enterprises or the approaches for community assets protection were not new but the climate adaptive knowledge, skills and technologies attached to them were new and innovative. For instance, the vulnerable farmers were found motivated by the simple climate smart techniques involved in riverbed vegetable cultivation, in mineral blocks and in animal shed improvements as they expressed in their interviews. The drum seeder, the zero-till seed cum fertilizer drill machine, the UMMB blocker machines, the chaff cutter and the associated knowledge and skills of these community assets were innovative for farmers.

Finding 16: The FFS approach proved effective to enabling farmers accept, adopt and adapt to affordable location specific climate adaptive crop varieties and associated technologies.

83. Under outcome 4.2, climate smart technologies were demonstrated and skills training provided to the farmers' groups through FFS. They also visited some demonstration sites. They identified relevant adaptation practices needed in their location specific context and involved in participatory action learning on rice, maize, wheat, mustard, potato, lentil, ginger, groundnut etc. They had field tested both conventional and adaptation practices and had opportunities to compare the progress under both practices step by step and learn. This was helpful in enabling them develop new perceptions and accept, adopt and adapt to climate adaptive seeds, practices and technologies involved.
84. Many farm based climate adaptive practices and technologies including DSR technologies on dry and wet rice varieties were not new in Nepal as NARC had already developed, validated and certified them. But they were not reaching to farmers basically because NARC did not have direct access to farmers and the efforts made by MoALD and DoA were inadequate and scattered. This project took them down to farmers in FFS groups, and enabled them field test them, learn and adopt accordingly. During field visit three stress tolerant varieties of rice were found growing in farmers' field out of 8 reported being practiced. FFS group members also reported about their experience with varieties of wheat, maize, oat and lentil tested and adopted. The production and use of mineral blocks was found very useful for health and growth of animals. Some farmers in different villages had already taken it up as an enterprise and were engaged in selling the mineral blocks. Some farmers interviewed excitedly reported about how they are able to identify and deal with friend and enemy insects and pests and what do they do when they find them in their crops,

vegetables and livestock. Farmers were curious to share all that they had learned during all FFS level FGDs in course of this evaluation.

85. Evidences collected at multiple levels indicate that the delay in RR/CCA plan in lieu of LAPA formulation was beyond project's control. However, an early start of alternative livelihoods promotion could have made it possible for the project to monitor the livelihoods improvements, if any were attributable to the project. Nevertheless, the outputs achieved under outcome 4.1 and 4.2 are well taken at beneficiary's level and indicating promising intended results. Hence, outcomes 4.1 and 4.2 are rated **Satisfactory**.

3.3 Efficiency, project implementation and execution

3.3.1 Efficiency of Project Activities

Finding 17: The project activities were well planned and efficiently implemented despite some circumstantial disturbance and delays.

86. Project activities were already identified in the result-based work plan included in the project document¹² and focused at achieving the outputs that contribute to achieving the intended outcomes. The project implementation followed the operational modality for activities elaborated in the project inception report¹³.
87. Technical capacity strengthening was implemented following a systematic and phased approach in the first and third year, in order to mitigate the risk of losing the trained staff from project responsibilities at national and district levels due to staff transfers. However, this effort became partly futile at district level after governance restructuring and the project districts could only partly benefit from district staff training.
88. Activities planned for institutional capacity strengthening were adequate but the intended result under outcome 1.2 was little ambitious given its limitations. The project could only recommend for integration of CCA in to MoALD training system and mainstreaming of CCA concerns into agriculture sector policies and plans, it could not do so by itself.
89. Delays in some project activities such as i) development and finalization of awareness raising, knowledge management and communication strategy, and ii) development of RR/CCA plan in lieu of LAPA was beyond the control of the project. However, delays in support for alternative livelihoods and protection of community assets could have been mitigated through timely procurement planning.
90. On few occasions, timely delivery of material inputs for alternative livelihoods and community assets protection related activities had to sustain delays due to time taking procurement procedure as reported by the FFS group members during field visits. Interviews at national level revealed that the technical specification of expendable/non-expendable items to be procured needed clearance from FAO regional office that was time consuming, and once approved were subject to fulfilling procurement procedures from FAO Nepal office resulting in further delays.

¹² Project Document Annex II

¹³ Project Inception Report, April 16, 2019

Such delays could have been eliminated to a certain extent by advance procurement planning but that was practically constrained since items to be procured depended on emerging needs of project beneficiaries reflected only after detailed bottom up planning.

91. The evidences collected at multiple levels from the project reports and from field visits suggest that overall the project activities were focused at meeting output and outcome level targets to a desired level of quality and standard. They were well implemented except for some unprecedented delays in some cases.

3.3.2 Efficiency of the Institutional Arrangement

Finding 18: Project's institutional arrangement was adaptive and able to deliver and achieve intended outcomes and objectives even in the transitional governance situation.

92. Project was executed by the FAO country office in Nepal under direct execution (DEX) modality. Project was technically backstopped by the LTO from FAORAP and the management was taken care of by the FAO Nepal office representative. The project had a small staff structure with a national technical coordinator including few support staff in the project management unit (PMU) and four district technical coordinators (DTCs) in project districts. The DEX modality was based on the partnership experience of the past between FAO and MoALD and was instituted as per the consent of the MoALD.
93. The MoALD (with its two departments DoA and DoLS) was the project implementing agency. At the district level, the DADO hosted the project office. The DADOs and DLSOs were responsible for planning and implementing all the field level project activities with assistance from DTCs. For this purpose a five-member district technical team (DTT) comprising DADO, DLSO, one focal person from DADO and DLSO each and the DTC was formed and mandated for all implementing and monitoring the field level activities.
94. The project was to be strategically guided and steered by a national project steering committee (PSC) with membership from DoA, DoLS, NARC, DHM, DoI, DoE, FAO, selected NGO representative and development partners, and chaired by the Secretary of MoAD. At the project inception stage, owing to the existence of a separate Ministry of Livestock Development (MoLD) the inception workshop decided to include a representative from MoLD in the PSC. Later on after the governance restructuring in early 2016, agriculture and livestock ministries again got merged to establish MoALD. The inception meeting also decided to nominate a national focal person in MoALD and also constitute a technical coordination team (TCT) in the chairmanship of the national project director (NPD) including the representatives from NARC, DHM, DoA, DoLS, program officer (FAO Nepal office), national technical coordinator (NTC) and the national focal person as the member secretary to meet as required and provide regular backstopping to the project management unit (PMU). Hence, the major diversion from initially planned PSC to the one after the inception workshop was the addition of a NPD chaired TCT between PSC and PMU.
95. The institutional arrangement had envisaged a pro-active role of DADO and DLSO in field implementation. Accordingly, the district technical team (DTT) responsible for planning and implementing FFS group level activities was led by DADA and DLSO. It went well up to the first half of the project but got disrupted after the DADO and DLSO were dissolved and the provincial

and local governments emerged as new players. During most of the second half of the project, all field level activities were implemented by the PMU in consultation with newly established Agriculture Knowledge Centres (AKCs) and the Veterinary Hospital and Livestock Service Centres (VHLSCs). Consequently, the DTCs were overworked and the social mobilizers were also mobilized as technical hands in FFS sessions.

96. The project was adaptive to the transitional governance situation in the middle of its implementation. It coordinated with and got support from newly emerged AKCs and VHLSCs once they emerged in place of DADOs and DLSOs. It contributed to a larger extent in achieving the project outcomes and objectives. The project implementation and execution over all was as per the expectation with minor shortcomings at times.

3.3.3 Efficiency of Partnerships

Finding 19: Partnership between MoALD, NARC and DHM was instrumental in achieving project's intended outcomes and objectives.

97. Project document had identified NARC and DHM as partners and also included the Department of Irrigation (DoI) and the Department of Environment (DoE). At project inception stage, Ministry of Federal Affairs and Local Development (MoFALD) in addition to NGO representatives and development partners' network were included in the PSC. DoI and DoE (merged in to MoFE in 2018) however, did not visualize any pro-active role for themselves except for participating in the PSC meetings. NGOs were not included in any stage of project implementation except for procurement of technical services through outsourcing.
98. There did not exist any partnership at the district and local level except that majority of FFS group members belonged to already locally existing CBOs such as farmers' group, women's/mothers' group, saving and credit groups, forest users' group and/or water users' groups as per their local context.
99. DHM was a key partner in generation and sharing of meteorological data. Interviews with DHM focal person revealed that while PPCR contributed in DHM's technological capacity strengthening, this project has provided them with the perspective of making the meteorological forecasts useful for its end users. They are highly encouraged by the learning of this project, and are willing and ready to continue this partnership with MoALD and NARC on agro-advisory production. NARC focal person also indicated that they are working with DHM and MoALD to find ways to continue with this activity even after the phasing out PPCR in December, 2019.
100. MoALD, NARC and DHM partnership was instrumental in achieving project's outcomes and objectives so far as the agriculture and weather forecasting aspect of technologies for adaptive capacity development is concerned. DHM found its niche in farmers' perspective of their periodic weather forecasting and NARC intending to connect with farming communities was able to do so through agro-advisory bulletins.

3.3.4 Efficiency of Available Resources

Finding 20: The human and financial resources were used efficiently in best possible manner.

101. The human resources involved in this project was a small team of five staff members in PMU and four at district level assisted by eight subject matter specialist consultants engaged for specified durations in course of project implementation. Allocated project management cost was just 6% of the GEF funding.
102. Eighty percent of the total project budget (USD 12,990,000) was co-financing from FAO (UTF and MTF funding) and from the government (all in-kind support). Out of the available 20 percent of GEF funds (USD 2,689,498), the project had allocated 61% in component 4, all of which was spent at local FFS groups level. Components 1, 2 and 3 had a budget allocation of 8, 13 and 12 percent respectively. Activities under each of these components also contributed in district and local level capacity strengthening, RR/CCA plan preparation and weekly agro-advisory dissemination.
103. By June 2019, the Project Management Unit reported that committed co-financing from FAO/UTF (Agriculture and Food Security Project, total budget USD 8,990,119) and FAO/MTF (Ginger Competitiveness Project) had materialized at 100% and came in time.
104. According to the PMU, government's committed co-financing (investment in project districts) materialized in time and exceeded by 4.6% of committed amount (see co-financing table in Appendix 3).
105. The project could not provide any evidence as to how the co-financing from UTF and MTF occurred and in which ways it contributed to achieving outcomes under components 3 and 4, in which these funds were allocated (as per the inception report). However, evidences from project's progress reports and from the field assessment indicate that the available human and financial resources were mobilized fairly efficiently to meet project's intended outcomes and objectives.
106. An overall evaluation of project's activities, institutional and partnership arrangements and available resources provide sufficient evidences to conclude that project was executed and managed in an efficient manner to meet project outcomes and objectives. Hence, the efficiency of the project implementation and execution is evaluated **Satisfactory**.

4. Monitoring and Evaluation

107. The project followed a structured and planned approach to monitoring and evaluation as per the GEF evaluation guidelines. Project document had elaborated the monitoring and reporting protocol at project progress, results and effect levels. Accordingly, the inception¹⁴ workshop had further specified the monitoring and reporting responsibilities and timeline.
108. Annual planning followed a bottom up approach, and periodic progress review and reporting was done from district, regional directorate and national level including review in PSC every six monthly. A baseline survey, a Mid-Term Review and an end line survey was carried out to assess changes taking place at project beneficiary's level due to project intervention. However, the draft report of the end line survey was available lately while this terminal evaluation report was being drafted.
109. Project progress report (PPR – biannual) as per the FAO monitoring requirements and project implementation review (PIR – annual) as per the GEF M&E guidelines were submitted to the FAO and GEF secretariat. Additionally, the LTO and other responsible project personnel undertook monitoring visits in the country and project field sites.
110. Periodic monitoring and supervision in general were reported useful in helping the project remain focussed at achieving the intended outputs. Lack of outcome monitoring, and the unavailability of a M&E person in the project management team (as decided in the project inception workshop) did not allow to fully assess projects results during implementation. Interaction with project and government staff did not provide any clue as to why the already decided M&E consultant was not brought on board.
111. An assessment of the documentary evidences and consultations at multiple levels with project stakeholders and beneficiaries confirms that the project did count on the M&E outcomes in most instances for timely decision making. The Monitoring and Evaluation of the project is evaluated **Satisfactory** for overall quality and M&E design, and **Moderately satisfactory** for M&E plan implementation.

¹⁴ Project Inception Report

5. Sustainability

5.1 Ownership

112. Evidences collected from project reports and through the interviews and consultations provide indications of counterpart ownership of the project. The MoALD was involved in the project design stage and it also took strategic role in implementing the project through the PSC. The two MoALD departments – DoA and DoLS - led the implementation in four project districts through their district offices. The improved VRA tools, crop situation and yield assessment methods and associated tools and technologies have now been institutionalized in MoALD. Relevant staff members have been trained to give continuity to using these tools, methods and technologies. DHM and NARC have owned and institutionalized the methods and approaches involved in agro-meteorological forecasting.
113. At the beneficiary's level, the evidences collected indicate that the knowledge and skills involved in climate adaptive agricultural practices have been well taken and are being practiced by all FFS groups visited. They have also been supported with appropriate alternative livelihoods measures, and appropriate tools and technologies for community assets protection all of which they own now.
114. These evidences indicate the project was to a larger extent successful in creating ownership among the counterparts and stakeholders at multiple levels.

5.2 Sustainability of Achieved Results

Finding 21: Most of the achieved results are highly likely to sustain.

115. The project has shown many positive signs of sustainability of achieved results. As observed in FFS groups, climate-adaptive good practices introduced by the project, and field tested and adopted by the farmers are highly likely to sustain so long as those practices fail due to further increase in climate variability or in case farmers find better productive options.
116. Many project introduced farming techniques such as direct seeding of rice in dry and/or wet conditions are not only productive but also labour efficient. Hence they are highly likely to sustain in the face of acute labour shortage in Nepal owing to widespread migration.
117. Alternative livelihoods measures such as river bed vegetable cultivation, climate adaptive approaches to livestock rearing and use of UMMB are highly likely to sustain as they are pro-poor and quick income generating, and contributing to women's economic empowerment as well. The agriculture equipment e.g., drum seeder, zero tillage, chaff cutter etc. introduced by the project have reduced the work load and contributed in saving the cost of labour, and therefore are highly likely sustain.
118. Sustainability of some achieved results such as institutionalized technical and technological capacities at national level in MoALD and NARC will depend on the extent to which they are used and maintained including capacity building of new staff and refresher trainings to those already

taking care of vulnerability and risk assessment tools, crop situation and yield assessment methods and agro-meteorological forecasting.

Finding 22: The sustainability of many adaptive agriculture practices to some extent will depend on the support available to farmers in terms of fertilizers, seeds and irrigation facilities from local and provincial government agencies.

113 Limited use of water for irrigation, good quality seeds, and chemical fertilizers is unavoidable even in case of climate adaptive good agriculture practices. FFS groups have learned the wise use of chemical fertilizer, and project has supported them to harness and protect their water sources. Yet some FFS group members in Kapilbastu and Siraha districts said they face water scarcity and shortage of fertilizer during every paddy and wheat cropping seasons. Most of the western terai districts face water scarcity in cropping seasons basically because of unavailability of irrigation facility and delayed and reduced rainfall during monsoon.

5.3 Environmental, Social and Financial Sustainability

Finding 23: Project has meaningfully contributed in protecting scarce natural resources such as water and soil and in enhancing the environmental, social and financial sustainability of agriculture sector in project districts.

114. Climate adaptive agriculture practices are in general environment friendly. During interaction with FFS group members in the field they shared their experience with many such practices such as limited use of fertilizers, regulated use of irrigation, green manuring and conservation of moisture in soil, minimum disturbance to soil organism, knowledge and skills of managing useful and harmful insects in crops, preparation and use of "Jholmol" as organic fertilizer in vegetable cultivation. They confirmed that these practices did not only spare them from investing money in chemical fertilizers and insecticides but also were helpful in improving health of soil, water and agriculture production system. All available evidences of project intervention suggest that the project has significantly contributed in enhancing the environmental sustainability of agriculture sector.
115. In most of FGDs and interviews, it was shared that men and women outside the group curiously watched whatever FFS group was doing during FFS sessions, and later many such practices were copied and replicated in neighbourhood. This probably is the best evidence of not only the social acceptance but also social sustainability of climate adaptive agricultural practices.
116. In most cases, the FFS groups were found either having their own already registered saving and credit group (CBO) or they have organised one among themselves and preparing to get registered as a CBO. In most cases, the FFS group members were found associated with one out of many already existing CBOs e.g., mothers' group, farmers' group, milk producers' group, vegetable farmers' group, forest users group, water users' group etc.
117. In most cases, FFS groups were found registered in the beginning as FFS groups in DADO/DLSO and later in their respective local governments as FFS groups. Registration entitles them to seek and get agriculture related support and services from government and non-government agencies

relatively easily on priority basis. Evidences indicate that achieved project results are socially sustainable in project districts.

118. The financial sustainability of project's achieved results is reflected in enhanced production of crops, vegetables, milk and meat perceived by FFS groups as revealed during FGDs/interviews in FFS groups, and also reported in the end line survey findings.
119. FFS group members and especially the land poor, vulnerable farmer members indicated that they could benefit from inter-cropping of maize and beans, efficient use of paddy land for vegetable cultivation due to early harvesting of paddy, diversified farm-based livelihoods and income generation. They did not have to spend as they were used to in buying chemical fertilizers and insecticides in the past. The available evidences indicate that the achieved results are financially efficient and sustainable.
120. Farmers in FFS groups consulted reported that they were used to a situation of "no water when seriously required and too much water when not required at all". Regulated use of water introduced through plastic ponds, water tanks, sprinklers, pumping sets and shallow tube wells was useful in conserving and using water which is a scarce natural resource. FFS group members seemed to have realized that they are now protecting soil from getting polluted through climate adaptive agriculture practices. It is evident from FFS groups' perception that the project has meaningfully contributed in sustainable usage of scarce natural resources such as soil and water. Overall the sustainability of the project's achieved results face negligible if any risk at all and hence, rated **Likely**.

5.4 Stakeholder Engagement

121. Review and assessment of project reports and further validation reveals that the project engaged only with most relevant government stakeholders at multiple levels other than those hired as service providers. Two important adjustments that the project had to undertake was to engage with 1) provincial government bodies e.g. AKCs and VHLSCs which got established after removal of regional and district level agriculture sector set ups and 2) relevant Palikas after the merger of project VDCs into them.
122. The pro-active role of district agriculture and livestock offices as envisaged in project implementation arrangement could not be realized in full due to various regions explained in previous sections. Project had to adjust and adapt to the changed organizational and governance situation. And to do so, it intensively trained and used its VDC level social mobilizers, and sensitized, oriented and trained newly elected local government office bearers and agriculture sector staff available in local government offices and worked with them.
123. This evaluation concludes that the project was adaptive in stakeholder engagement and it managed to achieve its intended results in the best possible manner by engaging with the most relevant stakeholders.

5.5 Gender

Finding 24: The project has, to a possible extent contributed in economic and social empowerment of most vulnerable FFS group members and specifically the women.

124. The gender disaggregated figures of 120 FFS groups show 74% women membership. There were 148 women out of 186 interacted with in FGDs organized in 7 FFS groups in course of this evaluation. Majority of women and men FFS members interviewed were land poor and from most vulnerable areas of VDCs.
125. In most cases, women spoke with ease and confidence except for some exceptions especially in FFS groups of southern most areas of Siraha and Kapilbastu. Women FFS members from north of highway VDCs and from Arghakhanchi and Udaypur districts comprised mostly of hill communities and were relatively loud and clear in sharing their experiences with project activities.
126. Project reports indicate that FFS group members were carefully selected from among the most vulnerable households in project VDCs in close consultation with local social actors and VDC representatives. Agriculture sector intervention, alternative livelihoods and small physical measures for community assets protection were selected based on priority needs of most vulnerable FFS members as indicated in CBA planning process and further validated through gender analysis in project districts.
127. Evidences were collected through one to one interviews with single-woman household farmers, and poorest FFS members during field visits regarding whether the project did take all possible measures to contribute to capacitating and economically empowering most vulnerable among them. Most of the respondents said that during FFS sessions, the trainers and project officials had kept the poorest and women members in the forefront of all the activities. Prior to alternative livelihoods support, the project officials personally came to their doors, discussed with them about their social and economic constraints, existing livelihoods measures, capacities and interests. The project provided them necessary skills training and financial/material support as per their interest and capacity. Most of the vulnerable and women FFS members consulted confirmed that they are now doing better financially than in the past with newly started livelihoods enterprises.
128. In response to enquiry on social aspects, some women respondents revealed that in the beginning of the project, the male elders of their households were reluctant to letting them join the FFS group and participate in FFS sessions. Traditionally, women in terai communities of Kapilbastu and Siraha districts require to keep their heads and face covered in front of the male elders of their family and village. Respondents in these communities reported that after getting exposed to new knowledge and skills they have started participating in family discussions and often keeping their heads uncovered in society. Male elders are also slowly getting influenced by such societal changes. This level of social empowerment among women in the FFS groups cannot be attributed fully to this project given many other development factors have also been in play since long influencing the changes in traditional societies of terai districts. Nevertheless, these evidences indicate that this project has contributed meaningfully to certain extent in women's struggle against male domination in their households and societies.

5.6 Progress to Impact

Finding 25: Progress to impact is as per the project's intended outcomes and objectives however, a robust agriculture sector support mechanism is required to sustain the impact in future.

129. The evaluation of progress to impact as per the identified impact pathways in the reconstructed ToC (in the inception report) indicates that the project has been successful in making impact along all five impact pathways leading to achieving the goal of the project. However, sustaining this impact in future will require a robust agriculture sector support mechanism. The progress to impact as per the five impact pathways are:

- 1) *Strengthening of technical and institutional capacities of agriculture sector on climate change adaptation at national, district and local levels:* There exist demonstrated evidences of strengthened national and local level technical and institutional capacities. MoALD and NARC have now enhanced technical capacities on improved tools and methods of crop assessment and yield forecasting, agro-meteorological forecasting, vulnerability and risk assessment approaches. At local level, the FFS groups have acquired new knowledge and skills of climate adaptive agriculture practices and also are capable of making best use of simple climate adaptive technologies to protect and increase their agriculture and livestock production. Most of them have got registered in government institutions and have indicated that they are committed to continue with their climate adaptive agriculture practices as a group. At district level, whatever technical capacity strengthening had happened, although is no more fully retained in the project districts, has yet been contributing to project's intended results to some extent wherever they exist.
- 2) *Integration of adaptation in to national food and agriculture policies, strategies, programs and plans:* It is likely that the government and the agriculture sector will take time in integrating most of the policy mainstreaming recommendations made by this project through its report on mainstreaming of climate change concerns in to agriculture sector policies and programs. Nevertheless, the recently approved the National Climate Change Policy of Nepal, 2019 has already mainstreamed one policy and six strategy level recommendations made by this project. This indicates that most of the policy mainstreaming recommendations of this project has got fairly high chances of getting mainstreamed in to Nepal's food and agriculture sector policies and plans in due course of time.
- 3) *Technical support/assistance for better adaptation planning and execution at local level:* Four municipalities and four Gaunpalikas in which most of project's 120 FFS groups got merged, were capacitated and involved in preparation "Vulnerability and Risks database", and in preparing risk reduction and climate adaptation plans. The prepared plans were thoroughly reviewed through community level consultations and endorsed by the respective municipalities and palikas. They have expressed their commitment to implementing these plans and some of them have already allocated resources to do so. The execution of CBAs has already been demonstrated to local governments by CBA based project intervention for climate adaptive agriculture practices in 120 farmers groups under FFS approach.
- 4) *Improvement of knowledge and awareness on climate change resulting in improved adaptation:* The evidences from 7 out of 120 FFS groups reveals that project has actively engaged with most vulnerable groups of people for the improvement of their climate

change related knowledge and awareness. Climate change has been negatively impacting on their agriculture based livelihoods. However, following the FFS approach, they engaged in learning by doing in all cropping seasons for three years. This has resulted in their improved adaptation capacity and they are now involved in climate adaptive agriculture which is also rapidly replicating in their neighborhoods.

- 5) *Transfer of adaptation technologies and strengthening of livelihoods strategies through promotion of community based adaptation:* As already noted in previous sections, a range of simple, easy to learn and cost-effective adaptation technologies were introduced by the project at FFS group level for strengthening of livelihoods strategies. Preparation and use of UMMBs (mineral blocks) using mineral blocker in livestock rearing, dry and wet DSR technologies, river bed vegetable farming, cattle shed improvement, rearing of improved varieties of goats, pigs and fish farming were already visible in the FFS groups visited in course of evaluation. Most of these livelihoods strategies are actually not new but attached to them after project intervention were the simple yet effective climate adaptive technologies to reduce vulnerabilities and risks which the FFS groups field tested, accepted and adapted in their agriculture practices.

Finding 26: The project is likely to contribute to local, provincial and national level policy making to a larger extent

130. Given that eight local governments have their RR/CCA plans endorsed by them, and a critical mass of community members engaged in preparation of those plans, it is highly likely that these local governments will be under ethical and popular pressure to include climate adaptive agriculture policies and implement those plans as appropriate.
131. There exist reported evidences that the Agriculture sector programs e.g. PM-AMP and an NGO in Siraha, and USAID KISSAN II in Arghakhanchi, many municipalities in project districts, AKCs in Kapilbastu and Saptari - all had carefully observed the changes brought about under FFS approach by this project in agriculture production and livelihoods through simple adaptive technologies. Based on this informed – based learning they replicated many such practices in their respective working areas.
132. The project districts are located now in provinces 1, 2 and 5 where a reasonable number of vulnerable farmers organized in FFS groups are now engaged in climate adaptive agriculture practices. Given the perceived benefits of such agriculture practices many other farmers in the neighbourhood are also adopting them and the newly instituted provincial government agencies e.g., AKCs and VHLSCs are also slowly promoting such practices. At the national level the recently published Climate Change Policy, 2019 has already included one policy and six strategy level recommendations provided by this project for mainstreaming of the climate change adaptation in to agriculture sector policy and plans.

5.7 Capacity Development and Knowledge Management

Finding 25: Capacity Development at multiple levels was key to achieving project's intended results and ensuring the sustainability of the achievements.

133. Interviews and interactions at multiple levels indicated that capacity development activities were designed based on systematically carried out training needs assessment for designated specific areas. Many orientation, sensitization and training workshops were organized at district, provincial and national levels in course of implementing different project activities. Community based adaptation planning in FFS groups was needs based and provided training needs at farmers level. Social and gender analysis was carried out with focus on capacity needs of women and most vulnerable FFS group members.
134. The project has documented and developed a wide range of knowledge management products. The key knowledge management products are: 1) FFS Manuals on crops and livestock, 2) Technical Manuals on crops and livestock, 3) Policy Mainstreaming Report, 4) Awareness raising, knowledge management and communication strategy, 5) Training Manuals for national and for district level climate adaptation in agriculture sector training programs, 6) Vulnerability and Risk Assessment Reports and Risk Reduction and Climate Adaptation Plans of 8 Palikas, 7) Voluntary Adaptation Planning Guidelines for Municipalities and Gaunpalikas, 8) Fact sheets of Climate Adaptive Technologies (in Nepali Language), 9) Success stories of project. The project has developed and uploaded 8 videos on project intervention and achievements.
135. Assessments of project's outcomes and objectives indicate that the diverse elements of 'capacity development' in the form of knowledge, skills and/or attitude building at multiple levels has remained at the central point of this project. As reflected in the previous section 5.6, the five impact pathways of the ToC leading to the intended project result have moved through the capacity development in one way or the other. The action learning at farmer community's level, and, orientation, sensitization and knowledge and skills development at local, provincial and central government level supported through technology transfer and a range of field tested knowledge management products for wider dissemination assure the continuity, replicability and sustainability of many achieved outcomes to a larger extent.

6. Conclusions and recommendations

6.1 Conclusions

Conclusion 1: This project was a relevant initiative for Nepal's agriculture sector geared at strengthening institutional and technical capacities at multiple levels to reducing vulnerability and promoting climate-resilient practices, strategies and plans.

136. The project objectives and outcomes are well reflected Nepal's agriculture sector priorities, and are fully in line with the global efforts aimed at improving awareness on climate impacts and adaption, strengthening capacities and reducing climate risks in agriculture as reflected in GEF CCAs 1,2 and 3 and FAO strategic objective (SO) 2.
137. The project design did take care of the major climate change impact related barriers facing Nepal's agriculture sector that required urgent and immediate attention. It however, became little complex with too many outcomes of which some could better be justified as outputs. Consultation at PMU level revealed that resource allocation for capacity strengthening along different components became cumbersome as each component consisted of elements of capacity development. Additionally, as discussed under Finding 2 (paragraph 45, 46) the outcomes 1.1 and 2.2 would have been better justified as standalone outputs making it simple for project implementation. This complexity in project design got induced basically because in order to align it with GEF/LDCF outcomes four project components were framed, around which eight outcomes were identified. This complexity could have been eliminated by taking up the existing four components as four project outcomes and defining outputs within each of those outcomes. The phrasing of outcome 1.2 was over ambitious since it intended to achieve mainstreaming of CC adaptation in to agriculture sector policies and plans, which is basically the government's prerogative.

Conclusion 2: The project contributed remarkably in strengthening institutional and technical capacities at national, district and local levels, but the project districts could benefit to a limited extent only due to relocation and scattering of trained staff.

138. Policy and decision makers in MoALD and its two departments and in NARC are now better equipped with contemporary knowledge on climate change adaptation. They made it clear during consultation that they are technically much better with learning from this project in terms of integrating climate adaptation in to agriculture sector policy and plans.
139. At local level, a cadre of 150 FFS facilitators and social mobilizers have been created in four project districts. They are capable of facilitating and demonstrating climate adaptive agricultural practices on the ground. 3484 relatively poor and vulnerable farmer households are engaged in climate adaptive agriculture practices and alternative livelihoods strategies. Training manuals on CCA for national and district level training are in place, and likely to be integrated into agriculture sector training programs in near future. Cross-sectoral coordination mechanism at MoALD has been strengthened. The inclusion of project-recommended one policy and six strategy into the recently published "the National Climate Change Policy of Nepal, 2019" is indicative of government's

commitment to mainstreaming of climate change concerns into agriculture sector policies, strategies and plans as per the report on policy mainstreaming submitted by this project.

Conclusion 3: Project has made remarkable contribution in improving assessment, monitoring and providing advance early warning information on vulnerabilities and risks of climate change and agro-meteorological forecasts to assist better adaptation planning.

140. This evaluation found that a team of agriculture scientists in MoALD are now equipped with tools and methods involved in crop modelling, crop assessment and yield forecasting and the tools and methods are institutionalized in the MoALD. NARC and DHM worked jointly to develop weekly agro-advisory for 55 weeks and institutionalized the process and procedure involved in it in their respective institutions. During consultations they expressed their commitment to continue with weekly meteorological forecasts and agro-advisory production and dissemination in collaboration with MoALD and provincial governments in future.
141. Project beneficiaries in FFS groups have demonstrated that they are now capable of reading the agro-meteorological devices provided to them and interpreting and using agro-advisories. The technicalities involved in vulnerability and risk assessment, and in climate change adaptation planning are better understood by the selected office bearers and agriculture sector staff of local governments in eight Palikas. Responsible office bearers of two municipalities during consultations reported that they are now better sensitized and capable of undertaking VRA and RR/CCA planning with minimum support. In 8 palikas, 192 local community members in different settlements are oriented, sensitized and trained to enable them make meaningful contribution with minimum technical support to undertaken RR/CCA planning.

Conclusion 4: Project was instrumental in improving awareness, knowledge and communication on climate change impacts and adaptation.

142. The project successfully prepared a cadre of CCA practitioner farmers and FFS facilitators in four project districts who believe in and are capable of demonstrating climate adaptive agriculture practices. Farmers in neighbourhoods of FFS groups in all districts are reported to have replicated many such climate adaptive practices. Formal interaction with office bearers of local governments and other project staff indicated that wider replication project promoted seed varieties, adaptive approaches technologies has been taking place.
143. Project has produced a wide range of knowledge and awareness raising products related to climate adaptive seeds and breeds, practices and technologies to be uploaded on the MoALD website. Eight awareness raising videos have been uploaded on you tube.
144. A comprehensive multi-stakeholder awareness-raising, knowledge management and communication strategy has been developed through intensive involvement of agriculture sector policy makers and implementers and following through a multi-level consultation process with a wide range of stakeholders of agriculture sector. This strategy provides a two-way dialogue and communication between farmers, service providers, technicians and experts at the multiple level of governance structure. Once implemented this will further contribute to improving awareness, knowledge and communication.

Conclusion 5: Project has contributed to a larger extent in prioritizing and implementing local investment by promoting community based adaptation to strengthen livelihood strategies and transfer of adaptation technology in targeted areas.

145. The community based adaptation approaches promoted by the project are location specific, diversified and focussed at protecting productive capacity of land. Climate adaptive agriculture practices are nicely interwoven in the diversified livelihoods strategies promoted by the project. Accordingly, the technologies adopted are simple, easy to learn and effective in location specific contexts.
146. The FFS approach proved most effective in enabling FFS group field test seeds and breeds, the associated agriculture practices and technologies, compare them with locally existing seeds, breeds, practices and technology and make their own judgements for adopting or rejecting new seeds, breeds, practices and technology.
147. Communities in FFS groups and in 8 Palikas had opportunity to learn and reflect on their livelihoods and natural resource based vulnerabilities, potential opportunities available to them and involve in preparing their CBA plans and RR/CCA Plans. This approach enables them to prioritize their investment in climate adaptive approaches, strategies and technology to protect and strengthen their livelihoods measures.

Conclusion 6: Project's institutional arrangement was conducive with adaptive project management and meaningful partnership that contributed in result oriented implementation of project activities.

148. The institutional arrangement pegged on the working experience of the past between MoALD and FAO. It was adaptive and effective even under the changed governance structure. Partnership between MoALD, NARC and DHM was built on the focus of this project matching with their organizational needs and objectives.
149. The project had a relatively small yet efficient PMU technically assisted by a technical coordination committee including the MoALD appointed NPD. The project adjusted to the changed governance structure and managed to develop working relationship with newly established local and provincial government entities relatively quickly, and ensured the continued implementation of field activities in changed organizational context. The human and financial resources available to the project were used in best possible cost-effective manner. The project records show that the expected co-financing occurred in time and in full.

Conclusion 7: Project's M&E system was structured, systematic, budgeted and clear on monitoring mechanism and reporting timelines.

150. Overall the project M&E system followed the GEF monitoring and evaluation guidelines. There was timely review and reporting of inputs provided, activities undertaken and progress on achieving outputs including issues being encountered.

Conclusion 8: The project was able to meet most of the indicators of sustainability to a larger extent.

151. All major intended project outcomes got institutionalized and routed in federal and local governments in course of project implementation. The MoALD, NARC and DHM took over the climate adaptive tools, methods and technology, the eight local governments have their RR/CCA plans and a CCA planning guideline including technical capacity to implement it and move towards climate adaptive practices, the farming communities in FFS groups have newly acquired knowledge, skills and technology to continue with climate adaptive agriculture practices that they themselves have field tested, validated and practiced.
152. The chances of sustainability of most of project's achieved results are relatively high. Climate adaptive agriculture practices promoted by the project are environment friendly, socially acceptable and financially viable. Many such practices are soil and water protective, labour efficient and gender friendly reducing the women's drudgery.
153. Sustainability of capacity development at local level is assured since it followed a participatory learning by doing approach which is a holistic approach to strengthening capacity. Achieved results on capacity development at all levels is visible and being practiced to a larger extent. However, sustainability of capacity development will require continued institutional back-up, resource allocation, follow up training and development of the next generation of experts, practitioners and champions of climate adaptive agriculture promotion at multiple levels.

Conclusion 9: Project took all possible measures in social and economic empowerment of most vulnerable female and male members in FFS groups.

154. Majority of female farmers from most vulnerable areas of the project districts were organized into FFS groups. Agriculture and livelihoods based priority needs and issues of single women and women-led households got reflected in the CBA planning process which was further validated through social and gender analysis. Accordingly, most project activities at FFS level focused at addressing the livelihoods security issues of most vulnerable FFS group members and categorically of the women among them.
155. Project did not categorically focus at any social issues, yet the project implementation and delivery mechanism contributed in helping the socially vulnerable members of FFS groups build their confidence and speak out in public about their needs and priorities.

Conclusion 10. Informed-based replication of climate adaptive agriculture practices attributable to project is taking place.

156. Evidences of informed-based replication of seeds, breeds, skills and technology of project promoted climate adaptive practices were reported and observed in all four project districts. A critical mass of local communities especially in 8 Palikas involved in preparing their RR/CCA plans exist and they are highly likely to influence the policy making of their respective local government entities in favour of climate adaptive agriculture practices. No any barriers or other risks that potentially could prevent future progress towards the achieved results were reported and observed in course of evaluation.
157. Evidences of promotion of climate adaptive practices and distribution of seeds and breeds by provincial government institutions (AKCs and VHLSCs), agriculture sector projects and NGOs in

project districts are some of the positive indications of informed-based replication of climate adaptive practices attributable to this project.

Conclusion 11: The stakeholders and beneficiaries have demonstrated the success of capacity building initiatives to a larger extent by adopting and engaging in climate change adaptation in agriculture sector.

158. All capacity building initiatives were relevant and designed based on systematic training needs assessment. Especially the FFS approach to capacity building at beneficiary level was highly effective despite being time and efforts consuming. It helped the beneficiary challenge their own perception, knowledge and attitude and accept and adopt the new knowledge and skills for climate change adaptation in their agriculture based livelihoods.
159. Project has developed a wide range of knowledge management products including climate adaptive good practices in agriculture. However, it is yet to be widely disseminated online and through publication.

6.2 Recommendations

Recommendations to MoALD

Recommendation 1. Maintain, up-grade and strengthen the technical, technological and institutional capacity of the division responsible for crop modelling, crop assessment and yield forecasting in MoALD.

160. This project has contributed in institutionalizing methods, tools and technology involved in crop modelling, crop assessment and yield forecasting in MoALD including technical capacity strengthening of limited number of staff to give continuity to this work. Maintenance, upgrading and up-keeping of this institutionalized capacity will require upgrading of technology and new crops of trained staff in due course of time.

Recommendation 2. Institutionalize a cross-sectoral coordination mechanism in MoALD and strengthen partnership between NARC, DHM and interested provincial governments to give continuity to production and dissemination of farmer friendly agro-advisory.

161. This project has demonstrated that the production and dissemination of farmer friendly weekly agro-advisory was a useful decision support system that helped farmers safeguard their crops and livestock and take agriculture related decisions well in time. This communication based decision support system holds great potentiality in safeguarding and increasing agriculture and livestock production in future. Under the federal structure the provincial governments would now need to take lead and work with NARC and DHM to give continuity to agro-advisory production and dissemination. However, the MoALD would need to facilitate and coordinate between these three institutions and provide policy, institutional and technical backstopping to ensure that the agro-advisory dissemination in districts willing and interested in it gets continuity.

Recommendation 3. Provide policy, institutional and technical support to provincial governments to institutionalize well-resourced training and extension wing in newly established AKCs and VHLSCs to promote climate adaptive agriculture practices.

162. This project has demonstrated that the FFS approach to technical and institutional capacity strengthening of vulnerable farmers is the best approach to enabling vulnerable farmers to adopt climate adaptive agriculture practices and enhance their income through diversified livelihoods strategies. Under the existing climate change scenario, farmers will increasingly need demonstrated climate adaptive knowledge, skills, seeds, breeds, fertilizers and water for irrigation to maintain and enhance their agriculture and livestock production. AKCs and VHLSCs are mandated for these support services. These newly born institutions have replaced the district offices of agriculture and livestock and are mandated to create and disseminate knowledge, and train frontline agriculture sector staff located in local government entities including farmers and their networks to boost agriculture and production.

Recommendation to Provincial Governments

Recommendation 4. Institutionalize FFS Approach in AKCs and undertake phase wise implementation in districts or pocket areas in close coordination with and support from local governments to support intensive promotion and replication of climate adaptive agriculture practices.

163. FFS approach has emerged as an effective approach for training and extension in farmers' groups. Provincial governments need to institutionalize this approach in AKCs. AKCs can either use the available cadre of FFS facilitators or create a new pool of FFS facilitators working closely with local governments interested and willing to promote climate adaptive agriculture practices within their municipalities/palikas. In addition to undertaking its regular mandates AKCs should be given the responsibility to run seasonal FFS in Palikas as per their request and also in pilot areas where farmers' groups express their interest and willingness to participate in AKC organized FFS sessions. AKCs should have fixed target and resources available to run FFS in their working areas.

Recommendation to 8 Municipality and Gaunpalika Governments having their RR/CCA Plans

Recommendation 5. Allocate resources and undertake phase-wise implementation of RR/CCA Plan with technical assistance from AKCs and VHLSCs.

164. The implementation of palika level RR/CCA plans prepared under this project provide an opportunity to strengthen and replicate knowledge, skills and capacity of farming communities to reduce vulnerability and increase adaptive capacity to protect and improve agriculture practices and sustain livelihoods. Municipality and Palika governments are responsible for all aspects of local development in their area of jurisdiction. The 8 local governments have a fairly good number of already experienced FFS groups and FFS facilitators who engaged in preparing and implementing their CBA plans, enhanced their knowledge and skills and adopted climate adaptive agriculture practices. They also have trained community members, agriculture sector staff and office bearers who were trained and engaged in VRA and RR/CCA planning process. So all they need to do now is to prioritize the activities of RR/CCA plan on annual basis, make resource allocation and implementation arrangements with technical support from AKCs and

VHLSC as appropriate and implement the plan. The lesson learnt will be an encouraging experience for them and a motivating factor for the local governments in their neighbourhood.

Recommendation to DHM

Recommendation 6. Continue to work with NARC, MoALD and develop partnership with Provincial Governments to give continuity to agro-meteorological forecasts production and dissemination.

165. DHM has realized the value and significance of agrometeorological forecast for agriculture practices and livelihoods protection working closely with NARC and MoALD. This has come out as a marketable commodity which it could sale to provincial governments interested and willing to invest in agro-meteorological forecast production and dissemination in their provinces. Agro-meteorological forecasts also provide an enhanced significance to the work of DHM as well. So it would be a win-win situation for DHM, NARC and MoLD to bring on board interested and willing provincial governments and continue with agro-meteorological forecasts and agro=advisory production and dissemination..

Recommendation to FAO

Recommendation 7. Assist the Federal Government of Nepal and the interested Provincial Governments through another project to develop and implement a longer term project at a wider scale on climate change adaptation in agriculture sector building on the achievements of the FFS approach in this project.

166. This project has been successful to a larger extent in enabling beneficiaries and stakeholders develop their technical and institutional capacity on climate change adaptation in agriculture sector. At the farmers' level however, the coverage of this project was limited to 120 FFS groups comprising just 3484 farming households. The climate change adaptation approaches, practices and associated technologies tend to be location specific. Replication of the learning from a project of this coverage probably would have many limitations given Nepal's diverse climatic conditions even in small span of altitudinal variation. It is therefore, logical for Nepal to embark on a project of this framework with a coverage in all physiographic and climatic regions.

Recommendation 7. Simplify the procurement policies and procedures for expendable and non-expandable commodities procurements in case of projects.

167. Activities related to alternative livelihoods support and community assets protection were started relatively lately in the project and that got further delayed due to the procurement policy and procedures of FAO. Some Goods and equipment most needed in course of the FFS sessions could not be availed in time. The boer bucks were being delivered to the project beneficiaries until as lately as in June 2019 when the project was at the stage of phasing out. The achievement of alternative livelihoods support could not be monitored adequately due to the delay in implementing this activity.

Recommendation to GEF Project formulators

Recommendation 8. Ensure the project design is simple and the result framework has a logically justifiable cause and effect relationship to the best possible manner.

168. This project had some design related problems which could have been eliminated within its framework as explained under sub-section 3.1 (paragraph 45). The project components themselves could have been taken as project outcomes and some of the defined outcomes could have been better justified as outputs especially the outcomes with only one outputs in this case.

7. Lessons learned

1. Even a mild level of risk identified in the project development stage could have severe consequences if the project fails to be adaptive and adequate mitigation measures are not taken well in time. In this case, the project was able to adapt and adjust to the administrative changes in the middle of implementation.
2. FFS approach to strengthening the capacity of vulnerable agriculture dependent communities for climate adaptation and livelihoods security was the best approach to making farming communities learn at knowledge, skills and attitude levels all at a time.
3. Enabling farmers read agro-meteorological devices and interpret the information for agricultural practices add value to the FFS sessions. However, providing them such devices was not worth it as it requires up-keeping, maintenance and replacing, which the FFS groups are neither expected nor likely to do.

8. Appendices

Appendix 1. GEF Evaluation Criteria Rating Table

FAO - GEF Rating Scheme	Rating	Summary Comments ¹⁵
1) RELEVANCE		
Overall relevance of the project	S	Fully relevant, design little complex
2) ACHIEVEMENT OF PROJECT RESULTS (EFFECTIVENESS)		
Overall assessment of project results	S	Achieved as expected with minor shortcomings
Outcome 1.1	MS	Achieved more or less as expected with minor shortcomings (refer to Finding 4, 5)
Outcome 1.2	S	Achieved as expected (Finding 6)
Outcome 2.1	S	Achieved as expected (Finding 7, 8)
Outcome 2.2	S	Achieved as expected (Finding 9, 10)
Outcome 3.1	S	Achieved as expect (Finding 10)
Outcome 3.2	MS	Achieved more or less as expected with minor shortcomings (Finding 11)
Outcome 4.1	S	Achieved as expected (Finding 12, 14)
Outcome 4.2	S	Achieved as expected (Finding 15, 16)
3) EFFICIENCY, PROJECT IMPLEMENTATION & EXECUTION		
Overall quality of project implementation & adaptive management (implementing agency)	S	Quality of implementation met the expectation (Finding 17 -19)
Quality of execution (executing agencies)	S	Quality of execution met the expectation with minor shortcomings
Efficiency (incl. cost effectiveness and timeliness)	S	Efficient with minor shortcomings
4) MONITORING AND EVALUATION		
Overall quality of M&E	S	Designed as per GEF and FAO standard guidelines (Chapter 4 Para 96-99)
M&E design at project start up	S	Supportive to quality and standard
M&E plan implementation	MS	Met expectation with minor shortcomings (paragraph 99,100)
5) SUSTAINABILITY		
Overall sustainability	L	Negligible risk to sustainability (Finding 21, 22)
6) STAKEHOLDER ENGAGEMENT		
Overall quality of stakeholder engagement	S	Met the expectation with minor shortcomings

¹⁵ Include hyperlink to relevant sections in the report

Appendix 2- GEF Rating Scheme¹⁶

PROJECT RESULTS AND OUTCOMES

Project outcomes are rated based on the extent to which project objectives were achieved. A six-point rating scale is used to assess overall outcomes:

169. Rating	170. Description
171. Highly Satisfactory (HS)	172. "Level of outcomes achieved clearly exceeds expectations and/or there were no short comings."
173. Satisfactory (S)	174. "Level of outcomes achieved was as expected and/or there were no or minor short comings."
175. Moderately Satisfactory (MS)	176. "Level of outcomes achieved more or less as expected and/or there were moderate short comings."
177. Moderately Unsatisfactory (MU)	178. "Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings."
179. Unsatisfactory (U)	180. "Level of outcomes achieved substantially lower than expected and/or there were major short comings."
181. Highly Unsatisfactory (HU)	182. "Only a negligible level of outcomes achieved and/or there were severe short comings."
183. Unable to Assess (UA)	184. The available information does not allow an assessment of the level of outcome achievements.

185.

186.

During project implementation, the results framework of some projects may have been modified. In cases where modifications in the project impact, outcomes and outputs have not scaled down their overall scope, the evaluator should assess outcome achievements based on the revised results framework. In instances where the scope of the project objectives and outcomes has been scaled down, the magnitude of and necessity for downscaling is taken into account and despite achievement of results as per the revised results framework, where appropriate, a lower outcome effectiveness rating may be given.

PROJECT IMPLEMENTATION AND EXECUTION

Quality of implementation and of execution will be rated separately. Quality of implementation pertains to the role and responsibilities discharged by the GEF Agencies that have direct access to GEF resources. Quality of Execution pertains to the roles and responsibilities discharged by the country or regional counterparts that received GEF funds from the GEF Agencies and executed the funded activities on ground. The performance will be rated on a six-point scale:

187. Rating	188. Description
189. Highly Satisfactory (HS)	190. There were no shortcomings and quality of implementation or execution exceeded expectations.
191. Satisfactory (S)	192. There were no or minor shortcomings and quality of implementation or execution meets expectations.
193. Moderately Satisfactory (MS)	194. There were some shortcomings and quality of implementation or execution more or less meets expectations.

¹⁶ See instructions provided in Annex 2: Rating Scales in the "Guidelines for GEF Agencies in Conducting Terminal Evaluations for Full-sized Project", April 2017.

187. Rating	188. Description
195. Moderately Unsatisfactory (MU)	196. <i>There were significant shortcomings and quality of implementation or execution somewhat lower than expected.</i>
197. Unsatisfactory (U)	198. <i>There were major shortcomings and quality of implementation substantially lower than expected.</i>
199. Highly Unsatisfactory (HU)	200. <i>There were severe shortcomings in quality of implementation or execution.</i>
201. Unable to Assess (UA)	202. <i>The available information does not allow an assessment of the quality of implementation or execution.</i>

MONITORING AND EVALUATION

Quality of project M&E will be assessed in terms of:

Design

Implementation

SUSTAINABILITY

The sustainability will be assessed taking into account the risks related to financial, sociopolitical, institutional, and environmental sustainability of project outcomes. The evaluator may also take other risks into account that may affect sustainability. The overall sustainability will be assessed using a four-point scale:

Rating	Description
Likely (L)	<i>There is little or no risk to sustainability.</i>
Moderately Likely (ML)	<i>There are moderate risks to sustainability.</i>
Moderately Unlikely (MU)	<i>There are significant risks to sustainability.</i>
Unlikely (U)	<i>There are severe risks to sustainability.</i>
Unable to Assess (UA)	<i>Unable to assess the expected incidence and magnitude of risks to sustainability.</i>

Appendix 3: GEF Co-financing Table

Name of the Co-financer	Co-financer type ¹⁷	Type of co-financing ¹⁸	Co-financing at project start (Amount confirmed at GEF CEO endorsement/approval by the project design team) (in USD)			Materialized Co-financing at project closer in June, 2019 (in USD)		
			In-kind	Cash	Total	In-kind	Cash	Total
FAO	UTF	Grant	8,620,000		8,620,000	8,620,000		8,620,000
FAO/MTF	MTF	Grant	1,170,000		1,170,000	1,170,000		1,170,000
Govt. of Nepal	Govt. Fund	Grant	3,200,000		3,200,000	3,347,200		3,347,200
Grand Total (in USD)			12,990,000		12,990,000	13,137,200		13,137,200

¹⁷ Examples of categories include: local, provincial or national government; semi-government autonomous institutions; private sector; multilateral or bilateral organizations; educational and research institutions; Non-Profit organizations; Civil Society Organizations; foundations; beneficiaries; GEF agencies; and others (please explain).

¹⁸ Grants; loans; equity participation by beneficiaries (individuals) in form of cash; guarantees; in-kind or material contributions; and others (please explain).

Appendix 4: List of People interviewed/Consulted

Appendix 4.1: List of Farmers' Field School (FFS) Groups interacted with in Four Project Districts (Focus Group Discussion-FGD)

S.No.	Name of FFS Groups (members/Female+male)	Location (Local Govt., District)
1	Namuna Jalvayu Parivartan Anukulan Krishak Samuh (28/16+12)	Sihokhor VDC (Now Yashodhara Gaunpalika – 8), Kapilbastu
2	Milijuli Jalvayu Parivartan Anukulan Krishak Samuh (32/28+4)	Chanai VDC (Now Shivaraj Municipality – 4, Kapilbastu
3	Narapani Bhuwandanda Jalvayu Parivartan Anukulan Krishak Samuh (24, all Female members)	Narapani VDC (Now Sandhikharka Municipality – 6, Arghakhanchi
4	Patauti Nigali Jalvayu Anukulan Krishak Samuh (18, all female)	Patauti VDC (Now Panini Gaunpalika – 4, Arghakhanchi
5	Maa Kamala Jalvayu Anukulan Krishak Samuh (28/15+13)	Chatari VDC (Now Kalyanpur Municipality Ward No. 2), Siraha
6	Krishna Jalvayu Anukulan Krishak Samuh (30/21+9)	Gadha VDC (Now Lahan Municipality Ward No. 23), Siraha
7	Gherkhola Jalvayu Anukulan Krishak Samuh (26 female members)	Sundarpur VDC (Now Chaudandigadhi Municipality Ward No. 5, Udaypur

All together 186 FFS Group members of 7 FFS groups were interviewed through 7 FGDs in which 148 female and 38 male members got involved.

Appendix 4.2: List of Individuals Interviewed in Project Districts

District: **Kapilbastu**

S.No.	Name and title	Role/Organization
1	Mr. Tek Narayan Murao	Poorest member, Namuna FFS group Sihokhor
2	Mr. Ram brikshya Lohar	FFS Facilitator, Sagarmatha FFS group, Sihokhor
3	Mr. Binod Kumar Lohar	Social Mobilizer, Sihokhor VDC
4	Ms. Ganga Mainali	Facilitator and member, Milijuli FFS, Shivaraj Municipality - 4
5	Mr. Shiv Kumar Chaudhari	Junior Technician, Shivaraj Municipality
6	Mr. Ramesh Maurya	Social Mobilizer, Chanai VDC (now Shivaraj Municipality – 4)
7	Mr. Ram Govinda Arya	Chief, (Agriculture Knowledge Center – AKC), Kapilbastu
8	Mr. Nandalal Pandey	Plant Protection Officer, AKC, Kapilbastu
9	Mr. Niranjana Tiwari	Horticulture Development Officer, AKC Kapilbastu
10	Mr. Binod Kumar Srivastav	Technician, AKC, Kapilbastu
11	Mr. Luvkhush Prasad Kurmi	Technician, AKC, Kapilbastu

12	Mr. Aniruddha Prasad Ojha	Technician, AKC, Kapilbastu
13	Ms. Maya Jnwali	Women's Rights Advocate, FFS facilitator, Hariya FFS
14	Mr. Bibek Acharya	District Technical Coordinator, Kapilbastu

District: **Arghakhanchi**

S.No.	Name	Role/Organization
14	Mr. Krishna Bahadur Acharya	Ward Chairperson, Sandhikharka Municipality - 6,
15	Ms. Chandrakala B.K	Poorest member, Narapani Bhuwandanda CCA FFS
16	Ms. Indira K.C	Facilitator, Narapani Bhuwandanda CCA FFS
17	Ms. Ambika Thapa	Social Mobilizer, Narapani VDC/Sandhikharka - 6
18	Mr. Bishnu Pokhrel	Area Coordinator, KISAN II Project (funded by USAID Nepal)
19	Mr. Yogendra Marasinin	Livestock Technician, VHLSEC, Sandhikharka Municipality
20	Mr. Prakash Ghimire	Livestock Technician, VHLSEC, Sandhikharka Municipality
21	Mr. Devesh Kumar Mishra	Chief, Agriculture Knowledge Center - AKC, Arghakhanchi
22	Mr. Thirlal Gaire	Prime Minister Ag. Modernization Project, Arghakhanchi
23	Mr. Narayan Bhusal	Agriculture Technician, AKC, Arghakhanchi
24	Mr. Balram Ghimire	Agriculture Technician, AKC, Arghakhanchi
25	Ms. Sushila Bhattarai	Social Worker, Patauti Nigali CCA FFS, Panini Gaunpalika 4
26	Ms. Sita Bhattarai	FFS Facilitator, Patauti Nigali CCA FFS, Panini Gaunpalika 4
27	Mr. Tomlal Adhikari	Social Mobilizer, Patauti VDC, Panini Gaunpalika 4
28	Ms. Narmada Gaire	Vulnerable farmer, Patauti Nigali CCA FFS, Panini Gaunpalika 4
29	Mr. Pritam Bahadur Thapa	Ward Chair, Sandhikharka Nagarpalika Ward - 7
30	Mr. Dhan Prasad Paudel	District Technical Coordinator, Arghakhanchi

District: **Siraha**

30	Mr. Omprakash Mandal	FFS Facilitator Chatari, Kalyanpur 2
31	Ms. Kari Mukhiya	Single women member of Maa Kamala FFS Group
32	Ms. Dhiyoni Mukhiya	Poorest female member of Maa Kamala FFS group, Chatari
33	Ms. Ranjita Mandal	Social Mobilizer of Chatari Kalyanpur 2
34	Ms. Urmila Devi Chaudhary	Poorest member of Krishna Jalwayu Anukulan FFS, Gadha VDC
35	Mr. Tarakant Singh,	Facilitator, Krishna Jalwayu Anukulan FFS, Gadha VDC
36	Mr. Shiv Shankar Gupta	Social Mobilizer, Gadha VDC Siraha
37	Mr. Prakash Sah	Former Agriculture Development Officer of DADO, Siraha
38	Mr. Bhagirath Yadav	Chief, Agriculture Knowledge Center - AKC, Siraha and Saptrari
39	Mr. Ram Avtar Yadav	Agriculture Officer, AKC Siraha and Saptari
40	Mr. Fulgen Yadav	Head, Veterinary Hospital and Livestock Service Expert Center, (VHLSEC) Siraha
41	Mr. Ram Prवेश Chauhan	District Technical Coordinator, Siraha

District: **Udayapur**

41	Ms. Pushpa Parajuli	Poorest female member, Gherkhola Jalwayu Anukulan FFS, Sundarpur VDC (Now Chaudandi Municipality 5), Udaypur
42	Ms. Sushma Parajuli	FFS Facilitator, Gherkhola Jalwayu Anukulan FFS, Sundarpur
43	Ms. Bimala Khatri	Single Women Member, Gherkhola Jalwayu Anukulan FFS
44	Ms. Tara Nepali	Social Mobilizer, Sundarpur VDC (Now, Chaundandi Municipality5
45	Mr. Saroj Kant Adhikari	Chief, AKC Udaypur
46	Mr. Ram Bahadur Pokharel	Ward Chairperson, Katari Municipality Ward No. 3
47	Mr. Vishal Paudel	District Technical Coordinator, Udaypur

Appendix 4.3: List of Professionals Consulted at the National Level

S.No.	Name	Role/Organization
1	Dr. Suraj Pokharel	First NPD of the project and Retired Secretary, MoALD
2	Dr. Banshi Sharma	Director General, Department of Livestock Services, MoALD
3	Dr. Surya Prasad Paudel	Director General, Department of Agriculture, MoALD
4	Mr. Parshu Ram Adhikari	Undersecretary, Project Focal Person, DoA
5	Mr. Ghanshyam Malla	Project Focal Person from NARC
6	Mr. Amit Prasad Timilsina	Agronomist/Climate Impact Specialist, NARC
7	Mr. Basu Dev Lohani	DDG/Department of Irrigation, PSC/Technical Committee member
8	Dr. Hari Bahadur K.C	Present NPD of the Project
9	Ms. Bidya Pandey	Present Project Focal Person/MoALD
10	Mr. Deepak Bhandari	Crop Director, NARC and First Focal Person from NARC
11	Ms. Archana Shrestha	Project Focal Person from DHM
12	Mr. Beau Samuel Damen	Lead Technical Officer, FAORAP Bangkok
13	Mr. Ramasamy Selvaraju	AGDR, FAO Rome
14	Dr. Somsak Pipoppinyo	Country Representative, FAO Nepal Office
15	Dr. Krishna Prasad Pant	National Project Manager/Technical Coordinator, GCP/NEP/070 PMU, FAO Nepal

Appendix 5: List of documents consulted

FAO AT THE UNITED NATIONS, OFFICE OF EVALUATION. 2017. *Guidelines for assessment of gender mainstreaming available at: <http://www.fao.org/evaluation>*

GLOBAL ENVIRONMENT FACILITY. 2017. *Guidelines for GEF Agencies in conducting Terminal Evaluation for Full-Size Projects*

NEPAL INSTITUTE OF DEVELOPMENT STUDIES. *Pre-Mission Report on Final Survey of Project ""Reducing Vulnerability and Increasing Adaptive Capacity to Respond to Impacts of Climate Change and Variability for Sustainable Livelihood in Agriculture Sector in Nepal (2019/FANEP/FANEP/101837) submitted to FAO at UN Nepal.*

THE FEDERAL REPUBLIC GOVERNMENT OF NEPAL. 2019. *The National Climate Change Policy, 2019, Ministry of Forest and Environment, Nepal.*

UNITED NATIONS EVALUATION GROUP. 2016. *Norms and Standards for Evaluation, New York, UNEG available at: <http://www.unevaluation.org/2016-Norms-and-Standards>.*

Appendix 6 - List of Annexes

Annexes are available at <http://www.fao.org/evaluation/en/>

Annex 1. Terms of reference for the evaluation