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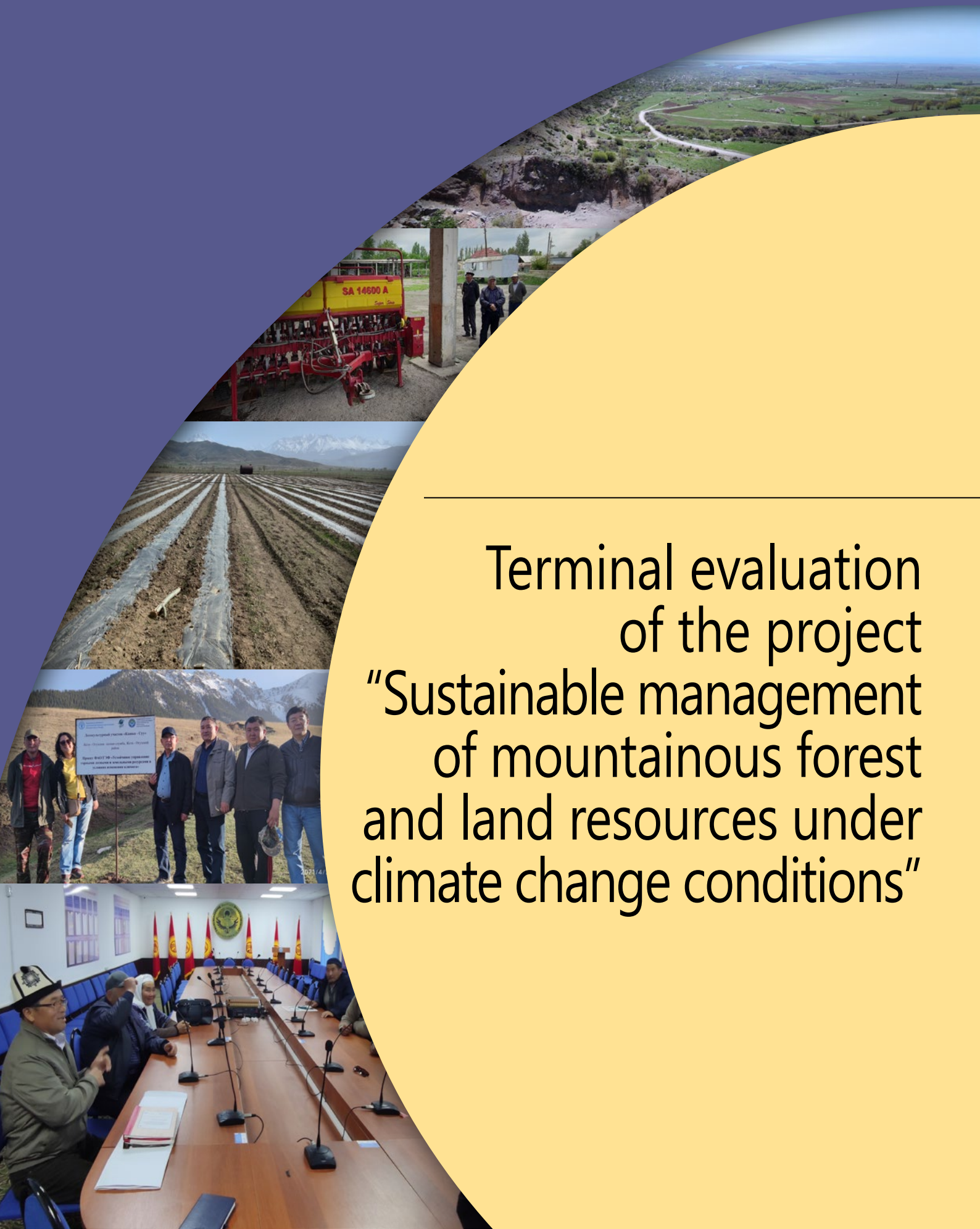

Terminal evaluation of the project "Sustainable management of mountainous forest and land resources under climate change conditions"

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Abstract

The project "Sustainable management of mountainous forest and land resources under climate change conditions" was implemented by FAO and financed by GEF.

The terminal evaluation took place mainly in Spring 2021, and the methodology included a literature review, remote interviews with key project stakeholders, and field visits to the sample of the project sites. Due to COVID-19 related restrictions, the team leader was not able to travel to Kyrgyzstan and participate in the field visits and all data collection on project sites was done by the national consultant.

Overall, the evaluation rated the project as "moderately satisfactory". Based on its findings, the evaluation presented four main conclusions:

i. The project was highly relevant to GEF, FAO and the national priorities as well the needs of the local communities.

ii. The project was highly relevant to GEF, FAO and the national priorities as well the needs of the local communities.

iii. In the areas where the project team had sufficient expertise, both in country and through Lead Technical Officer support, the use of project resources was strategic and cost-effective.

iv. Sustainability of results of different project activities depends, among other factors, upon the volume of investment necessary to support this sustainability. The results of the afforestation/rehabilitation activities of this project, and application of relatively inexpensive climate-smart agricultural techniques, are likely to be highly sustainable.

The evaluation made six recommendations:

Recommendation 1. To FAO Kyrgyzstan and Forest Service. Develop knowledge products that capture lessons learned through the application of new approaches to tree planting. (By June 2021).

Recommendation 2. To FAO. Consider supporting multi-focal projects through a team of Lead Technical Officers with a complementary set of expertise to ensure that each focus area of the project has sufficient thematic expertise.

Recommendation 3. To FAO and the Forest Service. Re-visit the project sites in five to ten years to check certain success factors, such as the tree survival rates. Note factors which affected the survival rates, and the geographic area variability. (Five to ten years from the project end)

Recommendation 4. To the Ministry of Agriculture, including the former SAEPF Department of Forest Ecosystem. Follow-up on regulatory recommendations developed with the project support, including results and recommendations of forest and agricultural policies, proposed amendments to Forest and Land codes, draft programmes and strategies. (No timeline)

Recommendation 5. To the Forest Service. Complete the development of the national Forest Information System and ensure its full use by leskhozes.

Recommendation 6. To the Forest Service. Lobby for the budget provisions of funds to continue afforestation/forest rehabilitation efforts using approaches piloted within the framework of this project. (Ongoing)

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The evaluation was carried out with the invaluable assistance of the FAO staff at the Kyrgyzstan Country Office and FAO Rome Office. Their insight, knowledge, advice and comments made this evaluation possible.

The evaluation benefited from the inputs of many other stakeholders, including government officers, farmers' organizations and the staff of other UN agencies, research centres and private sector. Their contributions were critical to the team's work and are deeply appreciated.

Abbreviations and acronyms

FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
IPCC	Intergovernmental Panel on Climate Change
LULUCF	Land use, land use change and forestry
M&E	Monitoring and evaluation
PSC	Project Steering Committee
SAEPF	State Agency for Environmental Protection and Forestry
SFM	Sustainable forest management
SLM	Sustainable land management
WFP	World Food Programme

Executive summary

Introduction

1. This terminal evaluation of the project "Sustainable management of mountainous forest and land resources under climate change conditions" (hereafter, "the project") is a requirement of the Global Environment Facility (GEF) and the Food and Agriculture Organization of the United Nations (FAO) for project monitoring and reporting purposes. The evaluation was conducted for both accountability and learning purposes of the GEF, FAO, national implementing partners and other participating institutions.

2. The terminal evaluation covered the entire project implementation period (1 August 2014 – 31 May 2021) including the results which took place after the mid-term review (MTR) (conducted in 2016). The terminal evaluation considered the findings, conclusions and recommendations of the MTR, and covered all the geographical areas (five provinces) where the project has been implemented.

3. The objectives of the terminal evaluation were to:

   i. Examine the extent and magnitude of the project achieving its stated objective, outputs and outcomes to date, and determine the likelihood of future impacts.

   ii. Provide an assessment of the project's performance (and factors affecting performance: design. M&E, implementation role, execution role, financial management, co-financing), gender-disaggregated achievements, and the implementation of planned project activities and outputs against actual results.

   iii. Synthesize lessons learned that may help in the design and implementation of future FAO and FAO-GEF Climate Change, Lands Degradation and/or Sustainable Land and Forest Management related initiatives.

4. The main audience and intended users of the evaluation are:

   i. The FAO Kyrgyzstan, the project Management Team, members of the Project Task Force (PTF) who will use the findings and lessons identified in the evaluation to finalize project activities; plan for sustainability of results achieved; and improve the formulation and implementation of similar projects.

   ii. Project governance and implementation bodies: the project Steering Committee (PSC), Technical Committee, project Planning Committees; as well as the Sustainable Land and Forest Management Platform.

   iii. The GEF, who will use the findings, aggregated across this and other evaluations, to inform strategic investment decisions in the future.

   iv. National government counterparts, such as the Ministry of Agriculture and Oblast authorities, who will use the evaluation findings and conclusions for future planning.

   v. Other donors, organizations and institutions interested in supporting and/or implementing similar projects (for instance, the World Food Programme (WFP), which co-finances the project) could equally benefit from the evaluation report.

5. The evaluation was conducted by the team of the team leader/international consultant and the national consultant. Data collection was competed from 26 April until 15 May 2021, and included remote interviews with key project stakeholders, and field visits to the sample of the project sites.

Due to COVID-19 related restrictions the team leader was not able to travel to Kyrgyzstan and participate in the field visits and all data collection on project sites was done by the national consultant. The national consultant interviewed local stakeholders, as well as visited land plots that were afforested and rehabilitation by the project, to observe and assess the results. The evaluation team has also reviewed the project documentation as well as relevant national, FAO and GEF policy documents. The collected primary and secondary data was analysed and triangulated to arrive to the evaluation findings, conclusions and recommendations.

Main findings

Relevance

Finding 1. The project, designed in response to GEF-5 strategies, remained fully relevant to evolving GEF priorities throughout the entire implementation period from 2014 to 2021.

Finding 2. Throughout the entire implementation period from 2014 to 2021, the project remained relevant to the priorities of the FAO Country Programming Framework.

Finding 3. The project remained relevant to the national priorities in the forest and agricultural sectors along all of the process of its implementation.

Finding 4. Evidence available at the time of this evaluation suggests that the recent changes in the government would not lead to significant changes in the national priorities in the LULUCF sector.

6. Several respondents believe that transfer of the forest management functions to the Ministry of Agriculture would allow for an integrated governance in the LULUCF sector and improve the management of forest, agricultural and pasture lands that are part of the same landscapes in Kyrgyzstan. The new President explicitly called for improving access of farmers to ecologically sound innovative technologies, promoting effective use of low productive agricultural and pasture lands.

Finding 5. The project goal to contribute towards improved local livelihoods was highly relevant to the needs of local communities.

Effectiveness

Outcome 1.1. Enhanced policy, legal and institutional framework in forestry and land management.

7. The project planned to have sustainable forest and land management (SFM/SLM) principles included into national and local land use plans (Outcome 1.1) by making amendments to forest and land code (Output 1.1.1), supporting development and adoption of cross-sectoral strategy (Output 1.1.2) and supporting development of an electronic information system to enhance communication between national and local levels (Output 1.1.3).

Finding 6. Results and recommendations of the forest and agricultural policy assessments conducted by the project informed the development of amendments to national forest and agricultural policy and legislation.

8. Results and recommendations of the forest policy assessments conducted by the project were used by the FAO Technical Cooperation Programme (TCP) Forest Policy Project to develop the Concept for Forest Development 2040, and the first related National Action Plan 2018–2022 approved by the Government in 2019. Recommendations of the assessment of the national agricultural policy were submitted to the Ministry of Agriculture in 2015. Some recommendations have already been translated into legal provisions.

Finding 7. The project developed recommendations for cross-sectoral integration between state agencies in the areas of land resources management and environmental education, but except for two cases on provincial and district levels these recommendations have not been adopted by the government yet.

9. The project conducted the analysis of the body of regulation related to land resources management and cross-sectoral interaction between state and local self-government entities in the land use sector. Results and recommendations of this analysis were presented to representatives of the Ministry of Agriculture, State Agency for Environmental Protection and Forestry (SAEPF), State Agency for Local Government and Inter-Ethnic Relations, Ministry of Education and Ministry of Emergency Situations at a roundtable in November 2020 but have not translated into any official strategy yet.

Finding 8. The project has made several critical contributions towards establishment of the Forest Management Information System.

10. The project supported the establishment of the national Forest Management Information System by providing hardware and software which is seen as a critical contribution by national stakeholders; but at the time of evaluation, the system was not fully operational – for reasons outside of the project control.

Finding 9. The project facilitated integration of sustainable forest and land management principles into local land use plans.

11. Results achieved under Outputs 1.1.1 and 1.1.2 facilitated integration of the sustainable forest and land management principles into national policies and legislation. Integration of these principle into local level land use plans and consequently the full achievement of Outcome 1.1 was made possible by activities contributing towards Outputs 1.2.1, 1.2.2 and 2.1.2, including development of management plans for pilot leskhozes[1] as well as local land and pasture use plans.

Outcome 1.2. Increased understanding and awareness on roles of sustainable forest and land management and LULUCF in carbon sequestration and greenhouse gas balance.

12. Under this outcome the project target was to assess participatory management in rural municipalities and develop related proposals for legal adjustments. This had to be achieved through development of land use plans for pilot rural municipalities (target for Output 1.2.1) as well as through developing the guidelines for participatory management and their application by resource user groups (target for Output 1.2.2).

Finding 10. The GIZ, a co-funding partner of the project, contributed to increased understanding and adoption of SFM through the *Programme for Sustainable and Climate Sensitive Land Use for Economic Development in Central Asia*.

13. In Kyrgyzstan, the programme introduced the concept of the joint forestry management and supported establishment of Joint Forestry Councils (JFC) and development of joint management plans at six pilot leskhozes, including Jety-Oguz and Nookat leskhozes that were also pilot leskhozes for this project. The idea of joint forestry management was included in the Concept for Forest Development 2040.

Finding 11. Results of the studies of land and pasture conditions in the pilot rural municipalities conducted by the project have laid the foundation for local SLM and land use plans.

14. The project supported development of soil and pasture vegetation maps as well as explanatory notes with recommendations on rehabilitation of degraded lands and pastures, which were

[1] Leskhozes are state forest farms or agencies managing at the local level.

handed over to representatives of rural municipalities and local pasture committees – to serve as the basis for comprehensive local land and pasture use plans. But while the maps and recommendations are kept at the rural municipality offices and are available to interested farmers, local authorities don't see them as their land management plans.

Outcome 2.1. Management of existing forests and trees improved.

15. Under this outcome the project target was to increase the carbon content by 15 percent due to improved management at 20 000 ha of forest land. This was to be achieved through LULUCF sector assessment, development of the national climate change mitigation standards in the LULUCF sector, national LULUCF and REDD+ Strategy and Action Plan (targets for Output 2.1.1) as well as through introduction of new management plans covering 20 000 ha in pilot leskhozes (target for Output 2.1.2) and establishment of the carbon monitoring system (Output 2.1.3).

Finding 12. The project laid the foundations for the establishment of the national carbon monitoring system by developing a map of land use based on Intergovernmental Panel on Climate Change (IPCC) categories, conducting baseline research on carbon content in forests, pastures and agricultural lands, and contributing to the development of methodological recommendations for soil monitoring.

Finding 13. Within the framework of the project, a digital map of land use, based on IPCC categories, and the draft Programme on regulation of emissions and removals of greenhouse gases of the forestry and other land use sector 2030, were developed. These have already been used in the process of preparation of the Forth National United Nations Framework Convention on Climate Change (UNFCCC) Communication and update of the intended nationally determined contribution (INDC).

Finding 14. The project reached the target of 100 percent of pilot leskhozes working according to their new management plans.

16. Soil maps and recommendations developed with the project support informed reforestation and forest regeneration activities undertaken by leskhozes within the framework of this project. The evaluation has found that these maps and recommendations were still used by leskhozes.

Finding 15. Payment for environmental services agreements piloted by the project worked with mixed success.

17. In 2016-2017 the project piloted the payment for environmental services (PES) approach in Tyup leskhoz in Tyup district of Yssyk-Kul province. One PES agreement between the leskhoz, rural municipality office and local pasture committee for the use of the remote forest pasture lands instead of the area near the village where cattle was damaging the forest reportedly was fully implemented. Another PES between the leskhoz and local water user association to undertake joint activities to prevent cattle access to the river that serves the source of drinking water for local people by planning trees and fencing of the water intake area to prevent water pollution was not fully implemented because of the disagreement that emerged between PES parties. Both PES agreements expired in 2019 and were not renewed.

Outcome 2.2. Dryland forest areas rehabilitated/afforested through introduction and demonstration of innovative technologies/practices and pressures on forests reduced.

18. The target for this outcome was to introduce three new technologies. Targets for related outputs foresaw restoration of 8 000 ha of degraded forest land (Output 2.2.1), establishment of 2 600 ha of plantations of fast-growing trees (Output 2.1.2) and introduction of innovative technologies and improved house insulation (Output 2.1.3).

Finding 16. The project has significantly increased capacity of pilot leskhozes.

19. The project made contributions towards greater professional qualification and knowledge on the national forest regulation of leskhoz staff, and provided materials and in some cases supported establishment of infrastructure for implementation of the management plans.

Finding 17. The project has successfully introduced and demonstrated several technologies that were new for Kyrgyzstan: fencing, agroforestry (including the silvopastoral model) and fast-growing forest species, as well as supported trials of several new approaches developed by the Forest Service.

Finding 18. The project largely met the 8 000 ha target for afforestation and rehabilitation.

Outcome 3.1. Improved agricultural management and rehabilitation practices and techniques in drylands.

20. The target for this outcome was to introduce three new practices that increase vegetation cover and soil fertility, reduce soil degradation and avoid greenhouse gas emissions. This was to be achieved through demonstration of innovative agricultural practices (Output 3.1.1), as well as identification and rehabilitation of degraded land (Output 3.1.2).

Finding 19. The project has introduced a complex of new agricultural techniques through farmer field schools and demonstration plots.

21. The project introduced five groups of agricultural technologies:

    i. soil conservation techniques including no-till farming, mulching, prevention of soil erosion, amelioration of degraded soils;

    ii. diversification of crops through crop rotation with perennial grasses and creation of wind-breaking tree belts;

    iii. integrated soil regeneration approaches including application of bio-humus, organic, bio-organic and bio-organic-mineral fertilizers as well as siderates (green fertilizers);

    iv. integrated plant protection including biological protection techniques, composting and use of compost, fertigation; and

    v. water efficient techniques including use of short irrigation trenches, pulse drip irrigation and contour irrigation.

Finding 20. The project introduced several new approaches to pasture management and rehabilitation

22. These approaches included use of geobotanical studies as the basis for pasture management, establishment of nursery areas for rangeland grasses as well as planting wild grasses in the degraded pastures to improve their productivity.

Output 4.2.4. Environmental education and awareness raising strategy.

23. While development and implementation of the environmental education and awareness raising strategy is positioned as part of the knowledge management, in the opinion of the evaluation team it actually contributes towards enhanced enabling environment.

Finding 21. The project contributed towards greater local capacity and enhanced enabling policy frameworks for environmental education.

24. In 2017–2018, the project piloted Youth and United Nations Global Alliance (YUNGA) Challenge Badges model in schools in pilot rural municipalities. In 2021 the project conducted an analysis of the regulations governing provision of environmental education in Kyrgyzstan and provided its results and recommendations to national authorities.

Progress to impact

25. The project goal was an enhanced enabling environment in the forestry and agricultural sectors, and sustained flow of ecosystem services, including enhancement of carbon stocks in forests and agro-ecosystems.

Finding 22. The project made some progress in terms of removing barriers to building resilience to climate change in Kyrgyz mountain ecosystems.

Finding 23. Introduction of new agricultural technologies has led to greater productivity and increased income for participating farmers.

26. According to the project monitoring data, additional income due to application of agricultural various techniques introduced through FFS was KGS 59 881[2] per ha on the average and ranged from KGS 5 650 per ha to KGS 161 292 per ha. The project did not monitor changes in income and livelihoods of the over 1 000 families that got new lease contracts for fruit tree plantations on pilot areas, but reportedly some of these plantations are already starting to bring fruits and nuts that are sold in the market.

Efficiency

Finding 24. Project activities were implemented in a logical sequence and mostly within the five-year period initially allocated for project implementation.

Finding 25. Due to the support from rural municipalities, the cost of training activities organized by the project were much lower than planned. The savings were used to complete the fencing works to ensure sustainability of afforestation efforts and to procure additional equipment for national and local partners.

Finding 26. Hiring national consultants supported the sustainability and amplification of the project's results which increases the value-for-money created by the project.

Sustainability

Finding 27. Project results contributing towards sustained flow of ecosystem services will be sustainable without additional financial investment.

Finding 28. Current socio-political developments, especially the review of the full body of national legal and regulatory acts, including concepts and strategies that were initiated in February 2021, create a significant level of uncertainty about the sustainability of the changes in the enabling environment created with the project support.

Finding 29. Without external support the Forest Service is unable to continue to apply the technologies introduced by the project. However, their use will be supported by forthcoming development projects, as the GCF/FAO project *Carbon Sequestration through Climate Investment in Forests and Rangelands*.

Finding 30. Maps developed by the project as the basis for forest, land and pasture management plans are still used by rural municipalities and will remain relevant in the long-term.

Finding 31. Application of agroforestry and climate-smart agriculture techniques by farmers continues, and event spreads and is likely to continue in the long-term.

Finding 32. Changes in temperature due to climate change are not likely to have serious effect on the sustainability of tree plantations established with the project support.

[2] National currency. Current exchange rate is about KGS 84 per USD.

Monitoring and evaluation system

Finding 33. The monitoring and evaluation (M&E) plan was well-structured and captured the main aspects of project implementation.

Finding 34. The M&E activities were largely implemented as planned.

Finding 35. The M&E activities were largely used to track performance. Monitoring data was also used to foster learning from the application of innovative approaches.

Quality of execution

Finding 36. FAO Lead Technical Officers and Funding Liaison Officer provided close support to project implementation. In some cases this facilitated acceleration of the implementation process, but there were also cases when it slowed it down.

Finding 37. Project institutional arrangements, including having National Project Implementation Unit in Bishkek and two field offices in the regions, facilitated the implementation of project activities and cooperation with partners.

Financial management and mobilization of expected co-financing

Finding 38. All co-financing was in-kind, and only contributions of SAEPF/Forest Service and WFP were closely coordinated with the project. By mid-2020, 86 percent of co-financing had materialized, and by the end of the project the planned level of co-financing is likely to be reached.

Project partnerships and stakeholder engagement

Finding 39. The project effectively and continuously engaged with the key national level stakeholders, including national and co-funding partners, through the project Steering Committee and involvement in donor coordination groups. Effective engagement was also facilitated by the project responsiveness to partner needs and ideas.

Finding 40. Attention to and responsiveness to existing needs and circumstances demonstrated by the project ensured high level of engagement with local communities.

Knowledge management, communication and public awareness

Finding 41. Local stakeholders value and use knowledge products developed by the project.

Finding 42. Availability of knowledge products on climate-smart agricultural techniques and pasture management created by the project at offices of rural municipalities and resource user associations supports sustainability and dissemination of the practices introduced by the project.

Finding 43. Knowledge products developed by the project fully capture the new climate-smart agricultural and pasture management techniques. However, the lessons learned through innovations in tree planting tested by the Forest Service within the framework of this project were not captured in the form of knowledge products.

Gender

Finding 44. Gender considerations were explicitly integrated in designing, implementing, monitoring and reporting of the project. The project achieved the desired 25 percent of female participation in activities related to introduction of climate-smart agricultural technologies and in the afforestation activities supported by WFP.

Environmental and social safeguards

Finding 45. Environmental and social concerns were explicitly integrated in the design and implementation of the project.

Conclusions

Conclusion 1. The project was highly relevant to the GEF, FAO and national priorities as well the needs of the local communities.

Conclusion 2. The project was highly effective in terms of introducing new approaches on forestry, agriculture and pasture management, and less effective in terms of changing policy and regulatory environment and mechanisms.

Conclusion 3. In the areas where the project team had sufficient expertise, both in country and through Lead Technical Officer support, the use of project resources was strategic and cost-effective.

Conclusion 4. Sustainability of results of different project activities depends, among other factors, upon the volume of investment necessary to support this sustainability. The results of the afforestation/rehabilitation activities of this project, and application of relatively inexpensive climate-smart agricultural techniques, are likely to be highly sustainable.

Recommendations

Recommendation 1. To FAO Kyrgyzstan and Forest Service. Develop knowledge products that capture lessons learned through the application of new approaches to tree planting. (By June 2021).

Recommendation 2. To FAO. Consider supporting multi-focal projects through a team of Lead Technical Officers with a complementary set of expertise to ensure that each focus area of the project has sufficient thematic expertise.

Recommendation 3. To FAO and the Forest Service. Re-visit the project sites in five to ten years to check certain success factors, such as the tree survival rates. Note factors which affected the survival rates, and the geographic area variability. (Five to ten years from the project end)

Recommendation 4. To the Ministry of Agriculture, including the former SAEPF Department of Forest Ecosystem. Follow-up on regulatory recommendations developed with the project support, including results and recommendations of forest and agricultural policies, proposed amendments to Forest and Land codes, draft programmes and strategies. (No timeline)

Recommendation 5. To the Forest Service. Complete the development of the national Forest Information System and ensure its full use by leskhozes.

Recommendation 6. To the Forest Service. Lobby for the budget provisions of funds to continue afforestation/forest rehabilitation efforts using approaches piloted within the framework of this project. (Ongoing)

GEF rating table

GEF criteria/sub-criteria	Rating[3]	Summary comments
A. STRATEGIC RELEVANCE		
A1. Overall strategic relevance	HS	See section 3.1 on Relevance
A1.1. Alignment with GEF and FAO strategic priorities	HS	The project remained relevant to evolving GEF and FAO country office priorities. (Findings 1 and 2)
A1.2. Relevance to national, regional and global priorities and beneficiary needs	HS	The project was well aligned with national priorities and was highly relevant to the needs of local communities. (Findings 3-5)
A1.3. Complementarity with existing interventions	HS	The project jointly worked with the World Bank/GEF project in the forestry sector. The Wold Bank/GEF project also built on some results of this Project.
B. EFFECTIVENESS		
B1. Overall assessment of **project** results	MS	While the project has met many of the targets, some of the results were achieved only partially.
B1.1 Delivery of project outputs	MS	Some of the outputs were achieved only partially.
B1.2 Progress towards outcomes[4] and project objectives		
- Outcome 1.1: Enhanced policy, legal and institutional framework in forestry and land management	MS	Though the targets for Outputs 1.1.2 and 1.1.3 were achieved only partially, the target for Outcome 1.1 - SFM/SLM principles included into national and local land use plans – has been mostly achieved. (Findings 6-9)
- Outcome 1.2: Increased understanding and awareness on roles of SFM/SLM and LULUCF in carbon sequestration and greenhouse gas balance	MU	The project achieved the target for Outcome 1.2 (the assessment of participatory management in two pilot rural municipalities were completed and proposals for legal adjustments were provided), but there is no evidence that this translated into increased understanding and awareness on roles of SFM/SLM and LULUCF in carbon sequestration and greenhouse has balance. (Findings 10-11)
- Outcome 2.1: Management of existing forests and trees improved	MU	Only one of three outputs contributing to this outcome was fully achieved. (Findings 12-15)
- Outcome 2.2: Dryland forest areas rehabilitated/afforested	S	The project introduced more new technologies than planned and achieved the target for the rehabilitated/afforested area but experienced problems with introduction of fast-growing trees into local communities. (Findings 16-18)
- Outcome 3.1: Improved agricultural management	HS	The project has significantly exceeded the target for number of introduced new practices. (Findings 19-20)

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

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

GEF criteria/sub-criteria	Rating[3]	Summary comments
- Overall rating of progress towards achieving objectives/outcomes	S	The project mostly achieved its objectives. The outcomes where the project performed better, were more important for achievement of the objectives.
B1.3 Likelihood of impact	S	By the end of the project, its global environmental and development objectives have been realized. (Findings 22-23)
C. EFFICIENCY		
C1. Efficiency[5]	MS	Project implementation was mostly timely and created value for money. See section 3.3 on Efficiency
D. SUSTAINABILITY OF PROJECT OUTCOMES		
D1. Overall likelihood of risks to sustainability	L	Current socio-political situation is highly uncertain, but there are some signs that it may favour continuation and dissemination of the use of new techniques introduced by the project, especially agroforestry and climate-smart agriculture where government investment is not absolutely necessary.
D1.1. Financial risks	ML	Financial risks are low. (Finding 27)
D1.2. Socio-political risks	ML	There is some risk that changes in the enabling environment created due to the project support will not be sustained. But this won't affect sustainability of other results. (Finding 28)
D1.3. Institutional and governance risks	ML	Due to the reforms of the Forest sector, some capacity created in leskhozes may be lost. (Findings 29-31)
D1.4. Environmental risks	L	There are no serious environmental risks to sustainability. (Finding 32)
D2. Catalysis and replication	S	There is already evidence of dissemination of introduced new technologies.
E. FACTORS AFFECTING PERFORMANCE		
E1. Project design and readiness[6]	S	The project design did not have major shortcomings and properly addresses identified problems.
E2. Quality of project implementation		
E2.1 Quality of project implementation by FAO (BH, LTO, PTF, etc.)	MS	Role of Lead Technical Officers and Funding Liaison Officers was largely positive, but in some cases the need to get their approval slowed approval of Letters of Agreement and knowledge products. (Finding 36)
E2.1 Project oversight (PSC, project working group, etc.)	S	PSC worked effectively.

[5] Includes cost efficiency and timeliness.
[6] This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

GEF criteria/sub-criteria	Rating[3]	Summary comments
E3. Quality of project execution	S	Project institutional arrangements facilitated the implementation of project activities and cooperation with partners. (Finding 37)
E4. Financial management and co-financing	MS	The project is likely to reach the planned level of co-financing, but one of the key partners – the Forest Service – was not able to fully meet its original obligations. (Finding 38)
E5. Project partnerships and stakeholder engagement	HS	The project effectively engaged with the key national level stakeholders including government and co-funding partners. (Finding 39-40)
E6. Communication, knowledge management and knowledge products	S	Knowledge products capture the new climate-smart agricultural and pasture management techniques and facilitate sustainability of their use. (Findings 41-43)
E7. Overall quality of M&E	S	There were no major shortcomings.
E7.1 M&E design	S	There were no major shortcomings in the M&E design. (Finding 33)
E7.2 M&E implementation plan (including financial and human resources)	S	The M&E activities were largely implemented as planned. (Finding 34)
E8. Overall assessment of factors affecting performance	S	
F. CROSS-CUTTING CONCERNS		
F1. Gender and other equity dimensions	S	Gender considerations were explicitly integrated in the project design and implementation. (Finding 44)
F2. Human rights issues/Indigenous peoples	NA	
F2. Environmental and social safeguards (ESS)	S	Environmental and social concerns were explicitly integrated in the design and implementation of the project. (Finding 45)
Overall project rating	**MS**	

1. Introduction

1.1 Purpose of the evaluation

1. This terminal evaluation of the project "Sustainable management of mountainous forest and land resources under climate change conditions" (hereafter, "the project") is a requirement of the Global Environment Facility (GEF) and the Food and Agriculture Organization of the United Nations (FAO) for project monitoring and reporting purposes. The evaluation was conducted for both accountability and learning purposes of the GEF, FAO, national implementing partners and other participating institutions.

27. The terminal evaluation aimed to document important lessons to guide future actions and to serve as an input to improve formulation and implementation of projects that may use similar approaches. The evaluation report presents a number of strategic recommendations for this purpose. Additionally, the evaluation report comments on the sustainability of the project's results, and serves to disseminate information about the project results to authorities and stakeholders that could benefit from it.

1.2 Intended users

28. The main audience and intended users of this terminal evaluation are:

i. FAO Kyrgyzstan and members of the Project Task Force (PTF) who will use the findings and lessons identified in the evaluation to improve the formulation and implementation of similar projects.

ii. Project governance and implementation bodies: the project Steering Committee (PSC), Technical Committee, project Planning Committees; as well as the Sustainable Land and Forest Management Platform.

iii. The GEF, who will use the findings to inform strategic investment decisions in the future.

iv. National government counterparts, such as the Ministry of Agriculture and Oblast authorities, who will use the evaluation findings and conclusions for future planning.

v. Other donors, organizations and institutions interested in supporting and/or implementing similar projects (for instance, the World Food Programme (WFP), which co-financed the project) could equally benefit from the evaluation report.

1.3 Scope and objectives of the evaluation

29. The terminal evaluation covered the entire project implementation period (1 August 2014 – 31 May 2021) and focused on the results which took place after the mid-term review (MTR) that was conducted in 2016. The terminal evaluation considered the findings, conclusions and recommendations of the MTR. The terminal evaluation covered all the geographical areas (five provinces) where the project has been implemented.

30. The objectives of the terminal evaluation were to:

i. Examine the extent and magnitude of the project achieving its stated objective and outcomes to date, and determine the likelihood of future impacts especially relating to environmental sustainability due to changes following the project's interventions.

ii. Provide an assessment of the project's performance, gender-disaggregated achievements, and the implementation of planned project activities and planned outputs against actual results.

iii. Synthesize lessons learned that may help in the design and implementation of future FAO and FAO-GEF Climate Change, Lands Degradation and/or Sustainable Land and Forest Management related initiatives.

Box 1. Evaluation questions by GEF criteria

Relevance	Were the project outcomes congruent with the GEF programme strategies (i.e. on Climate Change), priorities of the Kyrgyz Republic and the FAO Country Programming Framework? Have the project's objectives been in line with the needs of the local communities located at the project sites? Has there been any change in the project's relevance since the mid-term review, also considering the recent changes in the government structures?
Effectiveness - Achievement of project results	To what extent has the project objective to *enhance the enabling environment in the forestry and agricultural sectors and sustain the flow of ecosystem services, including enhancement of carbon stocks in forests and agro-ecosystems through the sustainable management and enhanced productivity of mountainous silvo-agro-pastoral ecosystems and to improved productivity and mountain livelihoods in the Kyrgyz Republic*, been achieved? In answering this question, the terminal evaluation will assess achievements against each project outcome and main outputs (while Component 4 on knowledge management, monitoring and evaluation would be addressed in the subsequent evaluation questions), and refer to its findings regarding the project's implicit theory of change. Did the project produce any unintended results, either positive or negative? Progress to impact: To what extent can the progress towards long-term impact be attributed to the project? Namely, as a result of the project, is there evidence that there are i) improved legal frameworks for sustainable forest and land management; ii) land tenure reforms; iii) modern approaches to sustainable forest and land management; iv) increased capacities inside the relevant local institutions? To what changes in the policy/legal/regulatory framework has this project actively contributed to (working together with its national partners)? What barriers or other risks could prevent future progress towards long-term impact?
Efficiency, project implementation and execution	Has the project been implemented efficiently, cost-effectively,[7] and management been able to adapt to any changing conditions (COVID-19 and change in government both taking place in the last years of project implementation) to improve the efficiency of project implementation? How well have risks been identified and managed?[8]
Sustainability	What is the likelihood of the project's sustainability?[9] The evaluation will analyse the reasons leading to increase or decrease in this likelihood, including the key risks (financial, socio-political, institutional, environmental) which may affect sustainability. The evaluation may reflect on topics such as: contributions to national policies, guidelines, strategies and their uptake; trainings conducted with the project's support (knowledge retained and utilized); the state and use rates for the small investments made by the project (i.e. wire fencing).

[7] The mid-term review made a particular recommendation to improve cost-effectiveness (Recommendation 9).

[8] Among other risks, the evaluation team can reflect, in particular, on the COVID-19.

[9] Considering also the relevant mid-term review recommendations on sustainability, such as "Focus on institutionalization. Some project activities are not fully integrated with the plans of the responsible forest and land management bodies."

Factors affecting performance:	
M&E	Was the M&E plan practical, well-structured and sufficient to capture all the aspects of the different components of the project? Did the M&E system operate as per the M&E plan? Was information gathered in a systematic manner, using appropriate methodologies? Was the information from this system appropriately used to make timely decisions and foster learning during project implementation? Why or why not?
Quality of implementation	To what extent did the FAO effectively discharge its role and responsibilities related to the management and administration of the project (FAO as GEF implementing agency)?
Quality of execution	How did the project activities, the institutional arrangements (FAO execution), the partnerships in place and the resources available contribute to, or impede, the achievement of the project's results and objectives?
Financial management and mobilization of expected co-financing	The mid-term evaluation considered that the co-financing delivery is on track, with 43.4 percent of the planned co-financing materializing at the mid-term. How has this situation changed thereafter, concerning both in-kind and cash contributions from each of the co-financing partners? Which factors either enabled or hindered materialization of the planned co-financing? What conclusions for future FAO-GEF projects can be gained from these insights?
Project partnerships and stakeholder engagement	Did the project include a stakeholder engagement strategy? How effectively and continuously has it been able to engage the relevant project stakeholders? Were other actors, such as civil society, minority populations or private sector involved in project design or implementation?[10] Does the terminal evaluation have any recommendations to increase engagement with any of these stakeholders?
Knowledge management, communication and public awareness	How effective has the communication of project aims, progress, results and key messages been, along with any structured lesson, knowledge product and experience-sharing between project partners and interested groups? To what extent are communication and knowledge products and activities likely to support the sustainability and scaling-up of project results?
Gender	To what extent were gender considerations taken into account in designing, implementing, monitoring and reporting of the project? Was the project implemented in a manner that ensures gender equitable participation and benefits, for example, during the Farmer Field Schools supported by the project?
ESS risks	To what extent were environmental and social concerns taken into consideration in the design and implementation of the project?[11]

1.4 Methodology

31. This terminal evaluation used a utilization-focused consultative and transparent approach. In the course of the data collection phase the evaluation gave priority to information-rich sources and sites to capture the broad range of the project experiences and results.

[10] It is of note that this project has also collaborated with regional bureaus of institutions such as the World Agroforestry Centre.

[11] The evaluation will also review the environmental and social safeguards classification which the project submitted in the initial stage.

32. The evaluation was conducted by the team made of Natalia Kosheleva, team leader/international consultant, who has significant experience with evaluation of development interventions, and Kanat Sultanaliev, national consultant, who is an expert in pasture management and is closely familiar with other aspects of sustainable land management in Kyrgyzstan.

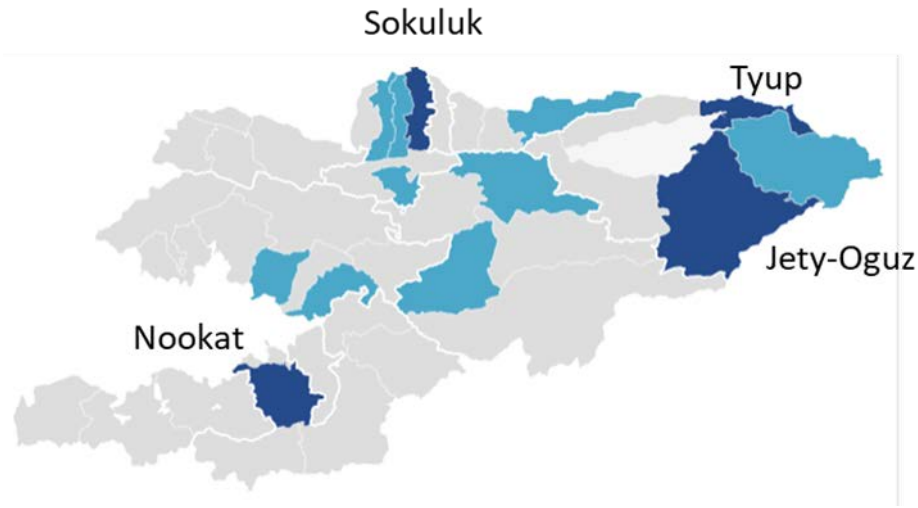
33. Development of the data collection plan was guided by the evaluation questions. The evaluation team used a mix of data collection methods that included:

i. Review of the project documents as well as relevant national, FAO and GEF policy documents and frameworks.

ii. Semi-structured interviews with the project staff and key stakeholders involved in the project at national level. Interviews were conducted remotely by the international consultant as COVID-19 related restrictions did not allow for international travel.

iii. Field visits to 4 of the 12 pilot districts (Nookat, Tyup, Jety-Oguz and Sokuluk) (Figure 1). The sample was selected: i) to include sites where activities important for sustained effect of the project took place (e.g. establishment of nurseries, piloting of payment for environmental services, PES); ii) to cover the full range of project activities; iii) to represent the variety of natural and climatic conditions and climate change patterns faced by the project; iv) to include both sites that were and were not visited during the mid-term review field mission in 2016. Field visits were conducted by the national consultant with the support from the national project implementation unit (NPIU) who conducted interviews with local stakeholders, mainly representatives of pilots leskhozes[12], local authorities of pilot rural municipalities and resource user groups, as well as individual farmers. Field visits also included observation of the results of various project activities, including afforestation and forest rehabilitation.

Figure 1. Sample of the project pilot districts



Visited districts are marked with deep blue.

Source: Developed by the evaluation team, created with Datawrapper. Map complies with UN. 2011. Map No. 3770, Rev. 8.

34. To generate answers to the evaluation questions, the evaluation team triangulated the data coming from different sources, including the primary data collected through interviews and observations and the secondary data from the project reports and other reviewed documents, to ensure the reliability and validity of findings.

[12] Leskhozes are state forest farms or agencies managing at the local level.

35. The evaluation team adhered to the United Nations Evaluation Group (UNEG) Norms and Standards for Evaluation (2016) and to the FAO Office of Evaluation (OED) Evaluation Manual (2019) and methodological guidelines and practices.

1.5 Limitations

36. **Low recall rate and loss of organizational memory.** Due to several extensions the project implementation continued for seven years – from 2014 to 2021. The evaluation team anticipated that it would be difficult for respondents to recall all activities and development that took place over this period of time, especially in the earlier years of the project. To mitigate this risk, the evaluation team prepared for each interview by developing the list of activities where each specific stakeholder was involved to help to "jump start" the recall process. In addition, each interview started with several "warm-up" questions about the history of stakeholder engagement with the project to stimulate recall.

37. **Lack of evaluator triangulation.** Due to COVID-19 related travel restriction, the evaluation team leader was not able to participate in the field visits and all data was collected by the national consultant. This was mitigated by triangulation of data from different sources, e.g. comparing the data from field monitoring reports and interviews with implementing and contributing partners who worked at those sites.

38. **Review of the evaluation report.** Due to the timeline of the project (end date 30 June 2021), most members of the project team were no longer employed with FAO at the time the draft evaluation report was sent for review. Considering the need for feedback in evaluations from project team staff with different expertise, this is treated as a limitation.

1.6 Structure of the report

39. Following this introduction, section 2 presents the background and context of the project. Section 3 presents key findings, followed by conclusion and recommendations in section 4 and lessons learned in section 5. The report is accompanied by the following appendices:

Appendix 1. People interviewed

Appendix 2. GEF evaluation criteria rating table

Appendix 3. Rating scheme

Appendix 4. GEF co-financing table

Appendix 5. Results matrix

2. Background and context of the project

40. **Project context.** The Kyrgyz Republic is a low-income food deficit country with a population of nearly 6 million, of which two-thirds live in rural areas and depend on agriculture and animal husbandry for their livelihood. Over 60 percent of the rural population are poor or vulnerable to poverty (IFAD, 2020).

41. The potential for increasing productivity in the agricultural sector necessary to improve rural livelihoods is hindered by progressive degradation of soils and pastures. Large areas of agricultural land are affected by erosion, salinization and alkalization, water logging of arable soils, trampling and contamination of pasture vegetation (mainly by unpalatable plants) and organic soil carbon content decline. Unsustainable use of pastures is having a significant negative effect on their productivity: between 2010 and 2016 as livestock numbers increased by 41 percent, the extent of rangeland degradation reached 42 percent.

42. The overall forest cover is low – about 5.6 percent of the country territory. 75 percent of these forest areas belong to the State Forest Fund, while remaining 25 percent are on the lands of rural and urban municipalities. The area of the State Forest Fund is managed by the state forestry management service. In 2021, activities on the ground were performed by 41 leskhozes (forest management enterprises).

43. Despite low coverage, the forests also play a crucial role in preventing soil erosion, mudflows, landslides and avalanches. They regulate mountain run-off so that rivers flow more evenly throughout the year – important in Central Asia where farming relies heavily on irrigation. And more than two million people based in 283 rural municipalities (62.5 percent) live in or near forests, relying on wood for heating and construction. For many households, walnuts, pistachios and fruit, such as apples, pears and plums, provide food and income.

44. Forests and pastures are the main carbon sinks in Kyrgyzstan – they hold the estimated 804 097 Gg CO2eq. At the same time, forests and pastures are already under pressure due to human-driven activities and are highly sensitive to climate change. Pastures are overgrazed in the lower/middle altitudes due to limited access to high altitude summer pastures. Grazing also prevents natural forest regeneration as cattle eat new seedlings. Reduced productivity of low altitude pastures and decreased resilience of the forest ecosystem are increasing the vulnerability of communities and negatively impacting rural livelihoods.

45. **Project rationale.** The project was designed to address the following interlinked barriers preventing sustainable land and forest management outcomes and building resilience to climate change in Kyrgyz mountain ecosystems:

    i. inadequate legal framework for sustainable forest and land management;

    ii. inadequate land tenure reforms;

    iii. outdated approaches to sustainable forest and land management;

    iv. limited capacity of local institutions.

46. The project's **overall objective** is to enhance the enabling environment in the forestry and agricultural sectors and sustain the flow of ecosystem services, including enhancement of carbon stocks in forests and agro-ecosystems through the sustainable management and enhanced productivity of mountainous silvo-agro-pastoral ecosystems and to improve productivity and mountain livelihoods in Kyrgyzstan.

Box 2. Basic project information

- GEF project ID Number: 4761
- Recipient country: Kyrgyzstan
- Implementing Agency: FAO
- Executing Agency: FAO, in partnership with the Ministry of Agriculture, and the State Agency for Environmental Protection and Forestry[13]
- Date of project start: 01 August 2014
- Initial date of project completion (original NTE): 31 January 2018
- Revised project implementation end date: 31 May 2021
- Date of mid-term evaluation: completed January 2017

47. The project is multi-focal and complex. Table 1 presents the system of intended project results. The results framework (Appendix 5) presents information on baseline situation and targets for all project results.

Table 1. Project goal, outcomes and related outputs

Project goal	Outcomes	Outputs
The goals are: i. an enhanced enabling environment in the forestry and agricultural sectors; and ii. sustained flow of ecosystem services, including enhancement of carbon stocks in forests and agro-ecosystems.	Outcome 1.1 Enhanced policy, legal and institutional framework in forestry and land management for integrating SFM/SLM principles and practices into national and local level land-use plans	Output 1.1.1: Forestry and land policy, and legislation for SFM and SLM developed and improved: Appropriate agro-environmental policies to incentivize SFM/SLM at local levels developed; SFM and SLM standards and guidelines developed; National soil fertility conservation strategy drafted; Amendments to land code to promote SLM on abandoned agricultural lands; Amendments to forest code to promote SFM on degraded forest agricultural lands.
		Output 1.1.2: Cross-sectoral strategies and/or strategic agreements between sectoral authorities on integrated land-use management developed and foster cross-sectoral cooperation
		Output 1.1.3: Operational mechanism for ensuring better collaboration at national level and enhanced communication between national and local levels developed and implemented
	Outcome 1.2: Increased understanding and awareness on roles of SFM/SLM and LULUCF in carbon sequestration and GHG balance	Output 1.2.1: SFM/SLM based on resource user associations (pasture, forest, water) is effectively promoted in the project areas and respective local resource management institutions are fully functional
		Output 1.2.2: Training and awareness creation tool kit on roles of SFM/SLM and LULUCF in carbon sequestration and GHG balance prepared and disseminated
	Outcome 2.1: Management of existing forests and trees improved	Output 2.1.1: National LULUCF and REDD+ Strategy and Action Plan developed and operationalized: LULUCF sector assessment improved, national climate change mitigation standards in the LULUCF sectors drafted and submitted to approval by the Government of Kyrgyzstan
		Output 2.1.2: Sustainable forest management planning covers minimum of 20 000 ha of forest
		Output 2.1.3: Carbon monitoring system established for forests and various dryland land use systems
	Outcome 2.2: Dryland forest areas rehabilitated/afforested trough introduction and	Output 2.2.1: 8,000 ha of degraded forest land rehabilitated/afforested through successfully demonstrated innovative technologies and practices including agroforestry trials, controlled grazing, windbreaks and roadside plantations

[13] Following government agencies' restructuring, the latter has been disbanded.

Project goal	Outcomes	Outputs
	demonstration of innovative technologies/practices and pressures on forests reduced	Output 2.2.2: 2,650 ha of tree plantations established by local people with indigenous fast-growing forest trees in order to reduce the wood demand from natural forests
		Output 2.2.3: Efficiency of fuelwood use improved by introduction of improved cookstoves, home-based solar heating and home insulation activities
	Outcome 3.1: Improved agricultural management and rehabilitation practices and techniques in drylands practiced of target households, including women headed by demonstrating and adopting agricultural and agroforestry best practices that increase vegetative cover and soil fertility, reduce soil degradation, and avoid greenhouse gas emissions	Output 3.1.1: 200 demonstrations of innovative agricultural practices covering a total of 10 907 ha of arable land
		Output 3.1.2: 20,000 ha of non-forest State Forest Fund lands/degraded agricultural lands rehabilitated using innovative technologies/practices successfully demonstrated
	Outcome 4.1: Monitoring and evaluation of project progress for adaptive results-based management to mitigate risks and changing conditions.	Output 4.1.1: M&E system operating and providing systematic information about meeting project outcome and output targets
		Output 4.1.2: Midterm and final evaluations
	Outcome 4.2: Dissemination of information and best practices through knowledge management platforms, national and international cooperation and awareness raising	Output 4.2.1: Synthesis of lessons learnt and generation of best practices
		Output 4.2.2. Application of research results and best practices of previous projects.
		Output 4.2.3 Integration of the project into knowledge exchange platforms
		Output 4.2.4 Environmental education and awareness raising strategy

48. The project included pilots of reforestation/afforestation approaches and of climate-smart agriculture conducted in 12 target districts of five provinces of Kyrgyzstan (Figure 2). Table 2 provides information on eight pilot leskhozes and 19 rural municipalities involved in the project.

Figure 2. Pilot district

Source: Developed by the evaluation team, created with Datawrapper. Map complies with UN. 2011. Map No. 3770, Rev. 8.

Table 2. Pilot leskhozes and rural municipalities

Province	District	Area, km²	Pilot leskhoz	Total area, thousand ha	Forested area, thousand ha	Pilot rural municipalities
Issyk-Kul	Tyup	2 121	Tyup	77.22	19.09	Toguz-Bulak
	Aksuu	9 917				Tepkinsky Kara-Kol
	Jety-Oguz	14 499	Jety-Oguz	91.52	31.21	Saru Darkhan
Naryn	Kochkor	5 868	Kochkor	5.34	2.25	Semiz-Bel Ak-Kyan
	Ak-Tala	7 266	Ak-Tala	81.77	18.88	Ugut Togolok-Moldo
Chui	Kemin	3 533				Kyzyl-Oktyabr
	Jaiyl	3 028	Jaiyl	16.48	5.66	Kara-Suu
	Moscow	3 028				Ak-Suu
	Sokuluk	2 550				Jany-Pakhta
Jalal-Abad	Nooken	2 336	Kochkor-Ata	61.25	34.78	Nooken Shaidan
	Suzak	3 019	Kara-Alma	30.78	13.93	Yrys
Osh	Nookat	3 179	Nookat	94.24	25.75	Kok-Jar Kok-Tash Mirmakhmudov

2.1 Theory of change

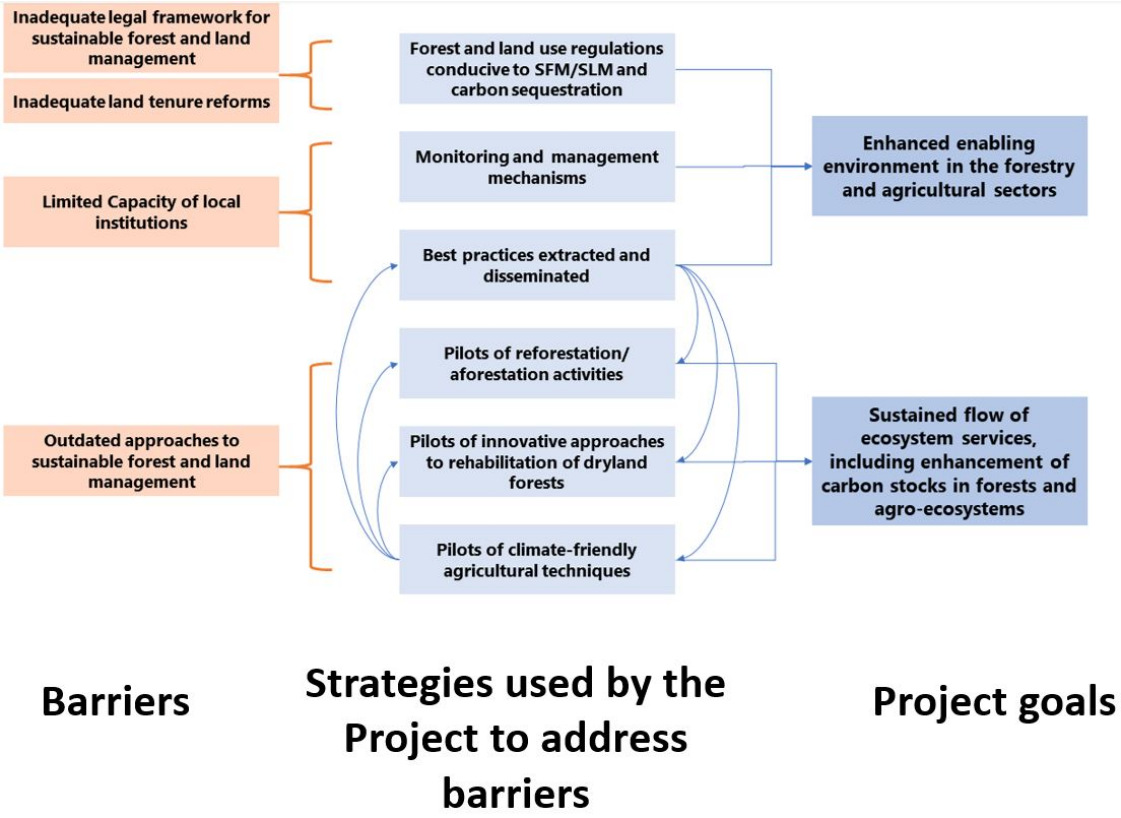
49. The project document did not include an explicit theory of change (TOC). The mid-term review also did not provide a reconstructed TOC.

50. Reconstruction of the TOC by the evaluation team was guided by the following considerations. The project was implemented on two levels. On the *national* level the project activities focused on enhancing the enabling environment in forestry and agricultural systems (one of the elements of the project goal) through proposing amendment to existing laws and developing new policies and strategies. On the *local* level – in pilot leskhozes and communities – the project focused on building capacity of local stakeholders to better manage forest and land resources, afforestation

and reforestation activities, including piloting innovative approaches like agroforestry and planning of fast-growing trees, and pilot introduction of climate-smart agricultural approaches. Activities on the local level were expected to contribute towards prevention of carbon loss in agricultural lands and enhancement of carbon sinks in forests and agricultural and pasture lands which was one of the elements of the project goal. Local activities were expected to be informed by international best practices, and lessons learned from the local activities were to contribute to the national body of knowledge in the area of sustainable forest and land management (SFM/SLM) which is one of the elements of enabling environment. Positive changes in the enabling environment were to support implementation of the project activities on the local level.

51. The strategies used by the project to achieve its double goal clearly address the barriers for introduction of sustainable land and forest management outcomes and building resilience to climate change identified in the project document (Figure 3).

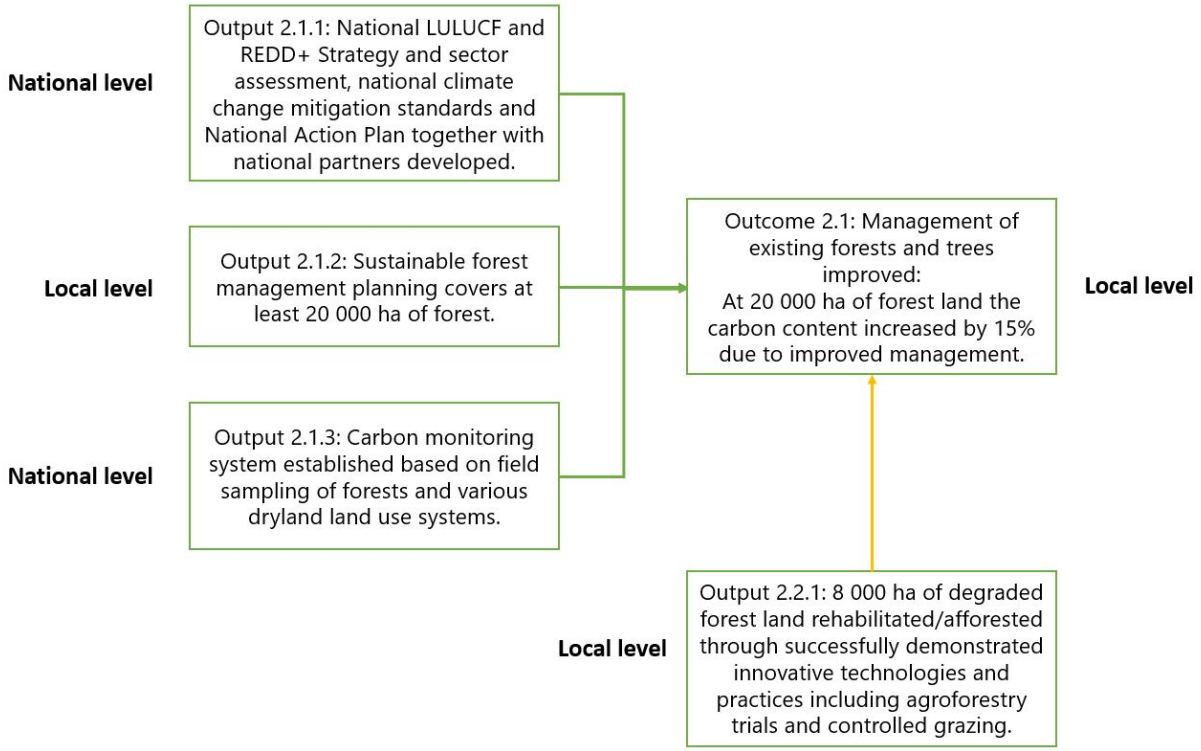
Figure 3. Project strategies used to address the barriers to achievement of the project goals



Source: Developed by the evaluation team.

52. In the evaluation team's opinion, the results matrix does not adequately present the project design. There is confusion between results to be achieved on the local and national levels and suggested linkages between results are misleading. For example, Outcome 2.1 (Management of existing forests and trees improved) foresaw improvement of forest management in pilot districts (local level). But outputs that were listed as contributing to achievement of this Outcome included development of national land use, land use change and forestry (LULUCF) strategy and establishment of the national carbon monitoring system (national level), though they would rather contribute towards enhanced enabling environment. Activities under Output 2.2.1 (8 000 ha of degraded forest land rehabilitated/afforested), especially development of soil maps for pilot leskhozes and management recommendations based on these maps, also contributes towards the target for Outcome 2.1 (Figure 4), but this connection is not reflected in the results matrix.

Figure 4. Theory of change for Outcome 2.1 – as per the results matrix and reconstructed

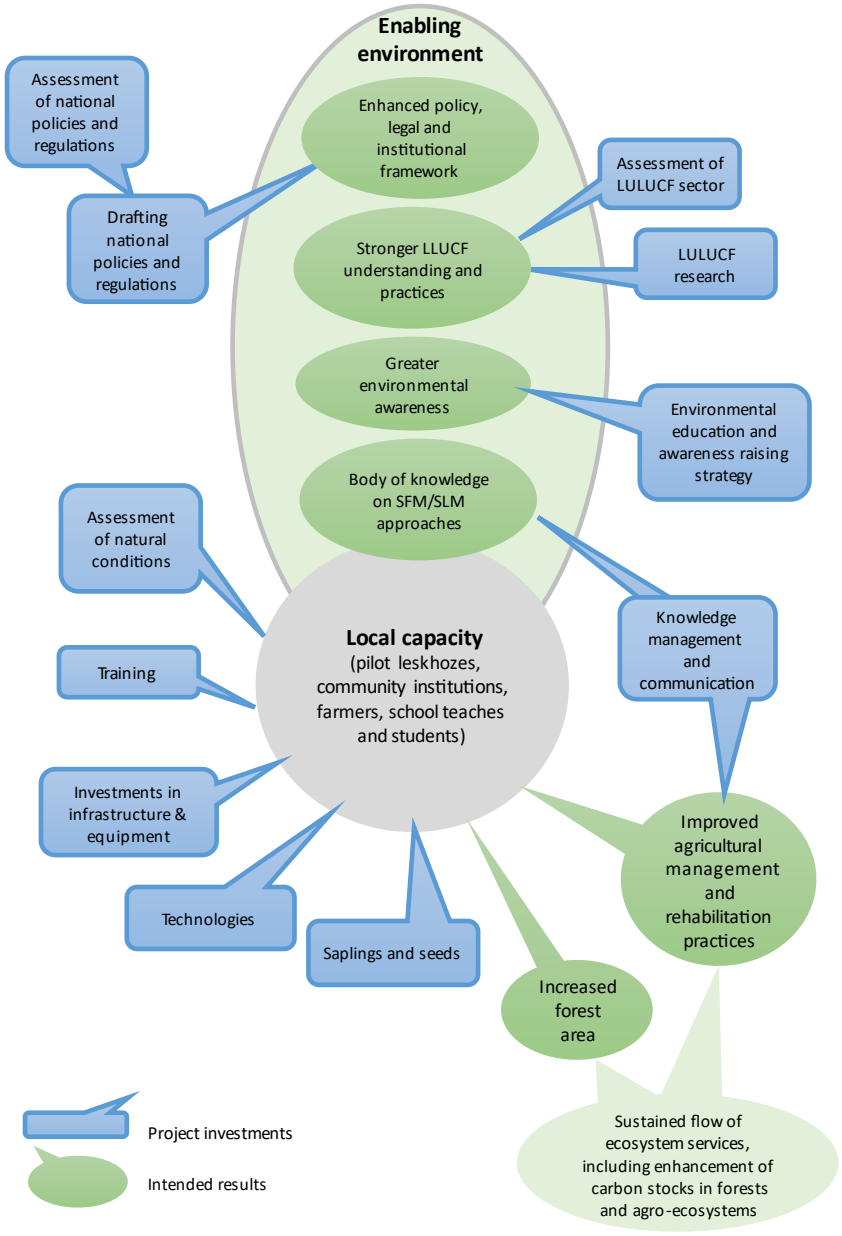


Source: Developed by the evaluation team.

53. Another example is Output 4.2.4 where the project intended to develop a national environmental education and awareness raising strategy, that is to contribute to the enabling environment on the national level. But in the results matrix this output contributes towards Outcome 4.2 (Dissemination of information and best practices through knowledge management platforms, national and international cooperation and awareness raising).

54. Based on the analysis of the project documentation, the evaluation team developed the theory of change that reflects the relationship between project interventions on the national level (into enabling environment) and local level where the project invested in the capacity of local stakeholders (pilot leskhozes and communities) which was then used to increase the afforested areas and improve agricultural and pasture management practices which in turn should contribute towards enhancement of carbon stocks in forest and agro-ecosystems thus supporting sustained flow of their ecosystem services (Figure 5).

Figure 5. Detailed theory of change



Source: Created by the evaluation team.

55. The theory of change also reflects that lessons learned in the course of project implementation at the local level were captured through knowledge management and knowledge management products and contributed towards greater body of knowledge on SFM/SLM management on the national level which is part of the enabling environment.

3. Key findings by evaluation questions

3.1 Relevance

Finding 1. The project, designed in response to GEF-5 strategies, remained fully relevant to evolving GEF priorities throughout the entire implementation period from 2014 to 2021.

56. The project was designed to contribute towards selected GEF-5 objectives under Climate Change Mitigation (CCM), Land Degradation (LD) and Sustainable Forest Management (SFM)/REDD-PLUS) strategies, namely:

    i. CCM-5: Promote conservation enhancement of carbon stocks through sustainable management of land use, land use change and forestry.
    ii. LD-1: Maintain or improve a sustainable flow of agro-ecosystem services to sustaining the livelihoods of local communities.
    iii. LD-2: Generate sustainable flows of forest ecosystem services in arid, semi-arid and subhumid zones, including sustaining livelihoods of forest-dependent people.
    iv. SFM/REDD-1: Reduce pressures on forest resources and generate sustainable flows of forest ecosystem services.

57. The mid-term review conducted in 2016 concluded that the project was in line with and supportive of these objectives (FAO-GEF, 2017). Due to delayed start and several extensions the actual project implementation period started in 2014 and continued till 2021 spanning across both GEF-6 (2014–2018) and GEF-7 (2018–2022) periods. Though the GEF priorities were evolving, the project remained highly congruent with the GEF programme strategies.

58. The project efforts to improve management of existing forests and trees (Outcome 2.1) and agricultural management and rehabilitation practices (Outcome 3.1) is in line with GEF-6 corporate level result 2 (Sustainable land management in production systems [agriculture, rangelands, and forest landscapes]).

59. The GEF-6 Sustainable Forest Management (SFM) strategy aimed to achieve multiple environmental benefits from improved management of all types of forests and trees outside of forests. The strategy recognized the importance of integration with and support for existing efforts towards developing national strategies, programmes and frameworks relevant for SFM. The strategy also recognized the importance of multi-stakeholder approaches for SFM and inclusion of local communities. The project efforts to develop and contribute to development of proposals for changes in forestry and land policy and legislation for SFM/SLM (Output 1.1.1) and inclusion of the local communities into SFM, for example through payment for ecosystem services schemes that were piloted in one of the target districts, are well in line with this vision. The project Outcome 2.1 (Management of existing forests and trees improved) is fully congruent with the SFM strategy key Outcome (Increased application of good management practices in all forests by relevant government, local community and private sector actors) under SFM Objective 2 (Enhanced Forest Management: Maintain flows of forest ecosystem services and improve resilience to climate change through SFM).

60. The GEF-6 Land Degradation (LD) strategy also recognized that successful SLM investment requires appropriate enabling environments, such as effective policies, legal and regulatory frameworks, capable institutions, and mechanisms for monitoring and knowledge sharing. So the project efforts to enhance policy, legal and institutional framework in land management to facilitate integration of SLM principles and practices into national and local level land use plans (under Outcome 1.1) remained relevant under GEF-6. The project efforts to introduce climate-

smart agriculture and pasture management under Outcome 3.1 are fully congruent with the LD strategy Outcome (Improved agricultural, rangeland and pastoral management) (including climate-smart agriculture) under Objective LD-2 (Generate sustainable flows of ecosystem services from forests, including in drylands).

61. The GEF-6 Climate Change Mitigation (CCM) strategy Objective CC 2 (Demonstrate systemic impacts of mitigation options) highlighted importance of mitigation-focused management practices in LULUCF, including conservation and enhancement of carbon stocks in forest and other land use, and support to climate-smart agriculture. It also recognized the importance of improving the accuracy of greenhouse gas emission estimates from LULUCF activities or agriculture (e.g. using mapping systems based on high resolution satellite imagery). The project efforts to improve management in the LULUCF sector to contribute towards enhancement of carbon stocks in forests and agro-ecosystems are fully in line with this vision. These efforts took place under Output 2.1.1 (National LULUCF and REDD+ Strategy established) and Output 2.1.3 (Carbon monitoring system established).

62. The GEF-7 did not include SFM as a focal area, it was turned into a cross-cutting impact programme. On the nexus with this programme, the GEF-7 Land Degradation (LD) strategy is aiming to avoid further degradation, desertification and deforestation of land and ecosystems in drylands through the sustainable management of production landscapes. Main elements of the programme are: i) sustainable management of dryland forests and trees outside forests; ii) the promotion of diversified agro-ecological food production systems in drylands; iii) integrated landscape management with particular attention to rangelands and livestock production in view of their effect on forest resources; and iv) the creation of an enabling environment to support the three objectives above. The above description almost fully suites the evaluated project. Under Outcome 2.1 the project worked to improve management of existing forests and trees. Under Outcome 2.2 (Dryland forest areas rehabilitated/afforested) the project efforts included provision of fencing to protect sites where trees were planted from damage by livestock as forest and rangeland areas are part of the same landscapes in Kyrgyzstan. At the same time under Outcome 3.1 (Improved agricultural management and rehabilitation practices) the project introduced the agro-pastoral model. Introduction of agroforestry under the same outcome contributes to creation of diversified agro-ecological food production systems. Under Outcome 1.1 the project worked to improve enabling environment in forestry and land management sector by enhancing policy, legal and institutional frameworks.

63. The GEF-7 LD strategy also has a focus on innovative approaches that can be scaled up to maximize global benefits for the environment and address the issues of biodiversity, climate change and local livelihoods. The project efforts to introduce innovative technologies and practices under Outcomes 2.2 and 3.1 are fully in line with this focus.

64. The GEF-7 CCM strategy retained focus on demonstrating mitigation options with systemic impacts (Objective 2). On the nexus with the SFM impact programme the strategy aims to foster low-carbon strategies, including in dryland forests, to halt the release of greenhouse gas emissions through avoided deforestation and by enhancing carbon stocks above and below ground. The project reforestation and afforestation efforts, including agroforestry, under Outcomes 2.2 and 3.1 as well as efforts to increase productivity of rangelands under Outcome 3.1 are fully in line with this aim.

Finding 2. Throughout the entire implementation period from 2014 to 2021, the project remained relevant to the priorities of the FAO Country Programming Framework.

65. The project design was aligned with two Outcomes of the FAO Country Programming Framework 2014–2017:

    i. Priority area 3.2: Management of natural resources in the rural sector.
    ii. Priority area 3.1: Policies and activities to enhance growth of smallholder agriculture allowing for growth in rural incomes and poverty alleviation.

66. Country Programming Framework 2018–2022 sets forth three priorities:

    i. coherent and gender-sensitive agricultural, food security and nutrition, social protection and rural development policies and programmes;
    ii. reducing rural poverty through smallholder support;
    iii. sustainable natural resources management, and resilience to climate management.

67. The project contributes to two of three Outputs under Priority 3, namely:

    i. Output 3.1: Enabling policies, legal frameworks and mechanisms for decentralized adaptive management improved for sustainable land and forest management. Within this Output the project is aligned with Target 1: by 2019, forest and land management policies and legislation are developed and submitted for approval and capacities are strengthened for sustainable natural management. This project contribution is made through achievement of the project Outcome 1.1.

    ii. Output 3.2: Investment promoted in sustainable land management, through agroforestry and pasture rehabilitation with the target to support rehabilitation, expansion and management of at least 25 000 ha of degraded forest resources by 2022. This project contribution is made through achievement of the project Outcome 2.2.

Finding 3. The project remained relevant to the national priorities in the forest and agricultural sectors along all of the process of its implementation.

68. The project design was informed by the Mid-term Development Programme of the Kyrgyz Republic 2012–2014, the Forestry Sector Development Concept of the Kyrgyz Republic 2004–2025, National Forest Programme 2005–2015, the draft National Agricultural Development Strategy 2012–2020, the draft Programme for Soil Conservation and Increase in Soil Fertility in the Kyrgyz Republic 2012–2015, and the National Strategy of Kyrgyz Republic on the achievement of gender development 2020.

69. During the period of the project implementation some of these strategic documents expired and new strategic documents were developed, but the project remained relevant to the national priorities.

70. The project Outcome 2.2 (Dryland forest areas rehabilitated/afforested) is well aligned with the national priority to increase the area of forests. Increasing the area of forests has been a priority for the Kyrgyzstan government for quite a while. The target to increase the forest cover from 5.6 percent to 6 percent by 2025–2030 and 8 percent cover by 2100 (increasing it by 289 000 and 664 000 ha, respectively) was already set in the National Forest Programme 2011–2015 which informed the design of this project. The Forest Development Concept 2040 adopted in 2019 with support of this project reconfirmed the 6 percent forest cover target but postponed the time of its achievement to 2040.

71. The first national strategic document on adaptation to climate change "Priority Directions for Adaptation to Climate Change in the Kyrgyz Republic 2017" adopted in 2013 has established increase of the forest cover as one of the strategic tasks. The National Development Programme 2018–2040 also highlights the importance of increasing the tree-covered areas as the key approach for mitigation of climate change, land degradation and air pollution. Identified priority activities include forest planting and increasing the areas covered by perennial vegetation.

72. The Adaptation to Climate Change Programme and Action Plan for the Forest and Biodiversity Sector 2015–2017 included the objective to expand the forest area and enhance effectiveness of forest management. Some of the specific activities under this objective were fully congruent with the project activities:

i. Activity 2.2.6: Develop and implement afforestation projects on the areas of the State Forest Fund is congruent with the project Output 2.2.1: 8 000 ha of degraded forest land rehabilitated/afforested.

ii. Activity 2.2.7: Develop and implement projects to establish plantation of climate-resilient fast-growing trees is congruent with the project Output 2.2.2: 2 650 ha of tree plantations established with indigenous fast-growing forest trees.

iii. Activity 2.2.8: Demonstrate the climate resilient agroforestry practices to local communities is congruent with the project Outcome 3.1: Improved agricultural management and rehabilitation practices and techniques in drylands by demonstrating and adopting agricultural and agroforestry best practices that increase vegetative cover and soil fertility, reduce soil degradation, and avoid greenhouse gas emissions.

73. The project efforts to introduce sustainable land management, climate-smart agriculture and techniques improving the productivity of pastures are aligned with the national priorities in the agricultural sector. The Adaptation to Climate Change Programme and Action Plan for the Agriculture and Water Sector 2015–2017 call for the introduction of soil protective agricultural practices and planting protective forest belts in agricultural landscapes, as well as improved pasture management. These are exactly the activities that the project was implementing. The National Development Programme 2018–2040 also stipulates the need for introduction of the ecologically sound agricultural practices.

Finding 4. Evidence available at the time of this evaluation suggests that the recent changes in the government would not lead to significant changes in the national priorities in the LULUCF sector.

74. Following the recent changes in the government, the State Agency for Environmental Protection and Forestry (SAEPF) responsible for coordinating the state programmes on forest management has been disbanded. The SAEPF Forest Ecosystems Department and the Forest Service which were actively involved in the project implementation have been transferred to the Ministry of Agriculture.

75. At the time of this evaluation, it was still unclear how these changes would affect national forest policy priorities. All the same, several respondents viewed transfer of the forest management functions to the Ministry of Agriculture as a positive development that would allow for an integrated governance in the LULUCF sector and improve the management of forest, agricultural and pasture lands that are part of the same landscapes in Kyrgyzstan.

76. The data available to the evaluation team also suggests that the recent changes in the government structures may not lead to significant changes in the government priorities congruent with the project outcomes. One of the first executive orders signed by the newly elected President was on measures to develop the national agro-industrial complex. These measures include improving

access of farmers to ecologically sound innovative technologies, promoting effective use of low productive agricultural and pasture lands through agroforestry, horticulture and grapes cultivation.

77. The evaluation team has also learned that the government is contemplating establishment of the State Committee for Climate and Ecology which may be a sign of its commitment to climate-related obligations made by the previous government. Such climate change adaptation priorities, as increasing the forest cover, sustainable land management, climate-smart agriculture and pasture management may stay intact.

Finding 5. The project goal to contribute towards improved local livelihoods was highly relevant to the needs of local communities.

78. Over 60 percent of the rural population in Kyrgyzstan are poor or vulnerable to poverty (IFAD, 2020). Sustaining and increasing the level of family income is the key priority for rural residents. So local communities highly appreciated that the project provided not only training on new agricultural and pasture management approaches, but also the initial investment necessary for their application, including seeds, saplings, various materials and equipment free of charge (Box 3).

Box 3. Project relevance to local needs – voice of the local stakeholders

> "Projects like this are very needed as they give farmers means to generate additional income. Rural life is difficult, people are glad for any opportunity to earn money. Getting saplings and seeds is much better than just getting training without material support."
> "People are grateful that FAO provided opportunities for better livelihoods. People who worked hard eventually earned good income. For poor families, this FAO project was very helpful."

79. **Rating:** Overall, despite a delayed start and an extended implementation period, the project remained relevant to evolving GEF, FAO country office and national priorities. Members of pilot local communities also see the project as highly relevant to their needs. On the basis of the above findings, the overall rating for the project relevance is **Highly Satisfactory** (HS).

3.2 Effectiveness

Component 1. Strengthening the enabling environment for sustainable forest and land management.

Outcome 1.1. Enhanced policy, legal and institutional framework in forestry and land management.

Box 4. Outcome 1.1, related outputs and targets

Results	End-of-project targets
Outcome 1.1: Enhanced policy, legal and institutional framework in forestry and land management for integrating SFM/SLM principles and practices into national and local level land use plans.	By end of the project principles included into national and local land use plans.
Output 1.1.1: Proposals for forestry and land policy and legislation for SFM/SLM developed.	Amendments to land code to promote SLM on abandoned agricultural lands. Amendments to forest code to promote SFM on degraded forest agricultural lands.
Output 1.1.2: Cross-sectoral strategies and agreements between sectoral authorities on integrated land use management developed to foster cross-sectoral cooperation.	Cross-sectoral strategy developed, adopted and operationalized.
Output 1.1.3: Operational mechanism for ensuring better collaboration at national level and between national and local levels developed and implemented.	The electronic information system is operational. Enhanced communication between national and local levels.

Finding 6. Results and recommendations of the forest and agricultural policy assessments conducted by the project informed the development of amendments to national forest and agricultural policy and legislation.

80. The project efforts to enhance policy and legal environment were undertaken in partnership with a number of parallel projects, including the GIZ *Programme for Sustainable and Climate Sensitive Land Use for Economic Development in central Asia* (which was providing in-kind co-financing to this project) and the FAO Technical Cooperation Programme (TCP) *Forest Policy Project*. This approach was fully appropriate given that majority of projects targeting forestry and agriculture sectors in Kyrgyzstan have components for enhancement of enabling environment.

81. During the inception phase the project reduced the expected results for Output 1.1.1 to the development of proposals for forestry and land management improvement dropping the target for adoption of these proposals as it was outside project control. The key instruments used to develop these proposals were two assessments – one of the existing national forest policies and another of the agricultural policies - implemented under the Letter of Agreement (LOA) with the project by the Association of Forest and Land Users.

82. Both assessments led to development of a number of recommendations for policy changes in the forestry and agricultural sectors that were eventually adopted and acted upon. For example, the assessment of the national forest policy led to the recommendation to develop a new concept for the forest sector development as the existing Concept for Forestry Sector Development 2004–2025 did not cover the social and economic aspects of forest management. This recommendation was acted upon: the new the Concept for Forest Development 2040, and the first related National Action Plan 2018–2022 were developed with support from the FAO TCP *Forest Policy Project* and approved by the government in 2019. The FAO TCP *Forest Policy Project* also developed proposals for amendments to the Forest Code based on results and recommendations of the assessment of the national Forest Policy. These amendments are still pending, but national partners interviewed by the evaluation team believe that they would be eventually adopted.

83. Recommendations that emerged from the assessment of the national agricultural policy included fostering cooperation between farmers so that they would jointly manage their land lots and introduction of agroforestry. The project submitted the assessment results and recommendations to the Ministry of Agriculture in 2015. Some of the recommendations have already been translated into regulatory changes. For example, the 2017 amendments to the Law on Moratorium on Transfer of Arable Lands under Other Land Use Categories (adopted by Law No. 174 from 14 October 2017) allowed for agroforestry on arable lands.

84. Results of the assessment of the national agricultural policy also informed further development of amendments to the Land Code and several other related laws in 2017–2019. The project staff were part of the working group that developed these amendments. Some of them have already been enacted. For example, amendments to the Land Code and Pasture Law (adopted by Law No. 76 from 10 June 2020) introduced the concepts of sustainable pasture management, including allocation of the fees for pasture use for pasture improvement activities.

85. The Executive Order on measures to develop the national agro-industrial complex signed by the recently elected President also includes provisions that were articulated in the recommendations of the agricultural policy assessment conducted by the project, including fostering cooperation between farmers and use of agroforestry.

Finding 7. The project developed recommendations for cross-sectoral integration between state agencies in the areas of land resources management and environmental education, but except for two cases on provincial and district levels these recommendations have not been adopted by the government yet.

86. To achieve intended results for Output 1.1.2, the project conducted the analysis of the body of regulation related to land resources management and cross-sectoral interaction between state and local self-government entities in the land use sector. Results and recommendations of this analysis were presented to representatives of the Ministry of Agriculture, SAEPF, State Agency for Local Government and Inter-Ethnic Relations, Ministry of Education and Ministry of Emergency Situations at a roundtable in November 2020.

87. At the local and provincial level the project used results of this analysis to support administration of Ak-Tala district to develop and adopt an Order "*On approval of the regulation and organization of the district commission on strengthening cross-sectoral interaction for management of natural resources*". The similar decree was developed and issued with the project support by the Representative Office of the Government of the Kyrgyz Republic in Naryn province.

88. The Memorandum on the results and recommendations of the analysis of the state of environmental education completed in 2021 (developed under Output 4.2.4: Environmental education and awareness raising strategy) also represents a proposal for cross-sectoral integration strategy. At present there are two entities responsible for environmental education – SAEPF and Ministry of Education. Recommendations made in the memorandum call for establishment of a cross-sectoral commission on environmental education.

Finding 8. The project has made several critical contributions towards establishment of the Forest Management Information System.

89. Support to the establishment of the SAEPF Forest Management Information System (Output 1.1.3) was provided in cooperation with the World Bank/GEF *Integrated Management of Forest Ecosystems of the Kyrgyz Republic* project. Contribution of this project included provision of two

servers, 35 computers, a router and a multifunctional device to SAEPF as well as the software for working with the forest inventory results.[14]

90. In the opinion of national partners interviewed by the evaluation team, the project's contributions to the establishment of the electronic (digital) Forest Management Information System were critical. They especially appreciated the provision of the hardware. Still at the time of evaluation the system was not fully operational as the necessary infrastructure was established only at the national level but not at the level of leskhozes. Leskhozes still have to procure the necessary hardware and obtain internet connection.

Finding 9. The project facilitated integration of sustainable forest and land management principles into local land use plans.

91. While results achieved under Outputs 1.1.1–1.1.2 facilitated integration of the sustainable forest and land management principles into national policies and legislation, their integration into local level land use plans and consequently the full achievement of Outcome 1.1 was contingent on the results of the activities contributing towards Outputs 1.2.1, 1.2.2 and 2.1.2.

92. Activities that facilitated integration of SFM/SLM principles into local level land use plans included:

i. In 2018–2019 the project published a collection of effective laws and policies governing forestry and agricultural sectors and conducted a series of workshops on their application – with a focus on SFM/SLM principles– for key project stakeholders in all provinces of Kyrgyzstan.

ii. The project also supported the development of management plans in pilot leskhozes – on the basis of land maps developed by the project and recommendations based on these maps.

iii. In cooperation with the World Bank/GEF project the guide for leskhozes on development of integrated forest management plans was developed and disseminated.

iv. The project supported mapping of land conditions in the pilot rural municipalities as well as the development of local land and pasture use plans.

93. **Rating: Moderately Satisfactory.** Though the targets for Outputs 1.1.2 and 1.1.3 were achieved only partially, the target for Outcome 1.1 - SFM/SLM principles included into national and local land use plans – has been mostly achieved**.**

Outcome 1.2. Increased understanding and awareness on roles of SFM/SLM and LULUCF in carbon sequestration and greenhouse gas balance.

Box 5. Outcome 1.2, related outputs and targets

Results	End-of-project targets
Outcome 1.2: Increased understanding and awareness on roles of SFM/SLM and LULUCF in carbon sequestration and GHG balance.	Assessment of participatory management in rural municipalities competed. Proposals for legal adjustments provided.
Output 1.2.1: SFM/SLM based on resource user associations is effectively promoted in the project area(s) and respective local resource management institutions are fully functional.	Land use plans of Aiyl okmotu[15] in project areas elaborated according to principles of sustainable resource management.
Output 1.2.2: Training and awareness creation toolkit on roles of SFM/SLM and LULUCF in carbon sequestration and greenhouse gas balance prepared and disseminated.	Guidelines for participatory management developed. 100 percent of user groups in the pilot areas work according to new management plans.

[14] The first forest inventory took place in 2008 with support of FAO. The second one started in June 2021 with support of the World Bank/GEF project. The software provided by the project will enable the Forest Service to track changes in the state of forests by comparing results of the two inventories as well as to digitally add new information provided by leskhozes.

[15] Aiyl okmotu is a rural municipality head office.

Finding 10. The GIZ, a co-funding partner of the project, contributed to increased understanding and adoption of SFM through the *Programme for Sustainable and Climate Sensitive Land Use for Economic Development in Central Asia*.

94. Achievement of the Outcome 1.2 was facilitated by an in-kind contribution of the GIZ *Programme for Sustainable and Climate Sensitive Land Use for Economic Development in Central Asia* (2016–2020). In Kyrgyzstan the programme introduced the concept of the joint forestry management and supported establishment of Joint Forestry Councils (JFC) at six pilot leskhozes: Balykchi, Jety-Oguz, Frunze, Nookat, Achinsk and Kyzyl-Unkur. (Jety-Oguz and Nookat leskhozes are also pilot leskhozes for this project.) Prior to establishing the JFCs the Programme conducted assessments of existing management practices in pilot leskhozes.

95. The JFCs are bringing together management of leskhozes and local resource management groups, for example pasture committees, to facilitate joint decisions about use of forest and pasture resources located on the lands managed by leskhozes. According to GIZ, joint management plans were developed in all pilot leskhozes, including Jety-Oguz and Nookat ones. Reportedly in Jety-Oguz and Nookat meetings of the JFCs were used to present information about this project. According to GIZ, piloting of JFCs had a limited success because of low buy-in from local communities. At the same time, on the national level the idea of joint forestry management was included in the Concept for Forest Development 2040. The programme has also developed a draft regulation on JFCs which has not been adopted yet.

96. The baseline for Outcome 1.2 is defined as "Principles of participatory management of local forest resources not included into the forest law". The target for this outcome envisages completed assessment of participatory management in rural municipalities and submission of proposals for legal adjustments. Given that the GIZ programme carried out assessments of management of local forest resources in some of the project pilot leskhozes and made proposals related to introduction of the joint forestry management into national forest policy, Outcome 1.2 can be rated as fully achieved.

Finding 11. Results of the studies of land and pasture conditions in the pilot rural municipalities conducted by the project have laid the foundation for local SLM and land use plans.

97. Literature (e.g. Sanz *et all*., 2017) indicates that introduction of SLM practices should be based on the analysis of the local environmental characteristics (climate, topography, soil quality) that should then inform the selection of the most suitable land use and/or management options.

98. The project conducted a series of studies (implemented by Kyrgyzgiprozem, a state research institute specializing in land use matters) of the conditions of the agricultural and pasture lands in pilot rural municipalities:

    i. In 2015 the soil and agrochemical study covered 10 724 ha of agricultural land in pilot districts to determine the degree of land degradation.

    ii. In 2015 the geobotanical study of pastures assessed the degree of degradation of 20 000 ha of pastures in six pilot rural municipalities.

    iii. In 2019 the agrochemical study covered 35 942 hectares of irrigated lands in pilot districts.

99. Results of these studies, including soil and pasture vegetation maps as well as explanatory notes with recommendations on rehabilitation of degraded lands and pastures, were handed over to representatives of rural municipalities and local pasture committees – to serve as the basis for comprehensive local land and pasture use plans. So while the studies are reported under

Component 3 as contributing to Outputs 3.1.1 and 3.1.2, they also clearly contribute towards Output 1.2.1.

100. During the field visit the evaluation team found that the maps and recommendations are kept at the rural municipality offices and are available to interested farmers, but local authorities don't see them as their land management plans. So the project did not fully reach the target for Output 1.2.1.

101. **Rating: Moderately Unsatisfactory.** The evaluation team did not find any evidence that a toolkit on roles of SFM/SLM and LULUCF in carbon sequestration and greenhouse gas balance was prepared and disseminated (Output 1.2.2). The project has contributed towards achievement of Output 1.2.1, but did not meet the set target. And while it can be concluded that the project achieved the target for Outcome 1.2 as the assessment of participatory management in two pilot rural municipalities were completed and proposals for legal adjustments were provided, there is no evidence that this translated into increased understanding and awareness on roles of SFM/SLM and LULUCF in carbon sequestration and greenhouse gas balance.

Component 2. Enhancing carbon stocks in dryland forest through innovative management and rehabilitation practices.

Outcome 2.1. Management of existing forests and trees improved.

Box 6. Outcome 2.1, related outputs and targets

Results	End-of-project targets
Outcome 2.1: Management of existing forests and trees improved.	At 20 000 ha of forest land the carbon content increased by 15 percent due to improved management.
Output 2.1.1: National LULUCF and REDD+ Strategy and sector assessment, national climate change mitigation standards and National Action Plan together with national partners developed.	LULUCF sector assessment. National climate change mitigation standards in the LULUCF sectors drafted. National LULUCF and REDD+ Strategy and Action Plan operationalized.
Output 2.1.2: Sustainable forest management planning covers at least 20 000 ha of forest.	100 percent of leskhoz in the pilot areas work according to new management plans covering 20 000 ha.
Output 2.1.3: Carbon monitoring system established based on field sampling of forests and various dryland land use systems.	The carbon monitoring system regularly provides data about 8 leskhozes of 5 provinces. Establishment of carbon monitoring system and baseline monitoring. Monitoring of carbon content of forests and dryland land use systems.

Finding 12. The project laid the foundations for the establishment of the national carbon monitoring system by developing a map of land use based on Intergovernmental Panel on Climate Change (IPCC) categories, conducting baseline research on carbon content in forests, pastures and agricultural lands, and contributing to the development of methodological recommendations for soil monitoring.

102. The project supported the development of the digital map of land use based on IPCC categories. National partners see this map as the foundation for national carbon monitoring and reporting.

103. The project conducted a study – implemented by the Climate Change Centre and the Forest Institute of the National Academy of Science – that identified national carbon content coefficients for eight most common forest tree and shrub species. According to national stakeholders this was the first study of this kind in Kyrgyzstan. Previously, calculation of carbon amounts accumulated in the LULUCF sector were done using the IPCC coefficients for Central Asia. But IPCC coefficients are identified as a rather broad interval of possible values which creates a significant level of

uncertainty regarding the carbon content. The coefficients that resulted from the study supported by the project turned out to be within the upper third part of the interval offered by IPCC.

104. The project also conducted a joint study on the carbon content in pasture and arable lands with the Department for International Development (DFID)-supported project *Prevention of conflicts over pasture resources* implemented by the non-governmental organization (NGO) Camp-Alatoo which is one of the members of Mountain Partnership, a co-funding partner of this project. Camp-Alatoo team collected soil samples from pastures in their project sites, and the project team collected samples from arable land lots in the pilot rural municipalities. According to national partners results of this study helped to prove that amount of vegetation biomass has a direct impact on the carbon content in soils.

105. In addition, members of the project team contributed to the development of regulations on the monitoring of the soil quality, namely:

i. Regulations on monitoring of arable lands of the Kyrgyz Republic (approved by the Ministry of Agriculture in 2019).

ii. Methodological guidelines on adjustment of soil surveys and preparation of large-scale soil maps of aiyl aimak[16] lands (approved by the Ministry of Agriculture in 2019).

iii. Procedures for determining the degree of land quality in the Kyrgyz Republic (approved by the Ministry of Agriculture in 2019).

106. Results of the studies guided by these regulations are used, among other things, for preparation of national estimates of carbon emissions and sinks in the LULUCF sector.

107. The provision to establish the national carbon monitoring system for the LULUCF sector was included in the draft Programme on regulation of emissions and sinks of greenhouse gases of the forestry and other land use sector 2030 developed with the project support. According to this document, the establishment of the carbon monitoring system for the LULUCF sector should be completed by 2030. The draft was ready in 2019 but at the time of this evaluation its approval was still pending.

108. According to the experts interviewed by the evaluation team, the draft Programme on regulation of emissions and sinks of greenhouse gases of the forestry and other land use sector 2030 developed in 2019 was not adopted because in 2020 all government attention was focused on COVID-19 related matters and then changes in the government structures at the end of 2020 and early 2021. At the same time, experts believe that the Programme will eventually be adopted. It is supported by the State Agency for Land Resources that sees adoption of the Programme as a means to have the country qualify for REDD+ support. In addition, experts who developed the draft of the Programme recently participated in the discussions about possible mandate for the new Committee on Climate and Ecology that may be established by the government. Experts used this opportunity to present the draft Programme and advocate for its adoption.

[16] Aiyl aimak is a rural municipality in Kyrgyzstan.

Finding 13. Within the framework of the project, a digital map of land use, based on IPCC categories, and the draft Programme on regulation of emissions and removals of greenhouse gases of the forestry and other land use sector 2030, were developed. These have already been used in the process of preparation of the Forth National United Nations Framework Convention on Climate Change (UNFCCC) Communication and update of the intended nationally determined contribution (INDC).

109. National stakeholders have also informed the evaluation team that results achieved by the project under Outcome 1.2 are already used in the process of preparation of the Forth National UNFCCC Communication and update of the intended nationally determined contribution.

110. Experts working on the Forth National UNFCCC Communication used the digital map of land use based on IPCC categories developed within the framework of this project to determine the area for each category used in calculations of emissions and sinks in the LULUCF sector. The map was also used for the analysis of adaptation and mitigation scenarios. Experts did not use national coefficients for eight common forest tree and shrub species determined by the study conducted by the project. But reportedly, results of this study served as proof that IPCC coefficients were appropriate for Kyrgyzstan. Use of the new accurate data on areas of land under IPCC categories resulted in a new estimate of carbon sink in the LULUCF sector that is 27 time higher than the estimate made in the Third National UNFCCC Communication.

111. Experts working on the next INDC took into account provisions of the draft Programme on regulation of emissions and sinks of greenhouse gases of the forestry and other land use sector 2030.

Finding 14. The project reached the target of 100 percent of pilot leskhozes working according to their new management plans.

112. Under Output 2.1.2 early in the implementation process the project supported field works in all eight pilot leskhozes that informed the development of recommendations for reforestation and forest regeneration, including selection of appropriate locations and species, which were converted into operational plans. The evaluation team has found that maps and recommendations developed with the project support were still used by leskhozes, and that the reforestation and forest regeneration activities undertaken by leskhozes within the framework of this project were guided by the plans developed with the project support.

Finding 15. Payment for environmental services agreements piloted by the project worked with mixed success.

113. Under Output 2.1.2 in cooperation with the Central Asia Regional Economic Cooperation Program (CAREC) in 2016–2017 the project piloted the payment for environmental services approach in Tyup leskhoz in Tyup district of Yssyk-Kul province. After the initial training for and consultations with local community of the village of Kurmenty, two PES agreements were made. One PES was between the leskhoz, rural municipality office and local pasture committee for the use of the remote forest pasture lands instead of the area near the village where cattle was damaging the forest. Another PES was between the leskhoz and local water user association to undertake joint activities to prevent cattle access to the river that serves the source of drinking water for local people by planning trees and fencing of the water intake area to prevent water pollution.

114. Both PES agreements expired in 2019 and several sources informed the evaluation team that they were not renewed. Still, local pasture committee plans to continue to cooperate with the leskhoz to get access to remote pastures. The PES between the leskhoz and the water user association did not work as planned. While the fencing and planting of trees around water intake was completed, after some time the fence was removed and the majority of seedlings did not survive. In addition, the planting of protective shrub belt along the river to prevent cattle access to the water was not

implemented. Data from the field visits indicates that there were significant disagreements between the leskhoz and local community. It seems that the main reason for disagreement was that local people wanted to plant a non-local variety of sea buckthorn that could be used for income generation while the leskhoz could offer only seedlings of local coniferous trees. This disagreement was not resolved, and the protective shrub belt along the river was not established.

115. **Rating:** In the opinion of the evaluation team, Output 2.1.2 (Sustainable forest management planning covers at least 20 000 ha of forest) does not fit under this Outcome. It would fit better under the Outcome 2.2 (Dryland forest areas rehabilitated/afforested) because rehabilitation and afforestation activities were conducted on the basis of the management plans developed with the project support. The target for Outcome 2.1 (At 20 000 ha of forest land the carbon content increased by 15 percent due to improved management) is also more appropriate for Outcome 2.2. Output 2.1.1 (National LULUCF and REDD+ Strategy developed) contributes towards the enhanced enabling environment. The overall rating for Outcome 2.1 is **Moderately Unsatisfactory**. The target for Output 2.1.2 was fully achieved , but targets for other two Outputs were achieved only partially.

Outcome 2.2. Dryland forest areas rehabilitated/afforested through introduction and demonstration of innovative technologies/practices and pressures on forests reduced.

Box 7. Outcome 2.2, related outputs and targets

Results	End-of-project targets
Outcome 2.2: Dryland forest areas rehabilitated/afforested through introduction and demonstration of innovative technologies/ practices and pressures on forests reduced.	Assessment of technologies by project team and research partners. In total three new technologies are introduced.
Output 2.2.1: 8 000 ha of degraded forest land rehabilitated/afforested through successfully demonstrated innovative technologies and practices including agroforestry trials and controlled grazing.	In total 8 000 ha of degraded forest land successfully restored.
Output 2.2.2: 2 650 ha of tree plantations established by local people with indigenous fast-growing forest trees in order to reduce the wood demand from natural forests (forest degradation prevented in at least 10 000 ha forest areas).	In total 2 600 ha of tree plantations established.
Output 2.2.3: Efficiency of fuel wood use improved by introduction of innovative technologies and improved house insulation.	Introduction of innovative technologies and improved house insulation. 20 percent less use of local fuel wood by households.

Finding 16. The project has significantly increased capacity of pilot leskhozes.

116. In addition to supporting the development of new management plans for pilot leskhozes, the project made contributions towards greater professional qualification and knowledge on the national forest regulation of leskhoz staff, as well as provided materials and in some cases supported establishment of infrastructure for implementation of the management plans.

117. The national partners were very positive about the results of the trainings organized by the project for heads of leskhozes and specialists of the Forest Service[17] in the Republic of Korea and Turkey. The study programme in Turkey that included three ten-day trainings – on nursery management and cultivation of planting material with closed root system, prevention and control of forest fires, measures to combat forest diseases and pests – had a "transformational" effect on attending

[17] Decision on the composition of the group that attended training was made by SAEPF. Reportedly the team included people working in leskhozes rather than agency executives.

foresters, as noted by one of the respondents, and changed their perception of forest management.

118. The staff of leskhozes also appreciated insulation of houses used for accommodation of staff in remote forest sites and installation of energy-efficient stoves and solar panels provided by the project under Output 2.2.3.

119. Establishment of two nursery farms – in Nookat and Tyup leskhozes – where the project supported construction of greenhouses, fencing of the nursery area, as well as provided three tractors MTZ-82 also constitutes a significant contribution towards their greater capacity.

Finding 17. The project has successfully introduced and demonstrated several technologies that were new for Kyrgyzstan: fencing, agroforestry (including the silvopastoral model) and fast-growing forest species, as well as supported trials of several new approaches developed by the Forest Service.

120. According to national and local stakeholders interviewed by the evaluation team, the key innovations introduced by the project in the forestry sector were fencing and agroforestry. Box 5 presents quotes related to the use of fencing and its results from interviews with stakeholders. Uncontrolled grazing prevents natural forest regeneration and can undermine human reforestation efforts as cattle eats and damages tree seedlings. Fencing is an effective way to prevent cattle access and to protect seedlings in both natural and planted plots. Before the project leskhozes did not use fencing because it seemed too expensive. Actually it was due to the project provision of fencing materials that pilot leskhozes were able to use this technique. But now, as the effectiveness of fencing was recognized within the Forest Service, other leskhozes have also picked this practice – usually with support of other development projects.

Box 8. Fencing – voices of the local stakeholders

"The main innovation introduced by the FAO project is fencing of tree planting areas."

"Fencing proved to be very effective as it provides excellent protection against cattle that eats the seedlings while they are small. Fencing also facilitates the natural afforestation by providing good conditions for very young and small trees. This measure is very simple, but it is quite costly which was the reason why it was not implemented in leskhozes before this project on such a large scale. Now, we hear from our colleagues that other projects also started fencing plots where they planted trees. So, it is a good indicator of the effectiveness of fencing."

"Fencing is really effective. One can see the results just by looking at the vegetation inside and outside of the fenced area. The difference is striking, as the grass inside is very high and green, whereas outside animals just eat all of the grass. Our leskhoz plans to continue fencing if we have sufficient resources for it."

"In Apshyr-Ata gorge we have put a fence this spring. At present, just after a month or so, there is already visible difference in vegetation cover inside and outside of the fence. We think that fencing is a very effective measure."

121. Introduction of agroforestry was another innovation. Due to careful selection of tree varieties based on the analysis of soil conditions conducted at the beginning of the project, agroforestry trials worked well and convinced local communities that planting fruit trees was a viable land use option. In addition, in the southern pilot districts – in Osh and Jalal-Abad provinces – the project introduced cultivation of the more commercially viable sweet almonds which made their planting attractive to local people. Box 9 presents relevant quotes from stakeholder interviews.

Box 9. Agroforestry – voices of the local stakeholders

From Issyk-Kul province

"Even though livestock breeding is the main occupation in rural areas, after the trainings and workshops on horticulture many farmers got interested in starting their own orchards, as they see this business as a promising one."

From Osh province

"I have worked with many different projects here in Zulpuev AO, but I would like to highlight that FAO project indeed waked up our farmers. People started to take unproductive land plots on lease from both AO and leskhozes. Now there is a high demand for such lands. It is all because of sweet almonds that were introduced in our area by FAO. Almonds turned to be a perfect fit for our climate and soils, and they can give a decent income to people. Pistachios proved to be too fragile, they need more care than almonds. Also, farmers learned that the best way of almonds' cultivation is growing them from the seeds. FAO provided high quality almond seeds. Another benefit of these trees, that they keep the soil tighter which helps to prevent landslides and mudflows which are frequent in our part of the country."

"Trainings on almond cultivation were very useful. Before the project people didn't grow almond much. We used to grow a bitter variety of almond which was not good for sale. FAO project introduced us the sweeter variety, which is much more popular in the market. They also gave a lot of seedlings to farmers, which is very good for us."

"I took on lease bogara (Bogara is the name for unirrigated lands in the areas where irrigation is widely used) land plot in our village. FAO gave me almond seeds of high quality; I am very happy with them. To protect seedlings from cattle I also fenced my land. Now my seedlings are already 5 years old. Seedlings do well, some of them flowered last year, but didn't fruit yet. I hope for some harvest this year. FAO is doing very good job on almonds promotion, farmers in our village appreciate this support."

122. By planting pistachio (and saxaul in Batken province – upon special request from national partners) the project has also introduced the silvopastoral model: once the planted trees mature enough, the site will be open for grazing.

123. Another innovation introduced by the project is fast-growing forest species – mostly poplars – that can be used for wood to reduce pressure on regular forests (Output 2.2.2). The project envisaged that these trees would be grown by local people. But local communities were not interested and preferred fruit trees that could be a source of income. So instead, the project – in partnership with the Central Asian Bureau of the World Agroforestry Centre (ICRAF) – established two demonstration plots planted with 23 different poplar hybrids in Issyk-Kul and Jalal-Abad provinces.

124. In addition, the project enabled the Forest Service to try several new approaches to planting forest species. Pilot leskhozes were deliberately selected to represent the variety of existing natural conditions and try the maximum number of new approaches. For example, they successfully planted trees on southern mountain slopes where there are no forests – debunking the common belief that trees cannot grow on southern slopes. Similarly there were successful trials of planting spruce seedlings 100 meter above the current forest line. This finding is important because temperature rise due to climate change is expected to shift the comfort zones for local tree species upward and there were concerns that forest ecosystems won't be able to transgress along with this shift. Now it is clear that it would be possible to support upwards transgression of forests by planting on higher altitudes. Another successful experiment involved planting walnut trees above their regular growth line under the cover of maple forests.

Finding 18. The project largely met the 8 000 ha target for afforestation and rehabilitation.

125. The project planned to plant trees and support natural regeneration of forest cover at 8 000 ha of leskhozes and rural municipalities lands (Output 2.2.1). Table 3 presents the data on the extent of planned afforestation and rehabilitation efforts and their actual results by the end of the project.

Table 3. Extent of planned and actual afforestation and rehabilitation efforts

Leskhoz	Planned area, ha		Actual area, ha	
	Afforestation	Rehabilitation	Afforestation	Rehabilitation
Tyup		181.3		507.0
Jety-Oguz	534.2	925.9	268.7	1 000.0
Kochkor	44.2	354.6	22.6	354.6
Ak-Tala	312.8	556.7	58.2	1 236.4
Jaiyl		721.5		870.0
Kochkor-Ata	1 129.6	496.0	1 297.09	496.0
Kara-Alma	848.4	321.8	591.85	
Nookat	404	1211.6	254.23	
Total	3 273.2	4 769.4	2 492.6	4 464.0
	8 042.6		6 956.7	

Source: SAEPF/NPIU.

126. The project did not manage to fully implement the plans set for pilot leskhozes, but planted additional 1 000 ha of saxaul in Batken province – upon request from the national partners and approval of the project Steering Committee. So overall the target for Output 2.2.1 has been achieved.

127. Reportedly the Forest Service conducts regular monitoring of the survival rates for tree plantations, including in the plots afforested with the project support. But the evaluation team did not manage to get this data. According to the local stakeholders interviewed during field visits, the survival rates range from 40 percent to 90 percent (Box 10).

Box 10. Tree planning - survival rates: estimates by stakeholders

Sokuluk district. The survival rate for elms and poplars was quite high – around 70 percent, whereas for fruit trees it was even higher – around 90 percent. People who received the apple seedlings were very grateful and provided a lot of care for the fruit trees, that is why the survival rate was high.

Jety-Oguz leskhoz. We planted around 270 ha of trees in forestry lands in 2016–2019. Some of the planted trees are still very young and small. They are hardly visible in the grass. But upon checking the plantations established recently we found that the survival rate was very high - around 90 percent.

Tyup leskhoz. Survival rate of planted trees was quite high - around 70 percent.

Noocat district. Unfortunately, cattle seriously damaged the seedlings. Even though we fenced all the plots, sometimes cattle went through and ate all the plants inside. I would say that on average around 35-40 percent of trees were lost.

On average, around 60 percent of seedlings survived. Largely these were almonds, pistachios are not good. They are too weak and got eaten by cattle too easily. Also, we lost some of trees because of landslides and mudflows.

Noocat leskhoz. Specific problem in our leskhoz were wild animals, who ate a lot of sown seeds. Even chemical treatment didn't help much. Foxes and badgers damaged around 30 percent of seeds. They liked both pistachio and almond seeds. We couldn't find an effective protection against these animals.

General survival rate was in range from 40 percent to 80 percent depending on soil features and other factors. But pistachios survived much better than almonds in our Lepshi plot.

Ak-Tala leskhoz (information from the Forest Service): Survival rate in Ak-Tala leskhoz was 51 percent to 69 percent. This is very high.

128. **Rating**: The project introduced more than three new technologies and achieved the target for the rehabilitated/afforested area but experienced problems with introduction of fast-growing trees into local communities. Overall rating for Outcome 2.2 is **Satisfactory**.

Component 3. Promoting and demonstrating climate-smart agriculture, including pastures as part of sustainable land and water management in drylands.

Outcome 3.1. Improved agricultural management and rehabilitation practices and techniques in drylands.

Box 11. Outcome 3.1, related outputs and targets

Results	End-of-project targets
Outcome 3.1: Improved agricultural management and rehabilitation practices and techniques in drylands by demonstrating and adopting agricultural and agroforestry best practices that increase vegetative cover and soil fertility, reduce soil degradation, and avoid greenhouse gas emissions.	Development of guidelines for introduction of innovative technologies. In total, three new practices are implemented that increase vegetation cover and soil fertility, reduce soil degradation and avoid green-house gas emissions.
Output 3.1.1: 200 demonstrations of innovative agricultural practices covering a total of 10 907 ha of arable land.	Innovative agricultural practices together with research partners identified. In total innovative agricultural practices demonstrated at 10 000 ha of land.
Output 3.1.2: 20 000 ha of non-forest land of State Forest Fund or degraded agricultural land using innovative technologies successfully rehabilitated.	Identification of degraded land for rehabilitation, baseline monitoring. 20 000 ha of non-forest land of State Forest Fund or degraded agricultural land successfully rehabilitated.

Finding 19. The project has introduced a complex of new agricultural techniques through farmer field schools and demonstration plots.

129. Activities under Output 3.1.1 implemented under a Letter of Agreement with local non-governmental agricultural extension agency Teaching, Consulting and Innovation Centre included development of training materials, training a cadre of local trainers, presentations at local

communities to recruit participants of farmer field schools (FFS), training and consultations to support operation of FFS at demonstration plots, exchange visits and open field days to facilitate broader dissemination of introduced technologies, monitoring of results achieved through application of these technologies. The project has also provided seeds, materials and equipment, including several Vence Tudo SA 14600 seeders, to support demonstration of innovative technologies.

130. The project introduced five groups of agricultural technologies:

i. soil conservation techniques including no-till farming, mulching, prevention of soil erosion, amelioration of degraded soils;

ii. diversification of crops through crop rotation with perennial grasses and creation of windbreaking tree belts;

iii. integrated soil regeneration approaches including application of bio-humus, organic, bio-organic and bio-organic-mineral fertilizers as well as siderates (green fertilizers);

iv. integrated plant protection including biological protection techniques, composting and use of compost, fertigation;

v. water-efficient techniques including use of short irrigation trenches, pulse drip irrigation and contour irrigation.

131. Overall, the project established 176 FFS and 220 demonstration plots in 2017–2018. The total number of farmers who were directly involved in these activities is over 2 000 people. Decisions about application of specific techniques in specific land plots were made with consideration of the results of the studies conducted earlier by the project.

132. Data of the surveys of farmers who participated in the project trainings and FFS indicates that introduced techniques were truly new – at least for the pilot rural municipalities: at each training only 5–15 percent of respondents were aware of them before the project.

Finding 20. The project introduced several new approaches to pasture management and rehabilitation.

133. Activities under Output 3.1.2 focused on improvement of pasture management and productivity in six pilot rural municipalities. Geobotanical surveys conducted by Kyrgyprozem covered 20 000 ha of pastures used by local pasture committees. Following rehabilitation activities were conducted in partnership with the Kyrgyz Research Institute of Livestock, Veterinary and Pastures. The project made a significant investment in building capacity of the Institute by helping to establish a nursery to produce seeds of local varieties of grasses and supporting the field collection of the initial stock of grass seeds. The project also provided field seminars and information materials and guides to representatives of pasture committees, pasture users and local authorities in pilot rural municipalities. With project support, 240 ha of degraded pastures (30 ha per pilot rural municipality) were planted with wild grasses, and relevant pasture infrastructure was improved.

134. According to national stakeholders the survival rate of planted grasses was around 15 percent to 30 percent. According to specialists of the Kyrgyz Research Institute of Livestock, Veterinary and Pastures, the natural survival rate for grass species is around 7 percent and is highly dependent on weather conditions and grazing pressure. So the survival rate on the project sites was quite high.

135. Local stakeholders interviewed by the evaluation team were unanimous that the project support was instrumental for improvement of pasture management in their rural municipalities (Box 12).

Box 12. Positive changes in pasture management – voices of the local stakeholders

"Pasture committee received many publications on Sustainable Pasture Management from FAO. We also developed the pasture management plan with good maps of our pastures. All these materials are available in our rural municipality office. Some interested pasture users read them to learn more about pasture management."

"Data of the geobotanical survey is very useful as it provides vital information on our pastures, including their productivity. We have detailed information on relevant pasture vegetation and maps. In addition, the project helped to build two bridges – the project provided necessary construction materials for two very simple wooden bridges for purposes of walking the cattle over, but actual construction was conducted by local community members. Supporting these bridges is one example of the project being responsive to the needs of pilot communities. Such bridges proved to be very effective as they provide access to new pastures to residents of ten rural municipalities in this area. Previously, cattle had to cross four to five rivers on its way to remote pastures which had a negative effect of its productivity."

136. Nursery areas for rangeland grasses and planting wild grasses in the degraded pastures to improve their productivity are new approaches for Kyrgyzstan. In addition, use of results of Kyrgyprozem geobotanical survey as the basis for pasture management can also be seen as innovation – according to Kyrgyprozem the survey commissioned by the project was the first one after the fall of the Soviet Union.

137. **Rating:** The main focus of Outcome 3.1 is on introduction of new practices that prevent soil and pasture degradation and facilitate their rehabilitation. The project has significantly exceeded the target of three new practices, hence the overall rating for this outcome is **Highly Satisfactory**.

Output 4.2.4. Environmental education and awareness raising strategy.

Box 13. Output 4.2.4 and related target

Results	End-of-project targets
Output 4.2.4: Environmental education and awareness raising strategy.	Awareness and environmental education assessment. Environmental education strategy is operational. Awareness raising and environmental education according to strategy

Finding 21. The project contributed towards greater local capacity and enhanced enabling policy frameworks for environmental education.

138. Output 4.2.4 (Environmental education and awareness raising strategy) is positioned as contribution towards Outcome 4.2 (Knowledge dissemination of information and best practices through knowledge management platforms, national and international cooperation and awareness raising) under the knowledge management component of the project. In the opinion of the evaluation team, this output actually contributes towards enhanced enabling environment – both at national and local levels, as analysis of undertaken activities and their results suggests.

139. In 2017–2018, under a Letter of Agreement with NGO BIOM, the project piloted Youth and United Nations Global Alliance (YUNGA) Challenge Badges model. YUNGA Challenge Badges model

supports environmental education and activism among young people. The model is design to be used by school teachers and leaders of youth clubs and groups. YUNGA has a set of manuals that provide information on important environmental topics in a format appropriate for young people and a set of activities where implementation is awarded by specially designed badges.

140. Introduction of this model in the project pilot rural municipalities was initiated by the National Project Implementation Unit. BIOM translated and adapted to the Kyrgyzstan context three YUNGA Challenge Badges manuals: on climate change, forests and biodiversity, as well as the corresponding badges. Then teachers from pilot rural municipalities were trained on the YUNGA Challenge Badges model and provided with all the necessary materials to implement the model in their schools. Trained teachers convened the teams of students and engaged them in learning as well as practical activities offered in the manuals. Practical activities included collection of waste paper, trips to local forests and rivers to study ecosystems, and making birdhouses. Results of the pilot model application was presented to representatives of the Ministry of Education and SAEPF responsible for education for sustainable development as a viable option for environmental education.

141. To the knowledge of the evaluation team, national authorities liked the model but did not take any steps to adopt it. Teachers in the pilot communities did not have resources to fully replicate the model without external support. But because students were interested to continue engaging in environmental activities, some teachers established school environmental clubs and continue doing activities offered by the YUNGA Challenge Badges manuals. For example, in Toguz-Bulak rural municipality a teacher started the school club on chemistry and ecology, and members of this club grew 5 000 tree seedlings from the seeds that they collected and already planted 2 000 trees in the municipality. In addition, teachers use information provided in YUNGA Challenge Badges manuals to teach regular classes.

142. In 2021, under the Letter of Agreement with the project, the American University of Central Asia (AUCA) conducted an analysis of the regulations governing provision of environmental education in Kyrgyzstan that revealed a number of gaps hindering provision of comprehensive environmental education to fulfil country obligations under relevant international treaties. Memorandum with the results and recommendations of this analysis should be submitted to the Ministry of Education and SAEPF, the two entities responsible for environmental education in Kyrgyzstan.

143. According to national stakeholders, the Ministry of Education is currently in the process of reviewing the school curriculum, so there are chances that the recommendations made by the project will be acted upon.

Progress to impact

Finding 22. The project made some progress in terms of removing barriers to building resilience to climate change in Kyrgyz mountain ecosystems.

144. The project document lists four fundamental and interlinked barriers to building resilience to climate change in Kyrgyz mountain ecosystems:

i. inadequate legal framework for sustainable forest and land management;

ii. inadequate land tenure reforms;

iii. outdated approaches to sustainable forest and land management; and

iv. limited capacity of local institutions.

145. Findings of this evaluation indicate that the project made some important contributions towards adoption of several legal and policy documents in the forest and agricultural sectors. Results and recommendation of the assessment of national forestry policies conducted by the project informed the development of the Concept for Forest Development 2040 (adopted in 2018) and the first related National Action Plan 2019–2023. These documents explicitly recognize the importance of engaging local communities in forest management which is one of the key principles of the sustainable forest management. The project team has also contributed to the development of amendments to a number of laws governing land and pasture use.

146. Given the scarcity of productive land resources in Kyrgyzstan and dependence of livelihoods of the majority of the population on agriculture, making amendments to land legislation is a sensitive matter. For example, in 2020 the President declined to sign the law, adopted by the Parliament, which would allow use of degraded agricultural land for other purposes. The national stakeholders shared with the evaluation team that to prove the necessity of this amendment the Parliament has even initiated the first national scale land survey to assess the actual area of the degraded agricultural lands and the extent of degradation. In this context, changes in the legislation that were informed by the project look significant.

147. The project contributed to the potential for long-term capacity of local institutions, especially leskhozes, by building their knowledge, providing information on land conditions necessary to make informed management decisions, as well as by investing in equipment. In addition, the project compensated for the lack of resources leskhozes needed to implement the afforestation/rehabilitation plans they committed to within the framework of this project by providing seeds, seedlings, fencing materials and fuel for vehicles and tractors. Box 14 presents some comments made by leskhoz staff in interviews with the evaluation team.

Box 14. Project contribution to changes in capacity of leskhozes – voices of stakeholders

> "FAO project helped us a lot to improve our work. Nursery, greenhouses, equipment, seeds will stay for a long time and bring many benefits not only to nature, but also to people. Now we can sell more seedlings and seeds, we can do more work with tractors. This was an excellent project."
>
> "My foresters refreshed their knowledge and got new information and skills on pistachios and almonds. This is important for forestry, as our own budget on trainings and capacity building is very scarce. All maps and publications are of high quality and very useful for us."

148. Similarly, the project compensated for the lack of resources in local communities by providing seeds, seedlings and the necessary materials and equipment to implement agroforestry, climate-smart agriculture and pasture rehabilitation efforts.

149. The key impact made by the project was through introduction of innovative technologies for forestry, agriculture and pasture management and rehabilitation. Evaluation data indicates that innovative practices introduced by the project in the pilot leskhozes have been recognized and adopted by other leskhozes. Participants of farmer field schools established by the project reported that they were continuing application of new practices they learned and that there was some uptake of these practices by their neighbours who were not involved in the project.

Finding 23. Introduction of new agricultural technologies has led to greater productivity and increased income for participating farmers.

150. According to the project monitoring data, the application of new agricultural techniques has led to increased productivity and increased income for farmers. Reported additional income due to

application of various techniques was KGS 59 881[18] per ha on the average and ranged from KGS 5 650 per ha to KGS 161 292 per ha. The project did not monitor changes in income and livelihoods of the over 1 000 families that got new lease contracts for fruit tree plantations on pilot areas, but reportedly some of these plantations are already starting to bring fruits and nuts.

151. Farmers and representative of local authorities interviewed by the evaluation team also shared stories of improved productivity, increased income and better livelihoods, including healthier diets due to access to fresh produce, of farmers who participated in the project (Box 15).

Box 15. Increased productivity and better livelihoods due to introduction of new agricultural approaches – voice of local stakeholders

"I appreciate that FAO helped farmers in Nookat. We received not only training and knowledge, but also some valuable support. Fertilizers were provided to people for free. These fertilizers and pesticides were very effective. Thanks to them our fruits looked impeccable in the market. We sold our harvest for a better price than usual. Before the project we would lose around half of the harvest for various reasons. With FAO we got greater harvest. I especially like the bio-preparations provided by FAO, for example Kocide. These preparations facilitate the growth and protect plants from diseases very well."

"Lands in rural areas are degrading and losing humus. This is why the workshops conducted by FAO were very popular with farmers who understand the problems with soil fertility. However, people mostly liked workshops aimed at generating additional income, like for example workshops on cultivation of strawberry (mulching). Before the project, cultivation of corn was not popular here. The project helped to promote corn among farmers as it suits local climate and soils well. Now an increasing number of farmers got interested in corn."

"No-till is really good for our area as we grow a lot of wheat. I really appreciate getting both a sowing machine and bio-fertilizers as they helped to get my best harvest ever at my plot. In 2017, after application of these techniques I got around 350 bags of fodder per ha, which is much higher than 200 bags per ha that people get usually. Next year, without project support, but still using these methods (maybe not as accurately as in the previous year), I still got high harvest of 310 bags per ha."

"We sell the produce (from the greenhouse established as a result of training provided by the project) mainly in the village, so prices are not that high. Still it is good for us, and we also eat fresh vegetables ourselves."

"I believe that the project achieved long-term results because of the seedlings, seeds, and a sowing machine. A lot of good things were done by FAO. I know many families who were able to improve their livelihoods after participation in the project. Now some households send their children to study in Osh and Bishkek."

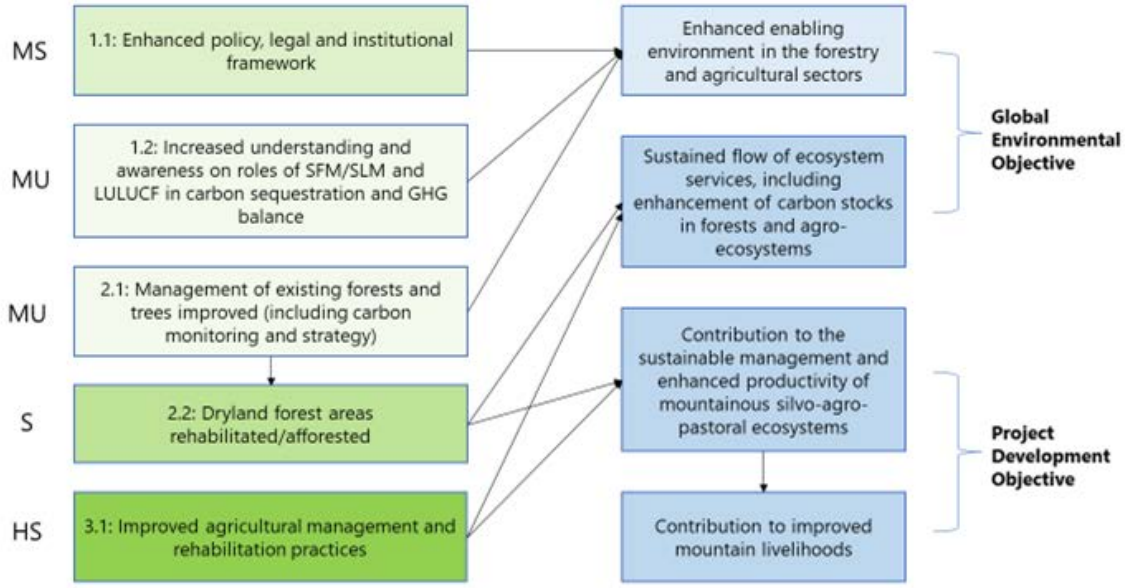
152. **Rating:** Overall, by the end of the project its progress towards the global environmental and development objectives have been realized, so project impact should be rated as **Satisfactory**. If assessments of the national stakeholders are true and draft policies and policy recommendations developed by the project will be soon adopted, its impact towards enhanced enabling environment in the forestry and agricultural sectors would be even greater.

153. Figure 6 presents the linkages between the project Outcomes and its global environmental and development objectives. The project performed differently on its outcomes. The best performance was under Outcomes 2.2 and 3.1, where the project had more control over achievement of planned results. The less than satisfactory performance was for outcomes contributing towards enabling environment where the project team had less control over achievement of the targets. High performance under Outcomes 2.2 and 3.1 facilitated satisfactory degree of achievement of

[18] KGS is a national currency. Current exchange rate is about KGS 84 per USD.

the project global environmental and development objectives. So, in the opinion of the evaluation team, the overall rating of progress towards achieving objectives/outcomes is **Satisfactory**.

Figure 6. Contribution of project outcomes to global environmental objective and project development objective



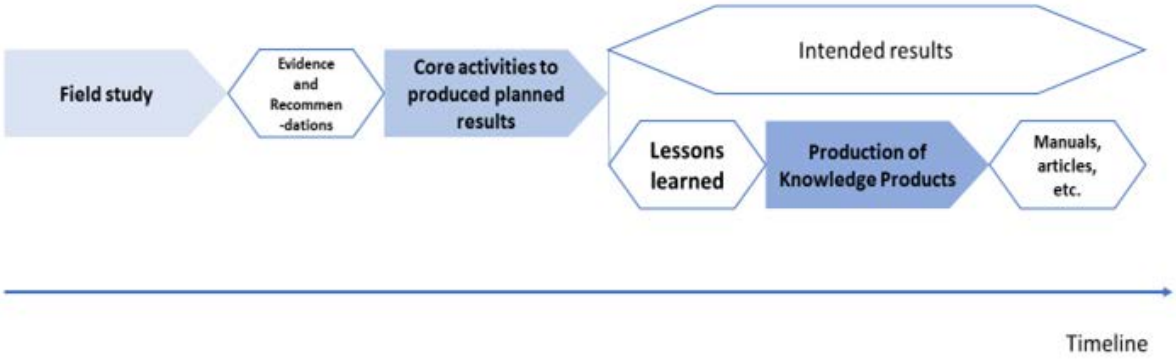
Source: Developed by the evaluation team.

3.3 Efficiency

Finding 24. Project activities were implemented in a logical sequence and mostly within the five-year period initially allocated for project implementation.

154. Analysis of the project activities has revealed a steady pattern of activities and intermittent results leading to achievement of the project Outcomes (Figure 7). The process of working towards each specific outcome starts with a study – of natural or regulatory conditions. Evidence and recommendations resulting from this study then inform the following activities that were deemed necessary to achieve the outcome. Lessons generated in the course of these activities are used to develop knowledge products.

Figure 7. The change process used by the project



Source: Developed by the evaluation team.

155. For example, before starting the afforestation and rehabilitation activities in leskhozes, the project commissioned a study that analysed the local conditions and developed a costed plan of activities for each leskhoz that included selection of appropriate tree species, instructions on technology of planting, density and placement. The study was implemented between April and October 2015, that is, during the first year of actual project implementation. Afforestation and rehabilitation works in pilot leskhozes started in 2016 and continued till the end of the project in May 2021.

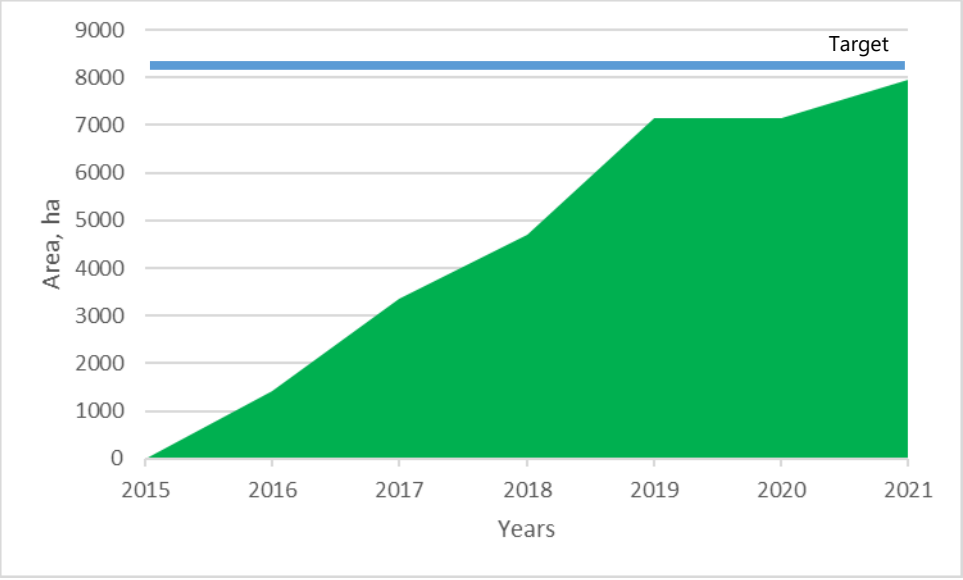
156. Evidence base for the introduction of climate-smart agriculture was laid by the soil and agrochemical studies conducted by Kyrgyprozem in 2015. Study results included maps and recommendation for rehabilitation of degraded lands. First trainings to farmers started in 2016, the farmer field schools programme was implemented in 2017–2018. Lessons learned from this programme were used in the development of ten brochures (developed at the end of 2018) about the introduced agricultural techniques.

157. Assessment of the national forest policy, including its effects on the operation of leskhozes, was conducted in 2015, and informed the following development of proposals for policy change.

158. The work towards development of the national LULUCF and REDD+ Strategy also started with field studies. In 2016–2017, the Centre for Climate Change implemented an assessment of absorption of greenhouse gases by forest lands that involved extensive field works for collect forest biomass followed by laboratory analysis. The similar study was conducted to assess carbon content in soils. The project actually planned to commission these studies in 2015 to the American University of Central Asia, but their proposal was too costly, and it was decided to look for other implementing partners. The draft document outlining the LULUCF and REDD+ Strategy was developed in 2019.

159. Thus, overall the project activities were implemented in a logical sequence and the majority of intended results were achieved by the end of 2019. Even the afforested/rehabilitated area was close to target (about 7 150 ha – including 1 000 ha of saxaul plantation in Batken province) (Figure 8).

Figure 8. Progress towards the target "8 000 ha of degraded forest land successfully restored"



Source: Developed by the evaluation team based on data from PIRs and NPIU.

160. The project extension in 2020 was granted because of the COVID-19 outbreak. The COVID-19 related lockdowns effectively blocked all activities in the course of 2020. The next extension shifted the project end date to 31 May 2021. This allowed time to complete the afforestation/rehabilitation activities.

Finding 25. Due to the support from rural municipalities, the cost of training activities organized by the project were much lower than planned. The savings were used to complete the fencing works to ensure sustainability of afforestation efforts and to procure additional equipment for national and local partners.

161. In the course of project implementation there were some considerable changes in the project budget (Table 4). As premises for training were provided by local communities, this led to huge savings in the corresponding budget line. Majority of these savings were reallocated to expandable and non-expandable procurement.

Table 4. Evolution of the project budget

Budget line	Budget at inception (USD)	Revised budget (USD)	Changes (USD)	% change
Salaries professionals	392 972.06	391 254.06	-1 718.00	0%
International Consultants	363 204.00	200 668.75	-162 535.25	-45%
National Consultants	1 249 806.53	1 599 263.25	349 456.73	28%
Contracts	1 102 056.11	1 014 424.46	-87 631.65	-8%
Travel	521 070.79	440 465.85	-80 604.94	-15%
Training and Workshops	580 889.15	108 552.06	-472 337.09	-81%
Expendable Procurement	947 875.83	1 067 063.78	119 187.95	13%
Non-expendable Procurement	196 670.53	504 240.78	307 570.25	156%
GOE	100 000.00	128 612.11	28 612.11	29%
Total	5 454 545.00	5 454 545.10		

Source: Developed by the evaluation team based on the analysis of the project budget.

162. It should be noted that the project has significantly increased spending on support to afforestation and rehabilitation activities and on procurement of fuel provided to leskhozes to plough land plots before afforestation (Table 5). Leskhozes were unable to provide poles to implement fencing using the barbed wire provided by the project as initially planned because of the legal ban on tree felling on the State Forest Fund land. Eventually the project decided to procure the necessary materials to complete the planned activities.

Table 5. Changes in selected budget items

Budget item	Budget at inception (USD)	Revised budget (USD)	Changes (USD)	% change
Investment in afforestation/ rehabilitation (Expendable Procurement)				
Support to tree plantations	245 000.00	629 250.72	382 359.20	1.56
Fuel for land ploughing	263 17.98	38 507.98	12 190.00	0.46
Equipment for national and local partners (Non-expendable Procurement)				
Drones		6 085.32	6 085.32	
No till planters		68 810.46	68 810.46	
Movable plot thresher		21 750.00	21 750.00	
Solar kits		16 639.00	16 639.00	
Lab equipment		130 000.00	130 000.00	
			243 284.78	

Source: Developed by the evaluation team based on the analysis of the project budget.

163. Some of the budget savings were also used to procure drones and solar energy kits for the Forest Services, four Vence Tudo planters that were provided to farmers to support introduction of the climate-smart agricultural techniques, equipment for pasture grass nursery, and two sets of equipment for soil and agro-chemistry laboratories in Bishkek and Osh that provide services to farmers.

164. Completion of fencing installation was absolutely critical to ensure survival of the tree plantations, so allocation of additional funding for these purposes was fully justified and cost-effective. Additional equipment provided by the project is still in use. Provision of Vence Tudo planters was definitely critical for demonstration of no-till farming, but because of the limited access to spare parts for this equipment in Kyrgyzstan and the cost of planters that is prohibitively high for local farmers, the impact and sustainability of this investment is limited.

Finding 26. Hiring national consultants supported the sustainability and amplification of the project's results which increases the value-for-money created by the project.

165. It should be noted that the project relied to a great extent on the national expertise. Except for the Chief Technical Adviser who led the National Project Implementation Unit for the first two years of the project implementation, National Project Implementation Unit was staffed with national experts and all work under Letters of Agreement was implemented by national experts and expert organizations. Evaluation data suggests that this approach has created a national pool of professionals that in a sense have become champions of the project and contributed towards sustainability of its results. For example, experts who developed the draft Programme on regulation of emissions and sinks of greenhouse gases of the forestry and other land use sector for the period 2030 advocate for its adoption when they engage with government executives for purposes not related to the project. Additionally, the Association of Forest and Pasture Users is disseminating information about agroforestry and climate-smart agricultural techniques to its members based outside of pilot rural municipalities.

166. **Rating:** The majority of the project results were delivered within the intended five-year period. The project has found more cost-effective approaches to delivery of trainings and workshops than planned initially. More of the GEF funds went towards fencing than planned initially. But these investments were critical for achieving global environmental benefits by ensuring survival of planted forest plots and prevented the loss of investments in tree planting, so they were still cost-effective. Provision of additional equipment is having positive effects in the short-term, but lack

of access to parts may undermine sustainability of these effects. Overall rating for Efficiency is **Moderately Satisfactory**.

3.4 Sustainability

Financial risks

Finding 27. Project results contributing towards sustained flow of ecosystem services will be sustainable without additional financial investment.

167. Under the current political situation, it is not clear if the government would be ready to fund implementation of the national policies developed with the project support, for example of the the Concept for Forest Development 2040, and even if these policies would remain (see below).

168. The project results on the local level shall be sustained without additional government investment. Fences installed with the project support to protect tree plantations and allow for natural regeneration of forest are made of barb wire and steel polls and shall last long enough without maintenance or with minimal maintenance by leskhozes to allow trees to grow old enough so that cattle would not be able to damage them.

169. **Rating: Moderately Likely.** Current political changes can potentially undermine the provision of state funding for implementation of policies developed with the project support but other project results can be sustained without additional investment.

Socio-political risks

Finding 28. Current socio-political developments, especially the review of the full body of national legal and regulatory acts, including concepts and strategies that were initiated in February 2021, create a significant level of uncertainty about the sustainability of the changes in the enabling environment created with the project support.

170. In February 2021 the new President of the Kyrgyz Republic issued an executive order that initiated review of the full body of national legal and regulatory acts, including concepts and strategies, to assess their relevance, effectiveness and coherence. The order also calls for establishment of a simplified procedure for cancellation of regulations deemed unnecessary. Reportedly the purpose behind this initiative as well as changes in the governance structures that have already led to dissolution of SAEPF and transfer of the forest management mandate to the Ministry of Agriculture is to reduce budget expenditure under conditions of declining state revenue and a growing budget deficit.

171. At the same time provisions of another Presidential executive order on measures for the development of agro-industrial complex explicitly call for more effective use of agricultural land, support for introduction of innovative technologies, including conservation ones, and development of agroforestry, look conducive for sustaining and even further disseminating the technologies introduced by the project.

172. Also, given that development projects usually include components promoting legal and regulatory changes, regulatory frameworks in the forestry and agricultural sectors will continue to evolve. For example, the recently approved Green Climate Fund (GCF)/FAO project *Carbon Sequestration through Climate Investment in Forests and Rangelands in Kyrgyz Republic* (CS-FOR) plans to continue working towards an enhanced enabling environment that supports investment for carbon sequestration through forest and rangeland management while providing economic and social incentives to the users of natural resources.

173. **Rating: Moderately Likely.** Current political changes can potentially undermine the results in the area of the enabling environment created with the project support but are not likely to have an effect on other project results.

Institutional and governance risks

Finding 29. Without external support the Forest Service is unable to continue to apply the technologies introduced by the project. However, their use will be supported by forthcoming development projects, as the GCF/FAO project *Carbon Sequestration through Climate Investment in Forests and Rangelands*.

174. A number of government decisions made since 2019 has undermined the financial capacity of the Forest Service and leskhozes to implement afforestation and rehabilitation activities. According to 2019 amendments to the budget code, all revenue generated by state enterprises, including leskhozes, belongs to the state and cannot be used at their discretion. In addition, the budget allocated for the Forest Service was cut by 30 percent in 2020 and by 60 percent in 2021.

175. Under these circumstances leskhozes were already unable to implement the planned afforestation and rehabilitation activities without the project support, including procurement of fuel for land ploughing before tree planting. To address this challenge the new GCF/FAO project *Carbon Sequestration through Climate Investment in Forests and Rangelands in Kyrgyz Republic* (CS-FOR) will facilitate the private sector's participation in forestry investment. CS-FOR explicitly envisages the use of approaches to afforestation and forest rehabilitation developed within the framework of this project.

Finding 30. Maps developed by the project as the basis for forest, land and pasture management plans are still used by rural municipalities and will remain relevant in the long-term.

176. The evaluation team has found that local authorities continue to use the soil and vegetation maps developed by the projects. According to Kyrgyprozem specialists, maps of agrochemical conditions will remain relevant for another 5 to 10 years; soil and geobotanical maps for another 20 years, providing a solid evidence base for land use management.

Finding 31. Application of agroforestry and climate-smart agriculture techniques by farmers continues, and event spreads and is likely to continue in the long-term.

177. Farmers interviewed by the evaluation team reported that they continue application of the techniques they adopted with the project's support (Box 16). In addition, experience of the project beneficiaries inspired other farmers to adopt these techniques. Continuation and spread of application of the techniques introduced by the project is driven by economic benefits that they offer so this process is likely to be sustainable.

Box 16. Continued application of agroforestry and climate-smart agriculture techniques – voices of stakeholders

> "Thanks to the nursery we are selling more seedlings to farmers. They prefer our seeds and seedlings, because they know that we do not deceive them. Most popular seedlings are apples, apricots and cherries."
>
> "The most important thing the FAO project did is that it taught farmers to grow sweet almond. Now people are sowing almonds everywhere. And it is good both for the population and for the environment."
>
> "Farmers who participated in the trainings still use bio-fertilizers and pesticides introduced by FAO. Even though they are sometimes more expensive, these materials are effective. It is better to pay a bit more, but to get better results. Also, some of the conventional pesticides are very toxic and bad for health. Therefore, we continue to buy those drugs and fertilizers which were recommended by FAO."

178. There is also evidence that government executives and NGOs further disseminate techniques introduced by the project. According to national stakeholders interviewed by the evaluation team, Ministry of Agriculture specialists presented these techniques at workshops for farmers that the Ministry regularly conducted across the country. Association of Forest and Land Users disseminates these techniques among its members and beyond. For example, they disseminated the agroforestry approaches within the framework of the European Union-funded project *Expansion of Kyrgyz, Tajik and Uzbek local smallholder organic agriculture and forest-based food products to EU Markets* implemented in Kyrgyzstan, Tajikistan and Uzbekistan.

179. **Rating:** There is a significant risk that application of innovations introduced by the project into the forestry sector (that is, new afforestation and forest regeneration efforts using fencing, agroforestry and silvopastoral models) won't be sustained without external support, but at the same time there is evidence that this support will be available. Institutional and governance risks to sustainability of other project results are low. The overall rating is **Moderately Likely**.

Environmental risks

Finding 32. Changes in temperature due to climate change are not likely to have serious effect on the sustainability of tree plantations established with the project support.

180. Selection of tree species used for afforestation and agroforestry was based on the analysis of soil conditions. In addition, FAO has a policy to only plant local species well adapted to local conditions. The project did not consider possible effects on trees from the forecasted temperature growth in the coming years. The national experts consulted by the evaluation team believe that this should not have a significant effect on the long-term sustainability of established tree plantations as they will create a favourable microclimate that should to some extent mitigate the overall effects of future temperature rise.

181. **Rating:** Trees planted by the project is the only project results prone to environmental risks. Given that the risks for sustainability of the tree plantations are low, the rating for this aspect of sustainability is **Likely**.

182. **Overall rating for sustainability:** Current socio-political situation is highly uncertain, but there are some signs that it may favour continuation and dissemination of the use of new techniques introduced by the project, especially agroforestry and climate-smart agriculture where government investment is not absolutely necessary. Application of new technologies introduced by the project is likely to continue. Environmental risks are low. Overall, the project results are **Likely** to be sustainable.

3.5 Factors affecting performance

3.5.1 Monitoring and evaluation system

Finding 33. The monitoring and evaluation (M&E) plan was well-structured and captured the main aspects of project implementation.

183. The project document describes several M&E modalities:

i. day-to-day monitoring and supervision missions of project progress conducted by the National Project Implementation Unit and field offices;

ii. technical monitoring of carbon benefits and ecosystem "status" indicators performed by the National Project Implementation Unit and field offices in coordination with other relevant participating technical units at provincial level;

iii. specific monitoring plans for carbon sequestration and emissions avoided conducted by the National Project Implementation Unit and the Operational Project Implementation Unit with support from local communities and other stakeholders;

iv. mid-term and final evaluations conducted by independent consultants and the FAO Office of Evaluation (OED); and

v. continual oversight, monitoring and supervision missions by the Lead Technical Officer and Funding Liaison Officer.

184. The project document also provides the list of the main M&E reports that shall be prepared in the course of the projects as well as corresponding responsible parties, time frame and budget.

185. The project results matrix and indicator matrix provide detailed information on targets for all results, corresponding indicators, baseline and target values as well corresponding sources of information and parties responsible for data collection. Many of the indicators and targets include specific numerical values which makes them easily measurable.

186. **Rating:** Overall the M&E plan was well-structured and captured the main aspects of project implementation. The rating for M&E design is **Satisfactory**.

Finding 34. The M&E activities were largely implemented as planned.

187. The evaluation data indicates that the day-to-day monitoring and supervision missions of project progress conducted by National Project Implementation Unit and field offices as well as continual oversight, monitoring and supervision missions by the two Lead Technical Officers and Funding Liaison Officer were implemented as planned, especially after the position of the Lead Technical Officer was filled in 2017. In addition, the Lead Technical Officers and National Project Implementation Unit communicated on a weekly basis.

188. Co-funding and executing partners that were involved in the joint monitoring missions and the project staff were very positive about the quality of the work done by both the Lead Technical Officers and the national project staff. For example, an executing partner for the introduction of climate-smart agriculture was very positive about Lead Technical Officer involvement in the monitoring missions to the demonstration plots and technical advice provided on site to farmers to improve application of piloted techniques. One of co-funding partners reported that monitoring information collected by the project team, for example on the extent of completion of the forest planting and fencing activities supported by the WFP Food-for-Work programme, informed their decisions regarding fulfilling their obligations to the beneficiaries.

189. The results matrix included high-level results. The detailed annual work plans with time-bound targets set for specific sub-tasks facilitated implementation of the day-to-day monitoring.

190. To lay the foundations of the monitoring of carbon benefits carbon sequestration and emissions avoided, in 2015 the project conducted a workshop for project staff and partners on application of the Ex-Ante Carbon-balance Tool (EX-ACT) method for calculation of carbon balances led by experts from FAO headquarters. The project team contemplated doing carbon monitoring for all pilot sites for all project sites. Some carbon content measurement in soils was done in partnership with the NGO Camp-Alatoo. But eventually, based on expert advice, the development of IPCC categories land use map for LULUCF sector was chosen as an approach to carbon monitoring. Overall, the lack of clear strategy to monitoring the carbon content at the project sites did not allow to get the data to measure the project reached its target for Outcome 2.1: at 20 000 ha of forest land the carbon content increased by 15 percent due to improved management.

191. All project reports (inception report, annual project implementation reports, six-months progress reports) were completed as planned. Mid-term review was conducted in 2016 with report finalized in early 2017. This terminal evaluation is conducted in line with the M&E plan.

192. In addition to the monitoring conducted by the project, the national Forest Service covered the plots that were afforested and fenced for rehabilitation within the project framework through their regular monitoring system that includes visits to leskhozes and on-site visual assessments of the state of forest by service staff twice a year – in spring and fall.

Finding 35. The M&E activities were largely used to track performance. Monitoring data was also used to foster learning from the application of innovative approaches.

193. Given the variety of project activities, monitoring was mainly used to track timeliness of their implementation. One example when monitoring results were used to foster learning is the detailed comparative analysis of changes in productivity and income generations between demonstration and control plots done under the FFS/demonstration plots activities. Another example is learning about effectiveness of various experimental forest planting approaches tested by the Forest Service within the framework of this project based on results of their monitoring.

194. **Rating:** Overall, the M&E activities were implemented as planned and can be rated as **Satisfactory**.

3.5.2 Quality of execution

Finding 36. FAO Lead Technical Officers and Funding Liaison Officer provided close support to project implementation. In some cases this facilitated acceleration of the implementation process, but there were also cases when it slowed it down.

195. The quality of project implementation has improved since the mid-term review. The project was supported by two Lead Technical Officers, one forest expert and another agricultural expert. The Lead Technical Officers were in regular contact with the National Project Implementation Unit, all substantive decisions were made with their support. The Lead Technical Officers were also instrumental as knowledge brokers connecting the project with centres of expertise outside Kyrgyzstan.

196. At the same time, coordination of all project decisions with Lead Technical Officers had some drawbacks, most likely because of their high workloads due to involvement with other several projects (Lead Technical Officers at FAO routinely have to support several projects at the same time). Several executing partners interviewed by the evaluation team noted that approval of both

Letters of Agreement and developed knowledge products from the FAO side could take from four to nine months.

197. Funding Liaison Officer support was instrumental in accelerating the project progress, for example improving the planning processes. One of the issues that initially slowed project implementation was the late preparation of the annual work plans – they were submitted for approval in February of the year for which they were prepared which delayed the actual start of activities. Due to Funding Liaison Officer involvement the target date for preparation of annual plans was moved to November of the previous year which reportedly accelerated the implementation process.

198. Overall, the quality of project implementation can be rated as **Moderately Satisfactory**.

Finding 37. Project institutional arrangements, including having National Project Implementation Unit in Bishkek and two field offices in the regions, facilitated the implementation of project activities and cooperation with partners.

199. Evaluation data indicates that the projects institutional arrangements, including having the National Project Implementation Unit based in Bishkek and hosted by SAEPF and two field offices in Jalal-Abad, Jalal-Abad province, and Balykchi, Issyk-Kul province, allowed for close coordination with national authorities and expert community as well as local communities and partner staff in the regions. It has probably also reduced the need to travel for the National Project Implementation Unit staff and contributed to savings in the travel budget (Table 4).

200. National stakeholders were very positive about the high level of cooperation with the National Project Implementation Unit. Stakeholders who interviewed by the evaluation team were also very positive about the level of cooperation between their field staff and the project field offices, for example through joint monitoring missions.

201. Overall, the quality of execution can be rated as **Satisfactory**.

3.5.3 Financial management and mobilization of expected co-financing

Finding 38. All co-financing was in-kind, and only contributions of SAEPF/Forest Service and WFP were closely coordinated with the project. By mid-2020, 86 percent of co-financing had materialized, and by the end of the project the planned level of co-financing is likely to be reached.

202. Analysis of materialization of planned co-financing is based on the data available in project implementation reports (PIRs) – up to 30 June 2020. The final data on delivery of co-financing was still unavailable at the time of this evaluation. The details on co-financing provided in PIR 2016 is different from that in the mid-term review report, though the total amount is the same in both reports. The main difference is that the mid-term review report indicates that co-financing is provided as both cash and in-kind contributions while PIR 2016 classifies all co-financing as in kind. As all other PIRs also classify all co-financing as in-kind and the project team confirmed this, the evaluation team treated it as such. Other evaluation data also suggests that most co-financing was provided as in-kind contributions.

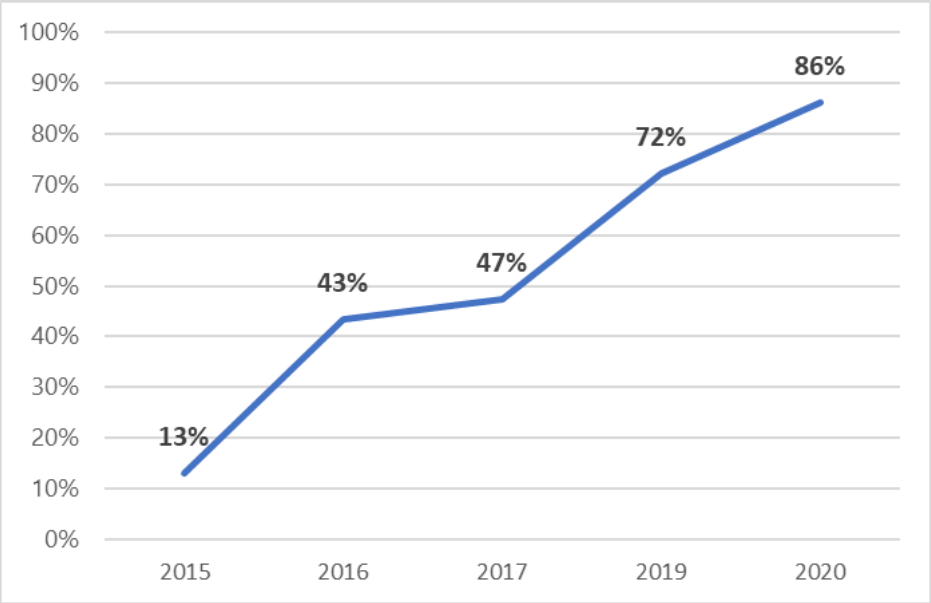
203. Table 6 presents data on progress in mobilization of co-financing – based on the data in PIRs with some corrections made by the evaluation team. For example, PIR 2019 and PIR 2020 did not include information on co-financing provided by the Mountain Partnership though it was included in earlier PIRs. The evaluation team adjusted the data for 2019 and 2020 accordingly. PIR 2018 did not include data on co-financing – but it was not mandatory to do this that year.

Table 6. Co-financing delivery by 30 June 2020 – accumulated amounts by year

Partners	Type	Planned	2015	2016	2017	2018	2019	2020	Realization Rate
National contribution	in-kind	11 500 000	1 646 913	5 341 000	5 791 000		8 791 000	11 330 000	99%
FAO	in-kind	2 400 000	400 000	800 000	800 000		900 000	950 000	40%
Mountain Partnership	in-kind	1 716 850	100 000	305 850	305 850		305 850	305 850	18%
GIZ	in-kind	1 700 000	350 000	650 000	965 900		1 965 900	1 965 900	116%
Local Resource Users	in-kind	1 183 300		810 099	810 099		910 099	990 000	84%
WFP	in-kind	500 000	-	345 602	345 602		845 602	845 602	169%
Total		**19 000 150**	**2 496 913**	**8 252 551**	**9 018 451**		**13 718 451**	**16 387 352**	**86%**
Realization rate			**13%**	**43%**	**47%**		**72%**	**86%**	

Source: Developed by the evaluation team based on PIRs.

Figure 9. Rate of co-financing delivery by 30 June 2020



Source: Developed by the evaluation team.

204. By mid-2020, 86 percent of planned co-financing was realized. The degree of co-financing realization significantly differs between co-funding partners: the government has largely fulfilled its obligations to the project, Mountain Partnership contributed significantly less than planned, while WFP significantly exceeded its initial commitment. This is well aligned with the evaluation data about what in-kind contributions were provided to the project (Table 7). WFP contributions were closely coordinated with the project activities and the partnership was mutually beneficial: foe example, FAO supported the development of several training modules for WFP SCAP programme on climate-smart agriculture.

Table 7. Description of the in-kind contributions to the project

Partner	In-kind contribution
National partners: SAEPF and Forest Service	Contribution includes provision of office space for the project team as well as the cost of work that staff of leskhozes, Forest Service and SAEPF put into the implementation of afforestation and rehabilitation activities. It should be noted that the Forest Service was not able to fulfil its original obligations to the project (e.g. to provide poles for fencing) so additional funds had to be allocated from the project budget.
National partners: Ministry of Agriculture	In-king contribution was provided through the IFAD-funded *Livestock and Market Development Programme* that was implemented in 2016-2019 in Issy-Kul and Naryn provinces and covered pilot rural municipalities of this project. One of the programme components was supporting development of Community Pasture Management Plans and development of pasture inventories facilitating more effective use of pastures.
GIZ	In-kind contribution was provided through the *Programme for Sustainable and Climate Sensitive Land Use for Economic Development in Central Asia* (2016-2020) that piloted the model of joint forestry management, including in two pilot leskhozes of this project, and provided proposals for necessary regulatory amendments to institutionalise this model.
WFP	WFP supported tree planting and fencing in pilot leskhozes in the South through its Food-for-Work programme. Participant of this programme also had the chance to take the established almond and fruit tree plots on a free lease to take care of the trees and collect fruits and nuts when trees mature. Later in-kind contribution was provided within the SCAP programme that establish agricultural consultative centres (ACC) on the basis of social protection departments of rural municipalities. SCAP programme and this project had one common pilot rural municipality - in Kochkor district. Local ACC got the set of materials on climate-smart agriculture developed by this project and made them available for local residents.
Mountain Partnership (MP)	The partnership did not go beyond 2016. The in-kind contribution to the project was provided within the framework of the study of carbon content in soils where one of MP members, NGO Camp-Alatoo analysed the samples collected at the project sites.

Source: Developed by the evaluation team.

205. Given that in 2021 leskhozes continued afforestation and fencing activities within the framework of this project, and the estimate of government contribution will be close to that in 2020 (USD 2.5 million), the level of co-financing will reach the planned level.

206. **Rating:** The project is likely to reach to planned level of co-financing, but one of the key partners – the Forest Service – was not able to fully meet its original obligations. **Moderately Satisfactory**.

3.5.4 Project partnerships and stakeholder engagement (including the degree of ownership of project results by stakeholders)

Finding 39. The project effectively and continuously engaged with the key national level stakeholders, including national and co-funding partners, through the project Steering Committee and involvement in donor coordination groups. Effective engagement was also facilitated by the project responsiveness to partner needs and ideas.

207. Close engagement with the national stakeholders started already during the design phase of the project. A group of experts working on the project proposal had meetings with all relevant national and international partners. Pilot leskhozes and rural municipalities were selected in consultation with SAEPF, Ministry of Agriculture, the Mountain Partnership Programme, and local administrations and stakeholders.

208. During the implementation phase the project Steering Committee was the main means of the project engagement with key national stakeholders and co-funding partners. PSC was chaired by SAEPF and included representatives of the Ministry of Agriculture, authorities of five provinces where the project was working and FAO. Representative of co-funding partners: GIZ, WFP and Mountain Partnership, as well as NGOs and academia were included as observers.

209. PSC meetings were conducted every six months (while the regular practice of development projects implemented in Kyrgyzstan is to have PSC meetings once a year) to ensure continuous engagement with key national stakeholders. Some of the PSC meetings were conducted on the Project sites to ensure high level of awareness and ownership by national stakeholders.

210. The project team and FAO were also responsive to the needs and requests of the national partners which was another strategy that ensured high level of national ownership of the project results. The most telling example of this approach is the project support to planting 1 000 ha of saxaul to create a silvopastoral landscape in Batken province, which was not initially targeted by the project. Reportedly SAEPF has presented this case to the Deputy Prime-Minister as an example of an effective agroforestry innovation.

211. High level of engagement with national and co-funding partners was replicated on the regional level. For example, according to the members of the WFP team in the South, there was an ongoing coordination between them and the staff of the project office in Jalal-Abad including regular e-mail exchange, joint monitoring missions as well as joint retreats and workshops.

212. On the national level FAO was also a member of the Coordination and Consultative Council of donors working in the forest sector, the donor coordination group on rural agricultural development, environment and climate change, and the Pasture Management Coordination Group which facilitated coordination of efforts in the area of enabling environment.

Finding 40. Attention to and responsiveness to existing needs and circumstances demonstrated by the project ensured high level of engagement with local communities.

213. Community meetings were used as an entry point to start engagement with local residents and to present opportunities to engage with the project. The common theme that emerged from interviews with local stakeholders was the use of a consultative approach and respect to the needs and circumstances of the local communities demonstrated by the project (Box 17).

Box 17. FAO engagement with local communities – voices of stakeholders

> ***Executing partner***: "FAO differs from other donors by consulting local communities and activists. This is a very important and useful practice and really makes FAO capacity building activities more effective. While planning our workshops we also took into consideration farmer's time constraints. Consequently, some of the seminars were conducted very late – after 8 or 9 p.m., to make these events as accessible as possible."
>
> ***Executing partner***: "In some cases we would finish training sessions one to two hours earlier to let farmers attends to their work or other matters. In other cases, when participants were interested in getting more information, we would go over the planned eight hours."
>
> ***Farmer***: "The project tried to pick the most appropriate dates for conducting workshops to allow the more people to attend them."
>
> ***Farmer***: "While selecting participants for trainings FAO tried to engage aksakals (elders). I think this is a very viable approach, as aksakals have more time to attend such events, and they also have a lot of influence on their children and relatives."

214. There were cases when the project provided help that was outside of its immediate mandate. For example, residents of Aksuu village in Sokuluk district turned to the project staff for help and advice on how to treat the local orchard infested by pests. The project specialists assessed the situation and recommended an effective solution.

215. **Rating:** Through the PSC and community meetings the project has met the GEF standard that stakeholders are engaged in meaningful consultations where they are able to express their views on project plans, benefits and risks. High responsiveness to the stakeholders' needs (including going above and beyond the project's mandate) clearly exceeds the GEF expectations in relation to stakeholder engagement. So the overall rating for this criteria is **Highly Satisfactory**.

3.5.5 Knowledge management, communication and public awareness

Finding 41. Local stakeholders value and use knowledge products developed by the project.

216. Knowledge management, communication and public awareness were implemented under Component 4 of the project: Knowledge management, monitoring and evaluation. The project approach to knowledge management and communication followed closely the project document and included several strings of activities:

i. maintaining the project website;

ii. facilitating media coverage of the project activities;

iii. developing training materials and manuals to support introduction of new approaches – based on analysis of experience of other projects and lessons learned within the context of this project;

iv. provision of these materials to project beneficiaries to support sustainability of application of new practices;

v. provision of these materials to educational institution for integration in the educational programmes; and

vi. publication of materials based on the project experience on international knowledge portals.

217. Local stakeholders interviewed in the course of the field visits were familiar with knowledge materials in local languages prepared by the project on climate-smart agriculture techniques and pasture management[19] and thought that they were very useful (Box 18).

Box 18. Quality of the knowledge management products – voices of the local stakeholders

- "Publications on pasture management were useful. It is good to have them, as sometimes new people come to the pasture committee, and they can read these brochures and enhance their knowledge."
- "I know that the FAO project has produced a lot of useful publications, brochures and studies. Our agronomist has all these publications and books in his office. When needed we always use and consult these materials and share with interested people."
- "Publications produced by FAO are very useful. We use them in our work. This is an area which needs constant support from the donors."

Finding 42. Availability of knowledge products on climate-smart agricultural techniques and pasture management created by the project at offices of rural municipalities and resource user associations supports sustainability and dissemination of the practices introduced by the project.

218. The evaluation team has found that brochures on climate-smart agricultural techniques and pasture management developed by the project are available at the offices of rural municipalities and resource user associations and people come to consult them. Reportedly there are even instances when people who have brochures share them with interested neighbours as photos via WhatsApp.

219. Some farmers shared with the evaluation team that before they got an opportunity to participate in FFS, they were watching agricultural advice videos on YouTube. Instructional videos is one of the communication and knowledge management approaches that was not used by the project. But this is something that could be used in future projects with similar context, or difficult-to-reach areas.

Finding 43. Knowledge products developed by the project fully capture the new climate-smart agricultural and pasture management techniques. However, the lessons learned through innovations in tree planting tested by the Forest Service within the framework of this project were not captured in the form of knowledge products.

220. Ten brochures on climate-smart agricultural techniques cover the full range of new approaches introduced by the project (Table 8). There is also a diverse body of knowledge products on pasture management issues. But there are no knowledge products capturing the experiences of experiments with tree planting conducted by the Forest Service within the framework of this project. If these innovations are not properly documented, they may be lost.

[19] Publications were produced in local languages.

Table 8. Knowledge products developed by the project – by thematic category

Climate-smart agriculture	Pasture management	Forestry
• Analysis of soil properties: practical guide for farmers • Soil conservation agricultural techniques • Preparation of use of compost. Bio humus and Sherbet-Suu technique • Selection of crops to grow on salinized soils • Use of bio-fertilizers to improve quality of degraded soils • Biological pest and plant disease control techniques • Farmer's guide to organic, organo-mineral and green fertilizers • Crop rotation use to present soil degradation and erosion • Water saving crop irrigation techniques • Watering techniques: trench watering, counter watering, sprinkling	• Recommendations on surface improvement of degraded mountain pastures • Recommendations on the multifunctional use of pasture grasses • Agro-pasture calendar of rangeland use • Collection and use of wild grasses seeds • Seed collection of promising cereal pasture grasses • Application of new fertilizers in mountain pastures	• Recommendations the cultivation of nut crops (walnut, pistachio, almond)

Source: Developed by the evaluation team.

221. **Rating:** The knowledge management products clearly support achievement and sustainability of the project results. The rating for this criterion is **Satisfactory**.

3.6 Gender

Finding 44. Gender considerations were explicitly integrated in designing, implementing, monitoring and reporting of the project. The project achieved the desired 25 percent of female participation in activities related to introduction of climate-smart agricultural technologies and in the afforestation activities supported by WFP.

222. The project design had to adhere to the provision of the GEF Policy on Gender Mainstreaming adopted in 2012. Policy requirements included doing gender analysis to inform the project design, identifying and taking measures to avoid, minimize and/or mitigate adverse gender impacts, and using gender-disaggregated indicators for monitoring. At the end of 2017 this policy was replaced by the GEF Policy on Gender Equality. Its requirements include performing a gender analysis to inform design, implementation and monitoring; not exacerbating existing gender inequalities and, where relevant, addressing gender gaps; striving to provide equal opportunities for women and men to benefit; giving men and women equal opportunities in terms of participation and decision-making throughout the project design and implementation process; collecting gender-disaggregated information.

223. There is evidence that gender issues were considered in the course of the project design. The discussion of the project context in the project document mentions the difference in how men and women use forests – collection of wood for fuel is mainly managed by women. The context section indicates that in Kyrgyzstan rural women are actively involved in agrarian sector and that an average 16 percent of farm households are run by women, reaching 25 percent in Chui province. The context section also acknowledges that women suffer more from climate change. Melting of glaciers in the mountains of Central Asia diminishes the region's main source of water for both domestic and irrigation purposes which creates additional burdens to rural women who play the primary role in cooking, heating and other subsistence production.

224. The project document also indicates that special efforts to include women were made during the mission that collected data to inform the project design: during field visits to pilot communities gender aspects were always discussed with local stakeholders to ensure that not only women associations are included, but attention is also paid to women headed households which account to up to 25 percent in some pilot areas.

225. During the implementation phase opportunities for women engagement were offered within the framework of activities targeting community members: farmer field schools, training on innovative approaches to pastures management and recruitment of people from low-income families to participate in forest planting and fencing activities under the WFP Food-for-Work programme. For monitoring of these components the project measured the number of participants in a gender-disaggregated way.

226. The climate-smart agriculture component that recruited participants of the farmer field schools had the target to have 25 percent female participants. Overall, out of 2 168 farmers involved as members of FFS, 535 were women (24.7 percent). At the same time, there was a considerable difference in participation of women in the FFS between Northern (Chuy, Issyk-Kul and Naryn) and Southern (Jalal-Abad and Osh) provinces. In the North, women made almost one-third of the FFS participants, one in four of FFS groups had at least 50 percent of female participants, there were all-female groups, and significant share of FFS groups was led by women. In the South, the level of female participation was much lower and there were no groups where women represented over 50 percent (Table 9). National partners attribute this difference to the more patriarchal social norms in the South.

Table 9. Gender dimensions of farmer field schools

Aspect	**North** (Chuy, Issyk-Kul and Naryn provinces)	**South** (Jalal-Abad and Osh provinces)	**Total**
Share of female participants of FFS	31.1%	10.2%	24.7%
Share of FFS with at least 50 percent of female participants	26.6%	1.6%	23.6%
Share of all-female FFS	6.5%	0**%**	4.5%
Share of women-led FFS	17.7%	3.1%	13.5%
Share of women running demo-plots	19.7%	6.3%	15.6%

Source: Developed by the evaluation team.

227. Operation of FFS was built around demonstration plots established by some of FFS members. Within this project there were 75 FFS that established 220 demonstration plots on the land of 205

farmers. The project collected data on the additional income that farmers running demonstration plots generated due to application of climate-smart technologies in 2017 and 2018.

228. The share of women among farmers running demonstration plots was 15.6 percent. It was higher in the North (19.7 percent) and lower in the South (6.3 percent). Average additional annual income generated from application of climate-smart agricultural techniques at demonstration plots run by female farmers in 2017–2018 ranged from KGS 0 to KGS 72 200 (no income was generated by a demonstration plot with a newly planted fruit tree garden in Jalal-Abad province that piloted dry-land agroforestry technology. The highest income was earned by a female farmer from Naryn province growing potatoes who piloted combined application of organic and mineral fertilizers.). The median average annual income was KGS 9 210.

229. It should be noted that almost two-thirds (62.5 percent) of demonstration plots run by female farmers were very small – 0.1 ha and less. 18.8 percent of demo plots managed by women had the area between 0.8 and 1.0 ha. Women were more likely to run a small demo plot: female farmers made 42 percent of farmers with a demonstration plot that was 0.1 ha and less, while in a group that was managing demo plots with the area between 0.8-1 ha female farmers made only 8 percent. And there were no female farmers with demonstration plots that were over 1 ha. These differences reflect the gender disparity in access to land and productive practices existing in Kyrgyzstan: in men-headed households, farming the family plot is mainly the male occupation.

230. The pattern of women participation in trainings on pasture management and following activities was similar. According to the estimates provided to the evaluation team, the share of women involved in pasture management workshops and events ranged from about 5 percent in the South to 25 percent in the North. Reportedly this reflects the general extent of women involvement in pasture management activities: in Kyrgyzstan cattle herding is predominantly a male occupation and there were few women in the pilot pasture committees.

231. WFP, that was recruiting people from low-income families to participate in forest planting and fencing activities under the Food-for-Work programme (which was WFP's contribution to the project), had the target to recruit 30 percent of women. According to WFP staff consulted by the evaluation team, the target was met and many of the women who participated were widows or spouses of labour migrants.

232. Overall, the evaluation data indicates that the project design was informed by a simple gender analysis which revealed the high-level gender gap – women being disproportionately affected by climate change. Increasing forest cover is seen as the main climate change mitigation measure in Kyrgyzstan, so on the impact level the project aimed to address this, thereby also addressing the potential effects of climate change on the gender gap.

233. The project document explicitly acknowledges that there are up to 25 percent of women-headed households in the pilot communities. The target to have at least 25 percent of female participants in the FFS that were used as vehicle to introduce climate-smart agriculture techniques corresponds with this number. The project also collected gender-disaggregated data on participation in community activities.

234. At the same time the project did not track if women who participated in FFS were from women-headed or men-headed households. Patterns of women participation in FFS are in line with existing gender norms and disparities, which means that the project had no effect in terms of promoting gender equality and women's empowerment (GEWE).

235. Still, given that GEWE promotion was not a requirement in the beginning of 2017 when the climate-smart agriculture component started, project performance on gender criteria can be rated as **Satisfactory.**

3.7 Environmental and social safeguards

Finding 45. Environmental and social concerns were explicitly integrated in the design and implementation of the project.

236. According to the project documents, the design of the project was informed by the Category B environmental and social considerations. Report on the criteria used to select the pilot sites (Appendix 8 of the project document) explicitly considered the extent of land degradation, landscape structure, social and economic standards of living.

237. The project documents also included an assessment of the risks associated with climate change and the shortage of wood coupled with energy crises that may exacerbate problems of deforestation and land degradation and developed corresponding mitigating measures.

238. All land-related decisions made within the context of this project were based on detailed information on soil and vegetation cover conditions using maps that were developed in the beginning of the project and followed expert recommendations. According to the project team, they followed the policy that only indigenous tree species should be used for afforestation and agroforestry.

239. The project tried to facilitate inclusion of women into FFS (see Finding 44). Recruitment of local people to plant trees and install fencing with support of WFP Food-for-Work programme had an explicit focus on reaching the most vulnerable people. Overall, the project demonstrated high degree of respect to local people, for example by adjusting time of training activities to accommodate their needs and by responding to ad hoc requests for help.

240. **Rating:** Environmental and social concerns were explicitly integrated in the design and implementation of the project, so the rating for this criterion is **Satisfactory**.

4. Conclusions and recommendations

4.1 Conclusions

Conclusion 1. The project was highly relevant to the GEF, FAO and national priorities as well the needs of the local communities.

241. Project implementation took place from 2014 to 2021. Throughout this period, the project remained relevant to the evolving GEF, FAO and national priorities. In the latter case, the project's influence, for example through support to the development of the new Concept for Forest Development 2040, facilitated convergence between the project and national priorities. The Concept 2040 included the concept of the joint forest management piloted within the project framework and connected forest management with improvement of the livelihoods of communities living near forests.

242. The focus on improving the livelihoods of local communities, embedded in the project, made it particularly relevant to local stakeholders and contributed towards a greater effectiveness and sustainability of results achieved by activities that targeted these local communities. This was especially the case with the introduction of agroforestry and climate-smart-agriculture techniques to increase land productivity, which translates into higher income for farmers.

Conclusion 2. The project was highly effective in terms of introducing new approaches on forestry, agriculture and pasture management, and less effective in terms of changing policy and regulatory environment and mechanisms.

243. The project has significantly exceeded its targets concerning the number of introduced innovations. This success was facilitated by combining technical support (training and consultations) with provision of materials and equipment necessary to start the application of the offered techniques.

244. The project introduced the practice of evidence-based land and forest management. The use of soil and geobotanical maps as the basis for land use-related decision is also an innovation for Kyrgyzstan. Maps created with the project support, and the land use recommendations developed on their basis, will remain relevant for the next 10 to 20 years.

245. A number of new approaches was tested with the framework of the afforestation activities implemented by the project, for example planting walnuts above the line of their usual growth under the cover of maple trees. These experiences were not captured by the knowledge products developed by the project and can be easily lost due to staff turnover.

246. The project laid the foundations for the establishment of a carbon monitoring system, including development of the digital map of land use based on IPCC land use classification and draft policy that would mandate this system.

247. Recommendations developed by the project on the basis of assessments of the national forest and agriculture policies and regulations have already led to changes in these policies. However, the recommendations on integration between agencies involved in the LULUCF sector and environmental education have not yet translated into actual policy changes. Securing changes in policy for institutional change has proved harder to achieve in this project.

Conclusion 3. In the areas where the project team had sufficient expertise, both in country and through Lead Technical Officer support, the use of project resources was strategic and cost-effective.

248. The project team had strong expertise in the areas of forest management and climate-smart agriculture. The project's approach in each of these two areas was focused and strategic. Soil studies informed the development of afforestation/rehabilitation plans, plans for agroforestry trials and selection of techniques of FFS demonstration plots. The project agreed to increase investment into fencing to ensure implementation of afforestation/rehabilitation plans. Additional equipment was procured and provided to farmers to facilitate demonstration of new soil processing approaches.

249. In the areas of carbon sequestration and environmental education, where the project had less in-house expertise, its approach was less coherent and efficient.

Conclusion 4. Sustainability of results of different project activities depends, among other factors, upon the volume of investment necessary to support this sustainability. The results of the afforestation/rehabilitation activities of this project, and application of relatively inexpensive climate-smart agricultural techniques, are likely to be highly sustainable.

250. Fences that don't require any additional investment should ensure survival of the tree plantations and continued natural regeneration, but leskhozes need external support to continue afforestation activities.

251. Climate-smart agricultural techniques increase agricultural productivity and eventually farmers' income, which facilitates continuation of their application. Techniques that don't require substantial initial investment are getting disseminated through peer networks.

252. Under the conditions of declining state revenues and growing budget deficit the Government of Kyrgyzstan currently focuses on cutting budget expenditure. The forthcoming review of all national policies and regulation creates a high degree of uncertainty about sustainability of the regulatory changes facilitated by the project, especially those that require state investments like implementation of the Concept for Forest Development 2040.

4.2 Recommendations

Recommendation 1. To FAO Kyrgyzstan and Forest Service. Develop knowledge products that capture lessons learned through the application of new approaches to tree planting. (By June 2021).

253. As mentioned in the conclusions, a few valuable experiences were not captured through the project's knowledge products. Documentation of results and experiences of these trials will increase the chances of their uptake by other projects – both inside and outside Kyrgyzstan.

Recommendation 2. To FAO. Consider supporting multi-focal projects through a team of Lead Technical Officers with a complementary set of expertise to ensure that each focus area of the project has sufficient thematic expertise.

254. Presence of two Lead Technical Officers with different thematic expertise (rather than a single Lead Technical Officer) worked quite well in the evaluated project so this practice can be replicated in other projects (where appropriate) to ensure strategic and focused implementation under all focal areas included in the project.

Recommendation 3. To FAO and the Forest Service. Re-visit the project sites in five to ten years to check certain success factors, such as the tree survival rates. Note factors which affected the survival rates, and the geographic area variability. (Five to ten years from the project end)

255. The following recommendations pertain especially to the Government, in order to build upon and continue the project's successes (sustainability)

Recommendation 4. To the Ministry of Agriculture, including the former SAEPF Department of Forest Ecosystem. Follow-up on regulatory recommendations developed with the project support, including results and recommendations of forest and agricultural policies, proposed amendments to Forest and Land codes, draft programmes and strategies. (No timeline)

Recommendation 5. To the Forest Service. Complete the development of the national Forest Information System and ensure its full use by leskhozes.

256. Due to the current cuts in the government budget, another development project may need to support this initiative.

Recommendation 6. To the Forest Service. Lobby for the budget provisions of funds to continue afforestation/forest rehabilitation efforts using approaches piloted within the framework of this project. (Ongoing)

5. Lessons learned

Lesson learned 1. Results. A mixed approach whereby technical assistance (training and consultations) was combined with provision of materials necessary for implementation worked very well in this project.

257. This approach was highly appreciated by the beneficiaries of this project, and it could be used within the framework of other similar interventions.

Lesson learned 2. Results. This project introduced new agricultural and forestry approaches to communities with a high incidence of poverty. Success was possible due to a focused approach that directly contributed towards increased income generation and better livelihoods and did not require high levels of investment to sustain application. It is recommended that future projects operating in communities with a high incidence of poverty take into account these two important success factors.

258. Ability of farmers to start and sustain application of a particular agricultural technique with minimum initial investment facilitates continuation of their use and further dissemination. Decisions on provision of equipment should include consideration of the maintenance costs and access to spare parts.

Lesson learned 3. Stakeholder engagement, local community participation. In addition to having field office staff, other projects can also consider conducting PSC meetings in project site areas. In this project, such practice contributed to a high level of awareness and ownership by national stakeholders.

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Appendix 1. People interviewed

Last name	First name	Position	Organization/location
Abdymital	Chyngojoev	National Forestry Expert	NPIU, Bishkek
Ainagul	Iskakova	Farmer	Toguz-Bulak AO
Aitbek	Aliev	Head	Rural Community Association of Drinking Water Users
Ajibek	Kasymaliev	Director	Kyrgyzgiprozem, Bishkek
Almaz	Abdiev	Head od Department	Cadaster Services, State Land Use Agency, Bishkek
Anna	Kirilenko	Executive Director	NGO BIOM, Bishkek
Asylbek	Nurbekov	Head of RUAR	Sokuluk rayon, Sokuluk
Aytkul	Burkhanov	Head	Association of Forest and Land Users, Bishkek
Azamat	Isakov	Director	NGO Camp Ala-Too, Bishkek
Azamat	Madaminov	Orchard Farmer	Saruu, Issikul
Azamat	Shamiev	Senior Specialist	International Department, Ministry of Agriculture, Bishkek
Aziz	Tyrgotov	Forest Expert	Forest Institute, Bishkek
Bolot	Minbaev	Land specialist	Saruu, Issikul
Cholpon	Alibakieva	National Project Manager	NPIU, Bishkek
Cholpon	Esenbekova	Project Assistant	NPIU, Bishkek
Daulet	Bagaev	Farmer	Toguz-Bulak AO
Dilshod	Ismonaliev	Programme Associate	WFP, Osh
Dinara	Rahkmanova	Deputy Representative of the FAO in Kyrgyzstan	FAO Country Office, Bishkek
Dostuk	Abdyrasulov	Farmer, recipient of the sowing machine	Saruu, Issikul
Ekrem	Yazici	Forestry Officer	FAO
Esenbek	Osmonakunov	Chief Forester	Jety-Oguz Forestry, Jety-Oguz rayon, Issikul
Guljan	Asanova	Head	Pasture Committee, Sary-Bulak AO
Guljan	Tezekbaeva	TAIC trainer and farmer	Toguz-Bulak AO
Gulnara	Kachmanova	Head of GIS Departments	Kyrgyzgiprozem, Bishkek
Hafiz	Muminjanov	Plant Production and Protection Officer	FAO
Hernan M.	Gonzalez	Technical Officer	FAO
Irina	Kikos	Senior Geobotanist	Kyrgyzgiprozem, Bishkek
Janar	Minbaev	Trainer	Training, Advisory and Innovation Center, Saruu, Issikul
Janbay	Ormonov	Farmer	Kok-Jar AO, Nookat rayon
Jarkyn	Osmonkulova	Head of Ayil Okmotu	Ak-Suu Ayil Aimak, Sokuluk rayon
Jenish	Kychanov	Chief Forester	Tyup forestry
Jumagul	Imaralieva	Farmer	Kok-Jar AO, Nookat rayon
Jumanazar	Atalov	Head	Nookat Forestry, Nookat
Kabyl	Satynbaev	Trainer	TAIC, Kok-Jar AO, Nookat rayon
Kairat	Alymbaev	Forester	Tyup forestry
Kuban	Matraimov	Project Coordinator	Regional Environmental Centre for Central Asia
Kutman	Isaev	Head of Soil Station	Kyrgyzgiprozem, Bishkek

Last name	First name	Position	Organization/location
Maksat	Damir-uulu	Project Manager	Tian-Shan Analytical Centre, AUCA, Bishkek
Marat	Asanaliev	National Coordinator for Kyrgyzstan and Kazakhstan	GIZ, Bishkek
Mira	Juzbaeva	Farmer and community trainer	Saruu, Issikul
Muhamed	Ugut ogly	Farmer	Cooperative "Kok-Jar", Kok-Jar AO, Nookat rayon
Muhamedhalil	Turduev	Head	Department of agrarian development, Nookat rayon administration
Muhtar	Abdilazizov	Farmer	Kok-Jar AO, Nookat rayon
Mukambet	Isaev	Forester	Nookat Forestry, Nookat
Natalya	Kilyazova	Head of Section on Pasture Fodder Plants	Kyrgyz Research Institute on Livestock Breeding and Pastures (KRILBP), Frunze village, Sokuluk rayon.
Nematilla	Eshenkulov	Activist	Zulpuev AO, Nookat
Nurbek	Okishev	Project Coordinator	Teaching, Consulting and Innovation Centre, Bishkek
Nurjan	Alamanova	Farmer	Toguz-Bulak AO
Nurlan	Jumaev	Director	Department for the Development of Forest Ecosystems, SAEPF, Bishkek
Rustam	Temir uulu	Farmer	Ak-Bashat village, Ak-Suu Ayil Aimak, Sokuluk rayon
Sabyr	Chukumbaev	Director	Kyrgyz Forest and Hunting State Enterprise, Bishkek
Salamat	Ataev	Head of pasture committee, Saruu	Saruu, Issikul
Shaibek	Karasartov	Director	Teaching, Consulting and Innovation Centre, Bishkek
Sovetbek	Mamytkanov	National Agricultural Expert	NPIU, Bishkek
Sovetbek	Murzakulov	Head of AO	Zulpuev AO, Nookat
Sulaiman	Karimov	Farmer and tenant	Zulpuev AO, Nookat
Symbat	Daldieva	Teacher	Secondary School, Toguz-Bulak
Tatiana	Semenova	National Programme Specialist	WFP, Bishkek
Ulan	Umetov	Programme Coordinator	NGO BIOM, Osh
Venera	Surappaeva	Senior Researcher	Forest Institute, Bishkek

Appendix 2. GEF evaluation criteria rating table

GEF criteria/sub-criteria	Rating[20]	Summary comments
A. STRATEGIC RELEVANCE		
A1. Overall strategic relevance	HS	See section 3.1 on Relevance
A1.1. Alignment with GEF and FAO strategic priorities	HS	The project remained relevant to evolving GEF and FAO country office priorities. (Findings 1 and 2)
A1.2. Relevance to national, regional and global priorities and beneficiary needs	HS	The project was well aligned with national priorities and was highly relevant to the needs of local communities. (Findings 3-5)
A1.3. Complementarity with existing interventions	HS	The project jointly worked with the World Bank/GEF project in the forestry sector. The Wold Bank/GEF project also built on some results of this Project.
B. EFFECTIVENESS		
B1. Overall assessment of **project** results	MS	While the project has met many of the targets, some of the results were achieved only partially.
B1.1 Delivery of project outputs	MS	Some of the outputs were achieved only partially.
B1.2 Progress towards outcomes[21] and project objectives		
- Outcome 1.1: Enhanced policy, legal and institutional framework in forestry and land management	MS	Though the targets for Outputs 1.1.2 and 1.1.3 were achieved only partially, the target for Outcome 1.1 - SFM/SLM principles included into national and local land use plans – has been mostly achieved. (Findings 6-9)
- Outcome 1.2: Increased understanding and awareness on roles of SFM/SLM and LULUCF in carbon sequestration and greenhouse gas balance	MU	The project achieved the target for Outcome 1.2 (the assessment of participatory management in two pilot rural municipalities were completed and proposals for legal adjustments were provided), but there is no evidence that this translated into increased understanding and awareness on roles of SFM/SLM and LULUCF in carbon sequestration and greenhouse has balance. (Findings 10-11)
- Outcome 2.1: Management of existing forests and trees improved	MU	Only one of three outputs contributing to this outcome was fully achieved. (Findings 12-15)
- Outcome 2.2: Dryland forest areas rehabilitated/afforested	S	The project introduced more new technologies than planned and achieved the target for the rehabilitated/afforested area but experienced problems with introduction of fast-growing trees into local communities. (Findings 16-18)

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

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

GEF criteria/sub-criteria	Rating[20]	Summary comments
- Outcome 3.1: Improved agricultural management	HS	The project has significantly exceeded the target for number of introduced new practices. (Findings 19-20)
- Overall rating of progress towards achieving objectives/outcomes	S	The project mostly achieved its objectives. The outcomes where the project performed better, were more important for achievement of the objectives.
B1.3 Likelihood of impact	S	By the end of the project, its global environmental and development objectives have been realized. (Findings 22-23)
C. EFFICIENCY		
C1. Efficiency[22]	MS	Project implementation was mostly timely and created value for money. See section 3.3 on Efficiency
D. SUSTAINABILITY OF PROJECT OUTCOMES		
D1. Overall likelihood of risks to sustainability	L	Current socio-political situation is highly uncertain, but there are some signs that it may favour continuation and dissemination of the use of new techniques introduced by the project, especially agroforestry and climate-smart agriculture where government investment is not absolutely necessary.
D1.1. Financial risks	ML	Financial risks are low. (Finding 27)
D1.2. Socio-political risks	ML	There is some risk that changes in the enabling environment created due to the project support will not be sustained. But this won't affect sustainability of other results. (Finding 28)
D1.3. Institutional and governance risks	ML	Due to the reforms of the Forest sector, some capacity created in leskhozes may be lost. (Findings 29-31)
D1.4. Environmental risks	L	There are no serious environmental risks to sustainability. (Finding 32)
D2. Catalysis and replication	S	There is already evidence of dissemination of introduced new technologies.
E. FACTORS AFFECTING PERFORMANCE		
E1. Project design and readiness[23]	S	The project design did not have major shortcomings and properly addresses identified problems.
E2. **Quality of project implementation**		
E2.1 Quality of project implementation by FAO (BH, LTO, PTF, etc.)	MS	Role of Lead Technical Officers and Funding Liaison Officers was largely positive, but in some cases the need to get their approval slowed approval of

[22] Includes cost efficiency and timeliness.
[23] This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

GEF criteria/sub-criteria	Rating[20]	Summary comments
		Letters of Agreement and knowledge products. (Finding 36)
E2.1 Project oversight (PSC, project working group, etc.)	S	PSC worked effectively.
E3. **Quality of project execution**	S	Project institutional arrangements facilitated the implementation of project activities and cooperation with partners. (Finding 37)
E4. Financial management and co-financing	MS	The project is likely to reach the planned level of co-financing, but one of the key partners – the Forest Service – was not able to fully meet its original obligations. (Finding 38)
E5. Project partnerships and stakeholder engagement	HS	The project effectively engaged with the key national level stakeholders including government and co-funding partners. (Finding 39-40)
E6. Communication, knowledge management and knowledge products	S	Knowledge products capture the new climate-smart agricultural and pasture management techniques and facilitate sustainability of their use. (Findings 41-43)
E7. **Overall quality of M&E**	S	There were no major shortcomings.
E7.1 M&E design	S	There were no major shortcomings in the M&E design. (Finding 33)
E7.2 M&E implementation plan (including financial and human resources)	S	The M&E activities were largely implemented as planned. (Finding 34)
E8. Overall assessment of factors affecting performance	S	
F. CROSS-CUTTING CONCERNS		
F1. Gender and other equity dimensions	S	Gender considerations were explicitly integrated in the project design and implementation. (Finding 44)
F2. Human rights issues/Indigenous peoples	NA	
F2. Environmental and social safeguards (ESS)	S	Environmental and social concerns were explicitly integrated in the design and implementation of the project. (Finding 45)
Overall project rating	**MS**	

Appendix 3. Rating scheme

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:

Rating	***Description***
Highly Satisfactory (HS)	*"Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings."*
Satisfactory (S)	*"Level of outcomes achieved was as expected and/or there were no or minor shortcomings."*
Moderately Satisfactory (MS)	*"Level of outcomes achieved more or less as expected and/or there were moderate shortcomings."*
Moderately Unsatisfactory (MU)	*"Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings."*
Unsatisfactory (U)	*"Level of outcomes achieved substantially lower than expected and/or there were major shortcomings."*
Highly Unsatisfactory (HU)	*"Only a negligible level of outcomes achieved and/or there were severe shortcomings."*
Unable to Assess (UA)	*The available information does not allow an assessment of the level of outcome achievements.*

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:

Rating	***Description***
Highly Satisfactory (HS)	*There were no shortcomings and quality of **implementation** or **execution** exceeded expectations.*
Satisfactory (S)	*There were no or minor shortcomings and quality of **implementation** or **execution** meets expectations.*
Moderately Satisfactory (MS)	*There were some shortcomings and quality of **implementation** or **execution** more or less meets expectations.*
Moderately Unsatisfactory (MU)	*There were significant shortcomings and quality of **implementation** or **execution** somewhat lower than expected.*
Unsatisfactory (U)	*There were major shortcomings and quality of implementation substantially lower than expected.*
Highly Unsatisfactory (HU)	*There were severe shortcomings in quality of **implementation** or **execution**.*
Unable to Assess (UA)	*The available information does not allow an assessment of the quality of **implementation** or **execution**.*

MONITORING AND EVALUATION

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

i. design

ii. implementation

SUSTAINABILITY

The sustainability will be assessed taking into account the risks related to financial, socio-political, 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)	*There is little or no risk to sustainability.*
Moderately Likely (ML)	*There are moderate risks to sustainability.*
Moderately Unlikely (MU)	*There are significant risks to sustainability.*
Unlikely (U)	*There are severe risks to sustainability.*
Unable to Assess (UA)	*Unable to assess the expected incidence and magnitude of risks to sustainability.*

Appendix 4. GEF co-financing table

Name of the co-financer	**Co-financer type**[24]	**Type of co-financing**[25]	**Co-financing at project start** (Amount confirmed at GEF CEO endorsement/approval by the project design team) (in USD)			**Materialized co-financing (by 30 June 2020)** (in USD)		
			In-kind	**Cash**	**Total**	**In-kind**	**Cash**	**Total**
National contribution	National government	In-kind	11 500 000		11 500 000	11 330 000		11 330 000
FAO	Multilateral	In-kind	2 400 000		2 400 000	950 000		950 000
Mountain partnership	Civil society organizations	In-kind	1 716 850		1 716 850	305 850		305 850
GIZ	Bilateral	In-kind	1 700 000		1 700 000	1 965 900		1 965 900
Local resource users	Farmers, water and pasture use committees	In-kind	1 183 300		1 183 300	990 000		990 000
WFP	Multilateral	In-kind	500 000		500 000	845 602		845 602
Grand total (in USD)					19 000 150			16 387 352

[24] 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).
[25] Grants; loans; equity participation by beneficiaries (individuals) in form of cash; guarantees; in-kind or material contributions; and others (please explain).

Appendix 5. Results matrix

Project outputs and outcomes

Result	Baseline	Target	Level of achievement	Evaluation team comments
Component 1. Strengthening the enabling environment for sustainable forest and land management (agriculture, rangelands and transitional areas) (SFM/SLM)				
Outcome 1.1 Enhanced policy, legal and institutional framework in forestry and land management for integrating SFM/SLM principles and practices into national and local level land-use plans	Principles of sustainable forest and land management not included into national and local-level land use plans.	By end of the project principles included into national and local land use plans.	More or less achieved as expected, but there were moderate short comings	Integration of SFM/SLM principles into local land use plans was facilitated by activities under Outputs 1.2.1, 1.2.2 and 2.1.2. Though the targets for Outputs 1.1.2 and 1.1.3 were achieved only partially, the target for Outcome 1.1 - SFM/SLM principles included into national and local land use plans – has been mostly achieved.
Output 1.1.1 Proposals for forestry and land policy and legislation for sustainable forest and land management developed.	Last assessment on forest legislation was done in 2003	Amendments to land code to promote SLM on abandoned agricultural lands. Amendments to forest code to promote SFM on degraded forest agricultural lands.	Fully achieved	Results and recommendations of the assessment of national forest and agricultural policies supported by the project informed the development of adopted the Concept for Forest Development till 2040 as well as amendments to the Forest Code and a number of laws regulating land use in the agricultural sector, including Land Code.
Output 1.1.2 Cross-sectoral strategies and agreements between sectoral authorities on integrated land-use management developed to foster cross-sectoral cooperation.	There is a memorandum between Pasture Department and SAEPF about joint use of pasture lands in State Forest Fund but no strategy on integrated land use management.	Cross-sectoral strategy developed, adopted and operationalized.	Partially achieved	Analysis and recommendations for improved cross-sectoral cooperation was developed and presented to Ministry of Agriculture, SAEPF, State Agency for Local Government and Inter-Ethnic Relations, Ministry of Education and Ministry of Emergency Situations in November 2020.
Output 1.1.3 Operational mechanism for ensuring better collaboration at national level and between national and local levels developed and implemented.	No electronic information system to improve collaboration between national and local levels.	The electronic information system is operational. Enhanced communication between national and local levels.	Partially achieved	The project supported establishment of the electronic information system by provision of hardware and software, but at the time of evaluation the system was not fully operational – local level (leskhozes) still was not connected.

Result	Baseline	Target	Level of achievement	Evaluation team comments
Outcome 1.2 Increased understanding and awareness on roles of SFM/SLM and LULUCF in carbon sequestration and GHG balance	Principles of participatory management of local forest resources not included into the forest law.	Assessment of participatory management competed. Proposals for legal adjustments provided.	Level of achievement is lower than expected and targets for Output 1.2.1 not achieved at all.	The GIZ Programme for Sustainable and Climate Sensitive Land Use for Economic Development in Central Asia (2016-2020) conducted assessments of participatory forest management in two pilot leskhozes of this project and developed proposals on integration of the participatory forest management into national regulation. GIZ is co-financing partner of this project, and the above efforts are GIZ in-king contribution to the project.
Output 1.2.1 SFM/SLM based on resource user associations is effectively promoted in the project area/s and respective local resource management institutions are fully functional	Up to now land use plans don't include principles of sustainable management	100% of Aiyl Okmotu	Partially achieved	Studies conducted by the Project laid the foundation for land and pasture plans in pilot rural municipalities.
Output 1.2.2 Training and awareness creation tool kit on roles of SFM/SLM and LULUCF in carbon sequestration and GHG balance prepared and disseminated	Most management plans of local user groups do not include principles of sustainable use of resources.	Guidelines for participatory management developed. 100 percent of user groups in the pilot areas work according to new management plans.	Not achieved	There is no evidence that Guidelines for participatory management developed
Component 2. Enhancing carbon stocks in dryland forest through innovative management and rehabilitation practices.				
Outcome 2.1 Management of existing forests and trees improved	Existing management for forests do not take into consideration their roles as carbon sinks and importance for GHG balance.	At 20 000 ha of forest land the carbon content increased by 15 percent due to improved management.	Level of achievement is substantially lower than expected.	Should be noted that targets for this Outcome were unrealistically high.
Output 2.1.1 National LULUCF and REDD+Strategy and sector assessment, national climate change mitigation standards and	There are strategic documents, but they are not linked to climate change issues.	LULUCF sector assessment. National climate change mitigation standards in the	Partially achieved	Assessment of carbon content of selected tree and shrub species and soils implemented. National programme on regulation of emissions and

Result	Baseline	Target	Level of achievement	Evaluation team comments
National Action Plan together with national partners developed.	No national LULUCF and REDD+ Strategy and Action Plan exist, and no carbon monitoring system is in place.	LULUCF sectors drafted. National LULUCF and REDD+ Strategy and Action Plan operationalized.		removals of greenhouse gases of the forestry and other land use sector for the period up to 2030 establishing LULUCF and REDD+ Strategy was drafted, but not adopted yet. No standards and Action Plans,
Output 2.1.2 Sustainable forest management planning covers at least 20,000 ha of forest.	Work plans exist for all Leskhoz, but not covering sustainable resource management	100% of Leskhoz in the pilot areas work according to new management plans covering 20,000 ha.	Target was fully achieved	Management plans were established and implemented. PES agreements did not work as planned.
Output 2.1.3 Carbon monitoring system established based on field sampling of forests and various dryland land use systems.	Carbon monitoring system is not existing.	Establishment of Carbon monitoring system and Baseline monitoring. Monitoring of carbon content of forests and dryland land use systems.	Partially achieved	The project laid the foundations both for carbon monitoring in pilot leskhozes and for establishment of the national Carbon monitoring system by developing a map of land use according to IPCC categories, conducting baseline research on carbon content in forests, pastures and agricultural lands, and contributing to development of methodological recommendations for soil monitoring.
Outcome 2.2 Dryland forest areas rehabilitated/afforested through introduction and demonstration of innovative technologies/practices and pressures on forests reduced.	Local population do not use innovative technologies.	Assessment of technologies by project team and research partners. In total three new technologies are introduced.	Achieved as expected with some minor short comings.	
Output 2.2.1 8,000 ha of degraded forest land rehabilitated/afforested through successfully demonstrated innovative technologies and practices including agroforestry trials and controlled grazing	Data on degraded forest land.	In total 8 000 ha of degraded forest land successfully restored.	Fully achieved	The project rehabilitated/afforested 6 956.7 ha in pilot leskhozes and 1 000 ha in Baytken province – upon request of national partners.

Result	Baseline	Target	Level of achievement	Evaluation team comments
Output 2.2.2 2 650 ha of tree plantations established by local people with indigenous fast-growing forest trees in order to reduce the wood demand from natural forests (forest degradation prevented in at least 10 000 ha forest areas)	No project plantations.	In total 2 600 ha of tree plantations established.	Partially achieved	Local communities did not agree to plant these trees, and they were planted in demonstration plots in partnership with ICRAF.
Output 2.2.3 Efficiency of fuel wood use improved by introduction of innovative technologies and improved house insulation.	N/A	Introduction of innovative technologies and improved house insulation. 20 percent less use of local fuel wood by households.	Achieved with some deviation.	Improved house insulation and efficient stoves were installed on the remote forest sites in pilot leskhozes.
Component 3. Promoting and demonstrating climate-smart agriculture, including pastures as part of sustainable land and water management in drylands.				
Outcome 3.1 Improved agricultural management and rehabilitation practices and techniques in drylands by demonstrating and adopting agricultural and agroforestry best practices that increase vegetative cover and soil fertility, reduce soil degradation, and avoid greenhouse gas emissions.	The use of agroforestry and other innovative best practices to increase vegetation cover and soil fertility are limited. 88 percent of the farmland is considered degraded.	Development of guidelines for introduction of innovative technologies. In total three new practices are implemented that increase vegetation cover and soil fertility, reduce soil degradation and avoid green-house gas emissions.	Level of outcomes achieved clearly exceeds expectations and/or there were no short comings	The number of introduced new practices significantly exceeds expectations.
Output 3.1.1 200 demonstrations of innovative agricultural practices covering a total of 10 907 ha of arable land	No innovative practices used yet	Innovative agricultural practices together with research partners identified. In total innovative agricultural practices demonstrated at 10 000 ha of land.	Fully achieved.	The project introduced five groups of innovative agricultural practices through 176 FFS and 220 demonstration plots: • Soil conservation techniques including no-till farming, mulching, prevention of soil erosion, amelioration of degraded soils. • Diversification of crops through crop rotation with perennial grasses and creation of windbreaking tree belts.

Result	Baseline	Target	Level of achievement	Evaluation team comments
				• Integrated soil regeneration approaches including application of bio-humus, organic, bio-organic and bio-organic-mineral fertilizers as well as siderates (green fertilizers). • Integrated plant protection including biological protection techniques, composting and use of compost, fertigation. • Water-efficient techniques including use of short irrigation trenches, pulse drip irrigation and contour irrigation.
Output 3.1.2 20 000 ha of non-forest land of State Forest Fund or degraded agricultural land using innovative technologies successfully rehabilitated.	New technologies are not used on State Forest Fund lands	Identification of degraded land for rehabilitation, baseline monitoring. 20 000 ha of non-forest land of State Forest Fund or degraded agricultural land successfully rehabilitated.	Achievement exceeds expectation because of the introduction of innovations.	The geobotanical survey that covered 20 000 ha of pasture lands assessed the quality of pasture lands and extent of their degradation. Survey results informed development of pasture management plants. Several innovative approaches were introduced: nursery for wild grass seeds, planting degraded pastures with wild grasses. Investments in infrastructure also contributed to a more sustainable use of pastures.
Component 4. Knowledge management, monitoring and evaluation				
Outcome 4.1 Monitoring and evaluation of project progress for adaptive results-based management to mitigate risks and changing conditions	N/A	PSC meeting regularly conducted	Fully achieved.	PCS meetings were conducted every 6 months.
Output 4.1.1 M&E system operating and providing systematic information about meeting project outcome and output targets	N/A	Monitoring implemented according to plan and indicator matrix.	Fully achieved.	All M&E reports included in the M&E plan were prepared.

Result	Baseline	Target	Level of achievement	Evaluation team comments
Output 4.1.2 Midterm and final evaluations	N/A	Midterm and final evaluations completed.	On track to achievement	Mid-term evaluation was conducted in 2016. Terminal evaluation is on-going.
Outcome 4.2 Knowledge Dissemination of information and best practices through knowledge management platforms, national and international cooperation and awareness raising.	N/A	Monthly presence of project in Kyrgyz mass-media.		
Output 4.2.1 Synthesis of lessons learnt and generation of best practices	N/A	Project website monthly updated. Publication of project results and lessons learnt.		There were publications on the project site and in media. Lessons learned were well captured by knowledge products developed by the project.
Output 4.2.2 Application of research results and best practices of previous projects	Basic talks with UCA and Agrarian University about future cooperation	Best practices from WOCAT introduced. Field research in cooperation with Universities. Results of field research implemented.	Partially achieved.	Materials on technologies introduced by the project were integrated in the curriculum of the Agrarian University.
Output 4.2.3 Integration of the project into knowledge exchange platforms	In preparation of the project there were talks with ICARDA, UCA and GIZ about future cooperation in knowledge management.	Link of the project to one international knowledge platform. Update of information for knowledge platform.	Achieved.	In 2021 the project joined the international knowledge platform CACIP.
Output 4.2.4 Environmental education and awareness raising strategy.	Assessments of other projects can be used. Several strategies for education are existing, which should be assessed.	Awareness and environmental education assessment. Environmental education strategy is operational. Awareness raising and environmental education according to strategy.	Partially achieved	The project initially piloted YUNGA model in pilot rural municipalities and presented results of this pilots on the national level. The assessment and recommendation for education strategy were developed only in 2021.

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