Food and Agriculture Organization of the United Nations

# Terminal evaluation of the project "Sustainable Land Management and Climate-friendly Agriculture"

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# Abstract

This terminal evaluation serves both learning and accountability purposes. It assesses the degree of achieved project results, examines the project's impact and sustainability, and identifies issues and constraints that were encountered during its implementation. The conclusions and appropriate recommendations, including lessons learnt, should contribute to sustain relevant project results and up-scale important best practices in order to substantially stimulate future interventions.

The overall objective of the project was to improve sustainability of agriculture and forest land use management through the diffusion and adoption of low-carbon technologies with win-win benefits in land degradation, climate change, and biodiversity conservation, including increased farm profitability and forest productivity. Three inter-linked components addressed the following: i) rehabilitation of degraded forest and rangeland; ii) climate-smart agriculture (CSA); and iii) enhanced enabling environment for sustainable land management (SLM) in four intervention zones in the Konya Closed Basin (KCB).

The project has demonstrated that biodiversity mainstreaming into forest and rangeland management and restoration practices can be considered as a model, developed for the first time to be used throughout Türkiye in terms of biodiversity management planning. The total emission reduction resulting from project related forest and rangeland management improvement is significant: 91 370 tonnes $CO_2$ equivalent per year are sequestered compared to 0 $CO_2$ equivalent per year at project-start.

Some of the activities and approaches deployed by the project stand out as good practices that are particularly noteworthy for replicating broadly. Turning theoretical knowledge of "how agriculture should be done" to hands-on practice in the fields in a synchronised way, with planting and production cycles in the pilot sites through Farmer Field Schools (FFS), appears as a strong point of the project. Collaborative implementation of tangible field-level interventions led to high ownership across the KCB and is most likely to be continued.

The project has helped the understanding and internalisation of the term "conservation agriculture" (CA), and the relevant technical implementations that accompany this approach, such as no-tillage, wind breaks, biogas digesters, enhanced irrigation schemes. The KCB and other drought sensitive zones in the country can optimally benefit from these lessons.

In the meanwhile, some of the activities and approaches deployed by the project shed light onto some challenges that should be addressed in the future: i) to promote CA and biogas digesters at the farm level, more economic incentives need to be developed, as the costs remain too high for the average farming communities of the KCB. Enhancing the strength of cooperatives or unions has a potential to make these initiatives economically more viable; ii) the key machinery that is required for CA and ultimately for climate change mitigation (such as no-till drills) should be procured within the country, so that their repair and upkeep is more feasible and quicker; iii) the deployed knowledge management techniques fell short of reaching out to wider audiences during the project lifespan. In this respect, the project should build a website where all the valuable educational materials produced as part of FFS and other synthesis technical reports (consecrated to CA, sustainable rangeland and forest management, or integrated biodiversity conservation planning) can be reached.

The experiences and lessons will be key for future interventions in tackling food security and climate change; as such, the project has a high potential to be scaled up. CA and integrated land management in Türkyie are approaches of particular importance that have already been taken up by governmental and international funding programmes.

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# Boxes, figures and tables

# Acknowledgements

The Evaluation Team, comprised of the international consultant, Andrea Walter (Team Leader and Evaluation Specialist), and the National Consultant, Esra Başak (sustainable land management [SLM] and natural resources management [NRM] Expert), would like to thank all those who contributed to this terminal evaluation.

A special thank you goes to the Food and Agriculture Organization of the United Nations (FAO) Office of Evaluation Regional Decentralized Evaluation Manager, Luca Molinas, based at the FAO Regional Office for Europe and Central Asia (Budapest). Mr Molinas provided guidance and invaluable inputs. We also extend special thanks to Serdar Bayryyev, FAO Office of Evaluation Senior Evaluation Officer, for providing quality assurance.

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This evaluation also benefitted from the inputs of many other project stakeholders, including government officials, farmers, research institutions, non-governmental organizations (NGOs) and a wide range of other project partners. Their contributions were critical to the team's work and are deeply appreciated.

# Abbreviations

| | |
|---|---|
| BDIARI | Bahri Dağdaş International Agricultural Research Institute |
| ÇEM | General Directorate of Combating Desertification and Erosion (by its Turkish acronym) |
| DKM | Nature Conservation Centre (by its Turkish acronym) |
| EIFMP | Ereğli Integrated Forest Management Plan |
| ESS | environmental and social safeguards |
| EX-ACT | Ex-Ante Carbon-balance Tool |
| FAO | Food and Agriculture Organization of the United Nations |
| FFS | Farmer Field School |
| FLO | Funding Liaison Officer |
| FPMIS | Field Programme Management Information System |
| FSC | Forest Stewardship Council |
| GEF | Global Environment Facility |
| GHG | greenhouse gas |
| KBA | key biodiversity area |
| KCB | Konya Closed Basin |
| LDCF | Least Developed Countries Fund |
| LOA | letter of agreement |
| LTO | Lead Technical Officer |
| M&E | monitoring and evaluation |
| MTR | mid-term review |
| NGO | non-governmental organization |
| NPC | National Project Coordinator |
| NPD | National Project Director |
| NRM | natural resources management |
| OGM | General Directorate of Forestry (by its Turkish acronym) |
| PIR | Project Implementation Report |
| PMU | Project Management Unit |
| SCCF | Special Climate Change Fund |
| SDG | Sustainable Development Goal |
| SFM | sustainable forest management |
| SLM | sustainable land management |
| TAGEM | General Directorate of Agricultural Research and Policies (by its Turkish acronym) |
| TOC | theory of change |
| TRGM | General Directorate of Agricultural Reform (by its Turkish acronym) |
| UNCCD | United Nations Convention to Combat Desertification |

# Executive summary

## Introduction

1. This terminal evaluation serves both learning and accountability purposes. It assesses the degree of achieved project results, examines impact and sustainability, and identifies issues and constraints that were encountered during implementation. The conclusions and appropriate recommendations include lessons learned, so that relevant project results can be sustained and key good practices can be scaled up. These aim to substantially stimulate future interventions, both in the intervention area and in Türkiye.

2. The overall objective of the project was to improve the sustainability of agriculture and forest land use management through the diffusion and adoption of low-carbon technologies that benefit biodiversity, land degradation and climate change. This includes greater farm profitability and forest productivity. Three barriers that had been identified at the project conception stage were directly addressed by three interlinked components with the following outcomes: Barrier 1, minimal experience among key government and civil society stakeholders in developing and implementing sustainable land management (SLM) and sustainable forest management (SFM) practices (Outcome 1: degraded forest and rangeland rehabilitated and management practices improved); Barrier 2, farmers underexposed to innovative low-carbon technologies for farming and farm waste management (Outcome 2: climate-smart agriculture techniques applied across productive landscapes); and Barrier 3, an inadequate enabling environment (legal, regulatory, institutional framework) and capacity for SLM (Outcome 3: enhanced enabling environment for SLM).

3. The terminal evaluation analysed all project activities implemented from January 2015 to February 2023 in the four intervention zones in the country's Konya Closed Basin (KCB): i) Ayrancı-Karaman; ii) the Green Belt; iii) Karapınar, Ereğli and Emirgazi; and iv) Sarayönü-Cihanbeyli. This also included a critical review of the effects and changes that the project generated on the different stakeholders, particularly the direct beneficiaries.

4. More specifically, the terminal evaluation sought to answer key evaluation questions based on the Global Environment Facility (GEF) criteria: i) relevance and coherence; ii) effectiveness and achievement of project results; iii) efficiency and factors affecting performance; iv) sustainability and impact; and v) cross-cutting issues.

5. The Evaluation Team was comprised of an international consultant and team leader (Senior Evaluation Specialist) and a national consultant (SLM/NRM Expert). It was supervised by a Food and Agriculture Organization of the United Nations (FAO) Office of Evaluation Regional Decentralized Evaluation Manager from the FAO Regional Office for Europe and Central Asia (Budapest).

6. The terminal evaluation process adhered to the United Nations Evaluation Group (UNEG) Norms and Standards and was based on an inclusive, transparent and impartial approach. This included a thorough desk review, as well as on-site data collection and information gathering through in-depth, semi-structured interviews with a total of 54 interviewees. All relevant stakeholders and beneficiaries on the central, provincial and local levels were involved. The Evaluation Team collected key project information from actors at both the

FAO Subregional Office for Central Asia in Ankara and FAO headquarters in Rome on operational, technical, administrative and financial management questions.

7. The evidence and information gathered were critically triangulated with complementary information and available documents to underpin their validity. This allowed for drawing conclusions, providing recommendations and compiling lessons learned.

# Main findings

## Relevance and coherence

8. The project fully aligns with national and provincial environmental and developmental goals and priorities, as set by the Government of Türkiye. The project also consistently aligns with the GEF's strategic priorities and entirely meets FAO's strategic objectives. The project further contributes to the United Nations Sustainable Development Goals (SDGs).

9. Additionally, the project is highly relevant in terms of addressing important challenges of environmental degradation and climate change. It focuses on necessary actions to fight the loss of ecosystem integrity within the KCB.

*The project's strategic relevance is rated as Highly Satisfactory.*

## Effectiveness (achievement of project results)

10. Through the implementation of three interlinked components, the project significantly contributed to the achievement of highly satisfactory results. However, the long-term impact of all components, particularly Components 2 and 3, has yet to be seen.

11. The overall result of total emission reduction from project-related improved forest and rangeland management is significant: 91 370 tonnes $CO_2$ equivalent per year are sequestered compared to 0 tonnes $CO_2$ equivalent per year at project start.

12. On Component 1 – the rehabilitation of degraded forest and rangeland – the new approaches contributed to successful capacity building and awareness raising among all government stakeholders and beneficiaries. This resulted in the rehabilitation of degraded forest that exceeds twice as much surface area than anticipated. The project rehabilitated 41 834 ha of degraded forest and 24 574 ha of degraded pasture. The area of degraded pasture rehabilitation was somewhat below expectations, but this was compensated by greater forest rehabilitation in the project area.

13. Activities related to degraded forest and rangeland used innovative technologies and practices. This involved the demonstration of evidence-based and improved rehabilitation techniques. It also contributed to the restoration of natural habitats for threatened biodiversity in degraded production landscapes.

14. Rehabilitation activities were closely linked with the monitoring and capacity building activities implemented under all three components. The interventions aimed to make both private and public stakeholders more knowledgeable and technically able given the current environmental status. This facilitated long-term climate change mitigation and adaptation benefits.

15. Monitoring took place on several intervention levels in order to assess: i) the delivery of meaningful results for biodiversity, climate change, soil productivity and water resources; ii) any considerable improvements in the quality of rural livelihoods in terms of income generation; and iii) if the interventions were adopted and scaled up.[1]

16. Under Component 2 – numerous activities were implemented on climate-smart agriculture – the avoided emissions and carbon sequestration delivering global environmental benefits due to overall project investments resulted in 59 867 ha of arable land under conservation agriculture. This avoided 36 768 tonnes $CO_2$ equivalent per year, meaning that the original project target was largely surpassed. However, determining and monitoring the soil carbon content was not possible due to the limited duration of the field demonstrations.

17. The interventions introduced innovative agricultural land rehabilitation technologies that produce SLM, climate change mitigation and biodiversity conservation benefits. They focused on the development of models for conservation agriculture demonstrations: i) no-tillage (by leaving agricultural soil with crop residue after planting);[2] ii) improved crop management practices like drip irrigation and programmed irrigation systems (with up to 30 percent water and energy savings for sugar beet and maize grain, plus yield increases of 9 percent and 30 percent respectively), crop rotation, the planting of drought-resistant crops and direct seeding with drought- and winter-tolerant and nitrogen fixing leguminous crops, as well as windbreaks to reduce soil degradation caused by harsh wind erosion. These efforts contribute to more optimal habitat conditions for the conservation of the endangered great bustard (*Otis tarda*).[3]

18. In contrast, the recommended use of pesticides, herbicides and synthetic fertilizers in some of the training and educational materials were found to be rather unsupportive of the overall project objectives.

19. As for rehabilitation activities on pastureland, segmentation between rotational grazing plots were created to provide a sustainable grazing zone for up to 3 000 sheep based on three-month grazing cycles. However, delays in project implementation impeded the assessment of the rotational grazing demonstrations' success and their potential for scaling up.

20. Other project activities focused on pilot-scale investments in biogas digesters to recuperate methane from agricultural waste and to produce electricity. The digesters' long-term impact could not be conclusively assessed since appropriate measures had not been undertaken in a timely manner. However, if the capacity of each digester would increase to 200 cattle, then the methane capture would increase to 518.80 tonnes $CO_2$ equivalent per year. The project activities offered good opportunities for generating lessons learned since the production and use of methane at the farm level is not common practice in Türkiye. The need to back successful initiatives with relevant legislation is underscored. Indeed, it would be beneficial if this could be done through the creation of proper economic incentives towards the establishment of biogas digesters on a larger scale.

21. On Component 3 – enhanced enabling environment for SLM – the activities focused on the establishment of capacity building programmes for local and national decision makers to mainstream SLM and climate-smart agriculture.[4] Furthermore, with the successfully introduced Farmer Field Schools (FFS), the project delivered considerable results to farmer households. New practices were adopted and income generation activities created to

[1] Several monitoring and decision-making tools were developed under the project.
[2] Equipment and machinery support were, however, highlighted as particularly challenging.
[3] This is also in the management plan for the great bustard.
[4] This is also in the rehabilitation strategy for the KCB and a good practices guide on SLM.

support SLM, climate change mitigation and biodiversity. An innovative, globally tested and participatory model of FAO was introduced through the FFS focus on women. This provided a conduit for the continued delivery of agricultural learning among government staff, farmers and producers. As a result, 1 000 farms adopted new practices. This represents an increase of 50 percent compared to the originally envisaged 500 farmer households. However, long-term effects could not be conclusively determined.

22. The engagement of women farmers in the FFS remained low over a long period of project implementation. However, the increased participation of motivated women that engage in income generation activities should be seen as an opportunity with long-term effects. A Gender Action Plan towards More Sustainable Farming and Women Farmers (hereinafter referred to as the Gender Action Plan) considers perceptions on gender relations, gender roles in decision-making and female roles in the production system. This informed the government on the elimination of gender imbalances through gender sensitization trainings that are specific to the needs of the target audience. Unfortunately, the data did not provide enough evidence on how this model will effectively contribute to reducing the gender gap in the long term.

23. A handover strategy – closely aligned with the decision-making tools under Component 1 – details how the project monitoring system should be mainstreamed within standard government operating systems. This, however, was not elaborated as a single document. Rather, it was justified with the produced plans and project reports, including good practices and lessons learned. In terms of sustainability, it remained unclear as to how these important tools would be implemented in practice.

*The overall project results are rated as Satisfactory.*

## Efficiency and factors affecting performance

24. In terms of project coordination, decision-making and stakeholder engagement, besides the project steering committee, efficient mechanisms and models between the central and provincial levels to jointly manage the project proved quite challenging. The FAO project team was the engine of project management. In fact, it coordinated and orchestrated all stakeholders and activities in both the planning and implementation phases.

25. The Ministry of Forestry and Water Affairs and the Ministry of Food, Agriculture and Livestock were separate entities with lead executing partners during the initial phase of project implementation. They later merged under a single entity: the Ministry of Agriculture and Forestry. This restructuring caused important challenges in project implementation. High staff turnover at the decision-making level led to delays in project processes: late feedback provision; delayed contract signing; and late procurement processing. This resulted in the postponement of activities.

26. The project steering committee meetings were held on a regular basis, except for the seventh meeting. However, these did not reflect the frequency that had been outlined in the 2014 project document. In fact, they occurred just once a year instead of twice.

27. The project's participatory processes and emphasis on inclusiveness were far from adequate.[5] A wide range of observers and stakeholders from numerous non-governmental organizations (NGOs) and the private sector was envisaged, but this was not the reality. In addition, local and provincial government stakeholders and target communities at the pilot

[5] The General Directorate of Agrarian Reform, for instance, expressed discomfort in not being appointed as the lead executing agency – even though they represent the main public authority on SLM.

sites were insufficiently consulted at the outset. The envisaged national stakeholder committee for providing consolidated advice on stakeholder participation and engagement, especially for communities at the identified pilot sites, never became operational. Regardless, the project made remarkable efforts to overcome these challenges.

28. The extent to which project ownership had been triggered from the central government bodies to the field office could not be determined. This was due to the short amount of time allocated for the evaluation's field mission.

29. In terms of management arrangements and work planning, rather lengthy tender, procurement and recruitment processes negatively affected the motivation of the executing partners. The internal delays that many GEF projects face at the outset were the main drivers behind four extensions. There were, however, external factors, such as the coronavirus disease 2019 (COVID-19), drought conditions that impacted project efficiency and the aforementioned merge of the two lead executing partners. Nevertheless, the project team considerably gained traction during the last phases of implementation to ensure the completion of all expected interventions.

30. The project made considerable efforts to adapt to institutional changes. However, it appears that tools for work planning and the facilitation of a common and transparent understanding of project implementation progress were not used efficiently. In addition, adaptive management of the project would have been facilitated if the project document had been updated upon project inception.

31. On financial management, important co-finance contributions created the potential for building valuable synergies among the different actors. On the operational level, however, co-financing reports from partners (cash and in-kind) could not be adequately assessed by the Evaluation Team.[6] Also, in-kind co-finance contributions (meeting attendance, allocating staff time, providing logistical support to the project) did not result in annual co-finance reports. According to the programme coordination unit, all funds were to be spent by project closure in February 2023.

32. On monitoring and evaluation (M&E), the project should have taken on an M&E professional to actively work on measurement and data collection. The initially planned National Project Implementation Unit only became operational in 2017, and the main M&E mechanism utilized throughout the project involved checking or evaluating the progress on achieving project results and objectives based on the targets and indicators. This was carried out by the National Project Coordinator (NPC) according to FAO-GEF M&E policies and checked at higher steering committee meetings. The recently established M&E department at the General Directorate of the European Union and Foreign Relations was only assigned for M&E activities during the last phase of the project. Consequently, the Evaluation Team is not able to comment on corresponding interventions.

33. For communications and knowledge management, a significant range of communication tools and materials were produced. These, however, were not clustered in an easily accessible portal for further dissemination to a larger number of beneficiaries and the broader public.

[6] The government co-financing reports were provided in their own format and only in Turkish, even though an official, co-financing standard format was provided by the project.

34. Through the FAO Subregional Office for Central Asia's exceptional guidance and supervision capabilities, regular internal communication significantly improved during the second half of project implementation. Regarding external communication, the project produced a great deal of communications and outreach materials, including national and local media. However, it did not produce an internet-based knowledge management system, such as a website or a portal for making these materials easily accessible.

*The project's overall efficiency, including factors affecting performance, is rated as Moderately Unsatisfactory to Moderately Satisfactory.*

## Sustainability and impact

35. In terms of institutional sustainability, there is good evidence that country ownership of the project is high. However, it was not possible to deduce if policy integration among the various project sectors (agriculture, forestry, biodiversity conservation) could be easily sustained. Policy integration between agriculture or pasture management and biodiversity conservation did not surface as apparent outcomes that will be sustained as a result of the project. This is because compartmental thinking and approaches are still dominant in the policy arena and difficult to overcome.

36. The project inspired and shaped the formulation of other national government programmes and projects. Gained experiences will help to form the foundation of long-term agriculture, forestry, natural resources and biodiversity management strategies and projects in the country. It is important to mention that the project outputs were also used in Türkiye's climate change policy-making processes and integrated into the first National Climate Council Meeting in February 2022 (Ministry of Environment, Climate Council, 2022).

37. FAO's FFS approach was applied for the first time through the project. It is highly likely to continue through both FAO and the Ministry of Agriculture and Forestry units as a programme jointly run or, potentially, in partnership with the private sector. Nevertheless, success stories springing from these capacity building events, extensions and other project activities merit more credit and can be highlighted to increase its multiplier effect and visibility. A formal sustainability plan and a sophisticated handover plan geared towards the project's main executing partners and decision makers were not available at the time of evaluation.

38. On financial sustainability, the likelihood of continued benefits after the end of project funding was found to be highly likely. In fact, conservation agriculture and integrated land management approaches have already been taken up by governmental funding programmes and will likely be financed by international or bilateral donors. Not enough effort was put into building partnerships and collaborations with actors that represent the private sector. This somewhat limits the prospect of financial instruments in the long term.

39. It was difficult to critically judge the success or failure of the project's socioeconomic sustainability due to the limitation in seeing immediate changes regarding the impact of income generation activities[7] on beneficiary communities. This was also attributed to a lack of data collection and data on economic impact.[8] The potential for biogas digesters to be scaled up remains uncertain. Setting up such systems requires technical expertise and depends on substantial investments. Regardless, the project definitively created important incentives.

[7] The harvest of non-wood forest products ranges from wild collection to farming.

[8] The average annual income from crop and livestock production for FFS participants was USD 3 534 at the end of 2021 (compared to the original project target of USD 1 341).

40. On sociopolitical sustainability, it is unclear as to how some of the project-led initiatives and challenges connected to biodiversity can be taken on politically. For rotational and sustainable pasture management to be scaled up throughout the KCB, the political will to manage and monitor them does not surface in the assessments on forest and agricultural ecosystems. Furthermore, agricultural expansion and encroachment upon natural steppes and pastures, as well as the critical underground water resources of the KCB, are the constant, overarching challenges that need to be addressed. As such, it remains unclear as to how the high and unique biodiversity features of the KCB will perform given the speed of habitat conversion. The adaptive measures benefitting both climate change and biodiversity conservation that have been put forward and demonstrated by the project are modest. Indeed, their promotion requires strong political will.

*The overall likelihood of risks to sustainability is rated as Moderately Likely.*

## Cross-cutting issues

41. During the second half of implementation, the project made remarkable strides towards increased participation from women. Their involvement, however, remained largely below expectations. The project had failed to stimulate the gender mainstreaming dimensions upon launch. This would have been pivotal since patriarchal power structures are still common in the country's rural areas.

42. The project's 31 FFS initiatives had a total of 114 females, representing 16 percent of all participants, and two women-led cooperatives with 68 women in income generation activities. Recent interventions are likely to be successful. However, positive long-term effects could not be determined given the delayed project implementation. Moreover, participation alone will be insufficient to ensure women's needs and demands. Enhancing women's leadership and decision-making power within institutions and governance mechanisms is therefore of particular importance.

43. For risk classification and risk mitigation measures taken regarding environmental and social safeguards (ESS), the project team assessed the chance of poor SLM activity coordination as low. In fact, this rating was considered too optimistic. According to the Evaluation Team, the forestry activities were generally more dominant and better aligned with biodiversity conservation objectives than the agricultural components.

44. The project team assessed the risk in terms of "weak capacity of local and national institutions" as low. The Evaluation Team found adequate evidence for this rating. However, the effective sustainability of institutional memory will require long-term impact assessments.

45. The risk of low ownership at different levels was largely mitigated by the capacity building programmes that had been coupled with the expedient SLM approaches. Scaling up interventions and increasing the project's visibility will, however, be relevant to increase ownership in the long term.

46. COVID-19 and extreme drought conditions in 2021 caused considerable delays in project implementation. As a result, greater risk was determined for natural calamities.

47. The cross-cutting issues are rated in the following points:

i. gender and other equity dimensions: Moderately Unsatisfactory to Moderately Satisfactory;
ii. human rights issues/Indigenous Peoples: Unable to Assess; and

*ESS: Satisfactory*.

# Conclusions

**Conclusion 1.** The project was found to be particularly innovative. In fact, it was the first of its kind to address important concerns on biodiversity, land degradation and climate change at once. Following successful interventions, the project showed positive evidence of high ownership. However, policy integration among the various sectors (agriculture, forestry, biodiversity conservation) will not easily be sustained if overlapping responsibilities and fields of competence on the various agricultural and forestry departments under the Ministry of Agriculture and Forestry are not clearly defined.

**Conclusion 2.** The project revealed high relevance on Türkiye's national environmental goals and priorities relating to the SDGs. The interventions and connected $CO_2$ savings positively illustrated new approaches for sustainable land and natural resources management. This represents a huge potential for catalysing a new era of climate-friendly agriculture.

**Conclusion 3.** The project was exemplary in turning theoretical knowledge into practice-oriented demonstrations. As a result, there is high project acceptance by both the beneficiaries at the grassroots level and the lead executing authorities.

**Conclusion 4.** The participatory processes in the selection of beneficiaries and importance given to project inclusiveness were not very satisfactory.

**Conclusion 5.** The FFS was identified as one of the main achievements of the project. In fact, the Evaluation Team found remarkable evidence that the provided models had been adopted by the local beneficiaries and are likely to be continued by both FAO and the Ministry of Agriculture and Forestry as a programme jointly run – potentially in partnership with the private sector. In practical terms, however, the inefficient maintenance services for no-tillage equipment and machinery support that needed to be purchased abroad were considered particularly challenging. The recommended use of herbicides (Roundup) in FFS manuals were found to be less supportive of the project's conservation agriculture objectives.

**Conclusion 6.** The project neglected to introduce appropriate incentives for women's engagement from the outset. At the same time, many of the project's demonstrations showed positive income generation results that are likely to spread to other farmers. The project's income generation and gender action plans include important activities to improve living conditions.

**Conclusion 7.** Significant delays in overall project implementation and the long-term effects of numerous interventions, such as rotational grazing, biogas digesters and women's cooperatives, could not be assessed conclusively. The delivery of expected outcomes within the planned timeframe would have been more effective if a detailed reconsideration of the overambitious results matrix had been made during the initial phase of project implementation.

**Conclusion 8.** The Evaluation Team found no evidence of the project's existing communications platforms, and the provided link for the website is dysfunctional. In addition, insufficient internal communication negatively affected general operational mechanisms between the central and provincial levels to manage the project jointly and efficiently in collaborative efforts.

**Conclusion 9.** The project has high potential to be scaled up. Conservation agriculture and integrated land management are approaches that have already been taken up by governmental funding programmes. Most likely, they will be also financed by international or bilateral donors.

**Conclusion 10.** The project still needs to finalize a sound handover strategy. This needs to be geared towards decision makers, closely aligned with decision-making tools, and detail how the project monitoring system will be mainstreamed within standard government operating systems.

# Recommendations

## Actions to follow up or reinforce initial project benefits

**Recommendation 1.** *Operational*: the Ministry of Agriculture and Forestry should develop an overarching monitoring programme that integrates all three project components in order to systematically assess the KCB's environmental state. An overarching, integrated monitoring scheme in the basin and, ideally, nationwide, should be developed to overcome policy integration challenges that the project has started to address successfully. An integrated water basin management approach and strategic environmental impact assessments can ensure that further expansion of agricultural surface area in the basin and its encroachment on not only freshwater aquifers, but also traditional landscapes, are avoided. The defined strategic targets within the Biodiversity Management Plan were developed as a result of the project. This involves pastures, wetlands, protected areas, agricultural areas and forests in the KCB that should be used.

**Recommendation 2.** *Strategic*: FAO should advocate for the Ministry of Agriculture and Forestry to establish concrete policy response measures against urgent environmental extremes in the KCB. From the government's perspective, intraministerial and intradepartmental cohesion efforts should be mobilized to achieve policy integration between agriculture and pasture management and biodiversity conservation. FAO should encourage the main project partners to tackle the core of the freshwater management issues in the KCB. Establishing economic incentives for farmers to gradually cease the production of freshwater-dependent crops regionally or – the use of fees or penalties for not abiding – can be among these instruments. Furthermore, technical know-how generated throughout the project, especially experiences gained in maintaining and increasing soil fertility via conservation agriculture, ought to feed more high-level public policy measures. This includes the country's recently established Basin-based Agricultural Subsidy Scheme to determine the crops to be subsidized in the water basins based on various groundwater and precipitation data. Due to overlapping responsibilities on behalf of the project's lead agencies on pasture and steppe management, intraministerial and intradepartmental cohesion efforts should be mobilized to achieve policy integration between agriculture and pasture management and biodiversity conservation. This needs to be evaluated through a set of agreed upon, common indicators across various general directorates.

**Recommendation 3.** *Operational*: the Ministry of Agriculture and Forestry and FAO should continue and spread the FFS model in collaboration with local and regional agricultural authorities and through private sector engagement in the KCB. The FFS model should be replicated across the entire basin and nationwide by strategically prioritizing and targeting the areas of concern, that is, in terms of biodiversity, and water scarcity or other key factors learned from the project. On-farm response capacities to climate change should continue to be strengthened with multiparty collaborations that engage the local and regional agricultural directorates, as well as the private sector.[9]

[9] Private initiatives in the KCB are represented through several agricultural development cooperatives and unions: irrigation unions; agricultural production cooperatives; agricultural credit cooperatives; and sugar beet cultivator unions. These cooperatives, which mainly serve members to boost agricultural production and provide extension services for farm development, represent the beneficiaries and were an important part of the project's baseline.

**Recommendation 4.** Operational, targeting "Leaving No One Behind": the Ministry of Agriculture and Forestry provincial directorates should develop a specific operating model for the fair use, sharing and distribution of agricultural machinery procured during project implementation. In order to facilitate the wide use of the agricultural machinery, particularly no-till machines in the KCB, a specific operating model for their fair use, sharing and distribution is of outmost importance. Ideally, this model should define the parties responsible for their upkeep and maintenance. Farmers renting them for a nominal fee is one possibility. This would assure that farmers return the machines promptly and provide resources for the maintenance of the machines. If the rent is high enough, this may also provide resources to purchase more machines. This type of operating model should be solidified with the involvement of district and provincial agricultural authorities, local chambers of agriculture, the General Directorate of Agricultural Reform (TRGM, by its Turkish acronym), and FAO.

**Recommendation 5.** *Strategic*: FAO should develop more sustainable communications strategies and reinforce related tools to make the project more visible and leverage substantial change through increased public awareness and the demonstration of transformative practices. A comprehensive communications strategy was not implemented during the project. The multiplier effect of successful and transformative practices, such as SLM, rangeland restoration and conservation agriculture practices should be disseminated through much stronger communication tools as part of the exit strategy. This could involve an internet-based knowledge management system, such as a website or a portal for making materials easily accessible, news pieces, short films, public service announcements, documentaries in various media, and social media networks. For instance, the Ministry of Agriculture and Forestry operates an agricultural television channel and NGOs, such as the project partner Nature Conservation Centre (DKM, by its Turkish acronym), have a strong social media presence. These tools should be used to disseminate demonstration results more widely and to leverage for substantial and lasting change, not only on local but also regional and national levels.

## Proposals for future directions

**Recommendation 6.** *Strategic*: FAO should set clearer standards of conservation agriculture in training materials. As a practice, the project's training and educational materials (brochures and curricula targeting farmers) recommend the use of pesticides, herbicides and synthetic fertilizers with little effort on the promotion of more nature-based solutions to improve soil conditions. A business-as-usual approach to agriculture underlines the tone of these guidelines that are specifically designed for the KCB. FAO's Subregional Office for Central Asia is responsible for providing guidance and advocacy. Indeed, they should reinforce more holistic, sustainable standards for soil and biodiversity conservation and strongly encourage these instead (FAO, 2019b; FAO and WHO, 2014).

**Recommendation 7.** *Operational*: FAO should integrate gender equality concerns during project design, and the Ministry of Agriculture and Forestry should prioritize and engage with gender-transformative approaches in their work plans. Closing the gender gap in agriculture is essential to fulfil FAO's mandate and overcome the "persistent gender inequalities that undermine rural women's potential" (FAO, 2020, p. v). This policy holds FAO accountable for systematically integrating gender equality as a priority in its strategic framework and related implementation mechanisms. A Gender Action Plan was prepared by the project and actively seeks to redress unequal power dynamics by challenging discriminatory social norms, behaviours and attitudes in the KCB. The gender gap, however, has not been addressed sufficiently. Rather, actions have been formulated towards income generation objectives for women beneficiaries in selected pilot areas. It is recommended that income generation is not equated with gender empowerment in future

work and projects conducted through GEF funding. Gender inequality reduction should therefore be a critical part of project design and implementation. However, participation alone will not be sufficient to ensure women's needs. The overall objective should aim to enhance women's leadership and decision-making power at all levels – also regarding their involvement in legal framework, policy and programme formulation.

**Recommendation 8.** *Operational*: FAO should enhance procurement planning and provide procurement support at an early stage of project implementation in order to minimize administrative hurdles and expedite the process. Procurement and contract hurdles within the FAO system led to high staff turnover during the entire implementation period, causing a number of delays. The project design and work plans did not sufficiently take into account administrative hurdles within FAO. This significantly impacted the timely implementation of activities and, in some cases, led to project ownership issues. FAO's Subregional Office for Central Asia and FAO headquarters should provide mutual support with appropriate measures to be taken in order to enhance procurement planning and identify potential risks. Extra time for the implementation of planned activities is also recommended.

## Lessons learned

48. Some of the project's activities and approaches stand out as good practices. These are noteworthy for broad replication.

49. Turning the theoretical knowledge of "how agriculture should be done" into a synchronized, hands-on practice in the field is key. This involves planting and production cycles at the pilot sites through the FFS. Indeed, this appears to be the project's strength. The collaborative implementation of tangible field-level interventions led to high ownership of the project across the KCB and is most likely to be continued by the relevant project partners.

50. The project has demonstrated that biodiversity mainstreaming in forest and rangeland management and restoration practices is possible. Indeed, it can be considered a model, developed for the first time for use throughout Türkiye in terms of biodiversity management planning.

51. The project has helped the understanding and internalization of the term "conservation agriculture" and the relevant technical implementations that accompany this approach: no-tillage, windbreaks, biogas digesters and programmed irrigation schemes. These are used throughout the executing partners' work agenda. The KCB and other drought-sensitive zones in the country can benefit from these lessons.

52. Some of the project's activities and approaches illuminated certain problems that should be avoided in the future.

53. Key machinery required for conservation agriculture and, ultimately, climate change mitigation, such as no-till drills, should be procured within the country. This way, their repair and upkeep are more feasible and quicker. Indeed, it can respond to both the real needs of the farming communities and the provincial public bodies whose duty is to ease such implementations.

54. More economic incentives need to be developed to promote conservation agriculture and biogas digesters at the farm level since the costs remain too high for the average farming

communities of the KCB. Enhancing the strength of cooperatives or unions can make these initiatives more economically viable, as with the milk production cooperative in Karaman.

55. Knowledge management techniques deployed by the project fell short of reaching out to wider audiences and disseminating results from the outset. The project did not build a website. Here, all the valuable educational materials produced as part of the FFS and other synthesized technical reports on conservation agriculture, sustainable rangeland management, SFM or integrated biodiversity conservation planning could be reached during and after the project's lifetime. The lack of such a website limits the possibility for disseminating these knowledge products.

**Executive Summary Table 1. The GEF evaluation criteria rating**

| GEF criteria/subcriteria | Rating[1] | Summary comments[2] |
|---|---|---|
| A. STRATEGIC RELEVANCE | | |
| A1. Overall strategic relevance | HS → HU | HS |
| A1.1 Alignment with the GEF and FAO strategic priorities | HS → HU | HS |
| A1.2 Relevance to national, regional and global priorities and beneficiary needs | HS → HU | HS |
| A1.3 Complementarity with existing interventions | HS → HU | HS |
| B. EFFECTIVENESS | | |
| B1. Overall assessment of project results | HS → HU | S |
| B1.1 Delivery of project outputs | HS → HU | S |
| B1.2 Progress towards outcomes[3] and project objectives | | |
| - Outcome 1 | HS → HU | HS |
| - Outcome 2 | HS → HU | S |
| - Outcome 3 | HS → HU | S |
| - Overall rating of progress towards achieving objectives/outcomes | HS → HU | S-HS |
| B1.3 Likelihood of impact | HS → HU | MS |
| C. EFFICIENCY | | |
| C1. Efficiency[4] | HS → HU | MU–MS |
| D. SUSTAINABILITY OF PROJECT OUTCOMES | | |
| D1. Overall likelihood of risks to sustainability | L → HU | ML |
| D1.1 Financial risks | L → HU | L |
| D1.2 Sociopolitical risks | L → HU | ML |
| D1.3 Institutional and governance risks | L → HU | ML |
| D1.4 Environmental risks | L → HU | ML–MU |
| D2. Catalysis and replication | HS → HU | L |
| E. FACTORS AFFECTING PERFORMANCE | | |
| E1. Project design and readiness[5] | HS → HU | MS |
| E2. Quality of project implementation | HS → HU | MS–S |
| E2.1 Quality of project implementation by FAO (Budget Holder, Lead Technical Officer [LTO], Project Task Force, etc.) | HS → HU | S–HS |
| E2.2 Project oversight (project steering committee, project working group, etc.) | HS → HU | MS |
| E3. Quality of project execution<br>For DEX projects: Project Management Unit (PMU)/Budget Holder<br>For Operational Partners Implementation Modality projects: executing agency | HS → HU | UA |

| GEF criteria/subcriteria | Rating[1] | Summary comments[2] |
|---|---|---|
| E4. Financial management and co-financing | HS → HU | UA |
| E5. Project partnerships and stakeholder engagement | HS → HU | MU–MS |
| E6. Communications, knowledge management and knowledge products | HS → HU | MS |
| E7. Overall quality of M&E | HS → HU | MS |
| E7.1 M&E design | HS → HU | U |
| E7.2 M&E plan implementation (including financial and human resources) | HS → HU | UA |
| E8. Overall assessment of factors affecting performance | HS → HU | MU–MS |
| F. CROSS-CUTTING ISSUES | | |
| F1. Gender and other equity dimensions | HS → HU | MU–MS |
| F2. Human rights issues/Indigenous Peoples | HS → HU | UA |
| F3. ESS | HS → HU | S |
| Overall project rating | HS → HU | S |

*Notes*:
[1] See Appendix 3. Rating scheme.
[2] Include reference to the relevant sections in the report.
[3] Assessment and ratings by individual outcomes may be undertaken if there is added value.
[4] This includes cost efficiency and timeliness.
[5] This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners upon project launch.

*Source*: Elaborated by the Evaluation Team.

# 1. Introduction

## 1.1 Purpose of the evaluation

1. This terminal evaluation, required by the Global Environment Facility (GEF) Coordination Unit, serves both learning and accountability purposes. It identifies project issues and constraints, its impact and sustainability, and the degree of achievement of its long-term results. The terminal evaluation further draws conclusions and formulates appropriate recommendations. Lessons learned to stimulate future initiatives and interventions are underscored. The terminal evaluation contributes to the dissemination of information. This is to assure continuity of the processes that were initiated by the project. In fact, it aims to sustain project results and expand on existing efforts, as well as mainstream and scale up the project's products and practices.

## 1.2 Intended users

2. The primary intended users are: i) the Budget Holder and the designated Evaluation Manager; ii) the Project Management Unit (PMU); iii) the national project counterpart; iv) the National Project Implementation Unit; v) the field-based Project Implementation Unit; vi) the Project Task Force, including the Funding Liaison Officer (FLO) and the Lead Technical Officer (LTO); vii) other Food and Agriculture Organization of the United Nations (FAO) technical personnel at headquarters; viii) project steering committee members; and ix) the GEF and other stakeholders.

3. The Evaluation Management team is comprised of Fatma Güngör as the National Project Coordinator (NPC) and the Co-evaluation Focal Point, as well as Luca Molinas as the Regional Evaluation Manager. Serdar Bayryyev, Senior Evaluation Officer from the FAO Office of Evaluation, provides evaluation quality assurance for key evaluation processes and deliverables.

## 1.3 Scope and objective of the evaluation

4. The main objective of the terminal evaluation is to assess the extent to which the project has achieved its intended results and to identify any design and implementation issues. The terminal evaluation covers all activities implemented throughout the project (from January 2015 to February 2023), taking into account lessons learned, conclusions and recommendations provided by the mid-term review (MTR) of April 2018 (covering the project period from January 2015 to June 2017). This includes an analysis of the intervention zones, as well as the effects and changes that the project generated on the stakeholders and beneficiaries.

5. The terminal evaluation aims to ensure that the data collected and analysed are credible, reliable and useful. It identifies constraints faced during implementation, but also highlights success stories and analyses the project's impact and sustainability of short- and long-term results. The terminal evaluation further draws conclusions and gives recommendations with an emphasis on important lessons learned that merit consideration for future project design and, most importantly, serve future actions to sustain the project's results. This will allow for existing interventions to be expanded by mainstreaming and scaling up the project's products and good practices. It can also disseminate information to assure project continuity and make full use of future synergies.

6. The terminal evaluation includes all three components with related intervention areas and the corresponding stakeholders that are actively involved in the project. It aims to observe and assess the results obtained by the project by focusing on the impact and changes generated through the numerous activities.

7. The terminal evaluation focuses on Ankara and four pilot sites in the Konya Closed Basin (KCB) where the key activities were implemented: i) Ayrancı-Karaman; ii) the Green Belt; iii) Karapınar, Ereğli and Emirgazi; and iv) Sarayönü-Cihanbeyli.

8. The terminal evaluation follows the FAO Office of Evaluation Decentralized Evaluation Guide for FAO-GEF projects (FAO, 2019a) and the GEF Evaluation Guidelines (GEF, 2017). In particular, it aims to answer the main evaluation questions based on the GEF criteria in Box 1.[1]

**Box 1. Key evaluation questions by the GEF criteria**

| |
|---|
| **Relevance and coherence** |
| - To what extent is the project relevant and consistent in meeting the strategic priorities of the Government of Türkiye, and in terms of sustainable agricultural development and environmental conservation in the strategic objectives of FAO and the GEF? |
| **Effectiveness (achievement of project results)** |
| - To what extent have the expected project objectives been achieved, and what is the level of progress towards impact? |
| **Efficiency and factors affecting performance** |
| - Has the project been efficient and effective regarding: coordination and decision-making; stakeholder engagement; knowledge and information sharing; work planning; financial management; monitoring and evaluation (M&E); reporting; internal and external communication; and knowledge management? |
| **Sustainability and impact** |
| - Are the project results sustainable, and what conditions have been put in place to consolidate its sustainability and reduce the risks that may affect it? |
| **Cross-cutting issues: gender and other equity dimensions; human rights issues/Indigenous Peoples; and environmental and social safeguards (ESS)** |
| - Has the project relevantly contributed to the achievement of the United Nations/FAO/the GEF commitments towards women's empowerment and gender equality?<br>- Have ESS risk classification and risk mitigation provisions been identified, and have they adequately been addressed during project implementation? |

*Source*: Elaborated by the Evaluation Team.

## 1.4 Methodology

9. The Evaluation Team has two consultants: an international team leader (Senior Evaluation Specialist) and a national consultant (sustainable land management [SLM]/natural resources management [NRM] Expert). The team is supervised by an FAO Office of Evaluation Regional Decentralized Evaluation Manager based at the FAO Regional Office for Europe and Central Asia (Budapest) who provides quality assurance and technical support.

10. The terminal evaluation process adheres to the United Nations Evaluation Group (UNEG) Norms and Standards and is based on a systemic and participatory approach. The

[1] These questions are detailed in the evaluation matrix (see Appendix 5).

evaluation uses the aforementioned criteria from the Development Assistance Committee of the Organisation for Economic Co-operation and Development: relevance and coherence; effectiveness (achievement of project results); efficiency and factors affecting performance; and sustainability and impact. In terms of factors affecting performance, the monitoring and evaluation (M&E) system, the quality of execution, partnerships and communication are included. These criteria are based on Cross-cutting issues relating to good practices and are complemented by significant questions on Gender. This includes minority and vulnerable groups, as well as environmental and social safeguards (ESS) to cover questions on risk management.

11. The terminal evaluation adopted a consultative and transparent approach by keeping internal and external stakeholders informed throughout the process. The evidence and information gathered were triangulated to underpin its validity and analysis and to support its conclusions and recommendations.

12. In line with the FAO-GEF project cycle, the terminal evaluation also verified compliance with the common United Nations Development Assistance Framework Programming Principles, namely the human rights-based approach: the right to food and the right to decent work; gender mainstreaming; sustainability (financial, sociopolitical, institutional, environmental); capacity building; and results-based management.

### 1.4.1 Preparatory phase

13. The preparatory phase of the terminal evaluation was complemented by a virtual meeting on 15 September 2022. This was organized by the Regional Evaluation Manager with the participation of the Field Programme Support and Monitoring Officer, the NPC and the international consultant. The meeting contributed to specifying the objectives of the evaluation, clarifying questions and an exchange on the tentative schedule for the country mission.

14. The preparatory phase further included a desk review. This involved the collection and analysis of resource documents, as provided through the Field Programme Management Information System (FPMIS) (see section 3.3.4 and Appendix 4). The information collected was also used to develop the evaluation matrix, which had detailed the evaluation questions and subquestions prior to the mission (see Appendix 5).

### 1.4.2 Data collection phase

15. The data collection phase included on-site data collection and information gathering through in-depth, semi-structured interviews with a total of 54 interviewees (see Appendix 1), focus group discussions with relevant project stakeholders and beneficiaries – separated by gender and, where applicable, debriefings within the team – and direct observations. The different categories of interviewees were consulted separately and in accordance with the agreed upon mission schedule. Particular focus was given to the direct operators and beneficiaries of the project.

16. The Evaluation Team collected key information from all relevant actors at the FAO Subregional Office for Central Asia in Ankara regarding quality and efficiency in the operational, administrative and financial management of the project. This includes exchanges with members of the multidisciplinary Project Task Force that supported the implementation with technical inputs from participating units.

17. Online discussions with FAO headquarters in Rome focused on the technical support provided to the project. This involved field missions, report reviews, approval processes and budget revisions.

18. Key informants for all project-related activities were the lead executing agencies and important co-financing partners: ÇEM and the TRGM. This includes partners at the national, provincial and local level, especially responsible actors under the Lead Technical Unit – the National Project Implementation Unit – which ensured overall project coordination and execution.

19. Interviews were also conducted with members from the project steering committee. This was co-chaired by ÇEM (by its Turkish acronym) as the head, and the TRGM (by its Turkish acronym), including the Deputy General Directors from relevant directorates and observers from non-governmental organizations (NGOs) and the private sector to gather opinions on project performance. This in particular involved the preparation and execution of the annual work plan and budget, and the application of recommendations made by the project steering committee.

20. Further interviews concerned local stakeholders and beneficiaries, such as farmers and herders, the private sector, universities and research institutions.

### 1.4.3 Data analysis and evaluation report

21. The Evaluation Team systematically sought evidence and triangulated information from the mission to support the findings. It conducted an in-depth consultation of resource documents, tools, statistics and scientific sources. This included follow-up discussions with key people virtually and after the mission. The analysis was based on the GEF key criteria.

22. At the project strategy level (relevance and coherence), the Evaluation Team examined the quality of the project design. This assessed the validity of the problem targeted by the project and its coherence and continuity with other initiatives. It also analysed the feasibility of the basic assumptions and the project's alignment with country priorities, as well as the strategic objectives of FAO and the GEF. An overall strategic relevance assessment was made by using a seven-point rating scale.

23. On effectiveness and the achievement of project results, a comparison of the results obtained was made with those expected. A seven-point rating scale was used to assess overall outcomes: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU); and Unable to Assess (UA).

24. The quality of project implementation and execution (efficiency and factors affecting performance) pertains to the roles and responsibilities discharged by the GEF agencies and by the country or regional counterparts that executed the funded activities on the ground. The performance was rated on a seven-point scale: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU); and Unable to Assess (UA).

25. On sustainability and Impact, the conditions put in place were examined to ensure the consolidation of results and promote ownership by the national stakeholders. Sustainability was assessed by considering the risks related to the financial, socioeconomic, sociopolitical,

institutional and environmental sustainability of project outcomes. This also involves the measures to prevent, eliminate or mitigate these risks. Further, the assessment determined the extent to which progress towards long-term impact could be attributed to the project. A five-point scale was used to assess the overall sustainability: Likely (L); Fairly Likely (FL); Fairly Unlikely (FU); Unlikely (U); and Unable to Assess (UA).

26. The analysis of cross-cutting issues focused on the quality and effectiveness of management in terms of gender (and other vulnerable or disadvantaged groups) and ESS. Both FAO and the GEF policies were consulted.

27. In summary, the terminal evaluation provided answers to the evaluation questions and subquestions, as well as triangulated and analysed the information available. At the same time, it highlighted the strengths and weaknesses of the project and formulated recommendations for stakeholders. It includes lessons to be considered for the design and execution of future government, FAO and the GEF projects.

## 1.5 Limitations

28. Although the terminal evaluation covers the entire project intervention area with all key stakeholders involved, only three out of the four pilot sites were visited.[2] This was due to a very tight mission schedule and pilot sites that are geographically too far apart.

29. Some interviews were deepened with other appropriate resource people. This aimed to deny any ambiguities and uncertainties and to mitigate further limitations due to the non-availability of a few stakeholders during the mission.

30. A challenge during the terminal evaluation was the missing resource documents that had not been uploaded to the FPMIS. To mitigate the risk that the Evaluation Team could miss important key information that allow the triangulation of the findings, a template indicating the missing means of verification and addressing detailed requests, was provided to the FAO project team.

[2] The Green Belt pilot site was not part of the mission.

# 2. Background and context of the project

31. The Republic of Türkiye (official name since 2020) has a surface of 783 356 km$^2$. The rural land surface is composed of 38 percent arable land, 30 percent pasture and meadow, and 28 percent forest. The country has three primary climate zones: i) the temperate oceanic climate of the Black Sea region; ii) the continental climate of the interior and the Eastern Anatolian highlands; and iii) the Mediterranean climate of the Aegean and coastal Mediterranean regions. The Turkish Black Sea coast receives the most precipitation. The driest regions are the Konya Plain and the Malatya Plain.

32. In 2021, the country's total population was estimated at 85 042 736 (World Bank, 2023) with women representing 50.6 percent of the population (World Bank, 2022). In 2021, 23 percent (World Bank, 2018a) of the total population lived in rural areas (towns and villages) and 77 percent (World Bank, 2018b) in urban areas (province and district centres).

33. Türkiye is a middle-income country. The nation's gross domestic product is within the world's top 20. Its primary economic engines are agriculture (9.4 percent), industry (25.9 percent) and services (64.7 percent), including trade, transportation, communications, financial institution services, self-employed people services and non-profit organization services.

34. The country is the world's seventh largest agricultural producer and exporter of crops, such as hazelnuts, chestnuts, apricots, cherries, figs, olives, tobacco and tea (World Bank, 2023). It is therefore an important contributor to Türkiye's economy. The agricultural sector represents 25 percent of the workforce and contributes 8 percent of the country's economic activity. Regarding the country's animal production in 2020, the numbers were as follows: 17 975 000 cattle, 192 489 buffaloes, 42 127 000 sheep and 11 986 000 goats (Turkstat, 2020). For comparison, the number of sheep and goats was 32.5 million in 2002. This represents an increase of approximately 40 percent. In 2022, poultry meat production had increased by 10 percent within six months and when compared to the same period in 2021. Poultry meat production is even expected to increase to 2.68 million tonnes in 2023 (AviNews, 2023) – compared to 663 000 tonnes in 2000.

35. There are 17 State Production Farms in Türkiye. Founded in 1950, they were reorganized in 1984 within the General Directorate of Agricultural Enterprises, a subsidiary of the Ministry of Agriculture – covering just over 300 000 ha. The primary purpose of these state farms is to provide seed and breeding stock to private agriculturalists. Most of the country's agriculture is highly dependent upon government policies and support to regulate feed prices and lower import duties on breeding stock.

36. Over two million farms in Türkiye are private. According to the Organisation for Economic Co-operation and Development, nearly two-thirds of Turkish farms are less than 5 ha (OECD, 2011).

37. Approximately 280 000 km$^2$ of Türkiye's territory is classified as forest (FAO & GEF, 2014, p. 8). Silviculture is widely practiced. The productive forests are mainly found at higher elevations. Two species, Calabrian pine (*Pinus brutia*) and black pine (*Pinus nigra*), account for over 75 percent of the coniferous forest. There are also significant quantities of fir (*Abies* spp.), juniper (*Juniperus communis*) and Scots pine (*Pinus sylvestris*). Beech (*Fagus* spp.) and oak (*Quercus* spp.) make up most of the broadleaf forest. Oak constitutes nearly 50 percent

of the total coppice area. Other species include alder (*Alnus* spp.), chestnut (*Castanea sativa*) and poplar (*Populus* spp.).

38. Three different phytogeographic regions meet in Türkiye, making it one of the temperate zone's most biodiversity-rich countries. There are approximately 10 000 plant species, and over 3 000 of these are endemic. The country has more than 1 500 vertebrate species.

39. Türkiye's protected area covers 5 647 568 ha or 7.24 percent of the country (FAO & GEF, 2014, p. 9) – of which, 11 types are noted: national parks; nature reserve areas; nature parks; nature monuments; wildlife development areas; conservation forests; and natural sites, especially protected areas, Ramsar sites, biosphere reserves and world heritage sites. Today, there are: 48 national parks; 31 nature reserve areas; 261 nature parks; 113 nature monuments; 85 wildlife development areas; 58 conservation forests; 1 273 natural sites; 15 specially protected areas; 14 Ramsar sites; one biosphere reserve; and 11 world heritage sites.

40. The KCB, where the project activities were implemented, is in the middle of the central Anatolian Plateau. The region covers approximately 53 000 $km^2$, and its elevation varies between 900 and 1 050 metres. It is classified into the follwing: 41 percent agricultural land; 34 percent pasture and rangeland; 13 percent forest; 8 percent wetland; and 4 percent rock and sand dunes. The KCB is semi-arid with an average annual precipitation of 378 millimetres.

41. Most of the KCB is situated in the country's largest province of Konya in southwest central Anatolia. The Konya, Karaman and Aksaray Provinces share the KCB territory: 56 percent Konya; 12 percent Karaman; and 14 percent Aksaray.

42. Sugar beet production makes up the largest agricultural activity, followed by livestock production. Other crops include cereals, fodder, fruits, vegetables, and legumes. Livestock numbers are continuously increasing, particularly dairy and feeder cattle, but also sheep and goat numbers. The total pastureland area in the KCB, owned by the state, covers 1.9 million ha (FAO & GEF, 2014, p. 10), including mountain grassland and grassland steppe. Animals are grazed widely on steppe and forested land through a mostly open-access grazing system. Both sugar beet and intensive livestock production are major contributors to land degradation and climate change.

43. Agriculture in the KCB is highly dependent upon irrigation. The total arable land in the basin is approximately 2.2 million ha, and 427 000 ha are irrigated. However, the actual surface area under irrigation is likely to be substantially higher. The economic value of irrigated versus non-irrigated land is nearly three times higher (USD 2.3 billion versus USD 760 million).

44. A substantial amount of the basin is forested. The main tree species are black pine (31 percent), oak (24 percent), juniper (20 percent), fir (9 percent), Calabrian pine (8 percent) and cedar (*Cedrus spp.*) (3 percent). The total basin designated as forested land is 733 760 ha, including nearly 100 000 ha of productive or commercial forest. The remaining forested areas are rangeland or degraded forests. Fragmentation is high, with 20 percent of degraded forests having 10 to 40 percent canopy cover.

45. The biodiversity of the KCB is globally significant with 24 key biodiversity areas (KBAs) and 12 protected areas. There are 21 Important Bird and Biodiversity Areas and one Ramsar site

designated in the KCB (FAO & GEF, 2014, p. 11). The KCB is globally recognized as a historical nesting area for tens of thousands of flamingos. Many of the globally significant species, such as the white-headed duck (*Oxyura leucocephala,* endangered) and the Eurasian otter (*Lutra lutra*), are highly dependent upon wetlands. The *Barbatula eregliensis*, a critically endangered and endemic ray-finned fish species, is only in the Ereğli Marshes.

46. The KCB steppes are globally unique habitats that host numerous threatened and restricted rangeland plant and animal species. The salt steppe is the largest and most pristine in Türkiye. As the most important basin for the endangered great bustards, there are several Important Bird and Biodiversity Areas, such as Tuz Lake, Sarayönü and Kulu Lake. These areas are fundamental for the survival of the species.

47. Important steppe plant species include: *Astragalus gigantostegius*, a narrow endemic known from one locality (critically endangered); *Astragalus cicerellus* (critically endangered); *Astragalus victoriae* (critically endangered); *Campanula antalyensis* (endangered) and *Gladiolus humilis* (endangered). The basin also hosts an endemic butterfly species, the Anatolian black-eyed blue (*Glaucopsyche astraea*), and the mountainous foothills provide habitat for the endemic Kasnak oak species (*Quercus vulcanica*).

48. The project identified four pilot sites within the KCB.

i. **Pilot site 1: Ayrancı-Karaman.** The pilot site covers an area of 264 700 ha and has a population of 7 000, with the majority living in villages. The elevation of the area varies from 1 000 to 1 800 metres. The province covers 45 000 ha of forest, 101 930 ha of arable land and 44 768 ha of pasture.

- Agriculture (livestock and cultivation) represents the main income source, employing approximately 70 percent of the population. The agricultural lands of the region are heavily degraded. Wind erosion is a major problem, and the intense use of fertilizer and chemical inputs has heavily contributed to this degradation. The result is decreased organic content in the soil and an increased susceptibility to further wind erosion. Due to the general water scarcity in the region, the total irrigated lands decreased by almost 50 percent within ten years. As a result, local farmers have increasingly turned to groundwater sources. Within just one decade, nearly 250 wells were opened. Approximately 36 percent of them are not licenced.
- Sheep and goat numbers have risen 20 percent and cattle numbers 40 percent within five years, mainly due to intensive livestock production systems.[3] Pressure on pastures is increasing, and the fodder quality is deteriorating. Methane emissions are on the rise.
- The forest structure is composed of oak, cedar, juniper, and black pine trees. The canopy coverage rate of the forests is 55 percent and heavily degraded. Within just ten years, the forest canopy cover rate has almost halved. The Yeşildere KBA extends along the Yeşildere River and obtains its status from a

[3] According to the 2014 project document, sheep and goat numbers were 89 000 in 2007 and 106 211 in 2012, and cattle numbers were 5 563 in 2007 and 7 820 in 2012.

freshwater fish species, the endemic Anatolian gudgeon (*Gobio hettitorum*). There are no protected areas in the pilot site.

ii. **Pilot site 2: the Green Belt.** As of 2012, the pilot site covered an area of 101 000 ha and had a population of approximately 15 000. The average elevation is around 970 metres, and the forest coverage is about 25 000 ha.

- The main economic activities are temporary forestry labour and animal husbandry. Although animal husbandry is a key livelihood, there are no pastures in the region. Agriculture is limited to the surroundings of the villages for gardening and small-scale crop production.
- There are no protected areas in the pilot site for wildlife and natural values nor Important Bird and Biodiversity Areas and KBAs. The Green Belt is under a certain protection by the Ministry of Agriculture and Forestry. Local authorities fenced the area and access is forbidden. The primary industry is poultry and egg production. Local residents use the area for grazing animals and illegal small-scale agricultural practices. The illegal use of forest land for grazing purposes and the occupation of forests for agriculture leads to additional costs on afforestation activities, particularly in terms of climate change.

iii. **Pilot site 3: Karapınar, Ereğli and Emirgazi.** In 2012, the pilot site covered an area of 292 600 ha and had a population of 78 500. The area has an average elevation of approximately 1 000 metres, with 20 100 ha of forest, 130 000 ha of arable land and 142 000 ha of pasture.

- The main income sources are the production of field crops, animal production and agroindustries. As a result of government subsidies, most farmers have changed their farming practices from rainfed agriculture to irrigated farming systems. Sugar beet, maize grain, sunflower, and horticulture have increased dramatically. Within just one decade, land irrigation has increased by more than 55 percent. By far, this exceeds the potential water capacity. In 2012, 82 000 ha of land were irrigated. Annual precipitation ranges from 250 to 350 millimetres. More than 5 000 wells exist in the region, with more than 70 percent unlicenced. As a result, the groundwater level and the quality of available water are diminishing. Groundwater levels have dropped nearly 15 metres in ten years. Further water loss is caused through the use of open channels (evaporation and leaks) for irrigation, contributing to the unconscious overuse of water.
- Intensive agriculture production techniques based on an overuse of inputs (fertilizers, chemicals, irrigation) and improper mechanization techniques (for example, intensive soil tillage like increased ploughing depths and shifting organic material to deeper layers) have resulted in further land degradation. The degradation has also decreased the organic content of soil and increased its susceptibility to wind erosion. This is another major problem that affects the remaining sediments from an ancient shallow lake. Fertile soil is threatened to be lost completely and wind erosion also causes further humidity loss from the topsoil.
- Sheep and goat husbandry is one of the main activities. Governmental support for cattle breeding has largely contributed to an increase in cattle

(doubled within a decade, reaching up to 145 000 animals). About 530 000 animals are kept in the area, which represents an increase of 80 percent in ten years. The increased pressure on pastureland heavily diminished the quality of fodder. Cattle breeding by using feedlots limits the pressure on pastureland but heavily contributes to an increased demand for irrigation-intensive fodder crops, such as alfalfa and maize grain. Methane emission levels have significantly risen. Parts of the pastureland are not suitable for growing grass species due to increased salinity problems in the soil that stem from insufficient water management practices. In fact, nearly 44 000 ha of pasture and meadow and approximately 9 000 ha of agricultural fields are affected by severe salinity.

- Most of the natural forest, situated around Karacadağ and Ereğli, consists of coniferous and deciduous species. It is, however, degraded due to overgrazing by goats. Despite forest stand rehabilitation by tree planting activities over three decades, site indices have worsened, and the productivity of the stands have dropped by 60 percent. Not only intensive grazing, but also trees and branches being cut by local villagers for fuelwood and livestock feeding, contribute to these negative developments.
- There are two protected areas: a nature reserve area in the Ereğli Marshes; and Lake Meke, a Ramsar site with a maar, which is also a declared nature monument under national regulation. Lake Meke and its maar is important due to its geological specialty. The two key biodiversity areas are the Karapınar Plain and the Ereğli Plain.

iv. **Pilot site 4: Sarayönü-Cihanbeyli.** In 2012, the pilot site covered an area of 232 750 ha and had a total population of 21 293. The average elevation of the area is 1 050 metres. There are 15 000 ha of forest, 139 000 ha of arable land and 57 000 ha of pasture. The Gözlü State Farm in Sarayönü is 28 000 ha and is used as both farmland and pastureland.

- The primary income sources are crops (70 percent) and livestock (30 percent). The government subsidizes the oil seed production (sunflower, safflower, maize), sugar beet, fodder crops (alfalfa, vetch), and livestock. Sugar beet, maize grain and sunflower production has increased three-fold within three years, heavily contributing to methane emissions from production factories.
- As a very dry area, annual precipitation ranges from 300 to 350 millimetres. There are no surface water resources. Most of the farmers have switched their farming practices from rainfed farming to irrigated farming. The amount of irrigated area from groundwater covers 7 250 ha, which is an increase of over 60 percent in only one decade. Most of the irrigation is applied with pressurized irrigation techniques. In just one decade, the number of wells doubled from 350 to 700, of which at least 20 percent are unlicenced. This was the situation as of 2012. In fact, poorly regulated groundwater use is resulting in a rapid decline of water resources. The water table has dropped by approximately 30 metres in just ten years.
- This pilot site is advanced in terms of progressive agricultural technologies applied, with nearly 2 500 ha under the Leader Farmers Union programme. Nonetheless, intensive agriculture production techniques (fertilizers, chemicals, irrigation) and non-proper mechanization techniques (intensive

soil tillage through increased plough depth, removing organic matter from the top layer) further degrade the soil. This triggers wind erosion, which then heavily contributes to the loss of fertile and humid topsoil.

- Sheep and goat husbandry is one of the main activities with 93 294 domestic animals. As a result of the severe land degradation of pastureland – estimated at 57 000 ha – and water scarcity, the 10 percent increase rate over one decade is relatively low compared to the other pilot areas. On the Gözlü State Farm, sheep and goat numbers increased to 20 000 in 2014, following the rehabilitation of pastureland.
- Cattle and poultry husbandry has also become important – and not just from government subsidies. It is underscored that within ten years, there was an increase of 10 percent in cattle (15 000 in 2012). Through the construction of cattle barns, the number of cattle kept on the Gözlü State Farm is more than 5 000. Methane release is a major contributor to the atmospheric greenhouse gas (GHG) level due to the lack of manure storage and processing facilities. With at least 200 000 tonnes of manure per year, this is an important resource in improving degraded farmland.
- The forest structure (covering approximately 15 000 ha) is mainly coniferous and deciduous species. Some agricultural lands were converted into forest government decree. Forest areas are also used for pastureland, leading to severe degradation (at least 5 000 ha of degraded oak, juniper and black pine).
- The pilot site has no protected areas except for two KBAs: the İnsuyu Valley and Sarayönü. This is important for endemic plant and fish species. In fact, it has one of the few breeding sites of the globally threatened great bustards.

## 2.1 Description of the project

49. The objective of the GCP/TUR/055/GFF project is to improve the sustainability of agriculture and forest land use management. It aimed to do so through the diffusion and adoption of low-carbon technologies that benefit biodiversity, land degradation and climate change. It also focused on increased farm profitability and forest productivity.

**Box 2. Basic project Information**

Project title: Sustainable Land Management and Climate-friendly Agriculture

Project symbol: GCP/TUR/055/GFF Recipient country: Türkiye

Resource partner: the GEF

FAO project ID: 613134 The GEF project ID: 4583

Executing partners at project design: the Ministry of Forestry and Water Affairs and the Ministry of Food, Agriculture and Livestock Since 2021: the General Directorate of Combating Desertification and Erosion (ÇEM, by its Turkish acronym) under the Ministry of Environment, Urbanization and Climate Change, and the General Directorate of Agricultural Reform (TRGM, by its Turkish acronym) under the Ministry of Agriculture and Forestry

Contribution to FAO's strategic framework:

i. Strategic objective/organizational result: Strategic Objective 2, Outcomes 1 and 2
ii. Regional result/priority area: Priorities 1 and 3 of the regional framework
iii. Country programming framework outcome: 1.1; 2.1; and 3.1

| |
|---|
| The GEF focal area/Least Developed Countries Fund (LDCF)/Special Climate Change Fund (SCCF): biodiversity; land degradation; and climate change |
| GEF/LDCF/SCCF strategic objectives: Biodiversity BD-2; Land Degradation LD-1; Climate Change Mitigation CCM-1 and CCM-5 |
| Environmental impact assessment category: B |
| Expected FAO Office of Evaluation start date: October 2014; effective start date: August 2015 |
| Expected not-to-exceed (end date): September 2019; extended to 28 February 2023 |
| Project extensions: December 2020; December 2021; December 2022; and February 2023 |
| Mid-term review (MTR): April 2018 (covering period from January 2015 to June 2017) |

*Source*: Elaborated by the Evaluation Team.

50. In principle, the project addressed three barriers; Barrier 1, minimal experience among key government and civil society stakeholders in developing and implementing sustainable land management (SLM) and sustainable forest management (SFM) practices; Barrier 2, farmers underexposed to innovative low-carbon technologies for farming and farm waste management; and Barrier 3, inadequate enabling environment (legal, regulatory, institutional framework) and capacity for SLM. The following interlinked three components address these barriers.

*Component 1: Rehabilitation of degraded forest and rangeland; Outcome 1: degraded forest and rangeland rehabilitated and management practices improved*

51. Under this component, the project aimed at: i) greater attention on the rehabilitation of degraded land in production landscapes, such as degraded forest and rangeland; ii) the production of soil organic carbon maps for pilot sites; iii) the preparation of an integrated SLM and biodiversity conservation land use plan for the Mount Karacadağ pilot area; iv) the certification of forest and rangeland landscapes by internationally recognized environmental standards that incorporate biodiversity considerations; v) the establishment of a biodiversity monitoring system; and vi) the quantification of ecosystem service values in the pilot areas of the KCB. According to the 2014 project document, the following results were expected: i) 78–105 000 tonnes of $CO_2$ equivalent mitigated; ii) 20 000 ha of rehabilitated forest sequestering 50–70 000 tonnes of $CO_2$ equivalent; iii) 30 000 ha of rangeland and pastureland rehabilitated; and iv) 6 680 ha of protected habitat managed sustainably.

*Component 2: Climate-smart agriculture; Outcome 2: climate-smart agriculture techniques applied across productive landscapes*

52. Key activities under this component include: i) the development of models for conservation agriculture demonstrations on private farms; ii) information dissemination on the General Directorate of Agricultural Enterprises' experience in terms of conservation agriculture; iii) pilot-scale investments in biogas digesters to recuperate methane from agricultural waste and produce electricity; iv) for high potential opportunities, incentives for investment in developing the infrastructure to capture methane; v) monitoring the adoption of climate-smart agricultural technologies, including the monitoring of GHG mitigation and biodiversity impacts; and vi) different management practices, such as reduced tillage, mulching, organic and inorganic fertilizers, as well as suitable irrigation, an increased soil carbon pool and storage in plant tissue and the soil body. Expected results according to the project document were: i) conservation agriculture practices applied on a total of 40–50 000 ha of arable land; ii) 18–22 000 tonnes of $CO_2$ equivalent reduced; iii) 9 900 tonnes of $CO_2$ equivalent of methane emissions reduced; iv) 50 livestock or poultry producers and

10 000 head of livestock contributing to digesters; and v) average annual income from crop and livestock production increased from USD 1 073 to USD 1 341.

*Component 3: Enhanced enabling environment for SLM; Outcome 3: enhanced enabling environment for SLM*

53. The baseline, as indicated in the 2014 project document, revealed very little energy on building a strong constituency for agricultural practices that deliver SLM, climate change mitigation and biodiversity conservation benefits. The project generates and supports the implementation of necessary enabling environment improvements by establishing a Farmer Field School (FFS) model specifically designed to empower farmers and ranchers. This enables them to become better informed on steps that they can take to improve production, maintain ecosystem integrity and reduce the long-term economic risks associated with degradation. The FFS model is interwoven throughout all project components, using the various investments as ways to strengthen the knowledge base of local resource users and government extension officers. It provides a conduit for the continued delivery of learning between government staff and farmers. With reference to the project document, the interventions should have resulted in: i) 500 farm and ranch households adopting new practices that support SLM, climate change mitigation and biodiversity conservation; ii) 1 250 FFS members (750 males and 500 females) actively participating;[4] iii) capacities strengthened to enhance a cross-sector enabling environment for integrated landscape management with a score of 2; iv) forest policy enhanced with a score of 3; v) agriculture policy enhanced with a score of 3; vi) one pilot site policy framework operationalized to integrate SLM-, climate change- and biodiversity-based land use planning across productive landscapes; and vii) a national monitoring programme for SLM, climate change and biodiversity conservation elaborated.

54. The implementation of the components is ensured by an M&E plan and supported by effective communications activities. This involves workshops, field trips, the elaboration of FFS information and awareness materials, and a website that serves as an information and learning portal. The aim is to create visibility and to ensure the dissemination of results and good practices.

55. The overall project budget is USD 28 050 000. This includes cash allocation from the GEF/LDCF/SCCF of USD 5 750 000, where the co-financing (USD 25 650 000 cash and USD 2 400 000 in-kind) is from different donors (see Table 1). The project benefits from several other interventions in Türkiye that are consistent with and complementary to the project's objectives and outputs.

[4] This number was revised during project implementation. See section 3.2 and the 2019 project implementation report (PIR).

**Table 1. Co-financing**

| Source of co-financing | Co-financer | Amount (USD) | Type |
|---|---|---|---|
| **Donor** | GEF/LDCF/SCCF | 5 750 000 | Cash |
| **Executing agency** | FAO | 500 000 | Cash |
| | | 200 000 | In-kind |
| **Government of Türkiye** | **From 2015 to 2018:** Ministry of Forestry and Water Affairs<br>**From 2018 to 2021:** Ministry of Agriculture and Forestry<br>**Since 2021:** ÇEM under the Ministry of Environment, Urbanization and Climate Change | 9 100 000 | Cash |
| | | 1 000 000 | In-kind |
| | **From 2015 to 2018:** Ministry of Food, Agriculture and Livestock<br>**Since 2018:** TRGM under the Ministry of Agriculture and Forestry | 7 700 000 | Cash |
| | | 1 000 000 | In-kind |
| **Private sector** | Konya Sugar | 1 000 000 | Cash |
| **Foundation** | Nature Conservation Centre (DKM, by its Turkish acronym) | 1 600 000 | Cash |
| | | 200 000 | In-kind |
| **Total** | | **28 050 000** | |

*Source*: Elaborated by the Evaluation Team.

56. During the project design phase, the Ministry of Forestry and Water Affairs and the Ministry of Food, Agriculture and Livestock were the lead executing partners. The lead executing agencies have been ÇEM under the Ministry of Environment, Urbanization and Climate Change and the TRGM under the Ministry of Agriculture and Forestry since 2018. The Project Lead Institute is the Ministry of Environment, Urbanization and Climate Change. The project is executed by FAO[5] in close consultation with ÇEM and the TRGM, as well as other partners at the national, provincial and local level. The ÇEM and TRGM support project execution through the National Project Director (NPD), designated by the national executing partners, the FAO Budget Holder and the Lead Technical Officer (LTO). The latter provides technical guidance under the Lead Technical Unit in the Forestry Division at the FAO Subregional Office for Central Asia in Ankara. The NPD acts as a focal point and is responsible at the political and policy level to ensure the necessary support and inputs from the government (see section 3.3.1).

57. The lead executing agencies, ÇEM and the TRGM, also represent one member from each: the General Directorate of Forestry (OGM, by its Turkish acronym); the General Directorate of Nature Conservation and National Parks; the General Directorate of Agricultural Research and Policies (TAGEM, by its Turkish acronym); and the General Directorate of Plant Production.

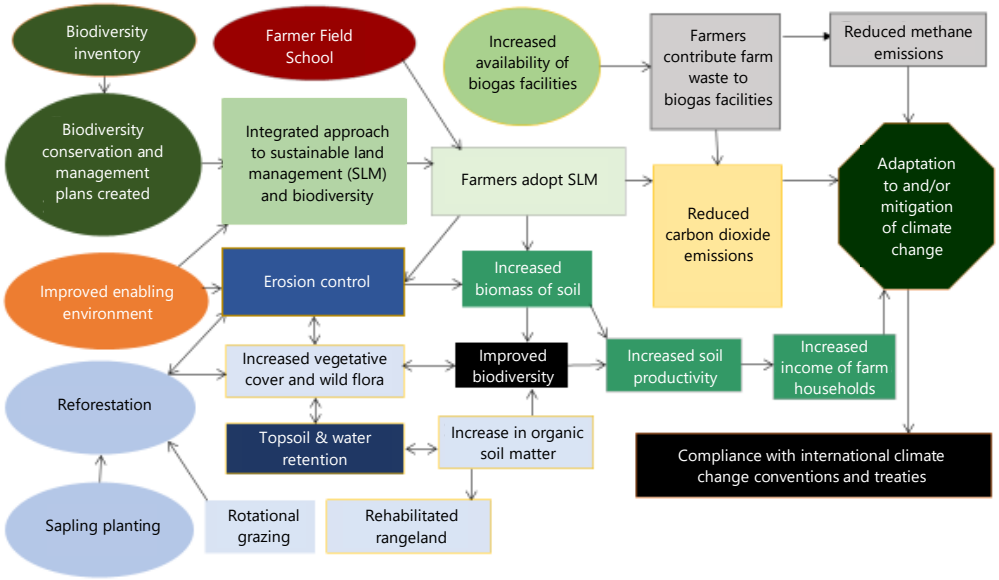
[5] FAO, as the GEF implementing and executing agency, is responsible for efficient project implementation and oversight and ensures that the GEF policies and criteria are applied. FAO reports on project progress to the GEF secretariat and financially to the GEF trustee. FAO supervises the project through the concerned units at FAO headquarters, the FAO Subregional Office for Central Asia, and FAO Representation in Ankara.

58. The Budget Holder heads a multidisciplinary task force that supports implementation. It ensures technical support and inputs from the participating units, the FAO Subregional Office for Central Asia and the GEF Coordination Unit at FAO headquarters.[6]

59. A project steering committee (formerly co-chaired by the Ministry of Forestry and Water Affairs and the Ministry of Food, Agriculture and Livestock) was established, and ÇEM is the head of it. Deputy General Directors from relevant directorates are project steering committee members. This includes FAO Representatives and observers from NGOs and the private sector.

60. The National Project Implementation Unit – with staff from ÇEM and the TRGM, hosted by ÇEM – acts as a secretariat to the project steering committee. To strengthen the National Project Implementation Unit, the GEF finances a full-time NPC in charge of daily project management, technical (field) supervision, communication and guidance. The GEF further finances an Operations, Finance and Procurement Administrative Assistant who oversees budget management, based at the FAO Subregional Office for Central Asia in Ankara.

**Figure 1. Theory of change diagram**




*Source*: FAO. 2018. *Mid-term evaluation of the project "Sustainable Land Management and Climate-Friendly Agriculture"*. Rome. Cited 26 May 2023. www.fao.org/3/CA1144EN/ca1144en.pdf

*Question: How robust, sophisticated and realistic was the theory of change (TOC) that had been developed during the project's midterm?*

61. A TOC was not created during the project design since the 2014 project document had been finalized and approved under a previous funding cycle that did not require it. As a result, the project's TOC (see Figure 1) was formulated during the MTR after a brainstorming session with project stakeholders and staff in Ankara. With reference to this TOC and to facilitate results-based planning, the project must have been able to improve

[6] The GEF Coordination Unit reviews and approves the biannual project progress reports, annual PIRs, results-based financial reports and budget revisions, and works closely with the FAO Office of Evaluation, the Budget Holder and the LTO to make project adjustments when necessary.

climate change mitigation and adaptation. Ultimately, this enables Türkiye to comply with international climate change conventions and treaties.

62. The TOC reflects logical pathways and interdependences on how the stakeholders and staff believe the project attains its overall goal of climate change mitigation and adaptation (see Figure 1). In contrast to the MTR, the circles and ovals in the diagram represent the project's outputs – not the specific activities. The squares feature the project's outcomes at different levels of project intervention. The same colours are used for corresponding project stages. The Evaluation Team found this to be a consistent approach.

63. The TOC developed is logical, coherent and realistic with regard to the project's results matrix and presented outcomes. Assumptions seem to have only been implicitly made, and concrete activities are not included. In any case, this would have gone beyond the scope of this exercise. Alternatively, this TOC demonstrates the complexity of the project. In fact, it was assumed that the supporting activities in different realms would "somehow" achieve the project's overall goal. On a practical level, the project required a reduction in complexity. In other words, every single activity and subactivity needed to be properly assessed and planned, and decisions had to be taken where underlying assumptions were too ambitious at project start.

64. What remains essential and cannot be adequately presented in this TOC is the need for the continuous mainstreaming of SLM in national planning and policy frameworks. This depends highly on collaborative cooperation between institutional stakeholders, including regular mutual consultations. Indeed, this is only possible if good practices and adapted technologies are adopted and applied by the farmers and herders (basin-wide in the KCB and, ideally, country-wide), including regular assessments by experts and the adaptation of measures whenever it becomes necessary. To address land degradation and desertification in the long term, SLM practices need to be mainstreamed, and activities and good practices need to be repeatedly promoted and scaled up.[7] Alternatively, the different monitoring instruments and related management plans, as elaborated by the project but not presented in the TOC, need to result in national regulatory frameworks. This would allow for enforcing the SLM to combat climate change.

65. At the same time, it is highly relevant that powerful policies and binding instruments are established on a national scale to not only ensure the proper conservation of protected areas, but also increase such areas of concern to further mitigate the irretrievable loss of biodiversity. In fact, the TOC does not address this issue. It is imperative that land use plans, as elaborated by the project, incorporate such protected areas that unconditionally ought to be managed as such.

[7] For instance, the TOC could have been presented in a circular format rather than a linear input–output format.

# 3. Key findings by evaluation questions

## 3.1 Relevance and coherence

*Question: To what extent is the project relevant and consistent in meeting the strategic priorities of the Government of Türkiye and in terms of sustainable agricultural development and environmental conservation in the strategic objectives of FAO and the GEF?*

*Subquestions: Is the project aligned with national environmental and development goals and priorities? Is the project aligned with FAO and the GEF strategic priorities, as well as higher goals (for example, the Sustainable Development Goals [SDGs])? Are the beneficiaries' needs complimentary with the interventions?*

**Finding 1.** The project fully aligns with national and provincial environmental and developmental goals and priorities as set by the Government of Türkiye. The project is also consistently aligned with the GEF's strategic priorities and entirely meets FAO's strategic objectives. The project further contributes to the SDGs to a considerable degree.

66. The project directly contributes to Türkiye's Ninth Development Plan (2007–2013) (Prime Ministry, 2006), which, for the first time, incorporated the sustainable management of natural resources as a top priority in the country's economic development. The project further aligns with the main goal of the management of soil and water resources and the development of management systems in the frame of the Tenth Development Plan (2014–2018) (Ministry of Development, 2014). This aimed to preserve and improve the quantity and quality of water and soil resources and their sustainable use. It is therefore fully consistent with the project's promotion of integrated land and natural resources management, including forest, rangeland and agricultural production landscapes. Finally, one of the main objectives of the Eleventh Development Plan (2019–2023) of Türkiye is "to protect the environment and natural resources, improve quality, ensure effective, integrated and sustainable management, implement environment- and climate-friendly practices in all areas, and increase environmental awareness and sensitivity of all segments of the society," underscoring the relevance of the project's numerous interventions (Presidency of the Republic, Presidency of Strategy and Budget, 2020, p. 187).

67. The project further clearly aligns with Türkiye's Rural Development Plan (2010–2013) (Ministry of Agriculture and Villages, 2009) and the current Rural Development Strategy (2021–2023) (Ministry of Agriculture and Forestry, 2021). These target the conservation of agricultural areas, pastures and forests, including soil and water resources, by prioritizing strategies, measures and activities that address desertification and promote proper land and water resources management. Additional national priorities that align with the project's objectives include the National Forest Programme (2004–2023) (Ministry of Environment and Forestry, 2004).

68. Target 15.3 of the SDGs, adopted in September 2015, states: by 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world. In this context, Türkiye developed the National Action Program on Combating Desertification (UNCCD, 2006). This was further updated under the National Strategy and Action Plan to Combat Desertification (2015–2023) (Ministry of Forestry and Water Affairs, General Directorate of

Combating Desertification and Erosion, 2015; 2017) with support from FAO and the GEF.[8] The strategies outlined in this action plan are clearly consistent with the overall project goal. In addition, many other important country initiatives with international support on M&E and reporting may be mentioned under this strategy and action plan. This involves the Global Drylands Assessment Project[9] (Ministry of Forestry and Water Affairs, General Directorate of Combating Desertification and Erosion, 2017, p. 9) with support from FAO to determine the status of drylands through the evaluation of primarily forest lands, as well as agricultural, shrub and pasture lands. Within this scope, 15 000 sample points in the Near East, including Türkiye, were assessed.

69. The project also directly supported the Action Plan of Combating Erosion (2013–2017) (Ministry of Forestry and Water Affairs, 2013) for afforestation, rehabilitation, erosion control and rangeland rehabilitation activities on a total of 1.4 million ha.

70. For a cross-cutting approach, the project was designed to align with biodiversity, land degradation and climate change mitigation to establish SLM and climate-friendly agriculture activities in the KCB. This includes sustaining the livelihoods of rural and forest-dependent people. The project is fully consistent with the Biodiversity (BD-2), Land Degradation (LD-1 and LD-2) and Climate Change Mitigation (CCM-1 and CCM-5) Focal Area Strategies of GEF-5. Entailed measures, in line with all three project components implemented, focus on: i) the reduction or reversion of land degradation trends in production landscapes; ii) the improvement of agricultural management and increase of the value of agricultural wastes (thus promoting climate-friendly agriculture); and iii) the strengthening of the enabling environment for SLM (by building institutional and technical capacities).

71. The United Nations Development Assistance Framework was renamed the United Nations Development Cooperation Strategy and, later, the United Nations Sustainable Development Cooperation Framework to reflect the relationship more accurately between governments and the United Nations development system in collaborating to achieve the SDGs (UNSDG, 2019). With FAO as a signatory to the United Nations Sustainable Development Cooperation Framework for Türkiye, this represents a strategic framework for cooperation between the United Nations and the country so that the goals defined in the national development plans can be achieved. It may be concluded that the project is fully consistent with this cooperation framework. Indeed, three strategic areas of cooperation and seven concrete results of this framework clearly align with five strategic objectives of the country's Ninth Development Plan (Republic of Türkiye, Prime Ministry, 2006).[10] With a view to the Cooperation Framework and the Tenth Development Plan, four strategic areas of cooperation and eight concrete results clearly comply with four strategic

[8] Under the National Climate Change Strategy (2010–2020), the FAO Subregional Office for Central Asia initiated the alignment of the country's National Action Plan with the UNCCD's 10-Year Strategy and Reporting Process in partnership with the Ministry of Agriculture and Forestry and with funding from the GEF. The Government of Türkiye has prepared its response to the UNCCD through its 2006 National Action Program on Combating Desertification. Following the adoption of the UNCCD's 10-Year Strategic Plan and Framework to Enhance the Implementation of Convention (2007), Türkiye decided to align its programme to the new approach.

[9] A more recent, full report is available: FAO, 2019c.

[10] The 2018 MTR determines on page 9: Result 3 of the Democratic and Environmental Governance Strategic Cooperation Area is buttressed by the project: "Strengthened policy formulation and implementation capacity for the protection of the environment and cultural heritage in line with sustainable development principles, taking into consideration climate change, including disaster management, with a special focus on the gender perspective."

pillars.[11] In fact, FAO was assigned as chair of the environmental sustainability results group by the United Nations country team between 2016 and 2020. FAO's active role in the achievement of project results cannot be overstated and underscores the relevance of project interventions.

72. The project entirely supports the FAO regional priorities for Europe and Central Asia on the following areas: i) strengthening food and nutrition security; and ii) NRM, including climate change mitigation and adaptation. Country-level priorities defined within the FAO Country Programming Framework for Türkiye (2012–2015),[12] as outlined in the 2014 project document, are fully consistent with the project. In fact, five priority areas were detected during the design phase – out of which four are directly linked to the project: i) NRM, including climate change mitigation and adaptation; ii) food and nutrition security; iii) policy support to small farmers; and iv) policy and institutional support for European Union accession and integration.[13]

73. FAO's Global Strategic Objective 2 fully aligns with the project: increase and improve the provision of goods and services from agriculture, forestry and fisheries in a sustainable manner. In particular, the project contributes to: Outcome 1, producers and natural resources managers adopt practices that increase and improve the provision of goods and services in agricultural sector production systems in a sustainable manner; and Outcome 2, stakeholders in Member States strengthen governance – the policies, laws, management frameworks and institutions that are needed to support producers and resource managers in the transition to sustainable agricultural sector production systems (FAO & GEF, 2014, p. 17; FAO, 2018, p. 18).

74. At the national level, the project currently supports the National Action Programme on Combating Desertification, the National Climate Change Strategy and the government's Climate Change Action Plan (2011–2023), among other programmes, plans and strategies. At the same time, the project significantly buttresses Türkiye in meeting its obligations under several international and environmental conventions that the country has ratified, namely the United Nations Convention to Combat Desertification (UNCCD), the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity. As a signatory to the Paris Agreement, the carbon mitigation objectives of the project set through biogas digesters, afforestation, land restoration, direct seeding and other methods are entirely in line with the country's 2050 net zero carbon goal.

[11] Namely, this involves the following: qualified people, strong society; innovative production, high and stable growth; liveable places, sustainable environment; and international cooperation for development. The project supports the strategic area of sustainable, inclusive growth and development, and Result 1, Outcome 1.1: by 2020, relevant government institutions operate in an improved legal and policy framework, and institutional capacity and accountability mechanisms assure a more enabling (competitive, inclusive, innovative) environment for sustainable, job-rich growth and development for all women and men. It also supports Outcome 1.3: by 2020, improved implementation of more effective policies and practices for all men and women on sustainable environment, climate change and biodiversity by national, local authorities and stakeholders, including resilience of the system and communities to disasters. See the 2018 MTR, pp. 9 and 10.

[12] FAO uses this tool to define medium-term responses to the assistance needs of Member States in accordance with the principles of FAO and in pursuit of national development objectives, the SDGs and other internationally agreed upon development goals within FAO's strategic framework and regional priorities. See also the 2018 MTR.

[13] The control of transboundary pests and diseases (animal and plant) is not directly linked.

**Finding 2.** The project is highly relevant in terms of addressing the challenges of environmental degradation and climate change. It focuses on the necessary actions to fight the loss of ecosystem integrity within the KCB.

75. On global environmental benefits and climate change vulnerability, the project document states: "according to climate change scenarios completed by independent experts, the KCB will be one of the most negatively affected regions in the country by climate change." It further states that "the findings all indicate that KCB agriculture and water resource-use policies and practices result in the habitat degradation and the subsequent loss of biodiversity" (FAO & GEF, 2014, p. 3).

76. During the project's design phase, it was estimated that 50 percent of the remaining coppice forests, 92 percent of pastureland, 40 percent of arable land and even 65 percent of the KCB's historical wetland were degraded or completely destroyed. Due to hydrological changes related to land degradation, Lake Tuz, with its historically and globally significant breeding ground for the greater flamingo, completely dried up in 2021. Overgrazing, fuelwood collection plus unsuccessful afforestation and forest rehabilitation have largely contributed to this situation. This is further exacerbated by the conversion of rangeland into temporary dry arable land.

77. Konya covers 15 percent of the country's agricultural production. Within just ten years, more than 250 000 ha in the KCB was put under cultivation (from steppe to agriculture or wetland to cropland). This is an increase of almost 50 percent. Agricultural practices are becoming increasingly intensified and ecologically inappropriate: stubble burning, resulting in the loss of the biological quality of the topsoil, or inappropriate cropping patterns – just to name a few. In addition, fertilizer and pesticide use have increased drastically. The results of increased production demands are connected to rapidly depleting surface and groundwater sources. This leads to increased desertification, wind erosion and salinization. Natural functions are being lost, and the rate of biodiversity loss is daunting.

78. The project design identified numerous national initiatives that address global environmental threats and climate change vulnerability. Consequently, the project was and is highly predestined to access relevant co-financing sources and is therefore entirely coherent with past and ongoing national and regional interventions (FAO & GEF, 2014, pp. 6–9).

79. This innovative project represents the first effort in Türkiye where biodiversity, land degradation and climate change concerns are brought together to deliver integrated synergies. It is built on lessons learned and thus consistent and fully in line with numerous past, ongoing or future FAO projects that emphasize biodiversity conservation and sustainable management, for instance: Conservation and Sustainable Management of Türkiye's Steppe Ecosystems (2016–2022) (GEF, 2016); Feasibility Study and Environmental and Social Instruments (2020–2021); Biodiversity Conservation and Sustainable Forest Management in Kaz Dağları (initiated in 2020) (both cited in: United Nations, Economic and Social Council & FAO, 2021, p. 8).

80. The Government of Türkiye and, undoubtedly, all stakeholders and beneficiaries interviewed, confirmed the importance of addressing the identified threats. Farmers almost entirely rely on natural resources for their economic survival, and these beneficiaries are particularly aware of the challenges. They face increased environmental degradation and climate change impacts every day. The project is highly relevant in terms of addressing

these challenges. In fact, the implemented activities[14] positively illustrated the potential for catalysing a new era for production that fully aligns with identifying and addressing SLM, climate change and biodiversity concerns.

*The overall assessment for strategic relevance is: HS.*

## 3.2 Effectiveness (Achievement of project results)

*Question: To what extent have the expected project objectives been achieved, and what is the level of progress towards impact?*

*Subquestions: Based on the indicators set in the project's results matrix, to what extent have the outcomes been achieved? What are the direct project outputs? What is the likelihood of long-term impacts, including global environmental benefits, socioeconomic benefits, replication effects and other (local) effects?*

81. The analysis focused on the 2014 project document, the MTR, the PIRs, project progress reports, project steering committee meeting and other minutes, financial and technical reports, and interviews to assess the extent to which the objectives, outcomes and outputs were achieved.

82. The project results obtained during the terminal evaluation were compared with the status of achievement at midterm and the expected end-of-project targets (see Appendix 2).

**Finding 3.** The overall result of total emission reduction resulting from project-related improved forest and rangeland management is significant: 91 370 tonnes $CO_2$ equivalent per year are sequestered compared to 0 tonnes $CO_2$ equivalent per year at project start.[15]

83. Global environmental benefits delivered in the project target area are as follows: the vegetative land cover is 66 408 ha (compared to 16 650 ha at project start); 2 400 kg C per ha per year of biomass (compared to 1 200 kg C per ha per year at project start); and 500 trees per ha (compared to 30 trees per ha at project start).

84. The number of hectares of forest, pasture and arable land with biodiversity mainstreamed into management practices from project investments cover: 69 147.3 ha of forest; 122 314.5 ha of pasture; and 360 853.6 ha of arable land (compared to 0 ha of forest, pasture or arable land at project start).

85. The spatial coverage of integrated natural NRM practices in wider landscapes results in: 0.60 million ha of agricultural land; 0.24 million ha of pastureland; and 69 147.3 ha of forest. At project start, none of the landscapes were integrated into NRM practices.

**Finding 4.** The project contributed to the achievement of highly satisfactory results through the implementation of three interlinked components. However, the long-term impact of all components, particularly Components 2 and 3, has yet to be seen.

[14] Essentially: i) The activities applied an integrated approach to SLM and implemented land rehabilitation, biodiversity and climate-smart agriculture practices, including methane capture; ii) the project also designed a series of institutional and regulatory structures to support and encourage agricultural changes; and iii) stakeholders were made capable of strategically determining the short- and long-term impacts of natural resource use decisions upon the vitality of overall ecosystem integrity.

[15] The figures are extrapolations of the project results.

86. The following points detail an assessment of project outputs by component.

*Component 1: rehabilitation of degraded forest and rangeland; Outcome 1: degraded forest and rangeland rehabilitated and management practices improved*.

*GEF budget: USD 2 188 864; co-financing: USD 10 800 000*.

87. Component 1 focused on the rehabilitation of degraded forest and rangeland. The activities contributed to the restoration of natural habitats for threatened biodiversity in degraded production landscapes, and SLM interventions should result in climate change mitigation and adaptation benefits in the long term. Capacity that is required to monitor and alleviate future degradation has been built largley among stakeholders and decision-makers and in particular among farmers or producers (see Components 2 and 3).

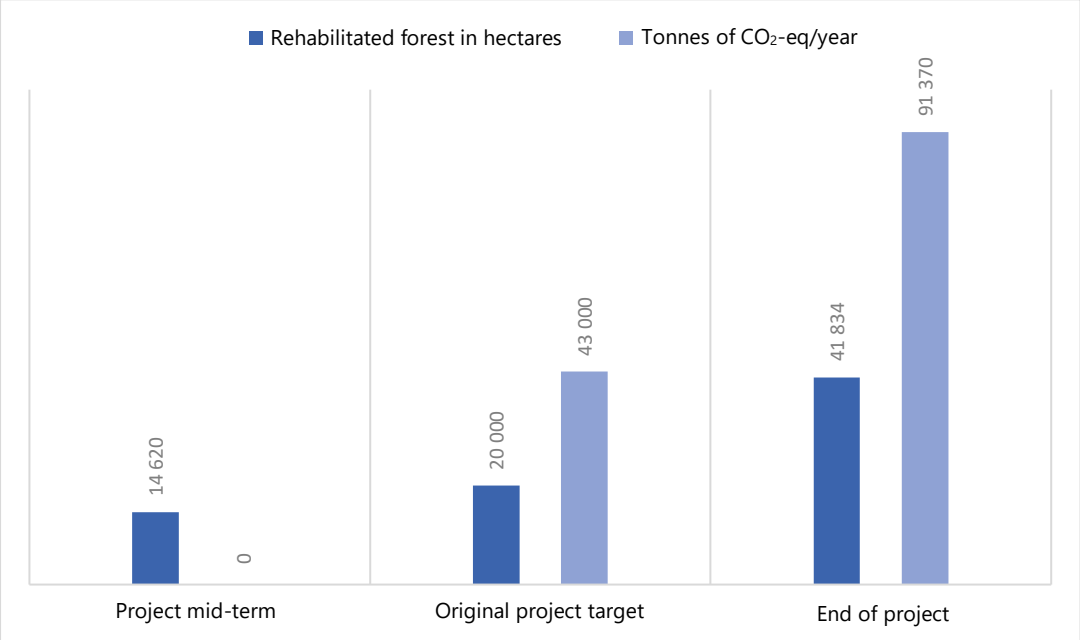
88. Activities under Output 1 – the rehabilitation of degraded forest and rangeland – used innovative technologies and practices, including the demonstration of evidence-based and improved rehabilitation techniques. A Strategic Rehabilitation Plan[16] was prepared in cooperation with the OGM regional office. This identified existing gaps of forest and pastureland rehabilitation, including pastureland within forests and at different sites in the KCB: i) the Ayrancı-Karaman pilot area, Akpınar village (rehabilitation of degraded juniper forest and degraded rangeland rehabilitation), Kayaönü village (windbreak in grasslands); ii) the Green Belt pilot area, Kurtusağı village (degraded mixed oak and pine forest rehabilitation and degraded rangeland rehabilitation); iii) the Karapınar, Ereğli, Emirgazi pilot area, Büyükdede village (rangeland restoration), Karaören village (degraded oak forest rehabilitation, assisted natural regeneration and enrichment planting in degraded mixed species forest); and iv) the Sarayönü-Cihanbeyli pilot area, Sarayönü site (hedgerows, silvopastoral agroforestry on fallow lands, windbreaks). In order to alleviate future degradation, innovative approaches were developed to be tested, monitored and later mainstreamed.

**Finding 5.** The new approaches introduced by the project contributed to successful capacity building and awareness raising among stakeholders. This resulted in the rehabilitation of degraded forest that exceeds twice as much surface area than anticipated. The area of degraded pasture rehabilitation, however, was slightly under expectation.

89. The project achieved the rehabilitation of 41 834 ha of degraded forest. At the project's midterm, however, 14 620 ha of forest were rehabilitated – representing only one-third of actual achievement at the time of the terminal evaluation. Compared to the original project end target of 20 000 ha of degraded forest to be rehabilitated, this is a highly satisfactory result. In fact, 91 370 tonnes $CO_2$ equivalent per year (compared to the project target of 43 000 tonnes $CO_2$ equivalent per year) are sequestered by this project (see Figure 2).

[16] This plan helps to inform the land use plan that was completed under Output 1.2. A concept proposal for ecosystem-based rehabilitation and management of dryland forests and afforested areas was developed in consultation with the OGM and ÇEM.

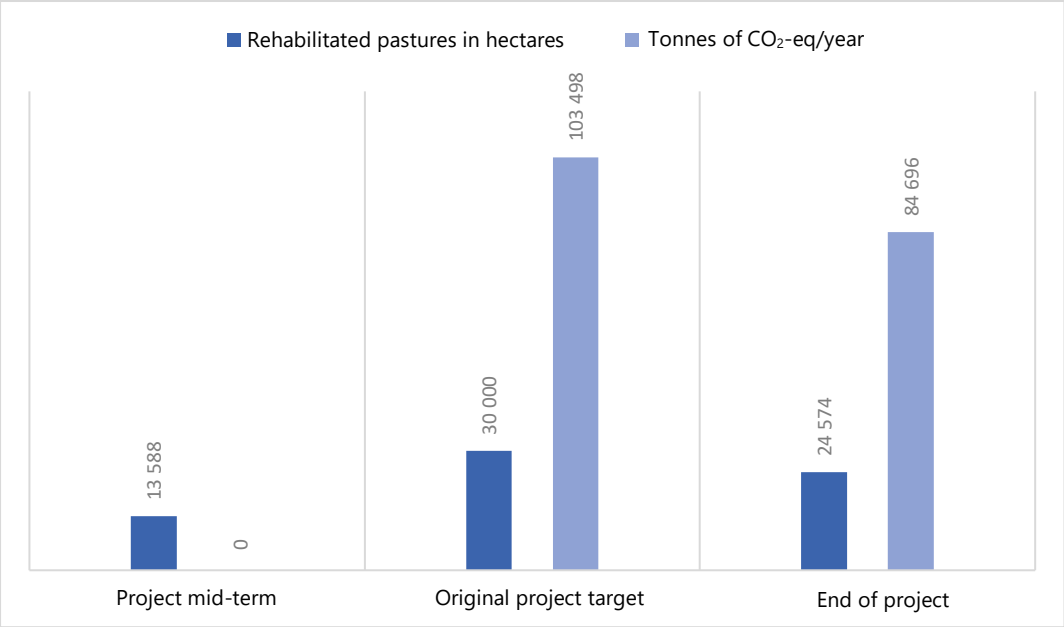
**Figure 2. Rehabilitated forest and $CO_2$ capture**




*Source*: Elaborated by the Evaluation Team.

90. The rehabilitation of 24 574 ha of degraded pasture (compared to 13 588 ha at the project midterm) captures a total of 84 696 tonnes $CO_2$ equivalent per year. The end-of-project-target, however, would have been 103 498 tonnes $CO_2$ equivalent per year. In this respect, it is noted that the original project target of 30 000 ha of degraded pastures to be rehabilitated was compensated by the significant increase in forest rehabilitation[17] (see Figure 3).

**Figure 3. Rehabilitated pastures and $CO_2$ capture**




*Source*: Elaborated by the Evaluation Team.

[17] A national forestry law states that rangeland does not legally exist within forests. Therefore, the rangeland target is compensated by increased forest rehabilitation.

91. Rehabilitation activities also contributed to the restoration of natural habitat for threatened biodiversity in degraded production landscapes. The goal of 6 680 ha of protected habitat being managed sustainably was completed for the Ereğli Marshes, including Akgöl with 6 680 ha and Lake Meke with 202 ha. In this regard, a biodiversity and hydrology monitoring programme were elaborated, and a restoration recommendation report was made available by the project in order to establish the quality of wetland habitats and biodiversity values in the Ereğli Marshes.

92. None of the results described in the following points had been delivered until the project's midterm. Regardless, remarkable results were achieved by project closure.

93. It is important to mention that rehabilitation interventions are closely linked to the monitoring[18] and capacity building activities that were implemented under all three components. For instance, the rangeland and forest rehabilitation plans were also part of Component 2 under climate-smart agriculture. Several SLM activities were conducted under Component 3 and in addition to the rehabilitation programme. These introduced the FFS approach to sensitize on the benefits of climate change mitigation and adaptation. Lessons learned from the demonstration of rehabilitation activities have been integrated into the FFS trainings and extensions. This provides practical, evidence-based experience in grazing and forest management improvements by directly supporting 715 local natural resources users and significantly increasing awareness on the root causes of inadequate management practices.

94. From the originally 100 targeted nomadic shepherds to be trained on rotational grazing, fodder species, animal husbandry and health conservation of biodiversity, a short, final report summarizes the following: a rotational grazing field day in Cihanbeyli for 70 farmers in 2021; six FFS sessions on rotational grazing with the participation of 63 farmers; and a workshop on rotational grazing and information on the benefits of manure and windbreaks for a total of 37 participants, including 12 farmers, in 2022. The project also contributed to the distribution of climate-friendly incentives, such as solar panels for water heating and heat-efficient stoves. Planned incentives for the construction of eco-friendly houses, as well as land tenure and land legislation information, were not implemented by the project. This is because the Forest Village Affairs Department of the OGM and local staff of the Ministry of Agriculture and Forestry provide this assistance.

**Finding 6.** The numerous demonstration activities in the rehabilitation of degraded forests with project stakeholders revealed considerable awareness raising among government project staff on the plantation of local, native species. Mainly, this involves shrubs and perennial plants to improve soil quality and stabilization.

95. Output 2 under Component 1 developed decision-making tools for SLM in forests and pasturelands. This informed and served land users and decision makers about the status of landscapes and the impact of natural resources activities related to ecosystem health, that is, delivering SLM, climate change mitigation and biodiversity conservation benefits. The aim of the interventions was to make both private and public stakeholders more knowledgeable and technically able regarding the current environmental status. Key activities included: i) the elaboration of soil carbon maps (TAGEM/Keçeci, 2017; TAGEM,

[18] This included, *inter alia,* equipment with drones.

2018a, 2018b)[19] for the pilot sites of Kayaönü, Kurtuşağı, Akpınar, Karapınar and Sarayönü, helping project stakeholders to assess and monitor the climate change mitigation benefits of project interventions; ii) an integrated SLM and Biodiversity Conservation Land Use Plan for the Mount Karacadağ[20] pilot area in order to determine better modalities for rangeland management and to foster the environmental conditions required to support and safeguard sustainable livelihoods for local stakeholders; iii) the certification of forest and rangeland landscapes by the Forest Stewardship Council (FSC) standards; iv) a Biodiversity Monitoring System/Concept[21] for all land use types, focusing on indicator plant and animal species (to ascertain the status of globally significant species), and allowing to conclude if the interventions create biodiversity conservation benefits; this new concept covers all existing land use types and should facilitate the dissemination of biodiversity conservation priorities into land use management; and v) the identification and quantification of ecosystem services values. The results shared with stakeholders through a final workshop showed that the project interventions had a positive impact on ecosystem services at the pilot sites.

96. In order to demonstrate the environmental benefits of biodiversity mainstreaming in forest and rangeland management and restoration practices, restored low density forest and pastureland were certified by FSC standards on a total surface area of 280 000 ha in all of the Ereğli Forest Enterprise Unit among the pilot sites. The certification process was also used as a training tool to achieve sustainability and ownership of the interventions and to raise awareness on the rehabilitation of degraded land in production landscapes.[22] The implementation of demonstration activities for the regional forestry department took place at demonstration sites with 85 participants. It involved representatives from Karaman and Ereğli, agriculture and forestry cooperative directors, village heads and associations. This also included the establishment of windbreaks and the introduction of apiculture forests in two areas of 30 ha each: "Combining forestry and beekeeping provides annual honeybee products (e.g. honey, beeswax) to supplement income from a landowner's long-term forest

[19] FAO had already calculated soil organic carbon in agricultural lands and grasslands from 2012 to 2015 in the frame of the project UTF/TUR/057/TUR "National Geospatial Soil Fertility and Soil Organic Carbon Information System". (TAGEM/Keçeci (2017), page 2). Built on these efforts, the project determined an additional 900 sample forest land plots within the KCB with additional soil samples taken. In total, 2 407 soil samples, covering all regions and representing all soil types of the KCB area were analysed. This number of samples was sufficient to fulfil the targets on modelling and mapping soil organic carbon distribution at the four pilot sites and the Ereğli Forest Management Unit (TAGEM, 2018b, page 6 and Project Progress Report January–June 2019, page 4).

[20] This is also referred to as the Mount Karacadağ Conservation Plan. Refer to: Konya Regional Forest Directorate, Karaman State Forest Enterprise, Ereğli Forest Management Unit. Ecosystem-based Multiple Use Forest Management Plan (1) and EIFMP (7).

[21] This is also referred to as the Biodiversity Management Plan. Refer to: Konya Regional Forest Directorate, Karaman State Forest Enterprise, Ereğli Forest Management Unit. Integrated Forest Management Plan. Biological Diversity Subplan 2018–2037 (5). The first of its kind in Türkiye, it was prepared for the pilot regions of Cihanbeyli-Sarayönü, the Green Belt and the Ereğli Forest Management Department, Ayrancı-Karaman.
In addition, an integrated plan with six subplans was prepared for Ereğli, with biodiversity integrated into the Ereğli Forest Management Department's integrated plan. Sensitive priority areas with important species (steppe eagle, bustard, tortoise, Konya liquorice root) and habitats were identified for nature conservation and sustainable resource management. The plan was prepared by scanning and monitoring an area of 600 000 ha. The process detected key areas, including ones with activities like forestry and agriculture. Refer to: Konya Regional Forest Directorate, Karaman State Forest Enterprise, Ereğli Forest Management Unit. EIFMP (7). And: Başkent, E.Z. & Bilensoy, Y., 2020.

[22] Production means products deriving from forests, that is, non-wood forest products. This excludes honey.

management. (…) Flowers of forest trees provide subsistence for honeybees and the trees physically provide shelter for a swarm or beehive" (Hill and Webster, 1995, pp. 313–320).

**Finding 7.** The Ereğli Integrated Forest Management Plan (EIFMP), with its six subplans, represents a sound approach to accommodate the governance, planning, implementation and monitoring of activities that are relevant to the specific objectives of each land use (forest, agriculture, rangeland, water, conservation). However, it is rather unclear if the comprehensive assessment report – in addressing the limitations of the elaborated plans and providing important recommendations – has been sufficiently addressed.[23]

97. Another important contribution under this component represents the completion of the EIFMP, including: i) the Ecosystem-based, Multiple Use Forest Management Plan; ii) the Non-wood Forest Products Subplan; iii) the Grazing and Pasture Management Subplan; iv) the Apiculture Subplan; v) the Socioeconomic Subplan; and vi) the Biodiversity Subplan according to international good practices, which provides key data and information for biodiversity management planning and supports stakeholders and local communities in sustainable natural resources use in production landscapes. In this respect, the biodiversity inventory and management planning study area, which originally covered the size of the four pilot sites with a total of 891 050 ha, increased to a total of 1 307 005.48 ha due to an enlargement of the third site and to cover the Ereğli Forest Management Unit boundaries.

98. The EIFMP replication plan to identify other strategic locations within the KCB and beyond the project's lifetime in terms of scaling up and mainstreaming had not been implemented at the time of the terminal evaluation. However, a comprehensive final assessment report of the EIFMP, including all six subplans, is available. This critical review formulates many important recommendations for the revision and improvement of the plan and its subplans (Başkent, and Bilensoy, 2020).

99. Monitoring took place on several intervention levels to assess: i) the delivery of meaningful results for biodiversity, climate change, soil productivity and water resources, that is, ecosystem integrity; ii) any considerable improvements in the life quality of rural households in terms of income generation; and iii) if the interventions are adopted and scaled up.

100. The biannual project progress report from December 2021 indicates a total of 134 participants who received trainings to ensure the continuation of biodiversity integration and monitoring programmes. This was done through the preparation of a forward-looking plan. It involved 90 participants through trainings on biodiversity in FFS workshops and 44 participants under the biodiversity monitoring letter of agreement (LOA). The numbers indicated in the reports have not been disaggregated by sex. There were, however, recent trainings on the biodiversity monitoring concept for technical staff of the Ministry of Agriculture and Forestry in the summer of 2022. This involves nine trainings with a total of 150 participants (47 percent male and 53 percent female).

*Component 2: climate-smart agriculture; Outcome 2: climate-smart agriculture techniques applied across productive landscapes*.

[23] The EIFMP and its subplans should have been implemented and revised based on experiences during the project's lifetime. However, since the timeline was too short, an assessment of the EIFMP according to best examples and approaches was completed to compensate for the original project target.

*GEF budget: USD 2 411 136; co-financing: USD 8 800 000.*

101. Output 1 activities on innovative agricultural land rehabilitation technologies that produce SLM, climate change mitigation and biodiversity conservation benefits focused on the development of models. These were for conservation agriculture demonstrations on a variety of state and private farms in the KCB. Conservation and innovative agricultural applications performed at the pilot sites are as follows: i) no-tillage by leaving agricultural soil with crop residue after planting; and ii) improved crop management practices, such as drip irrigation, crop rotation, the planting of drought-resistant crops and the creation of windbreaks throughout the agricultural landscape.

**Finding 8.** Turning theoretical knowledge into practice-oriented demonstrations is one of the project's most important elements in terms of acceptability – by both the beneficiaries at the grassroots level and the lead executing authorities.

102. The avoided emissions and carbon sequestration delivering global environmental benefits in the project target area are as follows. Due to project investments, 59 867 ha of arable land are under conservation agriculture[24] (compared to non-arable land under conservation agriculture at project start, 11 000 ha at midterm[25] and 50 000 ha at project closure). As a result, this avoided 36 768 tonnes $CO_2$ equivalent per year. Compared to the anticipated end-of-project target of sequestering 25 000 tonnes $CO_2$ equivalent per year, the original target was largely surpassed.

103. Drip irrigation demonstrations and programmed irrigation systems were successfully put in motion during the project. Demonstrations that engage 39 farmers in 11 apple orchards (of 1 ha each) and 15 sugar beet and 13 maize grain plots (2.5 ha each and with drip irrigation systems designed according to the site's field and soil conditions) were designed with two-year trials for sugar beet and maize grain.[26] The yield, energy efficiency and efficient water utilization results were promising. For the most water demanding regional crops of sugar beet and maize grain, up to 30 percent water and energy savings (7 litres fuel oil saving per day) was observed. Yield increases were 9 percent and 30 percent respectively.[27]

104. However, determining and monitoring the soil carbon content has not been possible due to the limited duration of the field demonstrations. Another factor that has been reported as a challenge is hyperinflation in the Turkish economy. This has led to fluctuations in the procurement of drip system materials.

105. Direct seeding with drought- and winter-tolerant and nitrogen fixing leguminous crops was another conservation agriculture demonstration within this component. In conjunction with the Field Crops Research Institute operating under TAGEM, demonstrations using

[24] This included 41 467 ha for conservation agriculture and 18 399 ha for manure application.

[25] The 2018 MTR provides two sets of figures: 11 000 ha and 50 ha. The discrepancy may derive from different criteria being applied. One project expert said that for arable land to be considered under conservation agriculture, three criteria must be fulfilled: no-till; the surface covered by mulch; and diversified crop rotation. The expert reported that little arable land meets all three criteria.

[26] The successful achievements observed in programmed irrigation demonstrations gave the impetus for the identification and implementation of 12 additional demonstration sites during the project's last phase.

[27] Irrigation consultants formulated a projection of 700 billion $m^3$ of water savings if programmed irrigation schemes would be expanded to the entire KCB (in sugar beet and maize grain).

green lentil and chickpea varieties for direct seeding were experimented in five plots[28] (0.2 ha for each) and completed in 2021. In these experiments, the planting of green lentils as a winter crop has been successfully achieved under no-till to the surprise of farmers and agricultural specialists.[29] Farmer training materials, including brochures and leaflets, were produced to expand the knowledge gained in these experiments.

106. Live fences and windbreaks were established in the Karapınar Desertification Station of the Ministry of Agriculture and Forestry (three units), as well as agricultural lands in the Gözlü General Directorate of Agricultural Enterprises[30] in Sarayönü (11 units) – both in Konya Province. There is one live fence in a pastureland in Cihanbeyli, three windbreaks in pastures in Karapınar and 11 windbreaks in agricultural lands in Sarayönü. Karapınar is reported to be the most exposed district to harsh wind erosion and therefore soil degradation due to erosion in the KCB. The latter aims to create more optimal habitat conditions for the conservation of the endangered great bustard in the agricultural lands of the Sarayönü District.

107. No-tillage agricultural activities were demonstrated in seven plots, complementing the FFS approach under Component 3. Equipment and machinery support was highlighted as the main challenge and lessons learned from the terminal evaluation interviewees. One of the no-till drills had to be purchased from abroad due to FAO procurement procedures and technical clearance for materials above a certain amount.[31] However, this machine had technical defects and could not be repaired since the maintenance services and spare parts were not available in the country. This, in turn, reflects an unfortunate waste of time and resources within the project.

108. Altogether, the following number of agricultural machinery and tools were procured through the project in the Konya and Karaman Provinces: tractor drawn mowers (four); trailers to spread solid fertilizer (ten); pulverizer or sprays (four); no-till drill machines (12); machinery to collect stones (two); and ecoboxes for seedlings (500). Increasing the availability of the no-till drills in the KCB and defining an operating model for their shared usage appear as the main issues to be tackled for their wider use (see Figure 4).

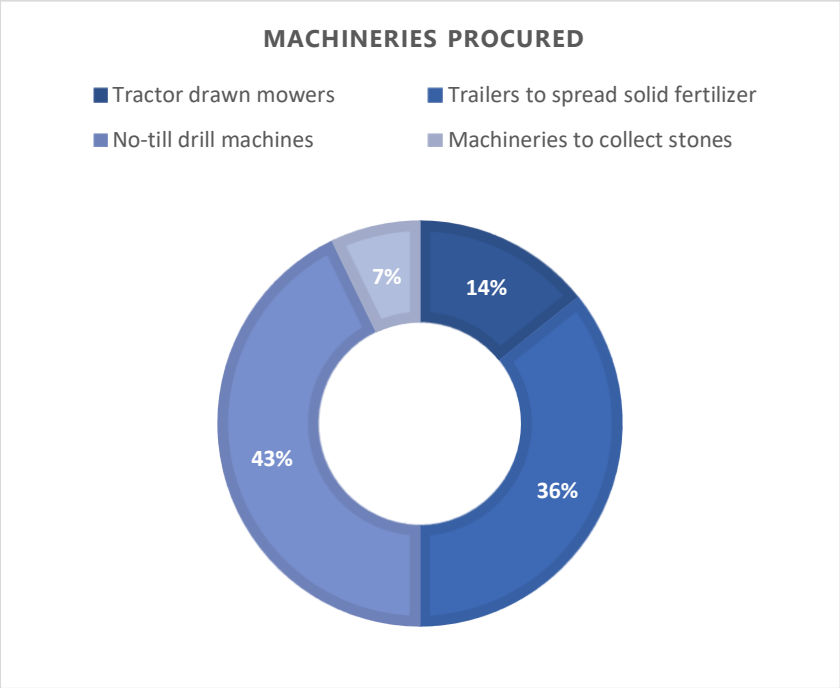
[28] The locations of legume crop production trials were Cihanbeyli, Sarayönü, Karapınar, Karaman-Merkez, and Ayrancı, which were accompanied by FFS trainings.

[29] Green lentil production is typically grown as a summer crop in Anatolia. The project established a first in enabling its planting in October with harvest in the following June.

[30] The General Directorate of Agricultural Enterprises is a public organization that was established to produce all kinds of goods and services needed by the agriculture industry. This is subject to the provisions of the Decree Law No. 233 on the State Economic Enterprises.

[31] This purchase included requests concerning other projects. The total costs were very high, resulting in international tender and delivery destinations (authorized by FAO headquarters).

**Figure 4. Agricultural equipment**




*Source*: Elaborated by the Evaluation Team.

109. The procurement and distribution of Hungarian vetch seed for farmers was performed in 2021 and 2022 (including 70 and 30 tonnes respectively) as a result of the ecosystem services analysis under Component 1. The objective was to reduce the pressures on the pastures classified as poor soil quality and, as such, 55 tonnes were allocated for Konya and 45 tonnes for Karaman Provinces.

110. Furthermore, the rehabilitation activities on pastureland were implemented at three demonstration sites of 40 to 45 ha each: one in Ayrancı, Karaman Province; one in Cihanbeyli; and one in Ereğli, Konya Province. These were identified by the service provider, Bahri Dağdaş International Agricultural Research Institute (BDIARI), in consultation with the provincial directorates. Segmentation between rotational grazing plots were created. Natural, that is, apricot and other shrub plantation, and artificial fences were used to provide a sustainable grazing zone for up to 3 000 sheep based on three-month grazing cycles. The original objective set for pasture rehabilitation activities were 20 000 ha, but a total of 135 ha was reached by the terminal evaluation phase.[32] Delays in project implementation impeded the assessment of the rotational grazing demonstrations' success and their potential for scaling up.[33]

111. The management plan for the great bustard was complemented through a 2022 monitoring protocol. It considered the conservation needs of this species in common agricultural activities and arable lands specific to Sarayönü-Cihanbeyli. Sarayönü is one of the country's most important breeding habitats for the species. Although this management plan for the great bustard applied a participatory approach, it remains unclear as to whether it will be compatible with the existing species' action plans and how it can be

[32] The GEF funds 135 ha as a demonstration activity. The total target of 20 000 ha includes government co-financing.
[33] Rotational grazing starts in the spring of 2023 for one of the visited pasture rehabilitation demonstration sites in Böğrüdelik, Cihanbeyli.

implemented in a legally binding manner as far as farmers and farming authorities are concerned.

112. The level of participatory processes in the identification of field and pasture demonstration sites for conservation agriculture, as well as the pilot villages and small- and medium-sized farms for the methane digester investments, remains unclear (see Output 2.2). In the field interviews, it was reported that "leading businesses" and farmers who are seen as "influencers" or "more advanced" were selected in conjunction by the contractor and provincial executing partners. This approach falls short of participatory decision-making, leaving the selection criteria rather one-sided. This can be seen as the general challenge of a large funded project, as in many GEF interventions, with timeline pressures to execute the activities and not ensure full participation.

113. Some of the technical reports submitted by the project's consultants highlight the farmers' reluctance in using their field for the project's experimental operations. They generally preferred directing project managers to fields that were not in use and unsuitable for cultivation. This is an indicator of the difficulty in altering how agricultural practices are inherently carried out within the central Anatolian agrolandscape. Not wanting to compromise their profitability remains the main challenge.

114. The use of herbicides (Roundup) is actively reported in both technical reports and training materials on the no-till system implemented in the KCB. Combined with other inputs (pesticides, fertilizers, seeds) whose manufacturing involves significant $CO_2$ emissions, the use of Roundup in no-till farming and synthetic fertilizers are not supportive of the overall project objectives. One of the project consultants' reports confirms that the use of Roundup boosted $CO_2$ emissions during their trials' emission calculations (TAGEM, 2022).

115. Activities under Output 2 – the demonstration of innovative methane capture and agriculture production technologies to generate SLM, climate change mitigation and biodiversity conservation benefits – focused on pilot-scale investments in biogas digesters to recuperate methane from agricultural waste and to produce electricity. Through this, it is intended to complement the reduction of carbon dioxide emissions – not only through the propagation of SLM practices (see Output 2.1) but also by increasing the use of biogas facilities in the KCB. The production and use of methane at the farm level is not common practice in the country. Therefore, project activities under this offer good opportunities to generate lessons learned.

**Finding 9.** The long-term impact of installed biogas digesters cannot be conclusively assessed as appropriate measures had not been taken up in a timely manner. If the capacity of each digester amounts to 200 cattle, then the methane capture would increase to 518.80 tonnes $CO_2$ equivalent per year.

116. No methane capture had been in place before project intervention. No progress was achieved in the establishment of biogas facilities at the MTR. The project invested in four facilities[34] during the terminal evaluation period. These were located at the following sites and selected based on the 100-cattle criteria: the Demiryurt Development Cooperative and the Serinler farm in Ayrancı, Karaman Province; the Göksel Gökcanlar farm in Karapınar; and the Emir Kaan farm in Ereğli, Konya Province. The overall methane capture of 10 000 tonnes

[34] The investment cost of the four biogas digesters is reported at USD 665 000.

$CO_2$ equivalent was projected by project closure, while the actual methane capture capacity of the established facilities was 10 376 tonnes $CO_2$ equivalent over their service life.[35]

117. One of the visited biogas facilities (serving the cooperative in Karaman[36]) had just had its opening ceremony by the time of the terminal evaluation. Therefore, the impact of the digester for methane capture was not assessed over time. The same is assumed for the remaining facilities. According to information received, work is underway to increase the capacity of each digester to 200 cattle.[37] The methane capture would then increase to 518.80 tonnes $CO_2$ equivalent per year, which would further help to reduce farm-level electricity costs.

118. Although the biogas digester's construction dates to 2019, it was reported that its operationalization was delayed due to COVID-19 and technical challenges. The contractor has not provided the expected trainings for the biogas generator, and this presents a sustainability challenge. However, according to the latest information received, a training was planned for early February 2023.

119. In summary, upgrading the established systems is foreseen and recommended to make the biogas facilities more sustainable and functional. This will be done by further insulating the digesters to increase biogas production capacity, installing automation systems to facilitate better monitoring and installing co-generation units to produce electricity and heat energy.

120. No data were available at the project's mid-term. However, the project objectives seem to have been reached for the cattle methane capturing biogas digesters with a total of 4 040 cattle (compared to the project's end target of 1 200 head of livestock contributing to digesters). This includes 33 livestock producers with 30 members of a cooperative. However, no evident action took place on the poultry farms within the KCB pilots. This was clearly the result of an adjustment in project strategy.

121. Public outreach events for training and awareness raising purposes that would have stimulated other farmers and individuals in the KCB on biogas digesters do not indicate follow up by the project. In fact, it is awaiting the integration of co-generators in the existing facilities.[38] Some of the interviewees underscored the need to back these initiatives with relevant legislation and the creation of proper economic incentives. This aims to establish biogas digesters for enterprises that surpass a certain number of bovines. Alternatively, interviewed farmers highlighted the curiosity and interest of other neighbouring cattle keepers in their districts and other provinces who had heard of the project implementations.

[35] The estimated service life is 20 years.

[36] The Demiryurt Development Cooperative was established in 2010 in Karaman under the investment programme of the former Ministry of Food, Agriculture and Livestock to cluster small milk producers. It has 30 active members and seven employees. A total of 500 cattle provide manure for the facility's electricity and fertilizer outputs. The biogas digester covers 15 percent of the farm's overall energy needs (the capacity of each unit is to generate 20 kW of heat per hour), but it has helped electricity cost reduction as the feed blending machine now operates with the generated energy. The cooperative's objective is to double the cattle number and enlarge the manure reception pool. It also aims to receive co-financing from the provincial Ministry of Agriculture and Forestry for installing additional solar panels.

[37] Two hundred cattle produce 13 kW of electricity per hour.

[38] An outreach plan on biogas digesters was made available during the finalization of this report.

*Component 3: enhanced enabling environment for SLM; Outcome 3: enhanced enabling environment for SLM.*

*GEF budget: USD 892 500; co-financing: USD 500 000.*

122. This component aimed to integrate an evidence-based approach linked to all project components. The goal was to integrate SLM, climate change mitigation and biodiversity concerns within agricultural management at multiple levels.

123. More precisely, the 2014 project document was drafted following specific outputs that are partly implemented under Components 1 and 2: i) the elaboration of a legislative framework (laws, regulations, guidelines) towards SLM practices; ii) the delivery of SLM training programmes for technical staff at the national and pilot levels; iii) awareness raising programmes for local beneficiaries on SLM practices; iv) the development of guidelines for SLM, specifically the restoration of degraded lands to be applied by the Ministry of Agriculture and Forestry; for conservation agriculture to be applied by farmers; and for rangeland rehabilitation to be applied by the Ministry of Agriculture and Forestry and local authorities; v) a carbon stock monitoring system for production landscapes; and vi) an M&E system for the project (a national monitoring programme for SLM, climate change mitigation and biodiversity).

124. Output 1 focused on the establishment of an institutional capacity building programme for national and local decision makers. The objective was to mainstream SLM and climate-smart agriculture within decision-making bodies and to build capacities among the Ministry of Agriculture and Forestry staff (regionally and centrally).

125. At the project's midterm, the number of decision-makers trained under the capacity building programme[39] was 11. The officials trained through all workshops and trainings according to cumulative data is 406, but this number is not disaggregated by sex. It should be noted that the project's originally planned SLM board, as a mutual decision-making and communication body between ministries and key stakeholders, was cancelled since alternative options had already been in place.[40]

126. Under the envisaged forest policy enhancement, as outlined in the results matrix, the project summarizes the improved EIFMP according to international good practices and a rehabilitation strategy for dryland forestry at the project site level. On agriculture policy to be enhanced by the project, a rehabilitation strategy for the KCB and a good practices guide on SLM (national co-finance) that also targets decision makers is highlighted. This guide is an important tool for the FFS and was planned to be made available electronically through various communication platforms and the project's website. A website specific to the project has not been set up. However, according to information received, the FFS concept and the work carried out were shared with relevant audiences at three levels: i) among the project workers and beneficiaries, WhatsApp groups and local media were utilized with over 1 000 messages exchanged, including over 800 with visual images; ii) at the ministry and official level, official media platforms, official journals and television

[39] Under the capacity building programme, recent reports summarize the improved EIFMP according to international good practices, the biodiversity management plan, and the identification and qualification of ecosystem services – all completed under Component 1.

[40] There are existing cross-ministerial boards in Türkiye, such as the climate change board and the desertification board.

channels; and iii) at the public level and for wider use, national news and media platforms, including the broadcasting of several interviews.

**Finding 10.** The project put in motion a mechanism of particular importance through capacity building programmes and the introduction of the FFS. This has created a strong enabling environment on different levels that is required to address the challenges posed by climate change.

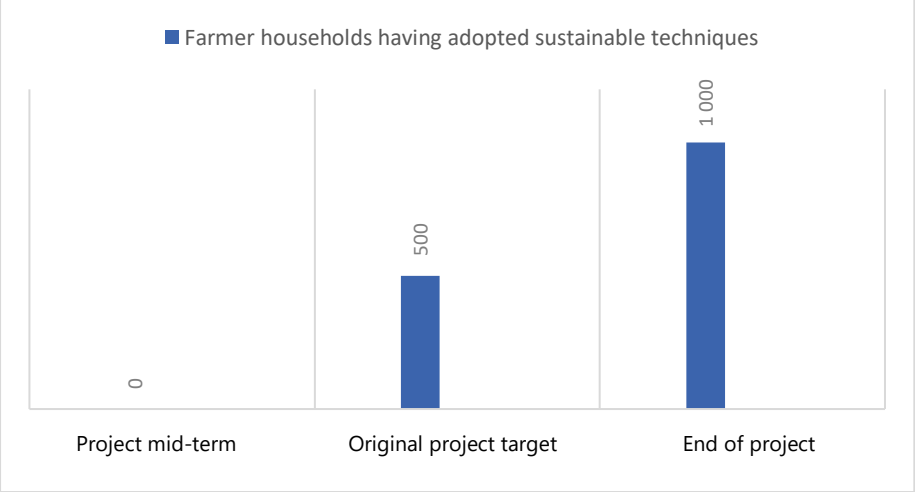
127. The interventions in the KCB focused on a better understanding of agricultural practices that deliver SLM, climate change mitigation and biodiversity conservation benefits (see Component 2). This aimed to formally build capacity within the Ministry of Agriculture and Forestry, especially at the regional level.

128. An innovative, globally tested and participatory model of FAO was introduced through FFS implementation. This provides a conduit for the continued delivery of agricultural learning between government staff, farmers and producers. The comprehensive SLM and climate-smart agriculture extension and awareness programme set in place with the FFS approach (learning by doing and witnessing) also focused on women and included an adapted curriculum for this target group under Output 2. The curriculum focused on conservation agriculture practices as a technical document. As a special consideration for female farmers, two specific sessions were organized to cover the elements and benefits of biodiversity and multiple cropping. According to information received, this was the most beneficial topic. Following an introductory session, female farmers were taken on a practical demonstration to an organic farm owned and run by a small family. A total of 43 farmers benefitted from these two sessions.

**Finding 11.** The project delivered considerable results for farmer households that had adopted new practices and created income generation activities to support SLM, climate change mitigation and biodiversity. However, long-term effects have yet to be determined.

129. At the beginning of the project, no agricultural households at the pilot sites of the KCB had adopted progressive and adapted techniques. The 2022 PIR states that 1 000 farms adopted new practices because of project interventions. This is an increase of 50 percent compared to the originally envisaged 500 farmer households applying improved techniques by project closure. This is a very good outcome since no results were available at the time of the MTR (see Figure 5).

**Figure 5. Farmer households and sustainable techniques**




*Source*: Elaborated by the Evaluation Team.

130. The project successfully implemented a total of 31 FFS interventions by raising the level of local knowledge and facilitating public participation in the NRM. To date, a total of 715 participants (601 males and 114 females) have attended various SLM and climate-smart agriculture activities (compared to the project's midterm with 180 FFS participants, from which one-third represented women). Compared to the project target of 1 250 FFS participants, a 2017 assessment revised this number to 620 members (stipulating 31 FFS with an average of 20 participants). In this light, it is difficult to conclude why the project design had envisaged 1 250 participants actively involved in FFS interventions. It may be assumed that this number had already incorporated a multiplying effect to be expected towards the end of the project.

131. Numerous activities were implemented under the FFS approach (see Components 1 and 2), such as: i) the planting of walnut and almond saplings as an income generation activity, pasture rehabilitation and management demonstrations, including awareness raising activities at a 40 ha pasture site (Böğrüdelik village, Cihanbeyli District) with 99 farmers (77 males and 22 females);[41] ii) sessions and field days, including the setup of six demonstration plots in Konya and Karaman with chickpeas and green lentils (0.2 ha for each plot)[42] and the promotion of direct seeding with drought-tolerant crop varieties, such as legumes, wheat, sunflower and barley; iii) the distribution of 100 tonnes of Hungarian vetch (*Vicia pannonica*) seeds to reduce pressures on pastures with poor soil quality;[43] iv) technical support and awareness raising on drip irrigation demonstrations for an additional 12 sites[44] to promote water and energy saving interventions for sugar beet and maize grain; v) no-tillage demonstrations on seven plots with drought-tolerant varieties, including the provision of agricultural machines; vi) bee keeping trainings for a total of 191 farmers, including women beneficiaries; vii) socioeconomic surveys; and viii) a 2022 press trip with 15 representatives from both local and national media, and a total of 20 interviews conducted with senior officials and project beneficiaries.

132. Sessions planned for the second half of 2021 were not carried out due to COVID-19. Updated numbers, including recent FFS interventions with data disaggregated by sex are summarized in Table 2.

**Finding 12.** The engagement of women farmers in the FFS is still low. However, a greater participation of motivated women that engage in income generation activities is promising.

133. The number of female farmers engaged in FFS activities is still relatively low. Their participation has generally been perceived as challenging by the majority of project stakeholders. This may also be attributed to predominantly traditional roles among local communities in the KCB and the high mechanization of agriculture in the basin. Women face various restrictions when it comes to accessing financial resources, attending activities or shaping decisions. In the agricultural sector, decisions related to plant production and livestock breeding are generally made by men. Women mainly take part in activities where

[41] Another three pastures were rehabilitated in Emirgazi, Zengen (Ereğli) and Alaçatı (Karaman).

[42] Each demonstration contains four different practices: i) no-till sowing and improved variety; ii) no-till sowing and farmer variety; iii) conventional sowing and improved variety; and iv) conventional sowing and farmer variety. This included the production of a farmers' brochure: Chickpea and Lentil Production with Conventional and No-till Sowing Methods.

[43] These are classified as pastures with poor soil quality. Identification and quantification activities were done under the ecosystem services work in 2021.

[44] This was in 2020 and in different villages of the pilot sites. The demonstration sites were selected for wider farmer trainings from among the 39 plots where drip irrigation systems had been installed.

there is a high need for handwork. In contrast, the participation of women is relatively low where machinery is used (Ozcatalbas and Akcaoz, 2010). Such factors, among others, significantly hamper women's empowerment – even though their contributions to climate change mitigation and adaptation are essential.

134. The inclusion of gender equality principles in climate-friendly agriculture was ensured by a socioeconomic analysis[45] conducted by the project. It considers perceptions on gender relations, gender roles in decision-making processes and women's specific roles in the production system. The findings of this analysis informed the development of the 2021 Gender Action Plan to support the government in the elimination of gender imbalances. It involves gender sensitization trainings that are specific to the needs of the target audience (FAO, 2022a). At this stage, however, the extent to which this model will contribute to reducing the gender gap cannot be determined.

135. None of the gender-based activities could be reported at project midterm. However, the project made considerable efforts to establish two women-led cooperatives with 68 women during the second half of project implementation. This involved: i) two trainings in business management and product marketing (e-marketing); ii) the provision of equipment for the processing and labelling of different products, such as molasses, tomato sauce, different grain varieties, and acorn coffee; and iii) the distribution of 500 honeybee colonies, 600 beehives and 195 equipment sets between June and September 2022 with 195 participants, including 133 males and 62 females.

136. In summary, the project established improved extension services, particularly the FFS as an instrument to trial progressive rangeland, forest and farming methods. During the discussions, the Evaluation Team found remarkable evidence that the provided models elaborated by the project were adopted by the stakeholders, and the FFS was perceived as one of the main successes of the project. Due to implementation delays, particularly in the project's first phase, replication at a larger scale (not only within the KCB but also nationally) and how that may evolve cannot be concluded (see section 3.4).

137. Output 3 aimed to set up a monitoring system to inform decision-making. A handover strategy – closely aligned with the decision-making tools under Component 1 and detailing how the project monitoring system should be mainstreamed within standard government operating systems – was not elaborated as a single document. Rather, it was justified with project reports, including good practices and lessons learned, and, *inter alia*, the elaborated EIFMP, its six subplans and its assessment.

**Table 2. FFS sessions**

| Type of FFS sessions | Number of sessions | Number of participants | Number of females |
|---|---|---|---|
| Conservation agriculture | 98 | 923 | 114 |
| Specific sessions on pasture rehabilitation | 7 | 72 | N/A |
| Specific sessions on biodiversity | 2 | 39 | 34 |
| Specific sessions on biogas | 3 | 69 | 1 |

*Source*: Elaborated by the Evaluation Team.

[45] Specifically, this is the December 2020 Gender Action Plan. Also, the 2022 PIR indicates a survey with 20 women. According to the Evaluation Team, this sample is too low and statistically insignificant.

**Figure 6. Project demonstration sites**


*Note*: blue, irrigation demonstrations; turquoise, pasture rehabilitation sites; red, no-tillage sowing in cereals; and yellow, legume demonstrations.

*Source*: Elaborated by the Subregional Office for Central Asia (SEC). Map conforms to United Nations. 2023. *Map of the World*. https://www.un.org/geospatial/content/map-world-1

*The overall assessment of project results is: S.*

## 3.3 Efficiency and factors affecting performance

*Question: Has the project been efficient and effective with regard to: coordination and decision-making; stakeholder engagement; knowledge and information sharing; work planning; financial management; M&E; reporting; internal and external communication; and knowledge management?*

*Subquestions: How effective has project management dealt with the challenges facing the project, adapted to overcome difficulties and improved delivery? Have project activities been cost-effective and implemented in a timely manner?*

### 3.3.1 Coordination, decision-making and stakeholder engagement

**Finding 13.** The project management engine was the FAO project team, which coordinated and orchestrated all stakeholders and activities in both the planning and implementation phases. Besides the project steering committee, mechanisms and models between the central and provincial levels to jointly manage the project in collaborative efforts proved challenging.

138. The main execution body was FAO as the GEF implementing agency, which carried out the work plan in close consultation with ÇEM, the TRGM and other partners at the national, provincial and local levels. As lead executing partners, ÇEM and the TRGM supported project execution by: i) its NPD,[46] designated by the Project Lead Institute within the Ministry of Environment, Urbanization and Climate Change; ii) the FAO Budget Holder; and iii) the LTO who provided technical guidance under the Lead Technical Unit, FAO's Forestry Division at the FAO Representation in Ankara. The NPD acted as the focal point and was responsible at the political and policy level to ensure the necessary support and input from the government. The project was to be implemented through a National Project

[46] The NPD changed several times during project implementation due to management changes in the Project Lead Institute.

Implementation Unit, consisting of the main representatives of the two lead executing partners. One of its objectives would improve communication and collaboration among government ministries. According to information received, this unit had not started its operation from project start and was only established by the Project Lead Institute in the beginning of 2017.[47]

139. During the project's design phase, the Ministry of Forestry and Water Affairs and the Ministry of Food, Agriculture and Livestock were separate entities and involved the lead executing partners.[48] However, in 2018, the two ministries merged under a single entity: the Ministry of Agriculture and Forestry. This restructuring caused important challenges in project implementation. Some departments of the former ministries were abolished during the reorganization. The resulting high staff turnover of project partner institutions at the decision-making level led to delays in project processes, such as feedback provision, delayed contract signing and late procurement processing. This caused the need to postpone activities with numerous consequences, for example, date and exchange rate changes.

140. One field office was established by the project in Konya[49] to make the necessary linkages with local stakeholders. This involved: local staff representatives from relevant agencies; local resource users, such as farmers and herders and their associations or cooperatives; the private sector; universities; and research institutions. The extent to which project ownership triggered from central governmental bodies to the field office could not be determined in the short amount of time allocated for such observations during the terminal evaluation field mission.

141. Some project documents, including the MTR, point to the lack of transparency and mutual accountability arising from the inefficient communication of activities and goals – not only externally among potential beneficiaries but also internally among project stakeholders. In the 2021 project steering committee report, the size of the areas where conservation agriculture practices were implemented is reported as unclear at the provincial directorate level. This not only jeopardized the monitoring of these activities but also illuminated the lack of communication and ownership among project managers at both the central government authorities and the field offices.

142. The project steering committee, formerly co-chaired by the Ministry of Forestry and Water Affairs and the Ministry of Food, Agriculture and Livestock, was established upon project launch. The ÇEM, under the Ministry of Environment, Urbanization and Climate Change, took the lead of the project steering committee following the merge of the two main ministries. This caused discontent among some partner public administration units that felt overshadowed by ÇEM. The project steering committee, as the project's main decision-making body, included: representatives from FAO; the General Directorate of Nature Conservation and National Parks; ÇEM and the TRGM; a representative from the Nature

[47] The National Project Implementation Unit engaged three part-time staff from ÇEM and two part-time staff from the TRGM.

[48] The 2014 project document had defined the following allocation of project tasks: the Ministry of Forestry and Water Affairs as responsible for the implementation of Component 1; the Ministry of Food, Agriculture and Livestock as responsible for Component 2; and Component 3 would be jointly implemented.

[49] The government willingly supported the project by providing an office at the Konya provincial government level. However, a review showed that the office had not met a variety of United Nations safety criteria. The Konya provincial directorate finally designated a project office in its main body in 2018.

Conservation Centre (DKM, by its Turkish acronym) as an observer; and one from the Konya Sugar Factory, also as an observer.

143. The project's participatory processes and importance given to inclusiveness were far from adequate.[50] Although a wider range of observers and stakeholders was envisaged in the project design – not only for the project steering committee but also the engagement processes during project implementation – this was not the reality. The only NGO with an active role in the project was DKM, whose duties focused on Component 1. The Konya Sugar Factory was the main private sector representation. In fact, it co-financed (in cash) the afforestation activities along the Konya-Ankara highway.[51] Also, a National Stakeholder Committee was envisaged in the 2014 project document to provide consolidated advice (policies, actions, measures) on stakeholder participation and engagement, particularly on local communities at identified pilot sites. However, such a committee never became operational. This observation was also addressed in the MTR, with provincial and local government stakeholders and target communities at the project pilot sites not having been sufficiently consulted during its design.

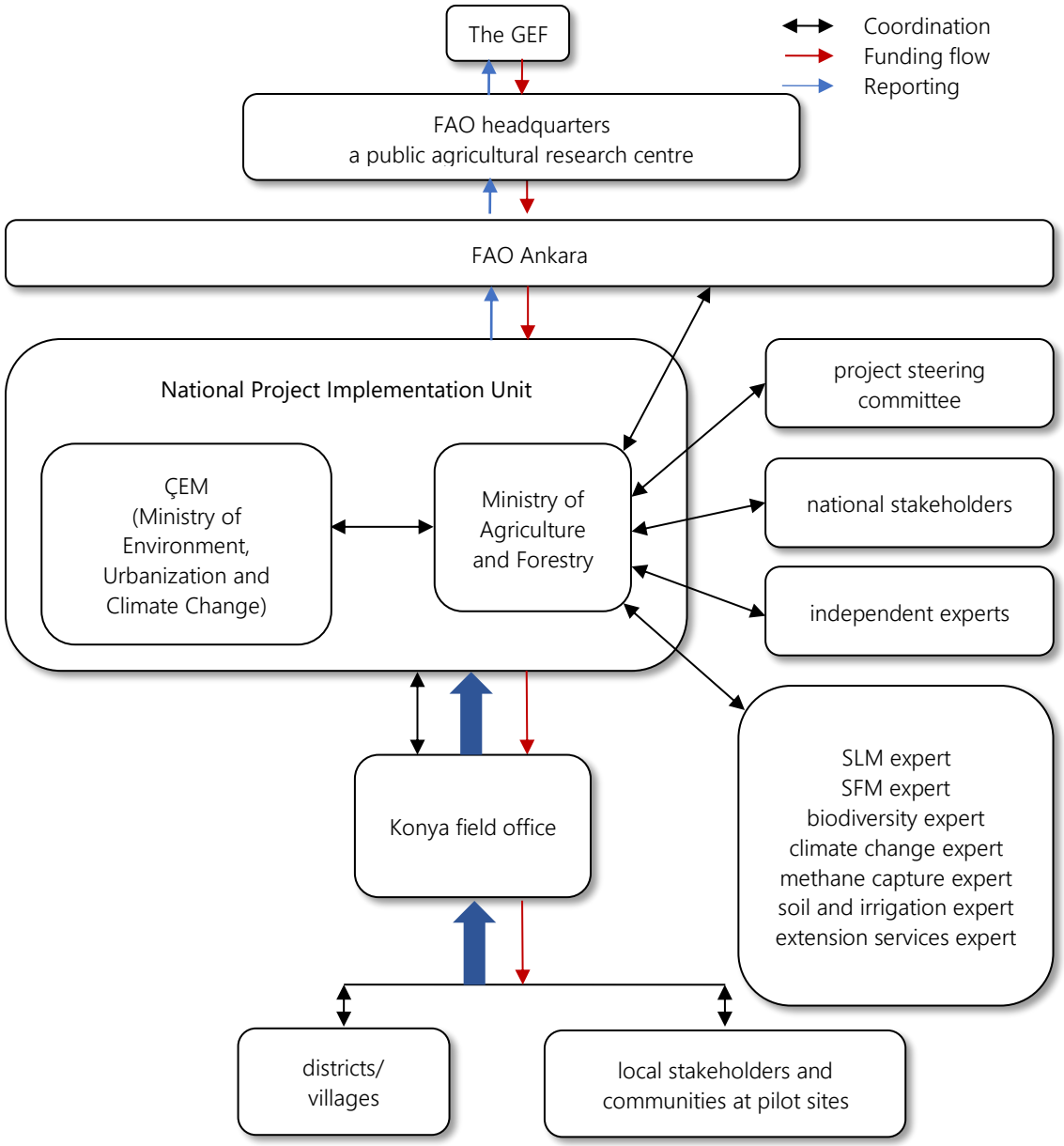
144. Project steering committee meetings occurred regularly (with the exception of the seventh meeting), but not in the frequency as planned and indicated in the project document (once a year instead of twice).[52] This may have affected joint project governance from both the implementing agency and the government partners, together with its accountability system (see Figure 7).

[50] The General Directorate of Agrarian Reform, for instance, expressed unease in not having been appointed as the lead executing agency – even though they represent the main public authority on SLM.

[51] Other actors (beneficiaries) from the private sector were the following: farmers and shepherds; women-led cooperatives; honey producers; Temmuz Organic Farming; Selçuk University, where the Konya Technological Research Unit as an annex to the university generates the funds; and BDIARI.

[52] The meetings were held in Ankara: the first on 8 December 2015; the second on 7 June 2016; the third with no available information on the meeting date; the fourth on 27 October 2016; the fifth on 19 March 2018; and the sixth on 6 March 2019. The seventh meeting was not held due to COVID-19, and decisions were made via an official letter. The eighth – and last project steering committee meeting – was held on 7 October 2021.

**Figure 7. Stakeholder chart**




*Source*: Elaborated by the 2014 Project documet and updated by the Evaluation Team.

145. Table 3 summarizes the materialized human resources for the project.

**Table 3. Project human resources**

| Institution | Number of staff | Total |
|---|---|---|
| **ÇEM** | 1 National Project Manager<br>1 project focal point<br>2 part-time staff members | 4 |
| **TRGM** | 1 Co-project Manager<br>1 project focal point<br>1 part-time staff member | 15 |
| **Konya provincial directorates:**<br>Provincial level<br>District level | 1 project focal point<br>1 part-time project staff member<br>5 part-time project staff members | |
| **Karaman provincial directorates:**<br>Provincial level<br>District level | 1 project focal point<br>2 part-time project staff members<br>2 part-time project staff members | |
| **OGM**<br>Central level<br>Regional level<br>Site level | <br>2 part-time project staff members<br>1 project focal point<br>2 part-time project staff members | 5 |
| **General Directorate of Nature Conservation and National Parks** | 1 project focal point | 1 |
| **FAO** | 1 full-time NPC<br>3 part-time project staff members | 4 |
| **Total** | | **29** |

*Source*: Elaborated by the Evaluation Team.

### 3.3.2 Management arrangements and work planning

**Finding 14.** Lengthy tender, procurement and recruitment processes negatively affected the motivation of project executing partners, both at the central and provincial levels.

146. Nearly all parties interviewed during the terminal evaluation and the analysed PIRs stressed the difficulties that the project had faced regarding tenders for the procurement of materials and services during implementation. FAO procedures and administrative rules were reported as too rigid and cumbersome. For example, service contracts were often time sensitive, leading to interruptions in the implementation of project activities and a high turnover of experts. The same rigidness in financial rules led to the obligatory procurement of agricultural machinery and equipment from abroad whose repair and upkeep was not feasible at the pilot sites (see section 3.2).[53]

147. Project focal points at the provincial level, representing contact points on field activities and demonstrations, reported limited manoeuvre space to make decisions – even on the smallest budgetary items. Although these are the general FAO-GEF operational rules, this remains an important challenge in creating a sense of project ownership.

[53] The 2018 MTR recommended to further explore the possibility of farmers renting the machines for a nominal fee. This would assure that the farmers not only return the machines promptly but also provide resources for their maintenance. If the rent was high enough, it might also provide resources for purchasing more machines.

**Finding 15.** Certain salient issues impeded the timely delivery of project outcomes, which manifested in four project extensions. However, all in all, the project team picked up speed on the last phases of project implementation to ensure the completion of the envisaged interventions.

148. The project had four extensions: December 2020; December 2021; December 2022; and February 2023. The main drivers behind these extensions were: i) internal delays that many GEF projects face at the outset, that is, forming the project team and the management structure, including task allocations;[54] ii) COVID-19, which impeded the implementation of face-to-face activities due to travel restrictions; and iii) changes in currency exchange rates due to hyperinflation in Türkiye, which, in turn, allowed for the execution of further improvement and the enforcement of activities (see section 3.3.3).

149. Overall project efficiency was diminished, despite the project's considerable efforts to adapt to the institutional changes that had occurred after the merge of the two ministries in 2018 – especially during the last two years of implementation following the MTR. It appears that tools for work planning and facilitating a common and transparent understanding on implementation progress were not used efficiently by the project and in conjunction with the lead executing partners. This lack of coordination was also flagged and raised as a challenge by some of the project partners during the interviews.

**Finding 16.** Ensuring a true sense of ownership over the project document by the main governmental bodies is perceived as crucial for a successful implementation of the work plan.

150. According to information received, several discussions were held with the implementing partners to revise the 2014 project document upon project launch and later as a result of the MTR.[55] This proved to be difficult, so the FAO Subregional Office for Central Asia developed a detailed implementation strategy that helped to clarify the project's focus and to facilitate its implementation.[56] However, adaptive management would have been facilitated if the project document had already been updated at the project's inception. Further, the delivery of expected outcomes within the planned timeframe would have been more effective if appropriate measures had been taken during the initial phase of the project. This would have included a timely reconsideration of the overambitious results matrix designed for the project. In fact, there was a selection of indicators that could only be met through larger schemes and initiatives. This was the case for the project's coverage of co-financing activities. Similarly, this would have further involved a stakeholder analysis and its timely reassessment and realistic adjustment. This includes the elaboration of a well-designed logical framework and regular work plan adaptation, followed by periodic project review meetings (which effectively seemed to be the case) with explicit follow up on these.

**Finding 17.** The project encountered a few external factors that affected its overall performance, but these were overcome by pertinent adaptive measures.

151. The need for translations of the produced documents created one of the major and time-consuming challenges encountered during project implementation.

152. COVID-19 was among the external key factors affecting project performance in 2020 and 2021. The pandemic limited and even halted the implementation of the majority of the

[54] The project was endorsed in October 2014, but there was a delay in establishing the Project Implementation Unit. The project started implementation only in August 2015.
[55] This was also recommended by the 2018 MTR.
[56] The updated implementation plan is dated 2017.

project demonstrations, trainings and meetings. The time lost during that timeframe was compensated through a no-cost extension provided to the project.

153. Drought was another important external, environmental factor that impacted project efficiency. Severe droughts in the KCB led to the failure of some of the planting and irrigation activities. The project team tried to compensate the planting activities by increasing the amount of irrigation at demonstration sites where water was more available. The project team also tried to renew the demonstrations.

154. Among the political factors affecting the project, the aforementioned merge of the two lead executing partners had a direct influence on the project. In fact, this merge halted the implementation of activities due to shifts and staff turnover that had occurred.

### 3.3.3 Financial management

**Finding 18.** Important co-finance contributions created the potential for building valuable synergies between the different actors. On the operational level, however, co-financing reports from partners (cash and in-kind) could not be adequately assessed by the Evaluation Team.[57]

155. Project design and implementation allowed for considerable efforts to build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects. These co-financing sources[58] were planned to significantly contribute to the project's overall efficiency.

156. The planned overall project budget was USD 28 050 000, including a GEF/LDCF/SCCF cash allocation of USD 5 750 000, where the co-financing (USD 25 650 000 cash and USD 2 400 000 in-kind) is from different donors (see Table 1 and section 2.1).[59] The project benefitted from a number of other relevant interventions in Türkiye that are highly consistent with and complementary to the project's objectives and outputs (see section 3.1).

157. However, in-kind co-finance contributions (attending meetings, allocating staff time, providing logistical support to the project) did not result in annual co-finance reports.

158. With regard to the overall project co-financing, the disbursement figures could not be assessed during the course of the terminal evaluation. In fact, updated co-financing reports were not available and could not be verified. According to the 2022 PIR, the total estimated co-financing materialized as of 30 June 2022 was USD 91 027 191.

159. Upon finalizing the terminal evaluation report, the review of financial records, as reported in the FPMIS, indicates a total disbursement of USD 5 714 655 as of 25 January 2023. This represents a share of 98.86 percent of the total amount of the USD 5 750 00 GEF grant.

160. According to information received, the programme coordination unit is confident that all funds will be spent by project closure in February 2023.

[57] According to information received, the government co-financing reports were provided in its own format and only in Turkish – even though an official, co-financing standard format was provided by the project.
[58] The project elaborated LOAs with different partners. The 2014 project document, however, does not include any commitment letters.
[59] The total co-financing (cash and in-kind) from project partners, excluding the GEF grant, amounts to USD 22 300 000.

161. As outlined in the previous section and regarding financial management, the project duration was originally planned for four years with an early 2014 start date. However, the project's inception workshop was only held in August 2015. After a no-cost extension of 24 months, as proposed by the MTR (indicating the December 2020 end date), the project had a second no-cost extension for another 12 months (with a December 2021 end date). These were not only due to the accumulation of delays caused by COVID-19 travel restrictions but also the budget gained through the rapid increase in the USD/TRY exchange rate. This can be seen as an advantage in financial terms. In fact, it allowed the project to execute further actions. However, it also led to an overall lag or inefficient implementation of the originally conceived implementation plan. The third and fourth no-cost extensions (with end dates of December 2022 and February 2023 respectively) were endorsed by the project steering committee to finalize all activities.

### 3.3.4 Monitoring and evaluation

**Finding 19.** The project should have taken on an M&E professional in a timely manner to actively work on measurement and data collection. Consequently, stakeholders could have been informed on a more regular basis for oversight and decision-making.

162. The main M&E mechanism utilized throughout the project was the checking or evaluation of progress in achieving results and objectives based on targets and indicators established in the project results framework. In the 2014 project document, the initial task to formulate the progress monitoring system was assigned to the National Project Implementation Unit, which initially had not been established. Therefore, the M&E responsibility was consistently carried out by the NPC[60] according to FAO and the GEF M&E policies and guidelines and checked at the higher steering committee meetings.

163. The day-to-day project implementation, mainly monitored by the PMU, led by the NPC and assisted by the LTO, was driven by the preparation and implementation of different reports and work plans. It was the product of a unified planning process between the main project partners. While the NPC reported to the pillar coordinators at the FAO Subregional Office for Central Asia in Ankara, the Chief Technical Adviser and the LTO liaised directly with the NPC on any technical aspects.

164. According to information received, the NPC has ensured activities as planned by the relevant partners. With regard to project design, this included adjustments as agreed upon by key stakeholders through the project steering committee meetings. As a general observation, most essential reports seem to have been delivered in a timely manner to the Budget Holder, even though numerous documents have not been uploaded to the common FPMIS. The following set of reports or minutes that were relevant for monitoring have, among others, been accessible for the analysis of the Evaluation Team: annual PIRs with updated tracking tools and core indicators (all in place); biannual project progress reports (biannual reporting was successful between 2015 and 2019, but from 2020 onwards, only from July to December reporting appears in the system); annual review

[60] All efforts to recruit M&E experts did not produce effective results. The project was therefore monitored through its indicators. The first NPC was assigned in July 2015 and was on duty until the end of 2016. The second NPC was assigned during the last week of April 2017.

meeting reports (2017 missing and 2022 still not in the FPMIS); and task force meeting minutes (complete for the period between 2015 and 2020, but missing since then).[61]

165. During the mission, the Evaluation Team was presented to the recently established M&E department of the General Directorate of the European Union and Foreign Relations under the Ministry of Agriculture and Forestry. Interviews revealed that this unit had been assigned M&E activities under this project for the last one and a half years of implementation. However, as tools and mechanisms applied were not subject of closer examination in the frame of this terminal evaluation, the Evaluation Team is not able to comment on corresponding interventions.

166. Monitoring activities at the operational level were conducted by individual service providers at each activity level, that is, a biodiversity monitoring programme at pilot sites, among others. Until 2019, the GHG mitigation monitoring system based on the Ex-Ante Carbon-balance Tool (EX-ACT)[62] had initially been implemented by former project field and FAO Subregional Office for Central Asia staff and, as of 2019, by the FAO Subregional Office for Central Asia Forestry Specialist and the NPC. However, some of the expected overseeing bodies of the project's individual components, such as the SLM board and the independent expert group[63] – which would have provided technical advice to the project steering committee – were cancelled (see section 3.2).

### 3.3.5 Communications and knowledge management

**Finding 20.** The project produced a significant range of communications tools and materials. These, however, were not clustered in an easily accessible portal for further dissemination to a larger number of beneficiaries and the broader public.

167. As a result of the FAO Subregional Office for Central Asia's exceptional guidance and supervision capabilities, regular internal communication with weekly review meetings among the relevant stakeholders significantly improved during the second phase of project implementation.

168. With three main components consisting of a very wide range of activities, the project produced a great deal of communications and outreach materials. Some of these were provided to the Evaluation Team during face-to-face interviews and field missions. However, the project did not produce an internet-based knowledge management system, such as a website or a portal for making these materials easily accessible.

169. The MTR also highlighted problems related to the transparency and mutual accountability of the project. The communications budget was reported to be used ineffectively, impeding the visibility of its activities and goals to wider audiences, such as potential beneficiaries and stakeholders. The Evaluation Team came to the same conclusion: the website or a portal through which to share project outputs, information and products – not only externally but also internally among project stakeholders – was not achieved by project

[61] Since both the PIRs and the biannual project progress reports are lengthy and overlapping documents in the GEF reporting system, it was decided to reduce the number of half-year reports to one starting in 2020.

[62] The EX-ACT is a tool jointly developed by FAO. It provides ex-ante estimations on the impact of agriculture and forestry development projects on GHG emissions and carbon sequestration, indicating the effects on the carbon balance.

[63] The independent expert group should have facilitated the collaboration with other programmes so that it could provide important views on synergies and long-term visions.

closure. The NPC stated that the Communications Officer deployed by the project was conducting all FAO Representation in Türkiye GEF project communications tasks. Therefore, the focus on the project appears to have been lost.

170. The project produced visual materials, such as videos from field demonstrations and FFS trainings. A short presentation film was also mentioned in the 2021 review meeting summary. These, however, were not compiled and cannot be accessed in a singular system for future use. As such, the project does not have a YouTube channel or social media accounts. The latest 2022 PIR stresses that, in this last period, the project results were more reflected in the media compared to the previous reporting periods.[64]

171. The following aspects were not subject of an analysis during the terminal evaluation: i) the quality of contact and communication among the Budget Holder, the PMU and the GEF Coordination Unit's FLO; ii) the knowledge of the PMU and the FLO on project financials; iii) the knowledge of project progress when disbursements were undertaken;[65] iv) the attention paid to compliance with procurement rules and regulations;[66] v) the PMU and the FLO responsiveness to addressing and resolving any financial issues; vi) any budget revisions and any issues with disbursement, including proof of transfers; and vii) any relevant legal agreements, such as LOAs.

*The overall assessment for efficiency, including factors affecting performance is: MU–MS.*

## 3.4 Sustainability and impact

*Question: Are the project results sustainable, and what conditions have been put in place to consolidate its sustainability and reduce the risks that may affect it?*

*Subquestions: To what extent can progress towards impact be attributed in the long term? What evidence exists indicating the feasibility of replication or catalysis of project results and the likelihood that project activities will continue after the project officially ends?*

### 3.4.1 Institutional sustainability

**Finding 21.** There is good evidence that country ownership of the project is high. However, it is not possible to deduce that policy integration among the various project sectors (agriculture, forestry, biodiversity conservation) can be sustained easily.

172. Numerous interviewed stakeholders expressed that the GEF funded projects, in general and for this project in particular, inspire and shape the formulation of other national government programmes and projects. Experiences gained in these multilateral projects help form the foundation of long-term agricultural, forestry, natural resource and biodiversity management strategies and projects in the country. The outputs of the project have already been used in the country's climate change policymaking and integrated into

[64] National and local media have been used effectively. Türkiye's largest national news outlet, Anadolu Agency, introduced the FFS concept to the public. This featured interviews with project stakeholders, as well as video footage. Corresponding links for media coverage were shared with the Evaluation Team. In summary, the following media coverage is highlighted: print media (26); television (two); and internet (98).

[65] Notifications are usually issued for funding requests and feedback once the requests are granted.

[66] The PMU follows the general FAO rules and regulations on procurement under the guidance of the Procurement Unit, led by an international procurement officer.

the first National Climate Council Meeting held in February 2022 (clause number 10) (Ministry of Environment, Climate Council, 2022).[67]

173. The majority of the interviewed parties during the terminal evaluation see the objectives set for the various components of this complementary project as inherent, ongoing duties of the respective public authorities. In fact, it is viewed that these are and would be executing tasks to combat climate change and implement measures towards climate change adaptation in agriculture or pasture management in the KCB.

174. Technical know-how generated throughout this project, especially experiences gained in maintaining and increasing soil fertility via conservation agriculture, ought to feed more high-level public policy measures, such as the country's recently established Basin-based Agricultural Subsidy Scheme. This determines what crops are to be subsidized in which water basin according to various groundwater and precipitation data.

175. Policy integration between forestry and biodiversity conservation objectives of the project is successfully exemplified in the integrated management plan for the Ereğli Forestry Enterprise (Component 1). Policy integration between agriculture or pasture management and biodiversity conservation, however, do not surface as apparent outcomes that will be sustained as a result of the project. Compartmental thinking and approaches are still dominant in the policy arena and difficult to overcome through this project alone.

176. In other instances, conflicting authorities of various ministries create contradiction and a lack of ownership. For example, as reported by the interviewed FAO Subregional Office for Central Asia technical staff, the responsibilities of the various agricultural and forestry departments under the Ministry of Agriculture and Forestry often overlap. In fact, fields of competence are not clearly defined regarding pasture and steppe management, and this leads to inaction.

177. High staff turnover during project implementation, especially when different ministries merge or are split, remains a future risk for institutional memory and overall stability. Sustaining the project's institutional memory will continue to be a challenge since the project lacks a formal archive or a portfolio sharing mechanism like a website to disseminate the experiences.

178. Last, a formal sustainability plan and a sophisticated handover plan geared towards the project's main executing partners, especially decision makers, was not available at the time of the terminal evaluation.[68] This poses a serious concern since many of the well-prepared management plans by public institutions in Türkiye fail to be put into effective implementation backed by monitoring schemes. This risk certainly exists for several important project outputs and would limit its results to "good theory" with reports that "decorate the shelves."

[67] The translation of Article 10 is as follows: "We will switch to the Sustainable Land Management Model for combating natural disasters. We will implement the subsurface and drip irrigation systems applied within the scope of the Sustainable Land Management and Climate-friendly Agriculture project, implemented in the Konya-Karaman region, where sink holes are most commonly due to the excessive use of groundwater."

[68] During the terminal evaluation mission, it was reported that an exit strategy and key messages for the government are in preparation. The 2014 project document mentions that a handover plan is expected to specify the financial and economic factors required to advance project-initiated activities, especially for the Government of Türkiye and other key stakeholders to fully absorb and continue the identified good practices.

**Finding 22.** The capacities of key stakeholders have been strengthened significantly in the KCB through trainings and extension programmes, such as the FFS, through hands-on demonstrations at the field level and by engaging farming communities.

179. FAO's FFS approach was applied for the first time through the project. It directly touched more than 700 farmers. Staff at the provincial and district level of the Ministry of Agriculture and Forestry gained a series of on-the-job trainings throughout the project to support the sustainable replication of the established FFS curriculum.

180. Positive feedback from FFS trainees and collaborations that have been created are very likely to be continued by both FAO and the Ministry of Agriculture and Forestry units as a programme jointly run or, potentially, in partnership with the private sector.[69] Nevertheless, success stories springing from these capacity building events, extensions and other project activities merit more credit and can be highlighted in order to increase the project's multiplier effect and visibility.[70]

### 3.4.2 Financial sustainability

**Finding 23.** The likelihood of continued benefits after the project funding comes to an end is highly likely. Indeed, conservation agriculture and integrated land management are approaches that have already been taken up by governmental funding programmes and will most likely be financed by international or bilateral donors.

181. The lead implementing partners have already financed and set in motion projects to replicate some of the experiences gained from the project. Some concrete examples are as follows: ÇEM has started conducting the Establishing a Carbon Sink Area for Income Generation and Climate Change Adaptation with a Green Development Goal project in the Divle settlement of the Ayrancı District of Karaman Province as further action in the KCB; the Afforestation Department under the OGM reports using similar integrated land management M&E procedures in the Murat River Basin (covering three provinces); and the TRGM has started a follow-up no-till agriculture project in Eskişehir Province (with a budget of EUR 150 000). Rain harvest practices are reportedly now included in the Ministry of Agriculture and Forestry subsidy programme.

182. Furthermore, and in light of experiences gained from the project, agricultural interventions for the rehabilitation of pastureland in the Karapınar District's Hotamış village will continue through a protocol[71] that was signed between the Ministry of Agriculture and Forestry of the Konya Provincial Directorate and the Konya Soil, Water and Deserting Control Research Institute (Ministry of Agriculture and Forestry, Konya Provincial Directorate of Agriculture and Forestry, 2022). The protocol is set so that 60 000 drought-resistant and salt-tolerant species, such as saltbush (*Atriplex*) and kochia (*Bassia scoparia*), are planted in degraded pastures of the determined zone to respond to strong wind erosion in the district. These examples provide good evidence on not only the project's financial sustainability but also lessons learned being scaled up.

[69] The Lay's potato chip company reportedly conducted trainings on agricultural production in Karaman, and PepsiCo approached FAO for the continuity of FFS implementations in the KCB.

[70] According to the 2014 project document, a good practices guide, including the evidence base and lessons learned of demonstration activities, was to be distributed to the FFS and made available electronically on the project website. This guide was provided to the Evaluation Team at the time of report drafting.

[71] The Cooperation Protocol for Pasture Improvement and Management project was signed in October 2022 between the two public bodies.

183. Conservation agriculture implementation, integrated pasture management, biogas digester models and FFS pilot demonstrations are highly likely to continue being funded. This may happen under different governmental umbrella instruments, such as rural development projects financed by the Konya Plain Project,[72] the regional Mevlana Development Agency (covering Konya and Karaman Provinces), and the Agriculture and Rural Development Support Institution supported by the Instrument for Pre-accession Assistance Rural Development Programme[73] of the European Union. These European Union programmes and the upcoming GEF funding cycles are other prospects to continue the implementation of similar project work by replicating and scaling up the current project objectives.[74] Some interviewed representatives from the Ministry of Agriculture and Forestry also stated the ministry's intention to continue to expand this project to other places in the country under the GEF-8 phase.

184. Except for the co-financing provided to the project's afforestation activities by the Konya Sugar Factory, not enough effort was put into building partnerships and collaborations with actors representing the private sector. This somewhat limits the prospect of financial instruments and mechanisms with private enterprises and businesses in the long term. A potential collaboration mentioned was with the Lay's potato chip company for continuing FFS trainings.

### 3.4.3 Socioeconomic and sociopolitical sustainability

**Finding 24.** It is difficult to critically judge the success or failure of the project in socioeconomic terms due to the limitation in seeing immediate changes regarding the impact of income generation activities[75] on beneficiary communities. This may also be attributed to a lack of data collection and data on economic impact.

185. As highlighted, the strengthened capacities of key stakeholders have directly contributed to the field through the FFS. This has been done through hands-on demonstrations that engage farming communities.

186. Climate agriculture demonstrations, such as programmed irrigation, showed positive income generation results in the KCB through avoided costs that are likely to spread to other farmers – even if the potential of its scaling up was difficult to predict at the time of the terminal evaluation. The same applies to the FSC certification obtained for the low-density forests at the Ereğli pilot site, which aims to ensure added value to the non-wood

[72] The Konya Plain Project, under the Regional Development Administration of the Ministry of Industry and Technology, covers eight provinces in the broader KCB: Konya; Karaman; Niğde; Aksaray; Yozgat; Nevşehir; Kırıkkale; and Kırşehir.

[73] The Instrument for Pre-accession Assistance Rural Development Programme (2021–2027) defines the measures and policies of rural development. Its programme document is the basis for the European Union's pre-accession assistance for rural development.

[74] Previously, the FAO Subregional Office for Central Asia had led the Agricultural Implications for Ecosystem-based Adaptation to Climate Change in Steppe Ecosystems project in conjunction with the Ministry of Agriculture and Forestry to ensure that medium-term plans are in place to implement and monitor ecosystem-based adaptation in the Central Anatolian steppe. The KCB was a key pilot site of this project which was funded by the European Union's Instrument for Pre-accession Assistance and finalized at the end of 2018. The Sustainable Land Management and Climate-friendly Agriculture project is considered a complementary follow-up project to this.

[75] The average annual income from crop and livestock production for FFS participants; status end 2021 is: USD 3 534 (original project target: USD 1 341).

forest products[76] made by the inhabitants and villagers of the area. Products, such as mushrooms and honey made with this certification, are likely to generate increased income for these villagers. However, assessing the relative impact of this certification is not possible during the project's lifetime. It remains unclear as to how the FSC monitoring will take place administratively.

187. As highlighted by the MTR, the effects of rehabilitating degraded forests will be more evident in the future – beyond the official project closure. By planting nut trees, the project has aimed to provide additional income sources for households near the new orchards. Regarding the planting of other tree species that grow quickly and are meant to decrease wind erosion, again, the impact of those plantings in terms of decreased erosion will be realized in the future.

188. The potential for farm-scale biogas digesters to be scaled up remains uncertain: setting up such systems requires technical expertise and depends on substantial investments that average farming households in the KCB cannot afford. Farmers in the KCB own 40 to 50 cattle on average. At least four to five farmers would need to join forces in order to install biogas digesters like the ones established by the project. The chances of such a clustering and collective action did not seem too feasible at the terminal evaluation's stage.

189. Two women cooperatives were established to create income generation sources for women in Konya and will continue to be supported by respective, local municipalities and other FAO initiatives (an in-house cooperative consultant now at FAO). The cooperatives are in their early establishment phase, which makes the assessment of their sustainability difficult. Although the intention of establishing women cooperatives within the project's scope is very valuable, their empowerment cannot be achieved through just supporting local products generated by these communities.

**Finding 25.** It remains unclear as to how some of the project-led initiatives and challenges connected to biodiversity are to be taken on politically.

190. Some project elements do not reflect a clear way forward on how they might proceed in the near future. For example, for the rotational and sustainable pasture management to be scaled up throughout the KCB, the political will to manage and monitor these ecosystems does not surface in the assessments on forest and agricultural ecosystems. The initially intended sectoral integration cannot easily be fulfilled in the project's short time span if the higher policy ground to manage the commons does not exist.

191. Furthermore, agricultural expansion and encroachment upon natural steppes and pastures, as well as the critical underground water resources of the KCB, is the constant, overarching challenge that needs to be addressed – especially if biodiversity objectives are to be met in the short term. In this regard, numerous land use, conservation and management plans prepared as project outputs would lose their relevance in light of the "bigger picture problem" of agricultural expansion at the expense of nature.[77]

[76] Non-wood forest products are useful foods, substances, materials or commodities obtained from forests other than timber. Harvest ranges from wild collection to farming.

[77] The Biodiversity Monitoring Concept, as outlined in section 3.2, was integrated into the ministry's existing system. The jointly determined indicators will be monitored by the ministry. In addition, a regional Biodiversity Monitoring Committee was established.

192. In addition, it is unclear as to how the high and unique biodiversity features of the KCB will perform given the speed of habitat conversion, especially for natural steppes and wetlands, which continues to occur disproportionately at the basin. The adaptive measures benefitting both climate change and biodiversity conservation that have been put forward and demonstrated by the project remain modest. Their promotion requires a strong and sincere political will.

*The overall likelihood of risks to sustainability is: ML.*

## 3.5 Cross-cutting issues

*Questions: Has the project relevantly contributed to the achievement of the United Nations/FAO/the GEF commitments towards women's empowerment and gender equality? Have ESS risk classification and risk mitigation provisions been identified, and have they adequately been addressed during project implementation?*

*Subquestions: Have gender, minority and vulnerable groups consideration been taken into account in designing and implementing the project? To what extent were environmental and social concerns taken into consideration in the design and during project implementation?*

**Finding 26.** The project made remarkable strides towards greater women's participation during the second half of project implementation. However, the involvement of women remained largely below expectations.

193. With reference to the FAO Policy on Gender Equality 2020–2030, the publication states the following: "FAO's commitment to promote gender equality stems from the intergovernmental mandate of the United Nations to promote and protect women's rights as fundamental human rights, as recognized by the 1948 Universal Declaration of Human Rights and the 1979 Convention on the Elimination of All Forms of Discrimination against Women" (FAO, 2020, p. 1).

194. Looking closer at the 2014 project document, it did not specifically formulate concrete gender equality outcomes for the results matrix, nor was there any reference to gender assessments or sex-disaggregated socioeconomic data. However, it is worth mentioning that one paragraph within the project document refers to FFS women cohorts to be elaborated by the project, including a specific curriculum designed for women. As such, the female cohort training module as an integral part within the FFS curriculum would address gender-specific issues related to food and nutrition security, and the necessity for women-centred knowledge building and information exchange (with opportunities for woman-to-woman learning) was emphasized. This would further include the enhancement of agricultural skills among the established FFS women cohorts. The aim was to create innovative knowledge tools for rural women. This involves sharing traditional knowledge and increasing awareness on conservation issues in order to reduce women's vulnerability to climate change. According to the proposals in the 2014 project document, at least one demonstration site for each FFS would be introduced specifically for women and, ideally, operated by a woman (FAO & GEF, 2014, pp. 49–50).

195. These projected results could just partially be confirmed by the Evaluation Team. None of the gender-based activities could be reported at the project's midterm. However, the project made some considerable efforts for Component 3 (see section 3.2): 31 FFS were elaborated, including a total of 114 females (representing 16 percent out of 715 participants). However, the FFS pilot sites visited during the mission were all represented

by men. According to documents received, it may not be concluded if one demonstration site specifically for women in each FFS is in place. The 2021 PIR references the socioeconomic survey and a Gender Action Plan elaborated by the project to support the government with gender sensitization trainings, as outlined under Component 3 (see section 3.2). A follow up to the measures initiated is highly recommended. In addition, a general manual for FFS elaboration and one adapted manual for winter crops may be validated. There appears to be no gender-specific curriculum. Merely one brochure (FAO, 2022a) reporting on the cooperatives may be noted.

196. Although the project made remarkable strides towards the greater involvement of women, their participation remained below expectations. This observation may be underpinned by the fact that equal gender participation was perceived as either challenging or totally unaddressed by the (male) interviewees during the mission. Observations with authorities point to an absence of female executives, and it may be concluded that this fact also negatively affected a timely and particular focus on the gender dimension.

197. Also, and with reference to the MTR, the project had failed to stimulate the dimension on gender mainstreaming from the onset. Nonetheless, this would have been particularly important as patriarchal power structures are common in the rural parts of the country. The fact that key implemented activities primarily focused on farming techniques (using machines and other technical equipment) that are mainly subject to domains traditionally headed by men also seemed to have negatively affected the inclusion of the gender dimension.

198. The project elaborated two women-led cooperatives with a total of 68 women for income generation activities (see section 3.2). As a result of delayed project implementation, positive long-term effects have yet to be determined. However, the interviewed beneficiaries of the cooperative in Emirgazi seemed very enthusiastic about the gained knowledge and the incentives for tools and equipment received through the project. Optimistic women highlighted the importance of the e-marketing capacity building programme. As such, the great underlying potential for activities to be expanded and replicated to other areas may be underpinned. From this perspective, recent interventions are likely to be successful – especially since the mayor of Emirgazi is fully in favour of supporting the women's initiatives. Indeed, this was evident during the mission.

199. The absence of women in afforestation activities was emphasized during the MTR. Reconsideration and appropriate planning of the gender inequality reduction dimension seem to have not taken place. This observation may be confirmed by the Evaluation Team as it still remains unclear if women in particular were addressed. The number of participants having benefitted from afforestation trainings are either incomplete or not available. In addition, the data indicated was not disaggregated by sex.

200. The FAO Policy on Gender Equality 2020–2030 confirms: "(…) across regions rural women still face major gender-based constraints that limit their potential as economic agents and their capacity to reap the full benefits of their work. The root cause of these discriminations lies in social norms, attitudes and beliefs, which shape how women and men are expected to behave, the opportunities that are offered to them and the aspirations they can pursue. (…) Land is perhaps the most important economic asset for which this gender gap is evident: women still account for less than 15 percent of agricultural landholders in the world. Disparities are also noticeable when it comes to different page types of agricultural

support services, be it extension, financial, or business development. While the need to disseminate innovative technologies and sustainable practices is increasing by the day, rural women still struggle to access simple life-changing technologies" (FAO, 2020, p. 4).

201. The document further claims: "Participation alone, however, might not be sufficient to ensure that women's needs and demands are effectively addressed and translated into action. The objective therefore aims to enhance women's leadership and decision-making power within institutions and governance mechanisms at all levels and increase their involvement in the formulation of legal frameworks, policies and programmes" (FAO, 2020, p. 6).

202. Regarding other vulnerable groups, the project design planned several activities targeting nomadic people. The planned interventions would have involved not only better living conditions through the provision of solar panels in four or five nomadic family houses or tents but also trainings about planned grazing, grazing techniques, fodder species, animal husbandry and health, biodiversity conservation, land tenure and land legislation. Some incentives were provided, but it is not clear as to what extent these minority groups were addressed by the project (see section 3.2). As outlined, from the initial 100 targeted nomadic shepherds, the project implemented the following: a rotational grazing field day in Cihanbeyli for 70 farmers; six FFS sessions on rotational grazing with the participation of 63 farmers; and a workshop on rotational grazing and information on the benefits of manure and windbreaks for a total of 37 participants, including 12 farmers.

**Finding 27.** Erratic climate conditions and the lack of proper institutional coordination temporarily yet negatively affected timely project implementation. Nevertheless, the measures taken by the project positively contributed to mitigating connected risks.

203. The 2014 project document identified a high risk in the case of poor coordination of SLM activities. Indeed, these interventions would require close cooperation between institutional stakeholders. In the meantime, the project assessed this risk as low (see the recent 2022 PIR) as the merging of two separate ministries (agriculture and forestry) and the shift of the Project Lead Institute to the Ministry of Environment, Urbanization and Climate Change significantly contributed to the efficient integration of climate change mitigation into SLM efforts. However, as an outcome of the mission, the Evaluation Team had a different opinion, namely that, overall, the forestry activities were more dominant and better aligned with biodiversity conservation objectives than the agricultural components.

204. While the project design assessed a medium risk in terms of "weak capacity of local and national institutions" (including staff capacity and the limited knowledge of new technologies), the project team recently assessed this uncertainty as low. It was justified by the good results of successful capacity building programmes within institutions at both the central and local level. The Evaluation Team found adequate evidence for this rating. However, this requires long-term impact assessments to provide sufficient indication if institutional memories are effectively sustained.

205. Another medium risk during project design was identified for natural calamities, such as drought and floods that could impede the adoption of new technologies. This risk was to be mitigated by a multiyear intervention, allowing for demonstrations to run over several

seasons (FAO & GEF, 2014, p. 54).[78] The Evaluation Team found sufficient evidence that this risk had even slightly increased because of COVID-19, causing delays in implementation. However, it is not just that: extreme drought conditions during 2021 severely affected the performance of field demonstrations.

206. The project's risk in terms of climate change was assessed as low. It was anticipated that the project would successfully adopt new technologies due to evolving research on good practices and the support of FAO expertise. This would then bolster political support. Indeed, this rating may be justified – but it was also found to be too optimistic. There are immense challenges connected to climate change. Many of them cannot be tackled by new technologies alone. Nonetheless, the project significantly contributed to raising awareness among decision makers.

207. The risk of low ownership at different levels was largely mitigated by the capacity building programmes that had been coupled with SLM approaches. Before the project started, the government had already put in place different incentives for conservation agriculture and land rehabilitation, including equipment, as well as support for private afforestation and nursery development. The project pursued a holistic approach by linking to these existing programmes. Scaling up interventions and increasing the project's visibility will, however, be relevant to increase ownership in the long term.

208. Cross-cutting issues:

i. assessment of gender and other equity dimensions: MU–MS;
ii. assessment of human rights issues/Indigenous Peoples: UA; and
iii. assessment of ESS: S.

[78] Also, the project was planned to be linked to the early warning services of the Ministry of Agriculture and Forestry.

# 4. Conclusions and recommendations

## 4.1 Conclusions

**Conclusion 1.** The project was found to be particularly innovative. In fact, it was the first of its kind to address important concerns on biodiversity, land degradation and climate change at once. Following successful interventions, the project showed positive evidence of high ownership. However, policy integration among the various sectors (agriculture, forestry, biodiversity conservation) will not easily be sustained if overlapping responsibilities and fields of competence on the various agricultural and forestry departments under the Ministry of Agriculture and Forestry are not clearly defined.

209. The project developed decision-making tools for SLM in forests and pastureland. This aimed to deliver integrated synergies where biodiversity, land degradation and climate change concerns intersect. Private and public stakeholders became more knowledgeable about the impact of human activities on natural resources in the KCB.

210. The project significantly helped to form the foundation of long-term agriculture, forestry, natural resources and biodiversity management strategies and initiatives in the country. The set objectives are inherent, ongoing duties of the respective public authorities. The connected tasks to combat climate change and to implement climate change adaptation measures in agriculture and pasture management are most likely to continue.

211. However, as a consequence of overlapping responsibilities on pasture and steppe management, policy integration between agriculture and pasture management and biodiversity conservation do not surface as apparent outcomes that may easily be sustained. High staff turnover, especially when different ministries merge or are split, carry some risk of weak institutional memory. This impedes the stability of the initiated interventions.

**Conclusion 2.** The project revealed high relevance on Türkiye's national environmental goals and priorities relating to the SDGs. The interventions and connected $CO_2$ savings positively illustrated new approaches for sustainable land and natural resources management. This represents a huge potential for catalysing a new era of climate-friendly agriculture.

212. The project is entirely in line with Türkiye's 2050 net zero carbon goal and fully consistent with FAO strategic objectives and the GEF's strategic priorities. Further, the project aligns with Target 15.3 of the SDGs, adopted in September 2015,[79] and significantly supports the country in reinforcing and meeting its obligations under several international and environmental conventions. The project's carbon mitigation objectives set through biogas digesters, afforestation, land restoration, direct seeding and the planting of local, native species substantially contributed to considerable emission reduction. Due to the integration of landscapes into natural resources management practices, 91 370 tonnes $CO_2$ equivalent are sequestered per year. One of the main results was the doubled rehabilitated surface area of degraded forest and the numerous rehabilitation demonstrations, including the FSC certification for low-density forest and pastureland. Considerable awareness raising was seen among the government authorities. The replication of the developed EIFMP and its six subplans, providing relevant key data and information for biodiversity management

[79] By 2030, the goal is to combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.

planning based on international good practices, will be key in identifying other strategic locations within the KCB to further stimulate SLM in the country.

**Conclusion 3.** The project was exemplary in turning theoretical knowledge into practice-oriented demonstrations. As a result, there is high project acceptance by both the beneficiaries at the grassroots level and the lead executing authorities.

213. With almost 60 000 ha of arable land under conservation agriculture in the KCB, this project introduced innovative agricultural land rehabilitation technologies that produce sustainable land use, climate change and biodiversity conservation benefits. Models for conservation agriculture demonstrations focused on: no-tillage and improved crop management practices like drip irrigation; crop rotation; the planting of drought-resistant crops; the creation of windbreaks; live fences; or direct seeding with drought- and winter-tolerant and nitrogen fixing leguminous crops. The project extensively demonstrated methods on how to combat desertification and create more optimal habitat conditions for the conservation of the endangered great bustard in the agricultural lands of the Sarayönü District.

214. Moreover, drip irrigation and programmed irrigation system demonstrations on the yield, energy efficiency and efficient water utilization within the scope of this project resulted in up to 30 percent water and energy savings for the most water demanding regional crops of sugar beet and maize grain. This included yield increases of 9 percent and 30 percent respectively. Hence, projections by irrigation experts even calculated 700 billion $m^3$ of water savings if programmed irrigation schemes would be expanded to the entire KCB.

**Conclusion 4.** The participatory processes in the selection of beneficiaries and importance given to project inclusiveness were not very satisfactory.

215. Provincial and local governmental stakeholders and target communities at the project pilot sites do not seem to have been sufficiently consulted at its design stage. The only NGO with an active role in the project was the DKM. In addition, the originally foreseen National Stakeholder Committee that would have provided consolidated advice (policies, actions, measures) on stakeholder participation and engagement at the community level never became operational.

216. The level of participatory processes in the identification of field and pasture demonstration sites for conservation agriculture, as well as the pilot villages and small- and medium-sized farms for methane digester investments, remained largely unclear. It was observed that "leading businesses" and farmers who were seen as "influencers" or "more advanced" were given priority in the selection process. This approach falls short of participatory decision-making, leaving the selection criteria rather one-sided. However, this can also be seen as the general challenge of large-scale projects dealing with timeline pressures.

**Conclusion 5.** The FFS was identified as one of the main achievements of the project. In fact, the Evaluation Team found remarkable evidence that the provided models had been adopted by the local beneficiaries and are likely to be continued by both FAO and the Ministry of Agriculture and Forestry as a programme jointly run – potentially in partnership with the private sector. In practical terms, however, the inefficient maintenance services for no-tillage equipment and machinery support that needed to be purchased abroad were considered particularly challenging. The recommended use of herbicides (Roundup) in FFS manuals were found to be less supportive of the project's conservation agriculture objectives.

217. An innovative, globally tested and participatory model of FAO was introduced with the FFS. This provided a conduit for the continued delivery of agricultural learning between government staff, farmers and producers. As a result of the interventions, 1 000 farms adopted new practices that support SLM, climate change mitigation and biodiversity. This is an increase of 50 percent compared to the envisaged 500 farmer households applying improved techniques. Nevertheless, success stories springing from these capacity building events, extensions and other project activities merit more credit and should be strongly highlighted in order to increase the project's multiplier effect and visibility.

218. Due to FAO procurement procedures and technical clearance for materials above a certain amount, one of the no-till drills had to be purchased from abroad. This proved to be very inefficient. However, increasing the availability of no-till drills in the KCB and defining an operating model for their shared use is a key issue to be tackled in the near future.

219. The reported use of Roundup that had boosted $CO_2$ emissions during the trials' emission calculations is not supportive of the overall project objectives. Combined with other inputs (pesticides, fertilizers, seeds) whose manufacturing involves significant $CO_2$ emissions, the use of Roundup in no-till farming and synthetic fertilizers in FFS training materials are, in the long run, ecologically unsustainable.

**Conclusion 6.** The project neglected to introduce appropriate incentives for women's engagement from the outset. At the same time, many of the project's demonstrations showed positive income generation results that are likely to spread to other farmers. The project's income generation and gender action plans include important activities to improve living conditions.

220. The participation rate of women farmers in the FFS remained low throughout the project. The efforts undertaken by the project towards the greater encouragement of motivated women engaging in income generation activities are promising. However, this will need to continue with significant reinforcement. In addition, the latest data on income for different activities, as proposed by the Income Generation Plan, will need to be made available with particular focus on women's needs. Women still face various restrictions locally, especially when it comes to accessing financial resources, attending activities or shaping decisions. The minimal engagement throughout the project with women farmers was attributed to the predominantly traditional roles among local communities. This is linked to the high mechanization of agriculture in the KCB, where women mainly take part in handwork activities.

221. Income generation activities, such as the programmed irrigation schemes, showed positive results through avoided costs. The same applies to the FSC certification obtained for the low-density forests at the Ereğli pilot site, which aimed to ensure added value to the non-wood forest products produced by the inhabitants and villagers of the area. The effects of rehabilitating degraded forests will be more evident after project closure. By planting nut trees, the project has aimed to provide additional income sources for households near the new orchards. Also, other quickly growing tree species that decrease wind erosion will be realized in the near future. Alternatively, farm-scale biogas digester potential for being scaled up remains uncertain. Setting up such systems require technical expertise and depend on substantial investments that average farming households in the KCB cannot afford.

**Conclusion 7.** Significant delays in overall project implementation and the long-term effects of numerous interventions, such as rotational grazing, biogas digesters and women's cooperatives,

could not be assessed conclusively. The delivery of expected outcomes within the planned timeframe would have been more effective if a detailed reconsideration of the overambitious results matrix had been made during the initial phase of project implementation.

222. Delays due to the late launch of the project and, later, COVID-19, impacted the delivery of the expected outcomes within the planned timeframe. As such, the rotational grazing demonstrations' success and their potential for scaling up, the long-term effects of installed biogas digesters and the impact on the established women's cooperatives have yet to be assessed.

223. The initiated activities also considerably slowed down as a result of FAO procedures and administrative rules that were reportedly too rigid and cumbersome. In particular, this relates to tenders for the procurement of materials and services, causing additional delays in project implementation.

**Conclusion 8.** The Evaluation Team found no evidence of the project's existing communications platforms, and the provided link for the website is dysfunctional. In addition, insufficient internal communication negatively affected general operational mechanisms between the central and provincial levels to manage the project jointly and efficiently in collaborative efforts.

224. Although the project is known to have produced a significant range of communications tools and materials (FFS training materials, videos from field demonstrations, good practices guides), they are not available electronically through various platforms. In addition, the project's website could not be confirmed as functional. However, national and local media have been used very effectively.

225. Some of the consulted documents also point to the lack of transparency and mutual accountability arising from the inefficient communication of activities and goals. This is not just externally among potential beneficiaries but also internally among project stakeholders.

**Conclusion 9.** The project has high potential to be scaled up. Conservation agriculture and integrated land management are approaches that have already been taken up by governmental funding programmes. Most likely, they will be also financed by international or bilateral donors.

226. Conservation agriculture implementation, integrated pasture management, biogas digester models, and FFS pilot demonstrations are highly likely to continue being funded under different governmental umbrella instruments. This also includes the Ministry of Agriculture and Forestry's intention to continue to expand this project to other places in Türkiye under the GEF-8 phase.

227. The project was anticipated to successfully adopt new technologies due to evolving research on good practices and the support of FAO expertise. This would then bolster political support. Nevertheless, the adoption of new technologies alone cannot halt the irreversible effects of climate change, especially in a vulnerable region like the KCB. The need to include measures for the establishment of further protected areas will be of utmost importance.

**Conclusion 10.** The project still needs to finalize a sound handover strategy. This needs to be geared towards decision makers, closely aligned with decision-making tools, and detail how the project monitoring system will be mainstreamed within standard government operating systems.

228. Over the course of the evaluation, it remained unclear as to how some of the project-led initiatives will be taken on politically. This poses a serious concern considering that many of the well-prepared management plans by the public institutions in Türkiye fail to be put into effective implementation backed by monitoring schemes. The handover plan is also expected to specify the financial and economic factors required to advance project-initiated activities that can fully absorb and continue the identified good practices. This also includes a critical review of all plans elaborated by the project, for example, the EIFMP and its six subplans.

229. Some project elements do not reflect a clear way forward. For rotational and sustainable pasture management to be scaled up throughout the KCB, the political will to manage and monitor these ecosystems does not surface compared to forest and agricultural ecosystems. As such, the initially intended sectoral integration cannot be easily fulfilled if the higher policy ground to manage the commons does not exist. In this respect, adaptive measures, benefitting both climate change mitigation and biodiversity conservation, that have been successfully put forward and demonstrated by the project, remain modest.

230. The scaling up of interventions to increase the visibility of successful outcomes is imperative to maintain ownership in the long term. As demonstrated, the continuous mainstreaming of SLM into national planning and policy frameworks is highly dependent on collaborative cooperation between institutional stakeholders. In this sense, strong and sincere political willingness remains essential.

## 4.2 Recommendations

### 4.2.1 Actions to follow up or reinforce initial project benefits

**Recommendation 1.** Operational: the Ministry of Agriculture and Forestry should develop an overarching monitoring programme that integrates all three project components in order to systematically assess the KCB's environmental state.

231. An overarching, integrated monitoring scheme in the basin and, ideally, nationwide, should be developed to overcome policy integration challenges that the project has started to address successfully. An integrated water basin management approach and strategic environmental impact assessments can ensure that further expansion of agricultural surface area in the basin and its encroachment on not only freshwater aquifers but also traditional landscapes are avoided. The defined strategic targets within the Biodiversity Management Plan were developed as a result of the project. This involves pastures, wetlands, protected areas, agricultural areas and forests in the KCB that should be used.

**Recommendation 2.** Strategic: FAO should advocate for the Ministry of Agriculture and Forestry to establish concrete policy response measures against urgent environmental extremes in the KCB. From the government's perspective, intraministerial and intradepartmental cohesion efforts should be mobilized to achieve policy integration between agriculture and pasture management and biodiversity conservation.

232. FAO should encourage the main project partners to tackle the core of the freshwater management issues in the KCB. Establishing economic incentives for farmers to gradually cease the production of freshwater-dependent crops regionally or – the use of fees or penalties for not abiding – can be among these instruments. Furthermore, technical know-how generated throughout the project, especially experiences gained in maintaining and

increasing soil fertility via conservation agriculture, ought to feed more high-level public policy measures. This includes the country's recently established Basin-based Agricultural Subsidy Scheme to determine the crops to be subsidized in the water basins based on various groundwater and precipitation data.

233. Due to overlapping responsibilities on behalf of the project's lead agencies on pasture and steppe management, intraministerial and intradepartmental cohesion efforts should be mobilized to achieve policy integration between agriculture and pasture management and biodiversity conservation. This needs to be evaluated through a set of agreed upon, common indicators across various general directorates.

**Recommendation 3.** Operational: the Ministry of Agriculture and Forestry and FAO should continue and spread the FFS model in collaboration with local, regional and national agricultural authorities and through private sector engagement in the KCB.

234. The FFS model should be replicated across the entire basin and nationwide by strategically prioritizing and targeting areas of concern in terms of biodiversity, as well as water scarcity or other key factors learned from the project. On-farm response capacities to climate change should continue to be strengthened with multiparty collaborations that engage the local and regional agricultural directorates, as well as the private sector.[80]

**Recommendation 4.** Operational, targeting "Leaving No One Behind": the Ministry of Agriculture and Forestry provincial directorates should develop a specific operating model for the fair use, sharing and distribution of agricultural machinery procured during project implementation.

235. In order to facilitate the wide use of agricultural machinery, particularly no-till machines in the KCB, a specific operating model for their fair use, sharing and distribution is of utmost importance. Ideally, this model should define the parties responsible for their upkeep and maintenance. Farmers renting them for a nominal fee is one possibility. This would assure that farmers return the machines promptly and provide resources for the maintenance of the machines. If the rent is high enough, this may also provide resources to purchase more machines. This type of operating model should be solidified with the involvement of district and provincial agricultural authorities, local chambers of agriculture, the TRGM, and FAO.

**Recommendation 5.** Strategic: FAO should develop more sustainable communications strategies and reinforce related tools to make the project more visible and leverage substantial change through increased public awareness and the demonstration of transformative practices.

236. A comprehensive communications strategy was not implemented during the project. The multiplier effect of successful and transformative practices, such as SLM, rangeland restoration and conservation agriculture practices should be disseminated through much stronger communication tools as part of the exit strategy. This could involve an internet-based knowledge management system, such as a website or a portal for making materials easily accessible, news pieces, short films, public service announcements, documentaries in various media, and social media networks. For instance, the Ministry of Agriculture and Forestry operates an agriculture television channel. NGOs, such as the project partner DKM, have a strong social media presence. These tools should be used to disseminate

[80] Private initiatives in the KCB are represented through several agricultural development cooperatives and unions: irrigation unions; agricultural production cooperatives; agricultural credit cooperatives; and sugar beet cultivator unions. These cooperatives, which mainly serve members to boost agricultural production and provide extension services for farm development, represent the beneficiaries and were an important part of the project's baseline.

demonstration results more widely and to leverage for substantial and lasting change, not only on local but also regional and national levels.

### 4.2.2 Proposals for future directions

**Recommendation 6.** Strategic: FAO should set clearer standards of conservation agriculture in training materials.

237. As a practice, the project's training and educational materials (brochures and curricula targeting farmers) recommend the use of pesticides, herbicides and synthetic fertilizers with little effort on the promotion of more nature-based solutions to improve soil conditions. A business-as-usual approach to agriculture underlines the tone of these guidelines that are specifically designed for the KCB. FAO's Subregional Office for Central Asia is responsible for providing guidance and advocacy. Indeed, they should reinforce more holistic, sustainable standards for soil and biodiversity conservation and strongly encourage these instead (FAO, 2019b; FAO and WHO, 2014).

**Recommendation 7.** Operational: FAO should integrate gender equality concerns during project design, and the Ministry of Agriculture and Forestry should prioritize and engage with gender-transformative approaches in their work plans.

238. Closing the gender gap in agriculture is essential to fulfil FAO's mandate and overcome the "persistent gender inequalities that undermine rural women's potential" (FAO, 2020, p. v) This policy holds FAO accountable for systematically integrating gender equality as a priority in its strategic framework and related implementation mechanisms. A Gender Action Plan was prepared by the project and actively seeks to redress unequal power dynamics by challenging discriminatory social norms, behaviours and attitudes in the KCB. The gender gap, however, has not been addressed sufficiently. Rather, actions have been formulated towards income generation objectives for women beneficiaries in selected pilot areas. It is recommended that income generation is not equated with gender empowerment in future work and projects conducted through GEF funding. Gender inequality reduction should therefore be a critical part of project design and implementation. However, participation alone will not be sufficient to ensure women's needs. The overall objective should aim to enhance women's leadership and decision-making power at all levels – also regarding their involvement in legal framework, policy and programme formulation.

**Recommendation 8.** Operational: FAO should enhance procurement planning and provide procurement support at an early stage of project implementation in order to minimize administrative hurdles and expedite the process.

239. Procurement and contract hurdles within the FAO system led to high staff turnover during the entire implementation period, causing a number of delays. The project design and work plans did not sufficiently take into account administrative hurdles within FAO. This significantly impacted the timely implementation of activities and, in some cases, led to project ownership issues. FAO's Subregional Office for Central Asia and FAO headquarters should provide mutual support with appropriate measures to be taken in order to enhance procurement planning and identify potential risks. Extra time for the implementation of planned activities is also recommended.

# 5. Lessons learned

240. Some of the project's activities and approaches stand out as good practices. These are noteworthy for broad replication.

241. Turning the theoretical knowledge of "how agriculture should be done" into a synchronized, hands-on practice in the field is key. This involves planting and production cycles at the pilot sites through the FFS. Indeed, this appears to be the project's strength. The collaborative implementation of tangible field-level interventions led to high ownership of the project across the KCB and is most likely to be continued by the relevant project partners.

242. The project has demonstrated that biodiversity mainstreaming in forest and rangeland management and restoration practices is possible. Indeed, it can be considered a model, developed for the first time for use throughout Türkiye in terms of biodiversity management planning.

243. The project has helped the understanding and internalization of the term "conservation agriculture" and the relevant technical implementations that accompany this approach: no-tillage, windbreaks, biogas digesters and programmed irrigation schemes. These are used throughout the executing partners' work agenda. The KCB and other drought-sensitive zones in the country can benefit from these lessons.

244. Some of the project's activities and approaches illuminated certain problems that should be avoided in the future.

245. Key machinery required for conservation agriculture and, ultimately, climate change mitigation, such as no-till drills, should be procured within the country. This way, their repair and upkeep are more feasible and quicker. Indeed, it can respond to both the real needs of the farming communities and the provincial public bodies whose duty is to ease such implementations.

246. More economic incentives need to be developed to promote conservation agriculture and biogas digesters at the farm level since the costs remain too high for the average farming communities of the KCB. Enhancing the strength of cooperatives or unions can make these initiatives more economically viable, as with the milk production cooperative in Karaman.

247. Knowledge management techniques deployed by the project fell short of reaching out to wider audiences and disseminating results from the outset. The project did not build a website. Here, all the valuable educational materials produced as part of the FFS and other synthesized technical reports on conservation agriculture, sustainable rangeland management, SFM or integrated biodiversity conservation planning could be reached during and after the project's lifetime. The lack of such a website limits the possibility for disseminating these knowledge products.

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# Appendix 1. List of people interviewed

| Surname | Name | Institution | Department/division | Position | Date of interview |
|---|---|---|---|---|---|
| Arısoy | Rıfat Zafer | Ministry of Agriculture and Forestry | BDIARI | Technical Expert | 20 October 2022 |
| Aydın | Samet | Ministry of Agriculture and Forestry | TRGM, Climate Change Division, Ankara | Division Director | 25 October 2022 |
| Aydoğan | Abdülkadir | Ministry of Agriculture and Forestry | General Directorate of Agricultural Research and Policies, Field Crop Research Unit, Ankara | Head of the Legume Breeding Unit | 25 October 2022 |
| Ayvaztekin | Ali | | FFS in Burunoba, Karaman | Farmer, FFS Member, Beneficiary | 22 October 2022 |
| Bal | Cafer | Ministry of Agriculture and Forestry | Konya Regional Directorate of Forestry | Regional Director, Local Executing Partner | 20 October 2022 |
| Çelik | Özlem | Emirgazi Women's Initiative Production and Business Cooperative (Karaman) | | Cooperative Chair, Project Beneficiary | 21 October 2022 |
| Dağdelen | Derya | Ministry of Agriculture and Forestry | General Directorate of the European Union and Foreign Relations, Foreign Relations Department, Ankara | European Union Expert | 25 October 2022 |
| Demir | Mehmet | General Directorate of Forestry | Forest Administration and Planning Department | Project Forest and Rangeland Consultant | 20 October 2022 |
| Doğan | Evren | Ministry of Agriculture and Forestry | General Directorate of the European Union and Foreign Relations, General Directorate of Agricultural Research and Policies, Ankara | Coordinator, M&E Expert | 25 October 2022 |
| Düşünceli | Fazıl | FAO Representation in Türkiye | Subregional Office for Central Asia (SEC), Ankara | Alternate LTO | 24 October 2022 |
| Erdem | Büşra | Emirgazi Women's Initiative Production and Business Cooperative (Karaman) | | Cooperative Member, Project Beneficiary | 21 October 2022 |
| Ergin | Ali | Ministry of Agriculture and Forestry | Konya Provincial Directorate | Director | 20 October 2022 |

| Surname | Name | Institution | Department/division | Position | Date of interview |
|---|---|---|---|---|---|
| Eryaşar | Ahmet | Ege University | Biomass Energy Systems and Technologies Application and Research Centre | Methane Digester Consultant | 20 October 2022 |
| Gezgin | Beran | Ministry of Agriculture and Forestry | Konya Provincial Directorate, Coordination and Agricultural Data Department | Project Staff (provincial) | 20 October 2022 |
| Gökcanlar | Göksel | Gokcanlar Farm | Karapınar | Farm Owner, Project Beneficiary | 20 October 2022 |
| Gonzales | Hernan | FAO headquarters, Rome, Itlay | Office of Climate Change, Biodiversity and Environment, Rome | FLO | 21 November 2022 |
| Gülmez | Bekir | Ministry of Agriculture and Forestry | Karaman Forestry Directorate of Konya Regional Forestry of the General Directorate of Forestry | Deputy Division Director, Business Assistant Manager | 20 October 2022 |
| Gültekin | İrfan | Ministry of Agriculture and Forestry | BDIARI | Technical Expert | 20 October 2022 |
| Güngör | Fatma | FAO Representation in Türkiye | Subregional Office for Central Asia (SEC), Ankara | NPC | 24 October 2022 and beyond |
| Gutu | Viorel | FAO Representation in Türkiye | Subregional Office for Central Asia (SEC), Ankara | Subregional Coordinator | 25 October 2022 |
| İmamoğlu | Özge | Ministry of Agriculture and Forestry | General Directorate of the European Union and Foreign Relations, International Organizations Department, Ankara | Department Head | 25 October 2022 |
| Irklı | Fatih | Demiryurt Development Cooperative (Karaman) | | Veterinary of the Cooperative, Member and Livestock Producer | 22 October 2022 |
| Kahraman | Emin | Ministry of Environment, Urbanization and Climate Change | ÇEM, Ankara | Deputy Director General | 24 October 2022 |
| Koçak | Nurişen | Emirgazi Municipality (Karaman) | Local government | Mayor | 21 October 2022 |
| Konukçu | Esat | | FFS in Burunoba, Karaman | Head of Village, Farmer, FFS Member, Beneficiary | 22 October 2022 |

| Surname | Name | Institution | Department/division | Position | Date of interview |
|---|---|---|---|---|---|
| Küçükcongar | Murat | Ministry of Agriculture and Forestry | BDIARI, Agricultural Economy Department | Department Head | 20 October 2022 |
| Kurt | Haydar | Ministry of Agriculture and Forestry | Konya Provincial Directorate, Coordination and Agricultural Data Department | Branch Manager and Provincial Focal Point, FFS Provincial Focal Point | 20 October 2022 |
| Lise | Yıldıray | Nature Conservation Centre | Ankara | Deputy Director General | 24 October 2022 |
| Onal | Çetin | Pasture Rehabilitation in Böğrüdelik, Cihanbeyli (Konya) | | Head of Village, Livestock Producer, FFS Member, Beneficiary | 22 October 2022 |
| Önen | Eda | Ministry of Agriculture and Forestry | General Directorate of the European Union and Foreign Relations, Foreign Relations Department, Ankara | European Unit Expert | 25 October 2022 |
| Özbek | Ali Kılıç | Ministry of Agriculture and Forestry | TRGM, Agricultural Environment and Natural Resources Conservation Department, Ankara | Department Head, Project Executing Partner | 25 October 2022 |
| Özdemir | Fatih | Ministry of Agriculture and Forestry | BDIARI | Director | 20 October 2022 |
| Özdemir | Ozan | Ministry of Agriculture and Forestry | General Directorate of the European Union and Foreign Relations, Foreign Relations Department, Ankara | European Union Expert | 25 October 2022 |
| Özveren | Erdoğan | FAO Representation in Türkiye | Subregional Office for Central Asia (SEC), Ankara | The GEF Portfolio Coordinator | 24 October 2022 |
| Pechacek | Peter | FAO Representation in Türkiye | Subregional Office for Central Asia (SEC), Ankara | LTO, Forestry Officer | 25 October 2022 |
| Pekdoğan | Kemal | Ministry of Agriculture and Forestry | TRGM, Agricultural Environment and Natural Resources Conservation Department, Ankara | Project Focal Point of Agricultural Reform, Agricultural Engineer | 25 October 2022 |
| Şahin | Batuhan | Ministry of Agriculture and Forestry | Ereğli Nursery and Greenhouse, Konya Regional Forestry of the General Directorate of Forestry | Forest Nursery Chief | 20 October 2022 |
| Şahin | Yasin | Pasture Rehabilitation in Böğrüdelik, | | Livestock Producer, FFS | 22 October 2022 |

| Surname | Name | Institution | Department/division | Position | Date of interview |
|---|---|---|---|---|---|
| | | Cihanbeyli (Konya) | | Member, Beneficiary | |
| Sayalan | İbrahim | Ministry of Agriculture and Forestry | Karaman Provincial Directorate | Provincial Focal Point, Provincial FFS Focal Point | 21 October 2022 |
| Sayma | Ramazan | | FFS in Burunoba, Karaman | Farmer, FFS Member, Co-facilitator, Beneficiary | 22 October 2022 |
| Selışık | Ayşegül | FAO Representation in Türkiye | Subregional Office for Central Asia, Ankara | Assistant FAO Representative | 25 October 2022 |
| Süheri | Sinan | Selçuk University | Farm Structure and Irrigation Department | Faculty Member | 20 October 2022 |
| Taş | Nurettin | Ministry of Environment, Urbanization and Climate Change | ÇEM, Ankara | Director General of Project Lead Institute | 24 October 2022 |
| Tas | Omer Faruk | FAO Representation in Türkiye | Subregional Office for Central Asia (SEC), Ankara | Logistics and Support Assistant | 21 October 2022 |
| Taşönü | Tolga | Ministry of Agriculture and Forestry | Ereğli Forest District, Konya Regional Forestry | District Chief | 20 October 2022 |
| Topçu | Tarık | Ministry of Agriculture and Forestry | General Directorate of the European Union and Foreign Relations, Ankara | European Union Expert | 25 October 2022 |
| Turan | Mutlu | Ministry of Agriculture and Forestry | General Directorate of Forestry, Ankara | Department Head of Afforestation | 24 October 2022 |
| Türker | Metin | Ministry of Agriculture and Forestry | General Directorate of Agricultural Research and Policies, Ankara | Acting Director General | 25 October 2022 |
| Velioglu | Hikmet | FAO Representation in Türkiye | Subregional Office for Central Asia (SEC), Ankara | Operations Associate | 24 October 2022 and beyond |
| Yaşar | Sami | Demiryurt Development Cooperative (Karaman) | | Cooperative Board Member, Project Beneficiary | 22 October 2022 |
| Yavuz | Duran | Selçuk University | Farm Structure and Irrigation Department | Associate Professor | 20 October 2022 |
| Yüksel | Burçak | Ministry of Agriculture and Forestry | General Directorate of the European Union and Foreign Relations, M&E Department, Ankara | Department Head | 25 October 2022 |
| Yüzer | İbrahim | Ministry of Agriculture and Forestry | General Directorate of Forestry, Ankara | Deputy Director General of the Executing Partner | 24 October 2022 |

# Appendix 2. Project results matrix

| Outcomes | Outcome indicator[1] | Baseline | MTR assessment (30 June 2017) | End-of-project target | Cumulative progress since project start level as of 30 June 2022 (and beyond) | Progress rating[2] |
|---|---|---|---|---|---|---|
| **Project objective: improve agriculture and forest land use management through the diffusion and adoption of low-carbon technologies that benefit biodiversity, land degradation and climate change, as well as increase farm profitability and forest productivity** | | | | | | |
| **Outcome 1: degraded forest and rangeland rehabilitated and management practices improved** | Land cover delivering global environmental benefits in the project target area as reported in the GEF land degradation tracking tool | 16 650 ha of vegetative cover<br>1 200 kg C per ha per year of biomass<br>30 trees per ha | N/A<br>N/A<br>N/A | 60 000 ha of vegetative cover<br>1 600 kg C per ha per year of biomass<br>50 trees per ha | 66 408 ha of vegetative cover<br>2 400 kg carbon per ha per year of biomass[3]<br>500 trees per ha | HS |
| | Avoided emissions and carbon sequestration delivering global environmental benefits in the project target area as reported in the GEF land degradation and climate change tracking tools | 20 000 ha of degraded forest targeted by the project<br>No arable land under conservation agriculture due to project intervention<br>No degraded rangeland or pastureland under improved management due to project intervention<br>No methane capture sites developed due to project intervention | 14 620 ha<br>11 000 ha<br>13 588 ha<br>N/A | 20 000 ha of degraded forest rehabilitated, capturing 43 600 tonnes $CO_2$ equivalent per year<br>40 000–50 000 ha of arable land under conservation agriculture, avoiding 25 000 tonnes $CO_2$ equivalent per year<br>30 000 ha of degraded rangeland and pastureland under improved management capturing 103 498 tonnes $CO_2$ equivalent per year[4]<br>8 000–10 000 tonnes $CO_2$ equivalent per year avoided from methane capture sites | 41 834 ha of degraded forest rehabilitated, capturing 91 370 tonnes $CO_2$ equivalent per year<br>**(Component 1)**<br>59 867 ha of arable land under conservation agriculture (41 467.5 ha conservation agriculture+18 399.5 ha manure application), avoiding 36 768 tonnes $CO_2$ equivalent per year<br>**(Component 2)**<br>24 574 ha of degraded pastureland rehabilitated, capturing 84 696 tonnes $CO_2$ equivalent per year<br>**(Component 1)**<br>Total methane capture is 518.80 tonnes $CO_2$ equivalent per year by considering 200 cattle on each farm. Hence, the systems mitigate | HS |

| Outcomes | Outcome indicator[1] | Baseline | MTR assessment (30 June 2017) | End-of-project target | Cumulative progress since project start level as of 30 June 2022 (and beyond) | Progress rating[2] |
|---|---|---|---|---|---|---|
| | | | | | 10 376 tonnes $CO_2$ equivalent over their service life (i.e. 20 years).<br>**(Component 2)** | |
| | Number of hectares of forest, pasture and arable land with biodiversity mainstreamed into management practices resulting from project investments at site level | Biodiversity mainstreamed into management practices covering:<br>0 ha forest<br>0 ha pasture<br>0 ha arable land | N/A | Biodiversity mainstreamed into management practices covering:<br>20 000 ha forest<br>30 000 ha pasture<br>30 000 ha arable land | Biodiversity mainstreamed into management practices covering:<br>69 147.3 ha of forest<br>122 314.5 ha of pasture<br>360 853.6 ha of arable land | HS |
| | Spatial coverage of integrated natural resources management practices in wider landscapes as reported in the GEF land degradation tracking tool | Spatial coverage of integrated natural resources management practices in wider landscapes:<br>0 million ha agricultural land<br>0 million ha pastureland<br>0 ha forest | N/A | Spatial coverage of integrated natural resources management practices in wider landscapes:<br>2.2 million ha agricultural land<br>1.8 million ha pastureland<br>700 000 ha forests[5] | Spatial coverage of integrated natural resources management practices in wider landscapes:<br>0.60 million ha of agricultural land<br>0.24 million ha of pastureland<br>69,147.3 ha of forest | MS |
| | Total emission reductions resulting from project-related forest and rangeland | 0 $CO_2$ equivalent per year mitigated as a result of improved rangeland and pastureland management | N/A | 66 000 tonnes $CO_2$ equivalent mitigated per year as a result of rehabilitated forests and improved rangeland and pastureland management | The project's total emission reduction for rangeland and pastureland: 91 370 tonnes $CO_2$ equivalent per year | HS |

| Outcomes | Outcome indicator[1] | Baseline | MTR assessment (30 June 2017) | End-of-project target | Cumulative progress since project start level as of 30 June 2022 (and beyond) | Progress rating[2] |
|---|---|---|---|---|---|---|
| | management improvements | | | | | |
| | Hectares of rehabilitated forest land sequestering $CO_2$ as a result of project investments | 0 ha of rehabilitated forest | 14 620 ha | 20 000 ha of forest land rehabilitated | 41 834 ha of degraded forest rehabilitated | HS |
| | Hectares of degraded rangeland and pastureland rehabilitated as a result of project investments | 0 ha of rangeland and pastureland rehabilitated | 13 588 ha | 30 000 ha of rangeland and pastureland rehabilitated | 24 574 ha of degraded pasture rehabilitated<br>No rangeland within forests according to national forestry legislation, so the target of 30 000 ha rangeland rehabilitation was compensated by rehabilitating an additional 20 000 ha degraded forest | S |
| | Measurable global biodiversity conservation benefits in the project target area as reported in the GEF land degradation tracking tool | Wetland in the pilot site is legally protected but no ecological restoration plan is in place | N/A | 6 680 ha of protected habitat managed under an ecological restoration plan | Restoration recommendation report completed for the Ereğli Marshes (Akgöl: 6 680 ha and Lake Meke: 202 ha) | HS |
| **Outcome 2: climate-smart agriculture** | Total hectares under conservation agricultural practices as a | 0 ha under project-driven conservation agricultural practices | N/A | 40 000–50 000 ha under project-driven conservation agricultural practices | 59 867 ha of agricultural land is under conservation agriculture through raised awareness and demonstrations | HS |

| Outcomes | Outcome indicator[1] | Baseline | MTR assessment (30 June 2017) | End-of-project target | Cumulative progress since project start level as of 30 June 2022 (and beyond) | Progress rating[2] |
|---|---|---|---|---|---|---|
| **techniques applied across productive landscapes** | result of project investments | | | | | |
| | Total emissions reduced as a result of project-driven conservation | 0 tonnes $CO_2$ equivalent reduced as a result of project-driven conservation agricultural practices | N/A | 23 000 tonnes $CO_2$ equivalent reduced as a result of project-driven conservation agricultural practices | 36 768 tonnes $CO_2$ equivalent as a result of expanding no-till practices, pasture rehabilitation, limited irrigation and improved crop management practices | HS |
| | Total amount of GHG emissions reduced as a result of project-driven livestock production improvements, including digesters | 0 tonnes methane emissions reduced | N/A | 10 000 tonnes $CO_2$ equivalent methane emissions reduced as a result of project-driven livestock production improvements, including digesters | Four biogas digesters are operational on four farms. The digester locations were selected based on the 100-cattle criteria. The total avoided emission is 10 376 tonnes of $CO_2$ equivalent over their service life (20 years). Currently, the work is in progress to increase the capacity of each digester to 200 cattle.<br>(When installed, the systems were operating under mesophilic conditions (i.e. up to 38 °C). Tests were conducted to increase the capacity of the systems to operate under thermophilic conditions. The results revealed that the systems could work under thermophilic conditions (up to 50 °C). The duration of fermentation (28 days under mesophilic conditions) was therefore reduced to 14 days. The halving of the fermentation period led to an increased system capacity from 100 to 200 cattle. | S |
| | Number of livestock or poultry producers and number of livestock contributing to digesters as a | Zero livestock or poultry producers and zero head of livestock contributing to digesters | N/A | Four livestock or poultry producers and 1 200 head of livestock contributing to digesters (adjustment to project strategy) | Four biogas systems were established on four farms. The total number of contributing cattle heads is 4 040 (cattle heads contributing to the systems on four farms in 2020, 2021 and 2022). | S |

| Outcomes | Outcome indicator[1] | Baseline | MTR assessment (30 June 2017) | End-of-project target | Cumulative progress since project start level as of 30 June 2022 (and beyond) | Progress rating[2] |
|---|---|---|---|---|---|---|
| | result of project investments | | | | The number of livestock producers are 33, including 30 members of a cooperative. | |
| **Outcome 3:** **enhanced enabling environment for SLM** | Number of farm or ranch households adopting improved practices that support SLM, climate change mitigation and biodiversity | Number of farm or ranch households adopting new practices that support SLM, climate change mitigation and biodiversity:<br>zero males<br>zero females | N/A | Number of farm or ranch households adopting new practices that support SLM, climate change mitigation and biodiversity: 500 | One thousand farm households adopted new practices (confirmed by the Konya and Karaman provincial directorates). | HS |
| | Number of FFS participants | Number of FFS participants:<br>zero males<br>zero females | Number of FFS participants (by gender):<br>120 males<br>60 females | Number of FFS participants:<br>Target: 31 FFS x average 20 members -> 620 participants<br>Since the original target of 1 250 FFS participants seemed unrealistic, the 2017 assessment concluded to reduce this number. No target was identified for female farmers, however, the project tried to increase the number of female farmers. | 31 FFS completed<br>The total number of FFS participants is 715 (601 males and 114 females).<br>The sessions planned for the second half of 2021 could not be conducted due to COVID-19.<br>The FFS approach was also implemented in drought-tolerant varieties of legume demonstrations under Component 2.<br>(Recent sessions in the summer of 2022 include five trainings in five districts (Cihanbeyli, Sarayönü, Karapınar, Karaman, Ayrancı) on winter- and spring-sown lentils and chickpeas (with 125 farmers and six technical experts). | HS, however, MU to MS for women's engagement |
| | Capacity strengthening to enhance a cross-sector enabling environment for | Capacity strengthening to enhance a cross-sector enabling environment for an | Institutional, integrated management capacity building programme established for national | Capacity strengthening to enhance cross-sector enabling environment for integrated landscape management score of 2 | The EIFMP, the Biodiversity Management Plan, and the Identification and Qualification of Ecosystem Services were completed.<br>The SLM board was rejected because alternative options are already in place. | S |

| Outcomes | Outcome indicator[1] | Baseline | MTR assessment (30 June 2017) | End-of-project target | Cumulative progress since project start level as of 30 June 2022 (and beyond) | Progress rating[2] |
|---|---|---|---|---|---|---|
| | an integrated landscape management score as reported in the GEF land degradation tracking tool | integrated landscape management score of 1 | and local decision makers<br>number of decision makers trained in SLM: 11 | | | |
| | Forest policy enhancement score as reported in the GEF land degradation tracking tool | Forest policy enhancement score of 2 | N/A | Forest policy enhancement score of 2 | An improved EIFMP based on international good practices (national level) and a concept proposal and rehabilitation strategy for dryland forestry (site level) were completed. | MS |
| | Agriculture policy enhancement score as reported in the GEF land degradation tracking tool | Agriculture policy enhancement score of 2 | N/A | Agriculture policy enhancement score of 3 | A rehabilitation strategy for the KCB and good practices guidelines were completed (site level). The SLM board was rejected because alternative options were already in place. Also, SLM good practices were funded nationally. | MS |

*Notes*: [1] This is from the approved results framework of the project.

[2] This is based on the required six-point scale system from the GEF: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); and Highly Unsatisfactory (HU).

[3] Data are extracted from the EIFMP developed under the project. This reflects the carbon stock calculated per hectare of degraded forest from the plan.

[4] The National Forestry Law states that rangeland cannot legally exist within forests. Therefore, the rangeland target is compensated by increasing degraded forest rehabilitation.

[5] The project's end target covers the entire basin, not the pilot sites.

# Appendix 3. Rating scheme[81]

### PROJECT RESULTS AND OUTCOMES

*Project outcomes are rated based on the extent to which project objectives were achieved. A seven-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 for an assessment of the level of outcome achievements. |

### PROJECT IMPLEMENTATION AND EXECUTION

Quality of implementation pertains to the role and responsibilities discharged by the GEF agencies that have direct access to the GEF resources. Quality of execution pertains to the roles and responsibilities discharged by the country or regional counterparts that received the GEF funds from the GEF agencies and executed the funded activities on the ground. The performance is rated on a seven-point scale.

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

[81] See instructions provided in Annex 2. Rating scales in the guidelines for GEF agencies in conducting terminal evaluations for full-sized projects, April 2017.

**MONITORING AND EVALUATION**

The quality of project M&E is assessed in terms of design and implementation.

**SUSTAINABILITY**

Sustainability will be assessed by taking into account the risks related to the financial, sociopolitical, institutional and environmental sustainability of project outcomes. The evaluator may also consider other risks 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. List of documents consulted

**The GEF annual PIRs**

- July 2015–June 2016
- July 2016–June 2017
- July 2017–June 2018
- July 2018–June 2019
- July 2019–June 2020
- July 2021–June 2022
- July 2022–June 2022

**Biannual project progress reports**

- January–June 2015
- July–December 2015
- January–June 2016
- July–December 2016
- January–June 2017
- July–December 2017
- January–June 2018
- July–December 2018
- January–June 2019
- July–December 2019
- July–December 2020
- July–December 2021

**Project steering committee meeting reports**

- Final evaluation and no-cost extension meeting. 18 August 2021.
- Ministry of Forest and Water Affairs: first project steering committee meeting. 8 December 2015.
- TRGM: second project steering committee meeting. 7 June 2016.
- Written stakeholder feedback. 2016.
- Project steering committee meeting minutes: fourth project steering committee meeting. 27 October 2016.
- Ministry of Forest and Water Affairs: fifth project steering committee meeting. 19 March 2018.
- Project steering committee meeting report: sixth project steering committee meeting. 6 March 2019.
- Project steering committee meeting minutes: seventh project steering committee meeting. 7 October 2021.

**Project Task Force meeting minutes**

- Project Task Force meeting minutes. 9 November 2015.
- Project Task Force meeting minutes. 18 September 2015.
- Project Task Force meeting minutes. 11 January 2016.
- Project Task Force meeting minutes. 9 April 2016.
- Project Task Force meeting minutes. 13 January 2016.
- Project Task Force meeting minutes. 10 May 2017.
- Project Task Force meeting minutes. 28 February 2018.
- Project Task Force meeting minutes. 26 March 2020.

**Review meeting minutes**

- Meeting minutes. 5 February 2016.
- Minutes of review meeting. 5 May 2016.
- Weekly project review meeting. 18 September 2018.
- Meeting minutes. 17 October 2018.
- Weekly project status update meeting. 15 November 2018.
- Weekly project status update meeting. 9 January 2019.
- Weekly project status update meeting. 5 February 2019.
- Project review meeting. 22 April 2019.

- Project review meeting. 15 November 2019.
- Project review meeting. 12 December 2019.
- Project review meeting. 10 January 2020.
- Project review Zoom meeting. 19 March 2020.
- Weekly review meeting. 24 April 2020.
- Weekly review meeting. 5 May 2020.
- Weekly review meeting. 15 May 2020.
- Weekly review meeting. 22 May 2020.
- Weekly review meeting 11 June 2020.
- Weekly review meeting. 24 June 2020.
- Weekly review meeting. 19 August 2020.
- Weekly review meeting. 2 September 2020.
- Weekly review meeting. 21 September 2020.
- Weekly review meeting 11 November 2020.
- Project review meeting. 19 November 2020.
- Project review meeting. 8 January 2021.
- Project review meeting. 28 June 2021.
- Final evaluation and no-cost extension meeting. 18 August 2021.

**Financial reports**

- FAO. Total co-financing. 1 July 2017 and 30 June 2018.
- FAO. Total co-financing. 2016 and 1 January–30 June 2017.
- FAO. Total co-financing. 2019 and 2020.
- Government official reporting for 2017; 2018; 2019; 2020; 2021; and 2022.
- FAO. Communication Action Plan and Budget 2020/2021.

**Technical and workshop reports and minutes/information and educational materials**

- **Avcıoğlu, B.** EX-ACT Report. 2015–2019.
- **Avcıoğlu, B.** EX-ACT Report. 2015–2020.
- **Avcıoğlu, B.** EX-ACT Report. 2015–2022.
- **Aydoğan, A.** Demonstrations and Promotion of Varieties and Production Techniques of Legume Crops in Drought-prone Conditions of Konya and Karaman as Climate-smart Agricultural Practices. September 2021.
- **Bal, C.** 2021. Final Report. 15 February.
- **Başkent, E.Z. & Bilensoy, Y.** 2020. Terminal Report of 1. EIFMP; 2. Ecosystem-based Forest Management Plan; 3. Non-wood Forest Products Subplan; 4. Grazing and Pasture Management Subplan; 5. Apiculture Subplan; 6. Income Generation Subplan; and 7. Biodiversity Subplan. December.
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- **BDARI.** 2018. Ayranci Arpa. Her Şartta Yüksek Verim. [Ayranci barley: High efficiency under all conditions]. Information Material. Konya, Türkiye.
- **BDARI.** 2019. First Interim Report. Konya, Türkiye.
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- **BDARI.** 2022. Presentation by Fatih Özdemir. September. Konya, Türkiye.
- **BDARI.** Undated. Doğrudan Ekim, Bütçeye Tasarruf, Topraga Bereket, Çevreyi Korumak, Gelecede Yatirim Demektir. [Direct Sowing Means Saving the Budget, Prosperity on the Land, Protecting the Environment and Investing in the Future]. Information Material. Konya, Türkiye.
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- **BDARI.** Undated. İzleme Değerlendirme Sistemleri Uygulamalari. [Monitoring Evaluation Systems Applications]. Final Report. Konya, Türkiye.
- **BDARI.** Undated. Konya Kapali Havzasi Mera Islahi ve Yönetimi Ygulamalari. [Konya Closed Basin Pasture Improvement and Management Practices]. Final Report. Konya, Türkiye.
- **BDARI.** Undated. Konya Kapali Havzasinda Proğramli Sulama Uygulamalari. [Programmed Irrigation Practices in the Konya Closed Basin]. Final Report. Konya, Türkiye.
- **BDARI.** Undated. Uygulamalı Çiftçi Okulları Kışlık Ürün Müfredatı ve Uygulama El Kitapçığı. Serin İklim Tahılları (Buğday ve Arpa) ve Baklagil Yem Bitkileri (Macar Fiği ve Yem Bezelyesi). [FFS Winter Crop Curriculum and Implementation Manual. Cool Climate Cereals (Wheat and Barley) and Forage Legumes (Hungarian Vetch and Fodder Peas)]. FFS Booklet. Konya, Türkiye.
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- Service Contract 1 and 2 SC-SEC-2016-09 between FAO and Uyum Ormancılık Çevre Proje Danışmanlık Bilişim Turizm SAN. VE TIC. LTD. STI for the provision of Integrated Forest Management Planning Services.
- LOA between FAO and Konya Teknokent Teknoloji Gelistirme Hizmetleri A.S. for the provision of Technical Support Services for Irrigation Demonstrations in 39 Sites in Support of Conservation Agriculture in the KCB between 14 June 2019 and 30 September 2020.

- LOA between FAO and BDIARI Konya for the provision of Promotion of Climate-friendly Agricultural Practices in the KCB in Support of Climate Change Mitigation with Focus on Promoting Drought-tolerant Varieties, No-Tillage Sowing, Pasture Management, and Biogas Production and Use through Demonstrations, Farmer Field Schools and Trainings between 6 April 2020 and 30 October 2020.
- Contract No. SC SEC 2020 03 between the FAO Subregional Office for Central Asia and the Sociological Association for the Socioeconomic Survey, the Finding Analysis and Assessment Report and the Gender Action Plan between 27 May 2020 and 30 December 2020.
- Amendment No. 1 (from 9 November 2020) to Contract No. SC SEC 2020 03 between the FAO Subregional Office for Central Asia and the Sociological Association for the revised schedule of the Socioeconomic Survey, the Finding Analysis and Assessment Report and the Gender Action Plan between 27 May 2020 and 30 December 2020.
- Amendment to LOA between FAO and BDIARI Konya for additional outputs between 30 October 2020 and 15 September 2021.
- LOA and Annex 1 between FAO and the DKM for the provision of the Biodiversity Monitoring Concept between 1 June 2020 and 15 December 2020.
- Amendment to LOA between FAO and the DKM for the provision of the Biodiversity Monitoring Concept between 15 December 2020 and 31 May 2021.
- Amendment No. 2 to LOA between FAO and the Konya Orman Bölge Müdürlüğu/Konya Regional Directorate of Forestry for services between 12 November 2020 and 25 February 2021.
- LOA between FAO and the Tarla Bitkileri Merkez Araştırma Enstitüsü for the provision of services for Demonstrations and Promotion of Varieties and Production Techniques of Legume Crops in Drought-prone Conditions of Konya and Karaman as Climate-smart Agricultural Practices between 30 April 2021 and 15 October 2021.
- Amendment No. 3 to LOA between FAO and BDIARI Konya for the provision of Promotion of Climate-friendly Agricultural Production Practices in the KCB in Support of Climate Change Mitigation between 1 January 2022 and 30 August 2022.

# Appendix 5. Evaluation matrix

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| **1. Relevance and Coherence** | | | |
| Is the project in line with the GEF focal area and strategic priorities and operational programmes?<br>How important is the relevance or significance of the intervention? | Relevance of the GEF focal area, strategic priorities and operational programmes | Project document<br>Background information<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| Is the project relevant in relation to FAO's mandate and its alignment with FAO's policies and strategies? | Relevance of FAO's mandate and alignment with FAO's policies and strategies | Project document<br>Background information<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| Is the extent to which the intervention responds to the stated environmental and development concerns and needs of the target country sufficiently taken into account? | Relevance of intervention | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Background information<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| Is the project relevant to the target country and donors? | Relevance to country and donors | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Background information<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| Is the project addressing the right barriers to change? | Relevance of barriers addressed | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Background information<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| Is each project component adapted to the demands of the country?<br>Component 1: rehabilitation of degraded forest and rangeland<br>Component 2: climate-smart agriculture<br>Component 3: enhanced enabling environment for SLM | Relevance of national priorities and ownership established (awareness at higher level, but also end users)<br>Quality of established relationships (at different levels of intervention)<br>Relevance of risk mitigation measures<br>Coherence between planned and implemented activities | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Background information (information on national policies, strategies and action plans)<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| Did the project formulation take into account preliminary (environmental) assessments? | Compliance of project design and previous assessments/analysis<br>Compliance of baseline data against targets in project design | Project document<br>Assessment and technical reports<br>Studies and surveys<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with donors and initiators of the project<br>Interview with persons in charge for project design development |
| Was coherence between the requirements of the different government institutions sufficiently taken into account in the project design?<br>Were there any adaptations upon project launch? | Quality of institutional assessment during project design<br>Quality of adaptation measures | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| To what extent has the gender aspect been included in the project design? | Quality of components including gender aspects<br>Extent of exposure of vulnerable populations to land degradation and climate change<br>Female/male distribution among beneficiaries<br>Established specific risk mitigation measures for vulnerable groups<br>Established relationships (at different levels of intervention) | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| Science and technological issues Is the project based on sound science and well-established technologies, or are there many scientific and/or technological uncertainties? | Comparison of market-based technologies (benchmarking) and similar projects | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes | Document and data analysis (desk review)<br>Interviews with the LTO and consultants |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| | | Studies and surveys<br>Scientific and technical assessments<br>Private sector<br>Data collected during mission | Technological watch |
| Environmental conditions Were environmental conditions anticipated during project design?<br>How were beneficiaries and areas selected (targeting criteria by area and people, especially the most vulnerable groups, such as women, children and the elderly)? | Mitigation measures for climatic conditions or natural events that may affect the project<br>Availability of resources for mitigation measures | Project document (risk matrix)<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| Were the indicators selected in the project design useful and relevant?<br>What are the experiences and feedback with a view to their application? | Quality of developed indicators | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| What role did co-financing play during project planning? | Establishment of national priorities<br>Relevance of national ownership<br>Quality of relationships (different levels of interventions) before project start<br>Quality of risk mitigation strategies as a result of change in co-financing | Documents of preparatory phase<br>Project document<br>Letters of commitment from co-financers<br>Government endorsement letter<br>Agreement with the government and other agreements<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Data collected during mission | Document analysis (desk review)<br>Interviews with donors and co-financers<br>Interviews with project staff, ministries and departments, and further stakeholders |
| **2. Effectiveness (Achievement of project results)** | | | |
| Were the funds allocated for the planned objectives, activities and results realistic (planning vs implementation)?<br>Were there any misunderstandings on co-financing (cash or in-kind)? If yes, which? What were the mitigation measures? | Consistency of planned and realized budget<br>Availability of mitigation measures | Project document<br>Different reports (PIRs, progress, steering committee reports)<br>MinutesData collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, and further stakeholders |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| Social, cultural and economic factors (external factors relating to progress)<br>Are there obvious social, cultural and/or economic problems that affected project performance and results, or was the project highly sensitive to economic fluctuations, social problems or cultural barriers?<br>By applying external factors (risks) and mitigation measures, how did this influence the results? | Risk mitigation measures related to social, cultural and economic factors<br>Availability of sufficient resources for mitigation measures | Project document (risk matrix)<br>Different reports (PIRs, progress and steering committee reports, technical reports)<br>Minutes<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, and further stakeholders |
| **Project progress, by component**<br>**Component 1: rehabilitation of degraded forest and rangeland**<br>**1.1 What has been done in the context of introducing innovative rehabilitation technologies?**<br>Has an implementation strategy been elaborated, and what were its key messages?<br>Has the elaborated rehabilitation plan identified the gaps to address root causes?<br>Which interventions has the rehabilitation plan proposed?<br>What were the bottlenecks to implement planned interventions?<br>How many hectares of degraded forest/degraded rangeland have been rehabilitated?<br>Which innovative techniques have been applied?<br>How have local communities and nomadic people been supported to change behaviours that lead to land degradation?<br>Which precautions have been taken to change their living conditions?<br>What were the bottlenecks, and what success stories may be reported?<br>**1.2 What has been done in the context of elaborating decision-making tools for forest and rangeland?**<br>Have soil carbon maps to assess and monitor the climate change benefits been produced?<br>Have they been adopted by the different stakeholders?<br>Has a management plan for Mount Karacadağ and the | Availability of implementation strategy<br>Availability of rehabilitation plan<br>Hectares of rehabilitated degraded forests<br>Quality of introduced innovative techniques for the rehabilitation of degraded forests<br>Number of communities and nomadic people<br>Quality of living conditions<br>Hectares of rehabilitated degraded rangeland<br>Quality of introduced innovative techniques for the rehabilitation of degraded rangeland<br>Midterm project achievements<br>Availability of soil carbon maps<br>Level of adoption by stakeholders<br>Availability of a management plan for Mount Karacadağ and the Ayrancı regions<br>Availability of a replication plan for strategic locations within the KCB<br>Availability of the FSC certification for forest and rangeland<br>Availability of ecosystem services-centred biodiversity integration | Project document<br>Different reports (PIRs, progress and steering committee reports, technical reports)<br>Minutes<br>MTR<br>Tools for decision-making<br>Data and documents collected during mission | Document analysis (desk review)<br>Results matrix<br>Interviews with project staff, relevant stakeholders, partners and beneficiaries<br>Evaluation of previous, initial and mid-project achievements<br>Site visits<br>Focus group discussions |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| Ayrancı regions been elaborated, focusing on maintaining and/or rehabilitating ecosystem integrity in order to deliver SLM, climate change mitigation and biodiversity conservation benefits?<br>Has a replication plan, identifying strategic locations within the KCB, been elaborated?<br>Has an FSC certification for forest and rangeland within at least one pilot area been gathered to be used as a training exercise for public and private sector stakeholders?<br>Has an ecosystem services-centred biodiversity integration system been developed?<br>Has a comprehensive biodiversity monitoring system been prepared and implemented?<br>Has a proper road map been elaborated, ensuring the continuation of biodiversity integration and monitoring programmes?<br>Has a biodiversity and hydrology monitoring programme been elaborated and an ecological restoration strategy been developed?<br>Have ecosystem services for proximate and concerned communities been assessed, and what were the results? | system<br>Availability of comprehensive biodiversity monitoring system<br>Availability of road map for biodiversity integration and monitoring programmes<br>Availability of biodiversity and hydrology monitoring programme<br>Availability of ecological restoration strategy<br>Quality of ecosystem services for communities<br>Midterm project achievements | | |
| **Component 2: climate-smart agriculture**<br>**2.1 What has been done in the context of introducing innovative agricultural land rehabilitation technologies?**<br>Has a strategic rehabilitation strategy been prepared to identify and select demonstration farms that show the cumulative and restorative impacts?<br>Have international good practices related to KCB-specific restoration challenges been identified and described, taking into account local challenges and most strategic approaches?<br>Has the rehabilitation strategy for 40 000–50 000 ha of arable land been implemented? What were the bottlenecks, and what needed to be adapted?<br>What were the interventions for the rehabilitation of 20 000 ha of pastureland? | Availability of rehabilitation strategy<br>Availability of document on good practices, related to KCB-specific restoration challenges<br>Availability of rehabilitation strategy for 40 000–50 000 ha of arable land<br>Quality and number of Interventions for the rehabilitation of 20 000 ha of pastureland<br>Quality of conservation plan for the endangered great bustard at the Sarayönü-Cihanbeyli pilot site<br>Quality of monitoring mechanisms for rehabilitation interventions (i.e. wind erosion measurement system) | Project document<br>Different reports (PIRs, progress and steering committee reports, technical reports)<br>Minutes<br>MTR<br>Communications material<br>Data and documents collected during mission | Document analysis (desk review)<br>Results matrix<br>Interviews with project staff, relevant stakeholders, partners and beneficiaries<br>Evaluation of previous, initial and mid-term project achievements<br>Site visits<br>Focus group discussions |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| Has the conservation of the endangered great bustards been integrated into the management of arable lands at the Sarayönü-Cihanbeyli pilot site? Has a dissemination strategy been developed?<br>Have necessary monitoring mechanisms been put in place to measure the success of rehabilitation interventions, such as a wind erosion measurement system?<br>Has a comprehensive evaluation of pilot demonstrations, including reporting on good practices, been elaborated?<br>Has a scaling up plan been developed, including capacity development programmes?<br>**2.2 What has been done in the context of introducing innovative methane capture and agriculture production technologies?**<br>Have "current" practices been assessed and specific opportunities been identified (at the pilot site and in terms of GHG emissions)?<br>Have relevant participants been identified?<br>Has a business plan been elaborated?<br>Have digesters, aiming at the methane capture of 10 000 $CO_2$ equivalent been introduced?<br>Have corresponding monitoring activities (to ensure that climate change mitigation levels are being achieved) taken place?<br>Have public outreach activities taken place (to make other potential groups of agricultural interests aware and to create pathways for replication)?<br>How have the farmers been supported (to reduce emissions and alleviate climate change vulnerabilities)?<br>Which techniques, including low or negative cost interventions, have been carried out?<br>Which and how many interventions have taken place in the frame of the FFS?<br>What is the level of adoption (ownership) of techniques reducing GHG emission?<br>Has a road map with good practices and guidelines been | Availability of the evaluation of pilot demonstrations<br>Availability of plan for scaling up (i.e. capacity development toolkits)<br>Midterm project achievements<br>Availability of assessment report (on practices and opportunities)<br>Number and kind of participants<br>Availability of business plan for investment requirements<br>Number of digesters (for methane capture) introduced<br>Quality of monitoring activities (for climate change mitigation)<br>Number and quality of public outreach activities<br>Quality of farmer support<br>Quality and number of interventions (relating to low or negative costs)<br>Quality and number of FFS initiatives<br>Number of actors trained in the FFS approach<br>Level of adoption of techniques reducing GHG emission<br>Availability of a road map for the government<br>Mid-term project achievements | | |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| elaborated for government use? | | | |
| **Component 3: enabling environment for SLM**<br>**3.1 Has an institutional integrated management capacity building programme been elaborated for national and local decision makers?**<br>Has an SLM board been established to ensure informed SLM decision-making?<br>Have awareness raising and technical training activities been carried out, targeting decision makers in the relevant ministries on SLM?<br>**3.2 Is a comprehensive SLM and climate-smart agriculture extension and awareness programme in place?**<br>Have training activities been conducted for the provincial and regional directorates of ÇEM and TRGM staff (building appropriate institutional capacity at the central and local level)?<br>Have the planned five FFS approaches been established, and are they operational?<br>Is the Karapınar Station for Combatting Desertification (as an awareness raising centre) operational, and has its infrastructure been strengthened?<br>Have implementation guidelines and directions been developed and disseminated?<br>**3.3 Has a carbon monitoring system been established in Türkiye based on EX-ACT?** | Operational SLM board<br>Quality and number of awareness raising and technical trainings for decision-makers<br>Midterm project achievements<br>Quality and number of trainings for provincial and regional directorates of ÇEM and the TRGM<br>Quality and number of FFS initiatives<br>Number of actors trained in the FFS approach<br>Quality and availability of the Karapınar Station for Combatting Desertification<br>Quality and availability of implementation guidelines and directions<br>Midterm project achievements | Project document<br>Different reports (PIRs, progress and steering committee reports, technical reports)<br>Minutes<br>MTR<br>SLM board<br>Training and awareness materials<br>Trained actors<br>Karapınar Station for Combatting Desertification<br>Guidelines and directions<br>Data and documents collected during mission | Document analysis (desk review)<br>Results matrix<br>Interviews with project staff, relevant stakeholders, decision makers, partners and beneficiaries<br>Evaluation of previous, initial and mid-term project achievements<br>Site visits<br>Focus group discussions |
| **3. Efficiency** | | | |
| Management arrangements<br>Was there an appropriate focus on results during implementation?<br>How was the quality and timeliness of FAO technical and operational support? | Adherence to planning and deadlines<br>Understanding of roles, responsibilities, and tasks<br>Communication flow between | Project document<br>Different reports (PIR, progress, and steering committee reports)<br>Minutes<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, and partners |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| How was candour and realism with a view to annual reporting?<br>How was the quality of risk management implemented?<br>How was the responsiveness of the managing parties to significant implementation problems?<br>Were there any salient issues regarding project duration (for instance, project delays), and how have they affected project outcomes?<br>Were adequate mitigation and management measures of environmental and social risks identified, and how were they applied (existing environmental and social risk management plan)?<br>Was the project management system understood and applied by the different project stakeholders? | stakeholders and further partners<br>Quality of mitigation measures and plans<br>Number of trainings and capacity levels<br>Availability of technical assistance<br>Number and importance of changes in strategies and methods<br>Quality of technical support from FAO headquarters<br>Number of corrective actions needed | | |
| Work planning<br>Did the project launch and implementation encounter delays?<br>If yes, what were the causes?<br>Has the work planning been results-based?<br>What was suggested to re-orient the work planning? | Number and quality of progress reports<br>Number and quality of steering committee meetings<br>Number of revisions<br>Number and quality of meetings<br>Quality and degree of outputs and results (achievements)<br>Quality of technical assistance | Project document<br>Different reports (PIRs, progress and Steering Committee reports)<br>Minutes<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| Financial management<br>Have strong financial controls been established that allowed the project management to make informed decisions regarding the budget? Did this also allow for the timely flow of funds and the payment of satisfactory project deliverables?<br>What are the variances between planned and actual expenditures?<br>Does the project demonstrate due diligence in the management of funds, including annual audits?<br>Have there been any changes made to fund allocations as a result of budget revisions and the appropriateness and relevance of such revisions? | Number of financial reports<br>Number of revisions<br>Number of commitment letters<br>Number of audit reports<br>Relevance of co-finance and deadlines set<br>Degree of capacity in financial management<br>Quality and availability of financial assessments<br>Scope of budget reallocations | Project document<br>Different reports (PIRs, financial and steering committee reports)<br>Audit reports (if available)<br>Budget revision documents<br>Co-finance commitment letters and memorandum of understanding<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, and further stakeholders |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| How many revisions did the project undergo?<br>Did the project face any challenges with regard to planned co-financing (cash or in-kind)? If yes, which measures were taken to overcome these challenges? | | | |
| M&E<br>Quality of the M&E plan's implementation:<br>Was the M&E plan sufficiently budgeted and funded during project preparation and implementation?<br>Have sufficient resources been allocated to M&E? Have these resources been allocated effectively?<br>Quality of indicator monitoring plan:<br>Was the indicator monitoring plan developed during the inception phase well designed and were the resources allocated effectively?<br>To which extent was the PMU using inclusive, innovative and participatory monitoring systems?<br>To which extend were follow-up actions and/or adaptive management taken in response to the PIR?<br>Participation and country-driven processes<br>Did local and national government stakeholders support the objectives of the project?<br>Do project stakeholders continue to have an active role beyond project implementation, and with a view to other interventions that support efficient and effective project implementation?<br>Project management<br>Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?<br>Extent to which development objectives are built into monitoring systems<br>How were the perspectives of women and men involved and affected by the project monitored and assessed?<br>How were relevant vulnerable groups (including women, Indigenous Peoples, children, the elderly, disabled, poor people) involved, and how was the impact on them | Availability of an M&E plan<br>Availability of monitoring systems by gender and vulnerable groups<br>Number and relevance of trainings<br>Quality of stakeholder involvement<br>Quality of the PIR<br>Quality of mitigation and adaptation measures (results-based) | Project document<br>Monitoring plan<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, and further stakeholders |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| monitored?<br>What were the adequate mitigation and management of environmental and social risks (as identified through the environmental and social management plan)? | | | |
| Reporting<br>How has adaptive management been reported by the PMU and shared with the project steering committee?<br>How well have the PMU, the Project Task Force and partners fulfilled the GEF reporting requirements?<br>How have the PIRs been shared with the project board and other key stakeholders?<br>How have lessons derived from the adaptive management process been documented, shared with key partners and internalized by partners and incorporated into project implementation? | Number, quality and type of reports<br>Number, quality and type of meetings<br>Number of shared relevant reports<br>Quality of communication between the actors | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, and partners |
| Communications and knowledge management<br>On internal project communication with stakeholders:<br>Was communication regular and effective?<br>Were any key stakeholders left out of communication?<br>Were there feedback mechanisms when communication was received?<br>Did communication with stakeholders contribute to their awareness of project outcomes and long-term investment (with regard to the sustainability of project results)?<br>On external communication<br>Have proper means of communication been established to express the project progress and intended impact to the public?<br>Is there a web presence?<br>Did the project implement appropriate outreach and public awareness campaigns?<br>What are possibilities for the expansion of educational or awareness aspects of the project to solidify a communications programme, with mention of proper funding for education and awareness activities?<br>What aspects of the project might yield excellent | Quality of communication strategy<br>Means of communication<br>Number of relevant meetings<br>Follow-up of communication plan<br>Number and means of communication material<br>Number and quality of awareness raising and communication programmes | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Communications plan/strategy<br>Media coverage (press releases, platforms, websites established, other awareness material produced)<br>Data collected during mission | Document and data analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| communications material? | | | |
| **4. Factors affecting performance (questions may also fall under Efficiency and Sustainability)** | | | |
| Partnerships and stakeholder engagement<br>How has FAO collaborated with partners and to what extent did the project develop new partnerships or enhance existing ones?<br>Have partnership strategies been appropriate and effective?<br>To what extent were stakeholders engaged in the project?<br>How, if at all, has FAO contributed to improving organizational policies, strategies and programmes?<br>What linkages, if any, exist between the capacities developed among the different beneficiaries (i.e. ownership by the government and beneficiaries, partnerships, capacity development)? | Degree of implication of organizational policies, strategies and programmes<br>Stakeholder involvement and feedback<br>Frequency of meetings<br>Quality of relationships<br>Conflict resolution and/or correction<br>Degree of information sharing and communication flow<br>Frequency of staff change | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders and partners |
| Project management, administrative and oversight arrangement<br>To what extent has the project's management, administrative and oversight arrangements contributed to the efficient achievement of project results?<br>How effective has project management dealt with the challenges facing the project and adapted to overcome difficulties and improve delivery?<br>Did the project face challenges with regard to planned co-financing (cash or in-kind)? | Degree of capacities among the project management team<br>Quality of relationship between actors<br>Quality of mitigation measures<br>Relevance of set co-finance and deadlines<br>Adequacy between planned and realized expenses<br>Quality of technical support from FAO headquarters | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, and further stakeholders |
| External factors (political and environmental factors)<br>Did the project face problems in terms of political instability and/or environmental disasters? | Frequency of political conflict<br>Frequency of staff changes<br>Frequency of environmental disasters | Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Background information<br>Data collected during mission | Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries |
| **5. Sustainability and Impact** | | | |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| Financial risks to sustainability<br>What is the likelihood of financial and economic resources not being available once the GEF assistance ends (to consider potential resources that can be from multiple sources, such as the public and private sectors, income generation activities and other funding that will be adequate financial resources for sustaining the project's outcomes)?<br>What opportunities for financial sustainability exist?<br>What additional factors are needed to create an enabling environment for continued financing?<br>Has there been the establishment of financial and economic instruments and mechanisms to ensure the ongoing flow of benefits once the GEF assistance ends (i.e. from public and private sectors, income generation activities and market transformations to promote the project's objectives)? | Financial plan and mechanisms of the project<br>Post-project financing plan<br>Number of commitment letters (cash or in-kind)<br>Financial strategies with a view to similar projects (also subregional)<br>Economic standards in the country<br>Parallel activities and interventions (synergies) | Project document (matrix)<br>Different reports (PIRs, financial, progress and steering committee reports, technical reports)<br>Minutes<br>Commitment letters<br>Synergies used (also with other projects)<br>MTR<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries<br>Focus group discussions |
| Socioeconomic risks to sustainability<br>Are there any social or political risks that jeopardize the sustainability of project outcomes?<br>What is the risk that the level of stakeholder ownership (including ownership by the government, beneficiaries, other key stakeholders) will be insufficient to allow for long-term results (benefits and impact sustained)?<br>Do the different key stakeholders see that it is in their interest that the project benefits continue to flow?<br>Is there sufficient public awareness in support of the project objectives?<br>Have lessons learned been documented by the PMU regularly?<br>Have the project's successful aspects (success stories) been transferred to appropriate parties (public, potential future beneficiaries, others) for awareness, learning, scaling up and replication purposes? | Degree of ownership development<br>Degree of stakeholder involvement<br>Degree of awareness regarding roles and responsibilities<br>Communications strategy development<br>Degree of communication flow<br>Economic indicators<br>Independent co-financing plans<br>Effectiveness of solutions already applied | Project document (matrix)<br>Different reports (PIRs, financial, progress and steering committee reports, technical reports)<br>Minutes<br>Media coverage<br>MTR<br>Background information<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries<br>Focus group discussions |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| Institutional and government risks to sustainability<br>Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize project benefits?<br>Has the project put in place frameworks, policies, governance structures and processes that will create mechanisms for accountability, transparency and technical knowledge transfer after the end of the project?<br>Has the project developed appropriate institutional capacity (systems, structures, staff, expertise) that will be self-sufficient after the end of the project?<br>Has the project identified and involved champions (i.e. individuals in the government and civil society) being able to promote the sustainability of project outcomes?<br>Has the project achieved stakeholder (including government stakeholders) consensus regarding courses of action on project activities after the end of the project?<br>Does the project's leadership respond to future institutional and governance changes (i.e. foreseeable changes to local or national political leadership)?<br>Can the project strategies effectively be incorporated/mainstreamed into future planning?<br>Does the project face political risks to sustainability (political instability)? | Political commitment<br>Degree of ownership development<br>Degree of institutional development<br>Degree of legislation/regulation development (and coherence to international conventions)<br>Country ownership development (in general and for this project)<br>Degree and quality of stakeholder involvement<br>National strategies and plans<br>Rating of political stability (international ratings)<br>Quality of trainings and capacities built<br>Degree of adoption regarding different interventions<br>Independent financing (long term) | Project document<br>Different reports (PIRs, financial, progress and steering committee reports, technical reports)<br>Minutes<br>Media coverage<br>MTR<br>Background information<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders and partners |
| Environmental risks to sustainability<br>Are there environmental factors (environmental disasters) that could undermine and reverse the project's outcomes and results, including factors that have been identified by project stakeholders? | Geographic situation<br>Number and kind of surveys and statistics<br>Quality of environmental standards<br>Presence of sound financing mechanisms<br>Degree of adoption of different interventions | Project document (matrix)<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes<br>Surveys and statistics (by ministries, departments, academia)<br>Financial plans<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries<br>Focus group discussions |
| Does the project respond to short-term needs and achieve results in a long-term perspective, especially when sustainability and replicability are concerned (or are long-term problems deliberately ignored or neglected)? | Degree of formalization of programmes<br>Degree of ownership and commitment of stakeholders and | Project document<br>Different reports (PIRs, progress and steering committee reports)<br>Minutes | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and |

| Evaluation questions | Indicators | Sources | Method/informants |
|---|---|---|---|
| What evidence exists indicating the feasibility of replication or catalysis of project results, and the likelihood that project activities will continue following project closure (financial and operational sustainability)? | actors<br>Planned long-term achievements<br>National and subregional strategies<br>Nature of evidence for replication of different interventions | Data collected during mission | beneficiaries<br>Focus group discussions |
| **6. Cross-cutting issues: gender; human rights issues/Indigenous Peoples; and ESS** | | | |
| To what extent were gender considerations taken into account in designing and implementing the project?<br>Has the project been designed and implemented in a manner that ensures gender equitable participation and benefits? | Relevance of gender factor | Project document<br>Different reports (PIRs, progress and steering committee reports, technical reports)<br>Minutes<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries<br>Focus group discussions |
| What are the results of including the gender factor in the different components (behaviour change, salary awareness, team parity, nature of women's involvement, but also for children and other vulnerable groups)? | Quality of measures taken to include vulnerable groups | Project document<br>Different reports (PIRs, progress and steering committee reports, technical reports)<br>Minutes<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries<br>Focus group discussions |
| To what extent where environmental and social concerns taken into consideration in the design and implementation of the project? | Quality of measures taken in light of environmental and social concerns | Project document<br>Different reports (PIRs, progress and steering committee reports, technical reports)<br>Minutes<br>Data collected during mission | Document analysis (desk review)<br>Interviews with project staff, ministries and departments, further stakeholders, partners and beneficiaries<br>Focus group discussions |

*Note*: Guiding instrument and working tool during the mission (not exhaustive).

Office of Evaluation
evaluation@fao.org
www.fao.org/evaluation

**Food and Agriculture Organization of the United Nations**
Rome, Italy

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