Validated Terminal Review of the UNEP/GEF Project

‘Implementing adaptation technologies in the fragile ecosystems of Djibouti's central plains’

(GEF ID 5021)

2017-2022

UNEP Climate Change Division

Validation date: September 2025

This report was prepared by an external consultant as part of a final review, a management-led process to assess performance at operational completion of the project. The UNEP Evaluation Office provides templates and tools to support the review process and provides a formal assessment of the quality of the review report, which is provided in the documents annexed to this report. The findings and conclusions expressed herein do not necessarily reflect the opinions of the Member States or UNEP management.

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Implementation of adaptation technologies in the fragile ecosystems of the central plains of Djibouti 5021
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This Terminal Review was prepared for UNEP's Cimate Change Division by Gaétan Quesne, Margarita Gonzales, Hélène Verrue and Hassan Rayaleh.

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The review consultant(s) hopes that the findings, conclusions and recommendations will contribute to the successful finalisation of the current project, formulation of a next phase and to the continuous improvement of similar projects in other countries and regions.

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ABOUT REVIEW

Joint Review : No

Report language: English

Type of assessment: Terminal Review

Brief Description: This report is a management-led Terminal Review of a UNEP/GEF project implemented between 2017 and 2022. The project's overall development goal was to to increase the resilience of Djibouti's society and economy to the effects of climate change, and to strengthen the government's capacity to integrate adaptation into its development planning. The review sought to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The review has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, GEF and the relevant agencies of the Government of Djibouti.

Source(s) of Funding by Country: *Djibouti*

Source(s) of Funding by Institution Type: *(indicate all that apply)*

Foundation/NGO	No
Private Sector	No
UN Body	No
Multilateral Fund	Yes
Environment Fund	No

Keywords: Ecosystem-based adaptation, climate change

Primary data collection period: January 2024 to February 2024

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ACRONYMS

ADDS	Djibouti Social Development Agency (*Agence de Développement Social de Djibouti*)
ANM	National Meteorological Agency (*Agence Nationale de Météorologie*)
NDC	National Determined Contribution
CCAU	Climate Change Adaptation Unit
CERD	Djibouti National Research Centre (*Centre National de Recherche de Djibouti*)
CTA	Chief Technical Advisor
DAF	Agriculture and Forestry Directorate (*Direction de l'agriculture et des forêts*)
DEDD	Environment and Sustainable Development Directorate (*Direction de l'Environnement et du Développement Durable*)
DHR	Direction de l'Hydraulique Rurale
DHU	Housing and Urban Planning Directorate (*Direction de l'habitat et de l'urbanisme*)
DGT	Infrastructure Directorate (*Direction des Grands Travaux*)
ESIA	Environmental and Social Impact Assessment
ESS	Social and Environmental Guarantees
ESMP	Environmental and Social Management Plan
EBA	Ecosystem-based adaptation
FIDA	International Fund for Agricultural Development
GDP	Gross Domestic Product
GEF	Global Environment Facility
HA	Hectare
HYR	Half-yearly activity report
KSQ	Key Strategic Questions
LDCF	Least Developed Countries Fund
M&E	Monitoring & Evaluation
MAEPE-RH	Ministry of Agriculture, Water, Fisheries, Livestock and Hydraulic Resources (*Ministère de l'Agriculture, de l'Elevage et des Ressources Hydrauliques*)
MAEPE-DGT	Infrastructure Department
MEDD	Ministry for the Environment and Sustainable Development (*Ministère de l'environnement et du développement durable*)
MTR	Mid-Term Review
NAPA	National Adaptation Programme of Action
ONEAD	Djibouti National Water and Sanitation Office (*Office National de l'Eau et de l'Assainissement de Djibouti*)
PGIRE	Integrated Water Resources Management Project
PIR	Annual Project Monitoring Report

PMU	Project Management Unit
POW	UNEP Programme of Work
PRODERMO	Community Rural Development and Water Mobilization Project
PRODOC	Project Document
PROMES-GDT	Surface Water Mobilization and Sustainable Land Management Programme
PSC	Project Steering Committee
RVE	Results Verification Exercise
SCCF	Special Climate Change Fund
SMART	Specific, measurable, achievable, relevant, time-bound
TM	Task Manager
ToR	Terms of Reference
UNDAF	United Nations Development Assistance Framework
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund
USD	U.S. Dollars
VRA	Vulnerability and Risk Assessment

PROJECT IDENTIFICATION TABLE

UNEP Sub-program:	Climate Change	**UNEP Division/Branch:**	Ecosystems Division, Climate Change Adaptation Unit
Expected Accomplishment(s):	EA1 Climate resilience: Ecosystem-based and supporting adaptation approaches are implemented and integrated into key sectoral and national development strategies to reduce vulnerability and strengthen resilience to climate change impacts	**Programme of Work :**	UNEP Programme of Work 2018-2019. Sub-programs: - Climate change - Healthy and productive ecosystems
Project Title:	Implementing adaptation technologies in fragile ecosystems of Djibouti's central plains		
Executing Agency:	Ministry of Environment and Sustainable Development (MEDD)		
Project partners:	Ministry of Agriculture, Livestock and Fisheries in charge of hydraulic resources (MAEM-RH) National Water and Sanitation Office of Djibouti (ONEAD) Djibouti National Research Centre (CERD) National Meteorological Agency (ANM) Social Development Agency of Djibouti (ADDS) Regional government of Tadjourah and Dikhil Agropastoralism Association of Hanlé Association of Women in Tadjourah		
Geographical Scope:	National		
Participating Countries:	Djibouti		
GEF project ID:	5021	**Umoja number:**	LDL-5060-2724-4E66
Focal Area(s):	Climate Change Adaptation	**GEF OP #:**	
GEF Strategic Priority/Objective:		**GEF approval date:**	March 10, 2014
UNEP approval date:	February 22, 2016	**Date of first disbursement:**	August 20, 2014
Actual start date:	November 2014 (Inception workshop)	**Planned duration:**	48 months
Intended completion date:	June 30, 2018	**Actual or Expected completion date:**	June 30, 2023
Project Type:	Full Size Project, Least Developed Country Fund (LDCF)	**GEF Allocation:**	US$ 7,360,000
PPG GEF cost:	N/A	**PPG co-financing:**	N/A
Expected MSP/FSP Co-financing:	US$ 14,170,000	**Total Cost:**	US$ 21,530,000

Mid-term review/eval. (planned date):	January 2019	**Terminal Review (actual date):**	May 2024
Mid-term review/eval. (actual date):	April 2019	**No. of revisions:**	2
Date of last Steering Committee meeting:	December 8, 2022	**Date of last Revision:**	June 30, 2021
Disbursement as of 30 June 2023:	US$ 7,144,654[1]	**Date of financial closure:**	June 2023
Date of Completion:	March 2023	**Actual expenditures reported as of 30 June 2023:**	US$ 7,140,000[2]
Total co-financing realized as of 30 June 2023:	US$ 14,170,000	**Actual expenditures entered in Umoja as of 30 June 2023:**	TBC
Leveraged financing:	N/A		

[1] Cash Advance Q3 and Q4 2022
[2] Draft Q2 2023 Expenditure Report

EXECUTIVE SUMMARY

The project "Implementation of adaptation measures in the fragile ecosystems of Djibouti's central plains" (LDCF 2) was approved by the Global Environment Facility (GEF) in March 2014 and officially started in November 2014. The project was overseen by the Ecosystems Division, Climate Change Adaptation Unit of the United Nations Environment Programme (UNEP) and executed by Djibouti's Ministry of Environment and Sustainable Development (MEDD). The 7,360,000 USD allocated by the GEF through the Least Developed Countries Fund (LDCF) was supplemented by 14,170,000 USD in co-financing. The project underwent two no-cost extensions, and was completed in June 2023.

Located in north-east Africa, Djibouti has a population of around 1.1 million, over 80% of whom live in urban centers. The rural hinterland is mainly populated by nomadic and semi-nomadic pastoralists, whose livelihood depends heavily on access to sustainable natural resources. However, the effects of climate change are making living conditions increasingly difficult for these populations, and forecasts of extreme events and rising temperatures would make Djibouti the 5th most exposed country in the world. In response to this growing vulnerability, the LDCF 2 project aims to implement climate change adaptation interventions that protect these populations, maintain productive assets and strengthen ecosystem resilience in the nine project sites in the Dikhil and Tadjourah regions, through the following components:

- **Component 1:** Protection against water-related climate change risks;
- **Component 2:** Ecosystem rehabilitation, restoration and resilience;
- **Component 3:** Sustainable and resilient livelihoods; and
- **Component 4:** Institutional capacity for adaptive development and community resilience.

The project's terminal review (TR) was carried out between November 2023 and March 2024, and included a review of documentation, key stakeholder interviews, and field visits with focus group discussions in all project sites. The TR assesses project performance through nine categories of review criteria: strategic relevance; quality of project design; nature of external context; effectiveness; financial management; efficiency; monitoring and reporting; sustainability; and factors affecting project performance. It also addresses five strategic questions (KSQ) defined in the ToRs. It provides evidence of results to meet accountability requirements and promote learning among UNEP, the MEDD and other stakeholders operating in the country.

Based on the TR criteria, **the overall project performance is Moderately Satisfactory**[3], with Satisfactory performance for strategic relevance; financial management of the project; monitoring and reporting; quality of project management and supervision; and communication and public awareness (see section Summary of project findings and ratings).

[3] The criteria are evaluated on a six-point scale as follows: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU).

Strategic relevance	***Score:***	***S***

The LCDF 2 project is well aligned with the strategic priorities of the LDCF, UNEP and UNDAF, as well as with Djibouti's national development and NDC strategies. The regions of Dikhil and Tadjourah are identified as particularly vulnerable in the National Adaptation Action Plan. Finally, the ecosystem-based approach seems relevant given the high level of vulnerability of the population.

Quality of project design	***Score:***	***MS***

Although the project responds to the country's priorities, the quality of the project's design is only Moderately Satisfactory as the number and variety of the activities proposed seem difficult to implement, and require good coordination and synergies. In addition, the targets proposed at the design stage were overestimated, and some budget items were underestimated. The project design does not sufficiently integrate identified risks in its design, in particular the constraints of climate change impacts and water scarcity as well as the challenges of learning and adopting new practices by communities. Finally, gender issues are not adequately addressed.

Nature of the external context	***Score:***	***MS***

Several external factors complicated the implementation of the project, such as climatic hazards and extreme weather conditions, which delayed or damaged works in the field. Recruitment of qualified personnel, and dependence on imported equipment also led to delays and additional costs. The COVID-19 pandemic caused a complete shutdown of activities for several weeks, followed by a gradual resumption. The political context did not have a significant impact on the project, but the institutional context may have influenced certain project decisions.

Effectiveness	***Score:***	***MS***

Outputs and outcomes

The outputs planned for the LDCF 2 project were only partially achieved. Several targets were progressively reduced due to operational constraints and project delays in the early years of the project. However, a was significant catch-up in field activities allowed for the achievement of key outputs of the four project components.

Likelihood of impacts

The likelihood of impacts varies according to the activities, sites and communities targeted by the project. On the one hand, the rehabilitation of the Marsaki dike has a high probability of impact, and restoration activities have a good probability of impact. For agricultural production, its dependence on access to water negatively affects the likelihood of impact. Finally, the limited scope of institutional strengthening activities will likely lead to low impact on Djiboutian society.

Financial management	***Score:***	***S***

Although disbursements were low in the first three years of the project, there was a significant catch-up from 2017 onwards and, after two extensions, the project reached a disbursement rate of nearly 100%. The co-financing planned for the project was fully mobilised from projects by the Ministry of Agriculture, Livestock and Hydraulic Resources and UNEP. Financial documentation is complete, and cash flow issues reported at the start of the project were resolved.

Efficiency	***Score:***	***MU***

The cost-effectiveness of the project was affected by the reduction in targets, and by the fact that some targets were ultimately not achieved. The implementation of certain activities required additional resources and could only be achieved through strong team commitment and adaptive capacity. The rehabilitation of the Marsaki dike consumed significant resources, and even then, its height is insufficient to protect the city of Tadjourah beyond a 10-year period, according to projected climate changes. In the end the project lasted nine years instead of four, due to the accumulation of delays. This led to an increase in project management costs.

Monitoring and reporting	***Score:***	***S***

The project's monitoring and reporting plan was comprehensive and was largely implemented, including a baseline study, a mid-term review (MTR), the results verification study and this TR. The baseline study and MTR helped to improve the results framework, but could not resolve some of the project design issues. In addition, most of the recommendations of the MTR were adopted by the project. Project reporting meets UNEP's requirements and is complete, benefiting from a gradual improvement in the quality of reporting.

Sustainability	***Score:***	***MS***

The project faced several challenges that limit the sustainability of its results which largely depends on future funding (KSQ4). Political support has been sustained and MEDD is responsible for ensuring the continuity of the project's activities and, more broadly, for adaptation to climate change. The project's exit strategy was developed early in the project's implementation and is well integrated into the project.

Factors affecting performance	***Score:***	***MS***

Project preparation does not appear to have been conducive to reflection on possible revisions to the project, beyond those proposed in the baseline study. The **quality of the project management** improved throughout the project implementation, thanks to the strong support provided by UNEP to the project team and executing partners. **Project stakeholders** at both national and regional levels were involved in the project's governance bodies, but despite the strong involvement of MEDD, **ownership of the project** at the national level was mixed. In addition, and despite the participatory approach, ownership by communities is heterogeneous. The project did not take **gender** issues into account in its design, making them difficult to monitor and measure. **Environmental and social safeguards (ESS)** were addressed slowly and on a case-by-case basis. Finally, the project produced studies and **communication** documents that are of interest to many stakeholders. Awareness-raising activities were tailored to different audiences, who often showed a low level of understanding of the project's purpose.

CONCLUSIONS

Strengths:

- The rehabilitation of the Marsaki dike and the successful restoration activities have the highest likelihood of impact in the short term, with 1.6 km of rehabilitated dike, 4.5 ha of restored acacia forests and 1.1 ha of restored mangrove.
- By the end of the project, four communities out of seven had improved access to water, helping to meet an essential survival need and enabling them to cope better with drought.
- Agropastoral and other income generating activities were more successful in communities with (i) well-functioning irrigation systems, (ii) previous farming experience, (iii) more advanced

sedentarization, (iv) pre-existing community organization, and (v) where activities proposed were aligned with local practices, including gender and age group roles.
- The RVE reported an average decrease of the vulnerability risk assessment index of 37% for the region of Hanlé and 11% for Tadjourah.

Weaknesses:

- The success factors of water supply construction or rehabilitation were not systematically considered, leading to the observed mixed results.
- The limited understanding of climate change and adaptation issues among targeted communities limits the incentives to adapt to upcoming climate change and affects household decisions on adaptation measures to prioritize.
- Where the project strengthened existing community organizations, these contributed to enhance and sustain project results. However, new associations are struggling to take shape, limiting the potential for income-generating activities. Their importance for project results was underestimated.
- By not adequately considering climate change projections in the design of key activities, the project may be promoting maladaptation. The Marsaki dike is not expected to withstand projected climate changes beyond a 10-year horizon. Several activities promoted rely on a highly vulnerable water access.
- Through LDCF 2, the MEDD built its capacity to mobilize and manage large environmental and climate change projects and has been doing so successfully, but these capacities do not extend to other institutional stakeholders, threatening sustainability of results.
- The project has generated and documented valuable lessons, but they have been insufficiently disseminated.
- The project team was able to identify risk mitigation measures and adapt throughout the project.

Conceptual challenges:

- The project's Theory of Change did not adequately consider the availability and capacity to access and manage water resources as a prerequisite for other project activities.
- The complexity of the local context was not adequately considered in activities and budget, and targets were overestimated.
- The processes to select beneficiaries and activities are not sufficiently strong to ensure equity and success of activities.

Operational challenges:

- Inadequate cost estimates at project design led to conflicting priorities between urban protection and rural water supply, leading to sub-optimal impacts.
- The project timeframe was insufficient to deliver the expected results.
- In a context where rural communities are small and dispersed, the project insufficiently sought to leverage synergies and coordinate interventions within and between the communities supported.

In terms of adaptation benefits (KSQ1), the project addresses issues and sites that are particularly exposed and vulnerable to the effects of climate change, helping to address the most direct impacts on communities. However, its insufficient consideration of climate change projections within implemented solutions raises questions about the adaptation value added of the project, as opposed to addressing development needs.

The project implementation structure (KSQ2) improved during the project, including with increased presence among communities and responsibilities for mainstreaming climate change adaptation allocated to the Chief Technical Advisor. The MEDD is an adequate execution partner, but the overall structure lacks involvement of other public sector institutions that could contribute to the project implementation, build their capacities, strengthen ownership, and help ensure sustainability.

Beneficiary engagement (KSQ3) was a challenge throughout the project and required significant efforts, but it ultimately improved when examples of success became visible and when technical assistants were established locally. Other factors that could have strengthened engagement include (i) further tailoring support to local context, including delivery models for this support, (ii) greater emphasis on community organization, (iii) supporting experience sharing with other communities, and (iv) guaranteeing continued access to water.

Lessons

1. A weak ToC can significantly undermine a project's performance.
2. In the context of Djibouti, success factors to consider for agropastoral and other income generating activities include with (i) well-functioning irrigation systems, (ii) previous farming experience, (iii) more advanced sedentarization, (iv) pre-existing community organization, and (v) where activities proposed were aligned with local practices, including gender and age group roles
3. The implementation of various activities on a single site increases the likelihood of strengthening resilience.
4. Detailed planning of infrastructure activities is essential.
5. Maintaining a focus on climate change adaptation throughout the project is essential to ensure results and prevent maladaptation.
6. Climate change increases costs.
7. Gaps in environmental and climate change data can significantly hamper climate change adaptation efforts.
8. Strengthening community organizations is important to support results and long-term impacts.
9. Consider with caution the priority given to agriculture as an adaptation measure in Djibouti.
10. Further engagement and capacity-building of institutional stakeholders is necessary to enable effective climate action in Djibouti.
11. Continuous risk monitoring and adaptive management are assets in achieving project results.
12. Stronger measures are needed to consider the local context across the board in project formulation, adequately incorporating identified contextual risk elements in the project implementation.
13. A strong process is required to select beneficiaries and define specific activities in order to ensure equity and effectiveness.
14. Behavior change processes require time and sustained support.
15. Prioritizing activities that target women and are aligned with their interests and capacities can generate multiple results.

Recommendations

Recommendations	Application	Responsibility
1. Strengthen the design of climate change adaptation projects by increasing the focus on a strong Theory of Change, better consideration of climate and other context-related risks in planning and budgeting, and improving the flow of activities to overcome limits to climate data availability.	Current and future projects	UNEP
2. Strengthen the process to select beneficiaries and define specific activities. This should be informed by a thorough feasibility study carried out at the project design or start-up stage, to better identify the particularities of each community (and in particular gender dynamics) in order to define a coherent strategy tailored to their situation.	Future projects.	UNEP and MEDD
3. Pursue capacity-building of institutional stakeholders in climate change adaptation beyond the MEDD. Capacity-building should include training, active participation in project implementation, climate change mainstreaming, and budgeting strategies to ensure funding of climate change adaptation measures.	Future projects in Djibouti	UNEP, MEDD and other institutions
4. Continue and intensify the dissemination of project knowledge and lessons as they are valuable and have so far been insufficiently disseminated. This should include public access via the new MEDD website and active dissemination to potentially interested institutions.	Immediate (short-term)	MEDD
5. Ensure continuity of support for project activities that depend on other projects for their sustainability. Review the exit strategy and identify elements whose sustainability is not yet ensured. Actively reach out to other projects to ensure sustainability gaps are bridged.	Immediate (short-term)	UNEP and MEDD
6. Strengthen the gender approach across the board in future projects, notably by integrating specific indicators and targets into the results framework and environmental and social management plan, and by clearly identifying barriers to women's access and measures to address them. This should be informed by a thorough analysis of gender dynamics by community and supported by the inclusion of a gender expert for the project.	Future projects	UNEP and MEDD

Validation

The report has been subject to an independent validation exercise performed by UNEP's Evaluation Office. The performance ratings for the UNEP/GEF Project *'Implementing adaptation technologies in the fragile ecosystems of Djibouti's central plains'* (GEF ID 5021), set out in the Summary of project findings and ratings section have been adjusted slightly as a result. The overall project performance is validated at the **Moderately Satisfactory** level. Moreover, the Evaluation Office has found the overall quality of the report to be 'Satisfactory' (see Annex VII). *While the report structure does not fully conform to the Evaluation Office's templates, the validation confirms that all necessary topics are covered adequately and the overall performance rating is consistent with other UNEP terminal evaluations/reviews.*

I. INTRODUCTION

1. The "Implementation of Adaptation Measures in the Fragile Ecosystems of the Central Plains of Djibouti (GEF ID 5021)" project was adopted by the Global Environment Facility (GEF) in March 2014 and officially launched in November 2014 with the organization of the kick-off workshop of the project. The project was overseen by the Ecosystems Division, Climate Change Adaptation Unit of the United Nations Environment Programme (UNEP).

2. The project was implemented by Djibouti's Ministry of the Environment and Sustainable Development (MEDD). The 7,360,000 USD allocated by the GEF through the Least Developed Countries Fund (LDCF) was supplemented by 14,170,000 USD in co-financing.

3. The project underwent two no-cost extensions and finally lasted nine years, instead of the four years as initially planned. The project benefited from a mid-term review in 2019, which identified key recommendations to be implemented to achieve the project's outcomes. The project officially ended in June 2023 and was subject to a final evaluation, of which this report is the final deliverable.

II. METHODOLOGY

A. Initial phase

4. The final review of the project began with an initial phase including a kick-off meeting with UNEP and former members of the Project Management Unit (PMU), an interview with the project's Task Manager (TM), and a preliminary review of documentation. This phase ended with the validation of the Inception Report, which included a presentation of the project, a preliminary analysis of the project's results framework, a reconstructed theory of change, an analysis of the project design, a stakeholder analysis, a description of the review methods and a detailed review matrix. For each evaluation criterion, the matrix identifies evaluation questions and sub-questions, indicators, collection methods and sources of information.

B. Document review

5. The evaluators reviewed all project documentation. This included project preparation documents (ProDoc and annexes, environmental and social safeguards checklist, budget, baseline study), annual or equivalent work plans and budgets, annual (PIR) and half-yearly (HYR) reports, project reports (including quarterly financial reports and other financial documents such as audit reports and budget review reports), Steering Committee (PSC) meeting minutes, reports of studies produced by the project, reports of other project activities such as training workshops, as well as the mid-term evaluation (MTR) and the report of the terminal results verification exercise (RVE) finalized in May 2023. All data collected during the literature review were compiled in a data collection matrix following the structure of the evaluation matrix. A list of the main documents consulted during the evaluation is presented in Appendix III.

C. Interviews and field mission

6. On the basis of the document review and prior to the field mission, the evaluation team conducted detailed preliminary interviews to complete the data collection and prepare for the field mission. These interviews were semi-structured and followed interview protocols. Interviews were also conducted with the UNEP TM and the two successive CTAs of the project.

7. One of the members of the evaluation team then carried out a field mission to Djibouti from January 28 to February 5, 2024. The mission made it possible to: (i) conduct interviews with key project stakeholders; (ii) meet with project beneficiary communities in the two target regions; and (iii) carry out field visits to the nine project sites spread across two target regions. The mission plan is presented in Appendix I. On site, the following interviews were conducted, based on the interview protocol:

- MEDD Environment Department: Secretary General of the Ministry, Deputy Environment Director and former project coordinator;
- Various departments of the Ministry of Agriculture, Livestock and Hydraulic Resources (MAEPE-RH): Livestock and Veterinary Services Department; Rural Hydraulics Department; Agriculture and Forestry Department;
- Djibouti Study and Research Center;
- National Meteorological Agency;
- LDCF 4 Project Coordinator ;

- Local and regional authorities: Prefect of Dikhil; President of the Regional Council of Tadjourah; and
- Other consultants and implementing partners: Agricultural specialist, Tadjourah Women's Association, Mangrove Assistant.

8. All nine project sites were visited, and specific community interviews were conducted with the help of interpreters (see Figure 1). These exchanges with project beneficiaries helped to validate the project's perception and the results obtained. In most communities, a group of women beneficiaries was specifically identified and asked questions about the activities directed at women.

9. Following the mission, further virtual interviews were conducted with the project's agricultural specialist, the project's financial assistant and the PGIRE project coordinator.

10. The data collected during the interviews and the mission were compiled for triangulation and analysis.

D. Presentation of preliminary findings

11. Once the interviews had been completed and the field mission carried out, the evaluation team presented the preliminary findings of the evaluation on February 28, 2024 to the main project stakeholders. This presentation was followed by a discussion in which all project stakeholders were able to react, ask questions and add to the evaluators' findings.

12. This approach ensures that the project team is actively involved in the data collection and analysis process, thereby increasing their ownership of the evaluation results. In addition, the Task Manager of the LDCF 4 project, which follows on from the LDCF 2 project, was involved in this exchange in order to capitalize on the project and disseminate lessons learned.

E. Analysis and reports

13. The analysis used a combination of quantitative and qualitative methods, and triangulated secondary and primary data to arrive at an evidence-based assessment. The analysis used information not only on the results of the implementation of each of the project's outcomes, but also on the context, the role of the implementing partners, and the institutional and policy changes brought about by the project. As part of the analysis of project outcomes (questions on effectiveness and impacts), the evaluation used the revised theory of change as an analytical framework to assess the extent to which outputs have advanced the achievement of outcomes, and to identify the mechanisms of change that have been set in motion. The evaluation does not measure the final impact, but the evaluators sought to determine whether all the elements necessary for sustainable change had been put in place, whether the risks had been properly taken into account and whether the opportunities linked to the project had been seized, in order to determine the likelihood of positive and negative impact (*likelihood of impact*). In this sense, the evaluators went beyond the assessment of project performance and provided a deeper understanding of the "why" of performance, and what could be done throughout the project to capitalize and learn in order to achieve the expected achievements and ensure their sustainability.

14. In addition to the evaluation questions provided in the review matrix, the evaluation also aimed to answer the additional key strategic questions (KSQ) provided in the ToRs and reviewed by the evaluators, namely:

- **KSQ1:** To what extent did the project advance adaptation and what benefits did it generate in respect of which climate impacts? Have climate changes and their impacts been sufficiently taken into account in the project implementation?
- **KSQ2:** Have arrangements in place allowed for an effective implementation of the project? Based on this experience, what improvements could be made to improve the implementation structure of future similar projects in the country?
- **KSQ3**: To what extent did the project manage to secure full beneficiaries' engagement and participation and how could this have been maximized?
- **KSQ4**: What are the key good practices and lessons learned coming out of the project implementation? How can these best practices be integrated into future similar projects, such as LDCF 4, to maximize their effectiveness?
- **KSQ5**: How well has the project ensured long-term impacts of its activities?

15. The evaluators also looked at the issues involved in monitoring co-financing, tracing the efforts made in this direction and the challenges encountered, in order to identify avenues to explore for improvement. In their analysis, the evaluators also look back at the project's initial targets, their evolution and the extent to which the initial targets were realistic.

16. The evaluators ensured that data and results were validated and triangulated in order to formulate solid, credible and useful conclusions and recommendations. In addition, the evaluation promotes pragmatic and feasible recommendations for future interventions.

F. Limitations of the final review

17. The evaluation exercise took place under very good conditions, with good access to project documentation and personnel, even though the project had already been completed. Some interviews with institutions were conducted in the presence of the former project coordinator due to various protocols, which is not a good practice, but the effects on exchanges seem to have been limited. The language barrier during the fieldwork generated some difficulties, particularly in Dikhil.

G. Ethics and human rights

18. Beneficiaries were met in small groups, and representatives of the authorities were met individually. All those interviewed were informed of the confidential nature of their contributions, and PMU representatives were asked not to be present in the room during interviews, particularly with communities. Where possible and relevant, separate discussions were held with women in the communities to provide a more suitable space for them to express their views. Triangulation of the data collected throughout the process ensures the anonymity of the individuals interviewed.

III. THE PROJECT

A. Project background and description

19. Djibouti is located in northeast Africa, along the Gulf of Aden, south of the Red Sea. Djibouti shares borders with Eritrea to the north, Ethiopia to the west and south, Somalia to the southeast, and a 314 km coastline to the east. Administratively, Djibouti is divided into six regions: Arta, Ali-Sabieh, Dikhil, Tadjourah, Obock and Djibouti city. Djibouti's population is estimated at around 1.1 million in 2024, with almost as many women as men. More than 80% of the population lives in urban centers, and there are around 600,000 people in the capital (2018 estimate)[4]. In contrast to urban and peri-urban contexts, Djibouti's rural hinterland is sparsely populated and comprises mainly nomadic and semi-nomadic pastoralists. Djibouti is one of the lowest-income countries in the world, with an estimated 40% of the population living in poverty and 23% in extreme poverty (<1.9 USD/person/day)[5]. The poverty rate in rural areas is 63%, with 45% of people in extreme poverty compared with a national average of 21%, reflecting the marked contrast between urban areas and the rest of the country. In terms of gender disparity, Djibouti ranks 171st out of 189 on the Gender Inequality Index (assessment from 2021)[6].

20. Djibouti has a Gross Domestic Product (GDP) of around 2 billion USD, with a constant growth rate of 3.4% over 2020-2022. The industrial and manufacturing sectors account for around 20% of GDP, while agriculture contributes only around 5%[7]. The country's trade balance is structurally negative, as it exports little other than livestock, but imports large quantities of petroleum products, foodstuffs and capital goods. This remains a major obstacle to economic development. The country also suffers from a lack of infrastructure and a poorly structured economic system (collective markets, cooperatives, private sector) to develop an agro-pastoral sector beneficial to national production and even exports. This situation makes producers highly dependent on external markets, which set prices that are often volatile given the state of raw materials markets.

21. These challenges are exacerbated by the effects of climate change, which are making living conditions increasingly difficult: an arid to semi-arid climate (average annual rainfall barely reaches 150 mm) and fragile water resources, over 95% of which rely on overexploited groundwater that is not always viable or sustainable (high temperature or salinity levels, supply difficulties, limited and poorly maintained infrastructure)[8]. Djibouti is also considered highly exposed to climate risks (drought and flooding), and ranks 37th out of 191 in terms of climate vulnerability according to the INFORM 2022 index[9] , and 59th the country most vulnerable to climate change according to the ND-GAIN (Notre Dame Global Adaptation Initiative) index[10]. Djibouti is also highly exposed to extreme temperatures, and it is predicted that if global

[4] World Bank. 2022. Djibouti urban population growth. Available at: https://data.worldbank.org/indicator/SP.URB.GROW?locations=DJ
[5] World Bank Group. 2020. Poverty and equity brief. Available at: https://databankfiles.worldbank.org/public/ddpext_download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_DJI.pdf
[6] UNDP Human Development Reports. 2021. Djibouti Human Development Index. Available at: https://hdr.undp.org/data-center/specific-countrydata#/countries/DJI
[7] World Bank Group. 2020. Poverty and equity brief. Available at: https://databankfiles.worldbank.org/public/ddpext_download/poverty/33EF03BB-9722-4AE2-ABC7-AA2972D68AFE/Global_POVEQ_DJI.pdf
[8] National Investment Programme for Agriculture, Food Security and Nutrition - PNIASAN 2016-2020. MAEPE-RH.
[9] EU Commission, INFORM Index : https://drmkc.jrc.ec.europa.eu/inform-index
[10] https://gain.nd.edu/our-work/country-index/rankings/

temperatures rise by 1.5°C, Djibouti would be the 5th most exposed country in the world to such increases[11]. These changes are likely to adversely affect agroecological food and pastoral systems in Djibouti's drylands, where desertification is a major challenge to these livelihoods.

22. The two major problems of i) the impact of climate change effects on water resources; and ii) limited technical and management capacities, financial resources or knowledge of climate change; were identified in the project document "Implementation of adaptation technologies in the fragile ecosystems of the central plains of Djibouti", the subject of this assessment and commonly referred to as the "LDCF 2 project". This project document (ProDoc) also identifies several threats unrelated to climate change which, combined with the above-mentioned problems, create high levels of vulnerability of local communities to the negative effects of climate change. The unsustainable use of natural resources and the degradation of ecosystems lead to threats linked to erosion, as well as to the availability of water and food. Poverty, dependence on rain-fed agriculture and immigration are also considered factors of vulnerability.

23. To meet these challenges and reduce people's level of vulnerability, the main objective of the LDCF 2 project is to implement climate change adaptation interventions that protect these populations, maintain productive assets and strengthen the resilience of ecosystems in the project's intervention zones.

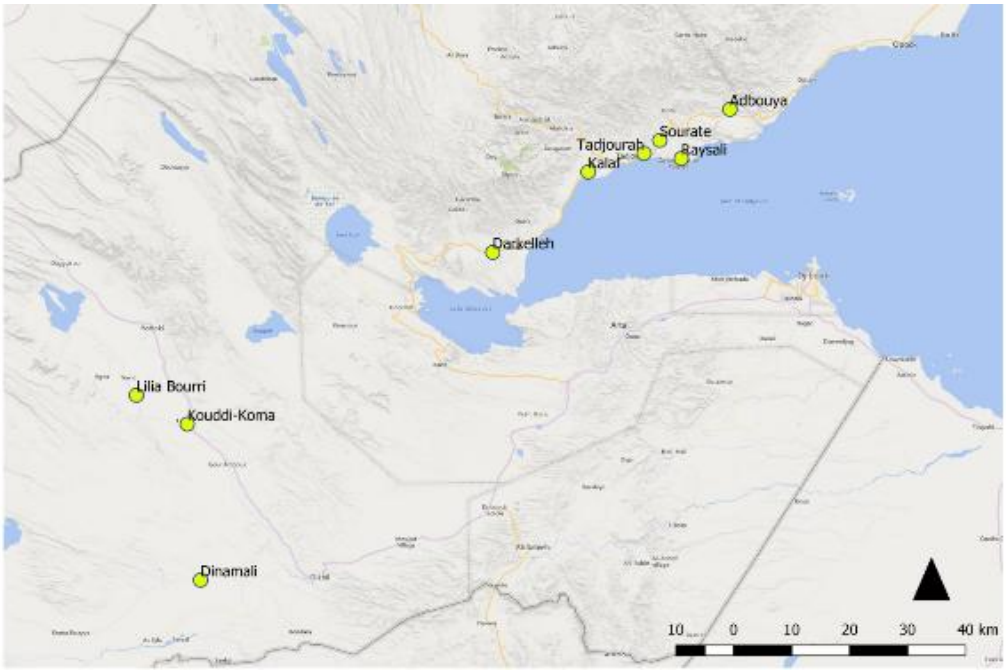
24. This objective was to be achieved through the following four components:

- Component 1: Protection against water-related climate change risks;
- Component 2: Ecosystem rehabilitation, restoration and resilience;
- Component 3: Sustainable and resilient livelihoods; and
- Component 4: Institutional capacity for adaptive development and community resilience.

25. The project is being implemented at a total of nine sites (Figure 1) spread across two regions of Djibouti: i) the Hanlé plains of the Dikhil region - comprising three project sites, namely Koudi-Koma, Liliya bouri and Dinamali - and ii) the interior plains and coast of the Tadjourah region - comprising the five project sites of Kalaf, Ad bouya, Darkenlé as well as Raysali and Marsaki.

[11] Lenton, T.M., Xu, C., Abrams, J.F. et al. Quantifying the human cost of global warming. Nat Sustain 6, 1237-1247 (2023). https://doi.org/10.1038/s41893-023-01132-6

Figure 1 Geographical distribution of project activities[12]



26. Project implementation was directly affected by two major external factors: the effects of climate change and the COVID-19 pandemic.

B. Results framework

27. The project's objective, outcomes, outputs, indicators and targets were defined in the ProDoc. The project's objective was "*to increase the resilience of Djibouti's society and economy to the effects of climate change, and to strengthen the government's capacity to integrate adaptation into its development planning*". Three indicators were linked to this objective:

- Number of climate change adaptation training activities and number of staff trained (disaggregated by gender) in integrating climate change adaptation into development. (Target: two training sessions)
- Number of people trained (disaggregated by gender) in climate-resilient livelihoods. (Target: 200 people)
- Percentage change in vulnerability of people living in project areas (broken down by gender). (Target: 45% increase in vulnerability and risk assessment (VRA) scores).

28. A target related to the first indicator "At least two meetings of the climate change committee" mentioned in the project document has been dropped.

29. The Table 1 shows the project's effects, outputs, indicators and targets as planned in the ProDoc (in black), and incorporates the changes as considered in the RVE report in May 2023 (in green). Items in blue have been modified on the basis of the results of the mid-term review carried out in 2019.

[12] Timesis srl. Terminal Results Verification Exercise (RVE) For the project: "Implementation of adaptation techniques in fragile ecosystems of the central plains of Djibouti" (GEF ID 5021) - Final Report (2023).

Table 1. Overview of changes in project outcomes, outputs, indicators and targets [13]

Outcomes	*Outputs*	Indicators	Targets
Component 1: Protection against water-related climate change risks			
Result 1. The negative effects of droughts and floods are reduced or avoided.	Result 1.1: Drought and flood protection measures in towns and cities	1. Length and volume of gabion walls built. 2. Average volume of water available per day for irrigation of agropastoral plots. 3. Number of fully operational water distribution systems in agropastoral plots (including boreholes, distribution systems and operational reservoirs).	1. 1,800 m, 8200 m^3 2. 1,209 m /d.^{3} 3. 5
	Result 1.2. A hydrogeological model of current and projected water resource availability		
Component 2: Ecosystem rehabilitation, restoration and resilience			
Result 2: Fragile ecosystems are productive and resilient to climate change	Result 2.1. Vegetation cover restored ~~and soil stabilized~~ in Acacia forests in Hanlé ~~and Tadjourah~~	1. Restored acacia forest at Hanlé. 2. Area of restored mangroves in the central coastal zones of Tadjourah. 3. Level of awareness and capacity of local communities to protect restored ecosystems	1. At least 15 ha at Hanlé 2. At least 3 ha[14] 3. At least 80% of residents at each project site are willing to take action to protect and restore vegetation cover.
	Result 2.2. Restoration of mangroves in the central coastal areas of Tadjourah		
Component 3: Sustainable and resilient livelihoods			
Outcome 3. Sustainable, climate-resilient livelihoods that maintain ecosystem services	Outcome 3.1. Productive oasis ecosystems that provide livelihoods and ecosystem services	1. Number of households with an irrigated agro-pastoral plot, by gender 2. Area of irrigated agro-pastoral plots. 3. Number of beneficial species cultivated per agro-pastoral plot. 4. Average annual forage and crop production. 5. Percentage of households with improved access to alternative livelihoods, by gender	1. a) 33 at Koudi-Koma, 42 at Liliya Bouri, 15 at Sourate, ~~21 at Dinamali,~~ 120 at Kalaf[15] , 8 at Darkenlé, 16 at Adbouya. b) Half of the households benefiting from an agro-pastoral plot have taken up farming or developed their farming activities in the last 3 years at the end of the project. 2. At the end of the project, at least 30 ha of irrigated agro-pastoral plots. 3. At least[16] 8 different species cultivated on agropastoral plots (6 tree species, 2 forage species and 3 crop species). 4. At least 8 t per ha per year for crops and at least 30 t per ha per year for forage in irrigated areas.
	Outcome 3.2. Increased, diversified and resilient livelihoods through the introduction of		

[13] ProDoc, Baseline Study, Mid-Term Review (2019), PIR 2023 and Results Verification Exercise (2023)
[14] In PIR 2023, this target is still 4 ha.
[15] In PIR 2023, the target is 60.
[16] In PIR 2023, we're still talking about an average of 8 species.

Outcomes	*Outputs*	Indicators	Targets
	alternative sustainable economic development activities.		5. By the end of the project, at least 280 agro-pastoral families will have more secure livelihoods.
Component 4: Institutional capacity for adaptive development and community resilience			
Result 4: Increased capacity of institutions and communities to adapt to climate change	Result 4.1. Strengthening the institutional and technical capacities of local and national authorities Result 4.2. Institutional capacity building at local level for climate change adaptation through an ecosystem-based approach	1. Number of operational agropastoral plot committees and cooperatives 2. Number of training courses on climate change for teachers 3. Number of projects sharing information through the LDCF project website. 4. Number of research projects to assess the medium- and long-term costs and benefits of LDCF project interventions.	1. By the end of the project, i) an agropastoral committee operates per project site, with the participation of at least half the beneficiaries of the agropastoral plots. ii) At least half the villages participate in a cooperative, and the proportion of farmers participating in these cooperatives is at least 15%[17] 2. By the end of the project, at least one training event on climate change for each teacher. 3. The DESD website is updated and includes a project page for this project, where all relevant documents, progress reports and lessons learned are shared[18] 4. At the end of the project, at least 2 research projects are funded by the FPMA project.

30. No substantial changes have been made to the project's logical framework since the mid-term review. Outcome 2.1 has been adjusted to align with the indicators. The changes have mainly been made to the targets. Those that have been modified have been lowered. There is, however, some confusion as to the official version of the logical framework, since some (minor) elements differ slightly between the PIR 2023 and the RVE.

C. Description of targeted stakeholders

31. Numerous organizations and groups were involved in or affected by the project. They are presented in

32. Table 2 which is based on the results of the mid-term review, the in-depth document review, the mission and the interviews conducted. Those who have been most closely involved in the implementation of the project or its components are identified as "main partners", and have generally had a high level of involvement and interest in the project. The organizations identified below as "partners" are those which did not directly manage the project, but whose collaboration was necessary for specific activities and for which the project is of strategic interest. This was notably the case for several ministries whose responsibilities fall within the scope of the project, and who had to be involved in certain activities. Other organizations were affected by the project but did not have any significant involvement with it. This is the case, for example, of government agencies concerned with tourism or fisheries, which were not major components of the project.

[17] Indicator not included in results verification exercise
[18] Indicator as mentioned in PIR 2023.

33. Many community organizations as well as beneficiaries are categorized as "low power/high interest", as they may not have been involved in the management of the project, but they had important implications in its operational implementation.

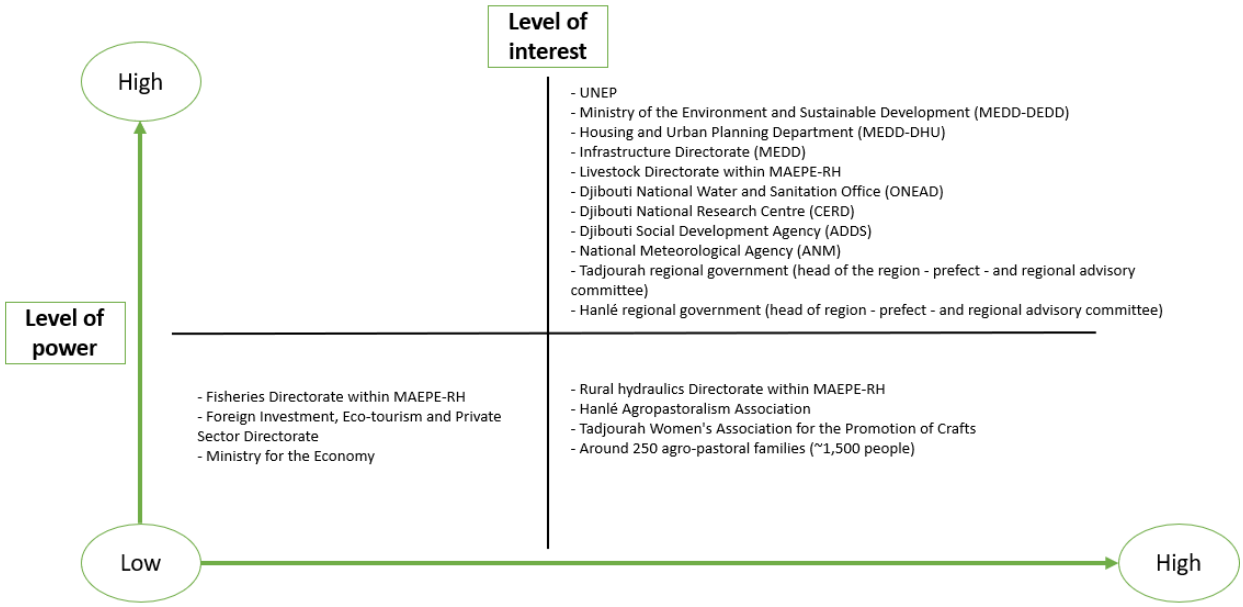
Table 2. Project stakeholders[19]

Organization	Type	Role in the project	Level of power	Level of interest
UNEP	International organization	Implementation agency	High	High
Environment and Sustainable Development Department (MEDD-DEDD)	Government	Execution agency	High	High
Housing and Urban Planning Department (MEDD-DHU)	Government	Main partner and PSC member	High	High
Major Works Department (MEDD-DGT)	Government	Main partner and PSC member	High	High
MAEPE-RH	Government	Main partner and PSC member	Medium	High
Rural hydraulics department within MAEPE-RH	Government	Partner	Low	High
Fisheries Division of MAEPE-RH	Government	Partner	Low	Low
MAEPE-RH Livestock Department	Government	Partner	Low	High
Djibouti National Water and Sanitation Board (ONEAD)	Government	Main partner	High	High
Djibouti National Research Center (CERD)	Government	Main partner and PSC member	Medium	High
Djibouti Social Development Agency (ADDS)	Government	Main partner and PSC member	Medium	High
Foreign Investment, Eco-tourism and Private Sector Department	Government	Involved in certain activities	Low	Low
National Meteorological Agency (ANM)	Government	Main partner and PSC member	High	High
Ministry of the Economy	Government	Involved in certain activities	Low	Low
Tadjourah regional government (regional chief - prefect - and regional advisory committee)	Local government	Main partner and PSC member	Medium	High
Hanlé regional government (regional head - prefect - and regional advisory committee)	Local government	Main partner and PSC member	Medium	High
Hanlé Agropastoral Association	Community association	Involved in activities	Low	High
Tadjourah Women's Association for the Promotion of Handicrafts	Community association	Beneficiaries	Low	High
Around 250 agro-pastoral families (~1,500 people)	Communities	Beneficiaries	Low	High

[19] Source: ProDoc, p.31, and mid-term evaluation inception report.

34. Figure 2 illustrates the positioning of the various stakeholders according to their level of interest and power in project implementation.

Figure 2. Diagram showing project stakeholders according to their level of interest and power



D. Institutional context and implementation structure

35. UNEP is the project's implementing agency, represented by a Task Manager (TM) from the Climate Change Adaptation Unit (CCAU) who oversaw project implementation and provided technical support. The project was implemented under the *National Implementation Modality* by Djibouti Ministry of Housing, Urban Planning and Environment, renamed Ministry of Environment and Sustainable Development (MEDD) in 2020, in collaboration with the Ministry of Agriculture, Water, Fisheries, Livestock and Rural Hydraulics (MAEPE-RH) and other relevant ministries. The MEDD was represented by the Environment Department (MEDD/DEDD), which is responsible for coordinating and implementing multilateral environmental agreements. The MAEPE-RH was represented by the Department of Agriculture and Forests (DAF), which is responsible for the National Convention to Combat Desertification. It is involved in a number of food security initiatives and is also responsible for several national reference initiatives. The MAEPE-RH was also represented by the Rural Hydraulics Department, responsible for drilling infrastructures.

36. The Project Management Unit (PMU) was based at MEDD/DEDD. It was responsible for the day-to-day coordination and implementation of the project, under the supervision of a full-time project coordinator. It also included an assistant project coordinator and an awareness-raising assistant until December 2020 and a mangrove assistant between 2016 and 2023. The PMU also included a financial manager and focal points for Dikhil and Tadjourah. The project coordinator reported regularly to the TM and worked closely with a Chief Technical Advisor (CTA) who was a part-time international expert based remotely.

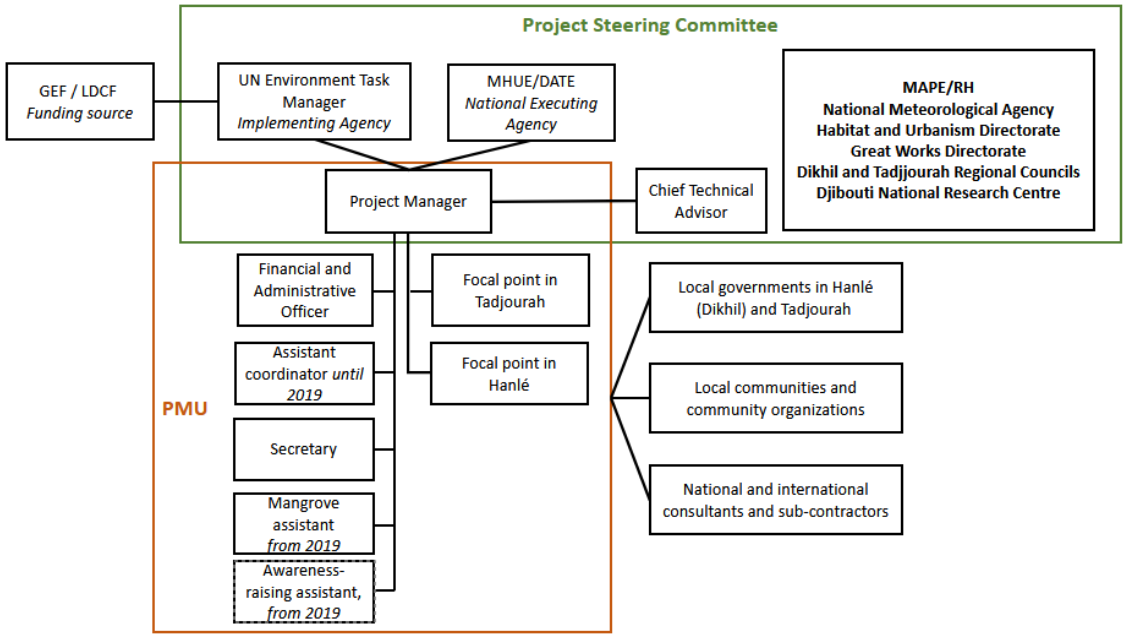
37. Other project partners included the Djibouti National Water and Sanitation Board (ONEAD), the Djibouti National Research Center (CERD), the National Meteorological Agency (ANM), the Djibouti Social Development Agency (ADDS), the Regional Governments of Tadjourah and Dikhil, Hanlé Agropastoral Association and the Tadjourah Women's Association for the Promotion of Handicrafts.

38. A Project Steering Committee (PSC) was to meet twice a year to provide strategic guidance and advice to the project. It was specifically charged with (i) overseeing project implementation and (ii) reviewing work plans and annual reports. It was chaired by the Secretary General of MEDD and comprised the following members[20] :

- National government representatives :
  - MEDD/DEDD (PSC Chairman), MAEPE-RH, ANM, Department for Housing and Urban Planning (DHU), Department for Infrastructure (DGT)
- Regional government representatives :
  - President of the Dikhil Regional Council
  - Chairman of the Tadjourah Regional Council
  - Prefecture of Dikhil
  - Prefecture of Tadjourah
- CERD
- TM UNEP
- PMU
  - National project coordinator
  - National assistants
  - Dikhil and Tadjourah focal points

39. The institutional arrangement of the project was schematized as follows:

Figure 3. Institutional arrangement of the project[21]



[20] Detailed list from the mid-term review
[21] Source: reconstitution by the evaluator

E. Key changes agreed in project design

40. The project has undergone two no-cost project extensions in 2018 and 2021, increasing the project duration by four and a half years. The first request was made in early 2018 and obtained by agreement from MEDD and UNEP in May 2018, for a three-year extension, with the project running until June 30, 2021[22]. This request was justified internally to UNEP's Ecosystems Division for the following reasons[23] : (i) delays in setting up the PMU; (ii) difficulties in recruiting the project coordinator and turnover for the CTA and TM positions; (iii) some delays linked to administrative procedures (decision-making and public procurement); (iv) underestimation of certain expenses which led to budget reallocations; (v) complications and delays in identifying contractor companies; (vi) delays in acquiring certain imported equipment; and finally (viii) delays in replenishing the project's treasury. A revised budget and work plan had been presented to underpin this request, and operational solutions had been put in place (training for the project team, monthly meetings between the TM, the CTA and the project coordinator, more frequent missions by the CTA)[24].

41. The second no-cost extension of the project duration was requested at the ninth meeting of the project PSC on June 9, 2020, for a duration of 2 years[25]. This request was validated by the MEDD and UNEP on June 30, 2021, given the project's positive results in previous years, the COVID-19 pandemic which largely affected project implementation, and the budget still to be disbursed, as reported in the June 2020 PSC minutes. It was agreed that the project team would be kept small to ensure efficient implementation. A revised work plan was then submitted.

F. Project financing

42. The total project budget is USD 21,530,000, financed by a GEF grant totaling USD 7,360,000 via the LDCF, and USD 14,170,000 in co-financing, mainly from the Djibouti government (USD 12,800,000). Of the LDCF funding, the ProDoc foresees a distribution by component as follows: 50% on component 1 (3,709,900 USD), 16% on component 2 (1,202,100 USD), 18% on component 3 (1,319,000 USD) and 9% on component 4 (672,000 USD). The remainder of the budget is allocated to project management (341,500 USD) and monitoring & evaluation (115,500 USD).

43. The project's final disbursement rate is close to 100% and 100% of co-financing has been awarded. Project disbursements have been significant between 2017 and 2019, reaching over $1.5 million disbursed in 2018.

[22] See the amendment to BCP No. 1 signed on May 21, 2018 by MHUEAT.
[23] See the UNEP Ecosystem Division's response to comments.
[24] See CTA and TM mission reports.
[25] See the amendment to PCA n°2 signed on June 30, 2021 by the MEDD.

IV. THEORY OF CHANGE

44. ProDoc developed problem and solution trees, as well as a contextual analysis, which served as the basis for developing a theory of change for the project during the MTR. This visual reconstruction of expectations in relation to the process by which project results were to be achieved remains valid and is presented below. The final review analyzed the Theory of Change proposed at the MTR and considers that it is still valid. There have been no major changes in activities or in the logic linking outputs to outcomes and impacts. The proposed assumptions and drivers are also still valid. This theory of change is presented in Figure 4.

45. The project identified that climate change threatens important socio-economic sectors in Djibouti, such as water, agriculture, economic development and health, due to the high level of vulnerability of rural communities to the impact of climate change. The main factors identified as weakening these socio-economic sectors and making rural communities vulnerable were as follows:

Dependence of rural populations on rain-fed agriculture in a context of chronic water stress
Widespread rural poverty and limited livelihoods
Unsustainable resource use and ecosystem degradation

46. Climate change is causing a rise in sea level, an increase in the duration and severity of droughts, irregular rainfall, changes in average precipitation, and an increase in seawater temperature that would exacerbate these various vulnerability factors.

47. The project therefore aimed to reduce the vulnerability of rural communities in order to mitigate the effects of climate change on Djibouti's society and economy. To this end, the project identified four main obstacles to overcome:

Limited institutional and technical capacity of government and local communities to plan and implement climate change adaptation activities;
Limited knowledge and capacity in water resources management;
Limited knowledge of adaptation options and the value of ecosystems in reducing vulnerability;
Ineffective prevention mechanisms for climate-related natural disasters.

48. The project planned to achieve its objectives through four components, which were aligned with the project's four outcomes:

Outcome 1. The negative effects of droughts and floods are reduced or avoided: This result involved the implementation of measures to protect towns and cities against floods and droughts. These included the rehabilitation or construction of gabion walls, boreholes and water reservoirs.
Outcome 2: Fragile ecosystems continue to provide their services and are productive and resilient to climate change (reworded): This outcome mainly involved the restoration of degraded mangroves and vegetation cover, as well as soil stabilization resulting from acacia restoration.
Outcome 3. Increased, diversified and resilient livelihoods contribute to the maintenance of ecosystem services (reworded): Under this outcome, activities included the construction and rehabilitation of several agricultural plots, as well as activities to implement sustainable agriculture and develop non-timber forest products. The aim was to provide training, equipment and inputs for a variety of agricultural productions ranging from appropriate forage and crop species to poultry farming, as well as water management and artisanal production (beekeeping was abandoned). As

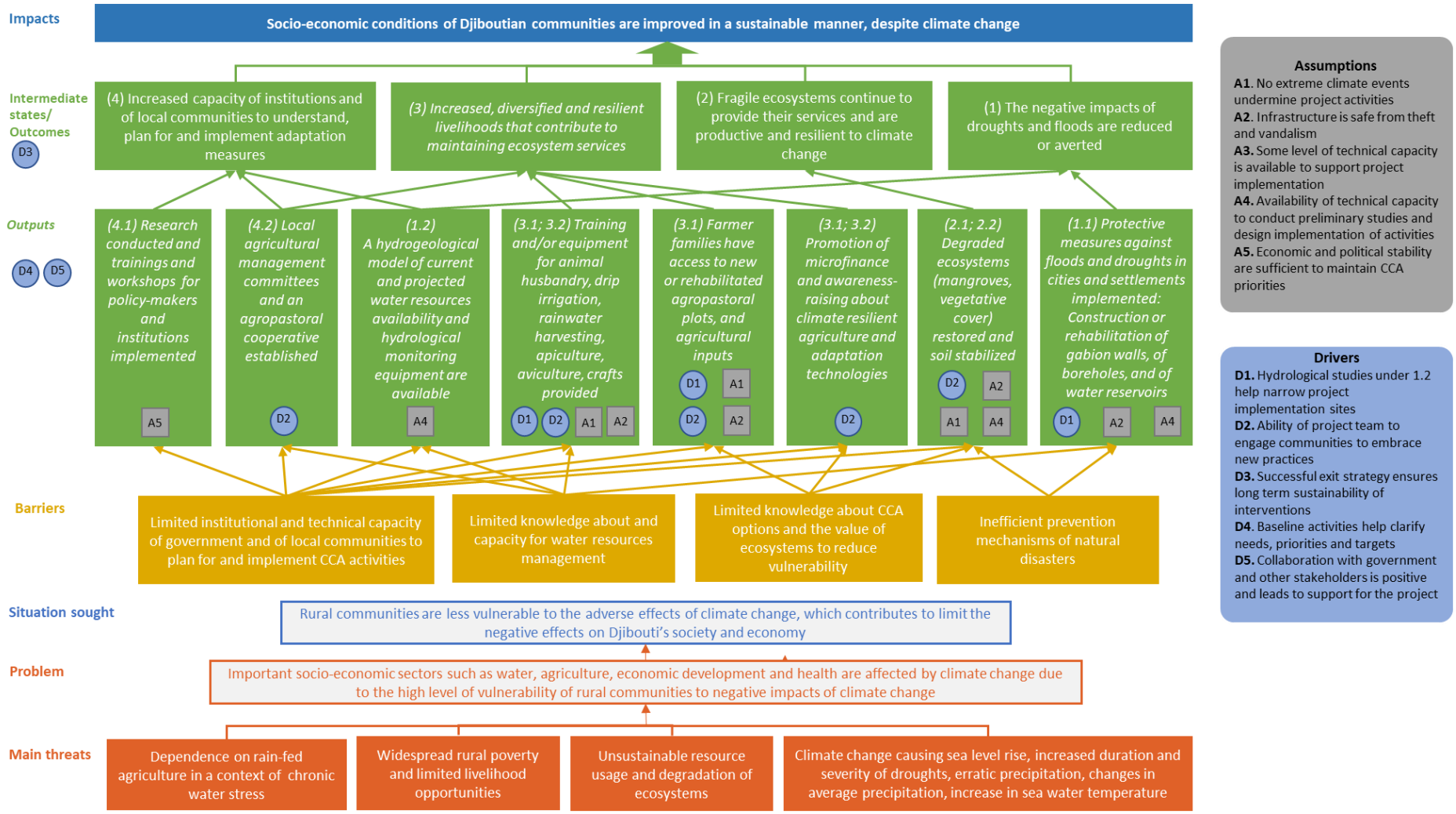
part of this component, the project also undertook to identify and promote financial options such as microfinance to support agropastoral and other small-scale producers. Learning-by-doing and public awareness campaigns on climate-resilient agriculture were also to be implemented.

Outcome 4: Increased capacity of institutions and communities to adapt to climate change (understand, plan and implement adaptation measures): The targeted outcomes were i) at local and national government level, and ii) at community level. This outcome aimed to build the capacity of Djiboutian institutions at all levels to understand and plan for adaptation and to implement ecosystem-based adaptation, through training and the creation of coordination mechanisms. At community level, local agricultural management committees and an agropastoral cooperative were to be set up. Hydrological modelling and the acquisition of water monitoring equipment were also to contribute to improved water management and science-based planning, as was support for research activities.

49. Overall, these achievements and results were aimed at sustainably improving the socio-economic conditions of Djibouti's communities, despite the predicted climate changes that would otherwise have jeopardized their livelihoods.

50. Although the logic behind the expected changes is correct, the reconstruction of the theory of change carried out during the MTR involved adjusting the wording of the achievements and some results, as well as their positioning within the project. Some changes were aimed solely at ensuring that information could be represented visually on a single page, such as the merging of results 2.1 and 2.2 into a single box. Other changes concerned the organization of activities in the logic model.

Figure 4. Theory of change - from the project's MTR



V. FINDINGS OF THE TERMINAL REVIEW

A. Strategic relevance

Alignment with UNEP's Medium-Term Strategy (MTS) and Programme of Work (POW), and GEF's strategic priorities

51. The aim of the project is to implement climate change adaptation interventions that protect populations, maintain productive assets and strengthen ecosystem resilience in the Hanlé and Tadjourah regions. This is in line with Objective 1 of UNEP's Medium-Term Strategy (MTS) for 2014-2017[26] "EA1 Climate resilience: Ecosystem-based adaptation and support approaches are implemented and integrated into key sectoral and national development strategies to reduce vulnerability and build resilience to the impacts of climate change".

52. The project is also aligned with UNEP's Programme of Work and its 2014-2015 budget[27] in force at the start of the project, which had the objective of "strengthening the capacity of countries to engage in climate change resilience and emissions reduction for sustainable development and human well-being". Its four axes refer to the expected effects of the project, i.e. i) the development of the hydrogeological model of current and projected water resource availability; ii) the adaptation measures implemented in components 1, 2 and 3; iii) the training provided to students and the lessons learned documents.

53. The project has also been designed to align with UNEP's water strategy[28] , which promotes the Ecosystem-based Adaptation (EbA) approach as a solution for better water resource management[29]. In addition, the project reflects the EbA approach promoted more widely by UNEP in all its communications[30].

54. The project's design is therefore in line with UNEP's priorities. Despite the project's extended duration, it is important to note that it has remained aligned with UNEP's updated priorities throughout its implementation. Indeed, the project remains aligned over time with UNEP's MTS (2018-2021) and UNEP's Programme of Work (2022-2023), particularly around Outcome 1B "Countries and stakeholders have enhanced capacity, finance and access to technologies to achieve the adaptation and mitigation objectives of the Paris Agreement".

55. The project is also in line with the 2013-2017 United Nations Development Assistance Framework (UNDAF) for Djibouti.[31] The project is particularly in line with cooperation axis n°3 "Resilience of populations to natural hazards and food insecurity", and more specifically with outcome 3.1 "Rural communities and ecosystems are more resilient in the face of climate change" and output 3.1.1. "Good practices in community adaptation to climate change are strengthened"[32].

56. Finally, the project is properly aligned with GEF strategies, namely the Climate Change Adaptation Strategy for the Least Developed Countries Fund (LDCF) and the Special Climate Change Fund (SCCF) 2010-2014, which had the objective of "supporting developing countries to increase their resilience to climate change through immediate and longer-term adaptation measures in development policies, plans, programs, projects and actions", and in particular, outcome 1.3 "Diversified and

[26] P.26
[27] P.34
[28] https://unepdhi.org/wp-content/uploads/sites/2/2020/06/Water_Policy_Strategy.pdf
[29] P.10
[30] https://www.unep.org/topics/climate-action/adaptation/ecosystem-based-adaptation
[31] https://www.unfpa.org/sites/default/files/portal-document/Djibouti_UNDAF%202013-2017-FR.pdf
[32] P.20

strengthened livelihoods and income sources for vulnerable people in targeted areas" and outcome 2.2 "Enhanced adaptive capacity to reduce the risk of climate-related economic losses". The activities carried out under the project to support the development of new livelihoods in order to reduce the vulnerability of the targeted communities while promoting activities adapted to climate change meet these priorities.

Relevance to national and sub-national environmental needs and priorities

Alignment with national development and environmental plans and strategies

57. The ProDoc mentions that the project is aligned with Djibouti's Poverty Reduction Strategy Paper adopted by the government in 2004, as well as with the National Initiative for Social Development (NISD) for the period 2011-2014. The project contributes to the third objective of the NISD, namely to reduce poverty while mitigating social and environmental vulnerability. The "Vision Djibouti 2035" document, which follows on from the NISD, also reflects poverty reduction objectives, but also defines a sustainable development strategy for 2035, based on the following areas: i) renewable energies; ii) Djibouti as a 100% green country; iii) sustainable water management; and iv) climate change adaptation and risk management. The LDCF 2 project is therefore consistent with this national sustainable development strategy.

58. As part of Djibouti's decentralization policy, "Vision Djibouti 2035" is being rolled out across the country's six regions through Regional Development Plans, which define development priorities for each region. The 2016-2020 PDR for the Tadjourah region emphasizes the need to improve access to water in order to develop agro-pastoral activities. As for the Regional Development Plans 2016-2020 for the Dikhil region, it emphasizes the region's agricultural potential, which needs to be strengthened by modernizing agricultural perimeters and irrigation systems. Through its general objective, the LDCF 2 project contributes to the achievement of these regional objectives, particularly with its focus on agricultural activities in Hanlé in the Dikhil region. The plans were revised in 2021 for the period 2021-2025, but retain the above-mentioned major objectives.

59. The project is also in line with Djibouti's National Determined Contribution (NDC) (2016), built around five main areas of intervention: i) reducing vulnerability to drought; ii) protecting against sea-level rise; iii) improving access to water; iv) protecting biodiversity; and v) strengthening the resilience of rural populations. Chapter 3 of the Third National Communication of the Republic of Djibouti to the United Nations Framework Convention on Climate Change (2021) deals with three sectors of intervention for the implementation of adaptation measures: agriculture, water management and coastal zone management. The LCDF 2 project responds to three of the approaches promoted for adaptation in these three sectors, namely: i) setting up financial, material and human resources to counter the effects of climate change (components 1, 2, 3 and 4); ii) improving knowledge of the climate in general and extreme climatic events in particular (components 1 and 4); and iii) building new protective structures and reinforcing existing ones (component 1). Finally, the two regions targeted by the project, Tadjourah and Dikhil, are identified in Djibouti's 2006 National Adaptation Action Plan (NAPA) as being particularly vulnerable to climate change.

Alignment with local environmental and social needs and priorities

60. Djibouti's rural communities are highly dependent on natural resources for their livelihoods, and show a very high level of exposure to climatic hazards, with little capacity to adapt. This exposure makes the level of vulnerability of these populations "high to extreme" for women and "medium to extreme" for men, according to the baseline study[33]. The nomadic or semi-nomadic way of life, still

[33] Delbosc, A.; Roux, J.M.(2017). Implementation of a baseline survey and development of indicators and targets for the project "Implementing adaptation technologies in fragile ecosystems of Djibouti's central plains". Final Report*, p.56.*

largely present in certain regions of the country such as Tadjourah, is undermined by the effects of climate change, which is motivating the emergence of new practices (e.g. goat breeding instead of cattle). Farming is not part of the cultural practices of these communities, but it is recognized as a source of fodder for livestock, a source of supplementary food and a source of income. Given the weakness of national production and the country's dependence on imports, the development of agricultural practices is a response to the challenges of food security. Agricultural production, even for subsistence purposes, is largely dependent on water resources, which are unevenly distributed across the country, poorly analyzed and sometimes unsuitable for use (salinity levels or temperatures too high), poorly managed and often overexploited. In addition, the water points identified in transhumance areas attract many of the region's livestock, which can lead to overgrazing. Climate forecasts predict a drying up of water resources and a prevalence of extreme events (floods, violent winds).

61. The project takes this context and the resilience needs of the population into account. The EbA approach seems relevant to the Djibouti context: it proposes diversification of income sources and access to new sources of financing, reinforcement of ecosystem services, low-cost solutions and solutions that can include women. The ProDoc also stresses the importance of access to water. These were analyzed in depth by the production of a report on aquifer modeling and assessment of the joint impact of climate change and human activities on the current and future availability and sustainability of groundwater resources (2017). Nevertheless, the report concludes that the situation is concerning, with overexploitation of water resources in Tadjourah and the limit of exploitation reached in Dikhil.

Complementarity with other concurrent or planned initiatives

62. The ProDoc takes good account of the various past and current projects with which synergies exist, mainly in the areas of water resource management and access to water. The ProDoc acknowledges the many investments made in this area, but highlights the project's uniqueness in that it operates in regions less covered by other funding (central and western regions). The LDCF 2 project is specifically designed to capitalize on the results of the PROMES-GDT project, using certain infrastructures or access to fodder. However, despite the fact that several projects were taken into account in the project design, few synergies were observed in the field during the evaluation, with the exception of the PRODERMO project, a World Bank rural development and water access project implemented by MAEPE-RH. The two boreholes built at Darkenlé and Lilya Bouri via this project were used by the LDCF 2 project. In addition, a UNICEF project rehabilitated an irrigation system built by the LDCF 2 project in Kalaf[34].

63. Coordination between the various projects implemented by the MEDD is directly facilitated by the Ministry, which favors the complementarity of actions between the different funding sources. For example, the LDCF 4 project reinforces and complements the results of the LDCF 2 project (see Sustainability section) and plans to strengthen the agricultural perimeters already built through the LDCF 2 project. However, coordination with other projects remains ad hoc, and the involvement of other ministries and institutions is virtually limited to participation in the PSC or a few follow-up meetings, as for example with the PRODERMO project, and between the DEDD and the Rural Hydraulics Department and the Department of Agriculture and Forest. Our interviews showed that participation in the PSC does not guarantee an effective flow of information within the other institutions involved in the project, especially if there is staff turnover. Greater integration between the various programs - and not just with the Ministries - could have been implemented, as the exit strategy or the lessons learned document (lesson no. 4) reminds us.

[34] https://www.unicef.org/djibouti/recits/la-corv%C3%A9e-de-leau-nen-es-plus-une

Criteria	Summary of the analysis	Performance
A. Strategic relevance		**S**
1. Alignment with UNEP's strategy and program of work	The project is aligned with the strategic priorities of GEF (LDCF and CSSF), UNEP and UNDAF.	**S**
2. Relevance to regional, sub-regional and national environmental priorities	The project is in line with the country's national development strategies, as well as its adaptation and NDC strategies. The project meets the challenges identified in the two target regions.	**S**

B. Quality of project design

64. The analysis of the quality of the project design was carried out for this final evaluation, based on the analysis carried out for the mid-term review (MTR) and the project formulation documents (ProDoc), on the basis of the analysis criteria proposed by UNEP. The findings of the other sections of this terminal evaluation allow us to qualify this analysis by considering the way in which the project was implemented. The main points are summarized below:

65. **Nature of external context**: The project design appropriately identifies the importance of water-related issues for any resilience project to be identified in Djibouti, and the complexity of building sustainable, resilient livelihoods given extreme water scarcity and high climate vulnerability. It identifies the risks associated with climate hazards and water scarcity, but does not incorporate them into its activities. The baseline study is useful for characterizing the context in each of the project sites, as the specific environmental and socio-economic conditions have not been specifically analyzed in the project document.

66. **Strategic relevance**: The project document justifies that the project is aligned with the poverty and vulnerability reduction objective of the country's main national development policy and its National Adaptation Plan of Action (NAPA), in which the two regions targeted by the project are identified as being among the most vulnerable.

67. **Expected results and causality:** The project addresses a wide range of issues concerning vulnerability, water management, institutional resilience, ecosystem restoration and disaster risk management. Some of the components include a wide range of activities, from the rehabilitation of agricultural plots to the promotion of microfinance and non-timber forest products. Although all the project's activities are likely to contribute to adaptation and resilience, their large number requires enhanced coordination and synergies to achieve their objectives, which are not foreseen in this way in the ProDoc. In addition, the project covers a large number of dispersed sites, making the implementation of activities more complex. Furthermore, the analysis of partners' and beneficiaries' capacities seems insufficient to best define the project's expected results and capacity-building needs. Finally, it seems that the targets set at the start of the project were overestimated, given the difficulties associated with the context and the activities planned for the project.

68. **Logical framework and monitoring**: The logical framework is analyzed at the beginning of the document (see section II). Planned monitoring and evaluation activities include annual progress reports (PIR), biannual reports, PSC meetings, CTA and TM mission reports, as well as a mid-term evaluation, an RVE and a terminal review (TR).

69. **Governance and supervision arrangements**: The planned institutional arrangements appear to be in line with recognized good practice, with a multi-stakeholder steering committee overseeing the work of the management team. A CTA provides technical support, while external consultants contribute during implementation. Coordination mechanisms have also been set up with other projects. The

modalities for ensuring project supervision at local level were not specified in the ProDoc and evolved during the project to best ensure ownership of the project by the final beneficiaries as well as successful project implementation.

70. **Partnerships**: According to the ProDoc, in addition to CERD, the project relies on numerous governmental and non-governmental partners for its implementation. The project also relies on several baseline projects that address similar issues concerning access to water and agricultural practices. However, these projects do not specifically examine the potential impacts of climate change and adaptation needs. This project therefore aims to bring the climate change dimension to these benchmark interventions, which requires increased coordination efforts, particularly in the Tadjourah and Hanlé areas, and regular analytical input on the effects of climate change. The absence of an analysis of partners' capacities limits their ability to adjust their prerogatives and responsibilities effectively to the needs of the project.

71. **Learning, communication and awareness-raising**: The project as formulated included several training and awareness-raising activities aimed at both institutions and communities, which were likely to generate valuable lessons through their capitalization and knowledge management efforts.

72. **Risk identification and social safeguards**: The risk analysis appears to be complete. Although most of the risks seem to have been taken into account in the planned activities and follow UNEP's prerogatives in this area, several of the measures have not been sufficient and have not been implemented as planned.

73. **Sustainability / Replication and catalytic effects**: Certain activities are included to ensure the sustainability of results, such as the creation of community-led organizations to support project objectives after completion. In addition, the project design emphasizes the development of activities in support of access to finance and the deployment of economic activities, in order to empower populations. Finally, the various training activities targeting both communities and governments are also designed to support the long-term sustainability of the project's results. In addition to taking sustainability aspects into account, the project aimed to create catalytic effects in the two regions targeted by the project. However, several of these activities will be cancelled for reasons of budget, relevance (community interest) or feasibility.

74. **Identified project weaknesses/challenges**: Much of the project depends on the availability and capacity to access and manage water resources. Although this is mentioned as an assumption and also as a risk, it is an important blind spot for activity planning. In the theory of change, the lack of knowledge on water resources and of management capacity is identified, but solutions do not address institutional capacity gaps for water management. Furthermore, it does not consider that (i) even with investments in water infrastructure, access to water could remain limited or vulnerable to climate change and that (ii) water access would be a precondition for the other planned activities to take place. These considerations would have enabled the project to seek alternative solutions, less immediately dependent on water.

75. The terminal review's terms of reference also mention inadequate cost estimates for several activities, which did indeed have an impact on project completion. Finally, although climate risk is included in the analysis, there are no concrete measures indicated in the project to ensure that this risk is properly taken into account in implementation. Another major weakness in the project design, which has had a significant impact on several project activities, is that it does not take into account the fact that some of the activities promoted by the project (agricultural or poultry farming practices, for example) are not already part of local practices. This requires a high level of learning on the part of the beneficiaries, and strong involvement on the part of the executing agency, which can create complications in implementation.

76. **Gender equality**: Although the context analysis mentions structuring elements on the gender issue, these are not explicitly introduced into the project, and little is said about how the project is to be gender-sensitive. Only certain subsistence activities are mentioned, such as poultry farming or handicrafts, which tend to be carried out by women, without, however, an analysis of the economic and social implications differentiated by activity, nor an implementation strategy and specific monitoring. While indicators are broken down by gender, objectives and targets are not.

Criteria	Summary of the analysis	Performance
B. Quality of project design	Although the project is in line with the country's priorities, the number and diversity of the proposed activities seem difficult to implement, as they require greater coordination and synergies. Furthermore, the analysis of partners' capacities seems insufficient to best define the project's expected results and capacity-building needs. Lastly, the project was hampered by a failure to take account of the risks associated with water availability and the effects of climate change, and by underestimates of the budgets allocated to activities. Other aspects of the project's design are detailed in the following section **Quality of project design**.	**MS**

C. Nature of the external context

77. Several factors external to the project complicated the implementation of certain activities. The first external factor was the vagaries of the weather, which complicated the execution of several agricultural and restoration activities. On more than one occasion, storms washed away mangrove nurseries, and floods damaged the Marsaki dike after it had been rehabilitated by the project. Extreme weather conditions on the project sites also caused damage. In particular, wind destroyed the nursery at Koudi-Koma and required an effort to build mechanical windbreaks at Lilya Bouri. Heat and lack of shade also affect plant growth. These extreme conditions shorten the lifespan of the equipment used[35].

78. The second external factor that created a number of difficulties in implementing the project was the recruitment of national staff and consultants with the skills required for the project. For example, the project team acknowledges the difficulty of recruiting a project coordinator who was "experienced in climate change issues"[36]. This difficulty probably created instability in the project team at the outset (several successive recruitments to key PMU roles between 2014 and 2017) and delayed the start-up of activities. This difficulty in finding relevant national expertise for the project also complicated the recruitment of external technical consultants such as for climate modeling, agropastoral training or reforestation, and therefore delayed the execution of activities that depended on them.

79. The third factor affecting the project's implementation was its heavy dependence on imported equipment. Given the importance of activities linked to equipment acquisition and infrastructure construction, the project has suffered several negative consequences of this dependence: i) difficulties in identifying providers and suppliers[37] ; ii) delays in the supply of equipment (e.g. for the Marsaki dike, where gabions are imported from Dubai)[38] ; iii) additional costs due to the transport of imported equipment; iv) significant fluctuations in equipment prices, depending on international market prices[39]. The difficulty of finding equipment suppliers/providers and the obligation to select the lowest bid, which was generally above the budget, may have affected the quality of implementation.

[35] PIR 2018, p.6 and p.8
[36] P.2
[37] HYR 2019, p.19
[38] PIR 2018, p.6
[39] PIR 2018, p.41

80. The fourth external factor that may have affected the project is the political and institutional context. On the political front, project monitoring reports mention elections that took place during project implementation, but which had a negligible effect on the project, apart from a slowdown in activity at the level of public institutions[40]. Nevertheless, the institutional context seems to have had a greater impact on the project. It was identified on several occasions that certain political priorities could influence the implementation of certain activities, budget reallocations but also the recruitment of certain PMU members[41].

81. Finally, although this risk could not have been anticipated or foreseen in the implementation of the project, the COVID-19 pandemic had several notable effects on project execution. Health restrictions in Djibouti led to a complete halt in activities for several weeks, and only the project coordinator and finance manager were admitted to the offices between March and July 2020[42]. The exit strategy acknowledges that this pandemic affected the execution of activities between April 2020 and December 2021, with consequent delays in training activities, expert coordination, field activities, follow-up missions and planned equipment replacement[43]. The project team revised its annual work plan in 2020 to adapt to this event and put in place measures to mitigate the delays by proposing to: use teleworking where possible and organize virtual meetings; organize remote monitoring of project sites through local authorities, on-site consultants and focal points; replace data collection missions for the climate modeling activity with questionnaires and calls with key stakeholders[44].

Criteria	Summary of the analysis	Performance
C. Nature of the external context	The external context has had a significant impact on project implementation. Firstly, climatic hazards greatly complicated the execution of several agricultural and restoration activities, and caused damage to infrastructure built by the project. Secondly, the project faced difficulties in recruiting staff and national consultants with the skills required for the project. This led to team instability and delays. In addition, infrastructure and equipment activities were penalized by the need to import materials. This not only led to delays, but also to cost overruns and even impacted on implementation quality. Finally, the project had to adapt to the restrictions associated with the COVID-19 pandemic by revising work plans, budgets and implementation methods. Although some elements of the external context are also part of internal planning, they have had a significant impact on the project. *The nature of this context and the efforts made to address it have been taken into account in the rating of effectiveness, efficiency and sustainability.*	**MS**

[40] PIR 2018, p.40; PIR 2021, p.46
[41] PIR 2017, p.38; PIR 2019, p.49; PIR 2020, p.60
[42] PIR 2020, p.10
[43] Exit strategy, p.7
[44] PSC minutes June 2020, p.6

D. Effectiveness

82. The different types of activities carried out are summarized by project site in the table below:

Table 3. Summary of project activities by site

Intervention site/ Type of intervention	Construction of water infrastructures	Agropastoral activities (plots and training)	Restoration activities (acacia)	Restoration activities (mangroves)	Other
TADJOURAH					
Kalaf	X	X		X	Poultry
Ad Bouya	X	X			Small dairy Poultry
Sourate	X	X			
Darkenlé	X	X			
Raysali				X	Crafts
Tadjourah (Marsaki)	X (dike)				
DIKHIL					
Koudi-Koma	X	X	X		
Lilya Bouri	X	X	X		
Dinamali	X	X			Small dairy Poultry

Outputs

83. Implementation of the project was subject to numerous delays at the outset, due to delays in recruiting the project team and in producing the studies needed to build the water infrastructure, which is in turn essential for the implementation of agricultural and livelihood activities. The tables Table 4,Table 5,Table 6 and Table 7 below summarize the outputs delivered during the project by component, as well as the level of achievement of targets.

Component 1: Protection against water-related climate change risks

Table 4. Component 1 deliverables and achievements

Outputs and outcomes	Delivered outputs	Targets
Outcome 1: The negative effects of droughts and floods are reduced or avoided		
Output 1.1 Protective measures against drought and flooding in towns and villages	• 1.6km dike (10,560 m3) built at Marsaki (Tadjourah) and rehabilitated • Three water distribution systems built (Koudi-Koma, Kalaf, Ad Bouya) and two rehabilitated (Liliya Bouri and Sourate). At the end of the project, only three were fully functional (Koudi-Koma, Liliya Bouri and Ad Bouya). • Total water distribution capacity of 2,664 m3/day. • Activities 1.1.3, 1.1.4 and 1.1.9 cancelled	**H.2.** Length and volume of gabion walls built : Target: 1.7km; 8,200 m3 Value: 1.6km; 10,560 m3 1.2. Average volume of water available per day for irrigation of agro-pastoral plots : Target: 1,209 m3/d Value: 2,664 m3/d[45] 1.3. Number of fully operational water distribution systems on agro-pastoral plots (including boreholes, distribution systems and operational reservoirs) :

[45] This figure is given in the final project report. However, if we add up all the volumes per site as indicated in Box 1 below, we arrive at a total volume of 3078m3/d.

Outputs and outcomes	Delivered outputs	Targets
		Target: 5 Value: 3
Output 1.2. A hydrogeological model of current and projected water resource availability	• A hydrogeological study taking into account the current and future impacts of climate change was carried out in December 2016. • Climate modeling report and vulnerability assessment completed in 2022, presented to national stakeholders in October 2022 and with local partners in March 2023. • Activities 1.2.3, 1.2.4 cancelled	Produced reports

Sources: Final report; RVE; PIR 2023; data collected during the evaluator's field mission.

84. Rehabilitation of the Marsaki dike is one of the main outputs of Component 1. The baseline study confirms the very high vulnerability of communities living in this district of Tadjourah to the effects of climate change, particularly in the face of violent events such as flooding[46]. The local authorities and the project team recognize that reducing this vulnerability is important, as the area behind the dike is the only space available to absorb the city's urban growth and thus bring socio-economic development opportunities to the population, for example through the development of tourism[47]. The PIR 2020 estimates that 1,500 households[48] will be affected by the rehabilitation of the dike. As a political priority, the dike has become an operational priority, albeit with a number of constraints. Firstly, the budget initially earmarked for eight sites (four in Tadjourah and two in Dikhil) totaling 7.7 km of dikes was redirected to the 1.6 km Marsaki dike alone (see Section F. Efficiency)[49]. In addition, several project monitoring documents indicate that work began before the environmental impact assessment had been carried out, as this study was delayed due to contract award processes[50]. This means that the environmental impact of this infrastructure, as well as the effects of climate change it may undergo, were not analyzed prior to its construction. For example, PIR 2022 mentions that the dike was damaged by flooding in October 2019, and that the project has repaired and reinforced it. The Figure 5 compares satellite images of the Marsaki site before and after the dam was rehabilitated.

[46] Basic study, p.49
[47] PSC minutes January 2017 and interviews
[48] The Marsaki community itself "probably" numbers 300 families - according to interviews with the Tadjourah authorities, but UNEP estimates the population at around 5,000 (in its response to the OIOS audit).
[49] PSC minutes January 2017 and interviews
[50] PIR 2018, PIR 2020, PIR 2022.

Figure 5. Google Earth satellite images of Marsaki in 2016 and 2023, i.e. before/after dike installation

Google Earth image of Marsaki - 25.05.2016

Google Earth image of Marsaki - 24.08.2023

Box 1. Construction and rehabilitation of water infrastructure by site

Construction and rehabilitation of water infrastructures by site[51]

- **Koudi-Koma:** borehole built (2017-2018) and operational. Used valves and pipes repaired in January 2023. Volume of water available for irrigation approx. 1,440 m3/d.
- **Liliya Bouri:** borehole and pump built by the PRODERMO project and the water tank rehabilitated by the LDCF 2 project. Minor repairs completed in 2023. System functional, but hot water with high mineral concentration. Volume of water available for irrigation approx. 960 m3/d.
- **Kalaf:** borehole, pump with solar panels and water reservoir built by the project in 2021, but partially operational with low water flow (irrigation of 14-17 plots instead of 60. Volume of water available for irrigation approx. 510 m3/d.
- **Ad Bouya:** borehole, pump with solar panels and water reservoir built by the project in 2021, operational and well-maintained. Water quality and quantity are good for domestic consumption and irrigation. Repairs carried out in January 2023. Volume of water available for irrigation approx. 168 m3/d.
- **Sourate:** water distribution system non-functional despite rehabilitation of water tanks. Water flow very low and insufficient for project activities.
- **Darkenlé:** borehole and pump built by the PRODERMO project. Construction of a water reservoir and addition of equipment by the LDCF2 project. The system was completed in 2022, but the pump was damaged by high water temperatures, so the borehole is no longer operational.
- **Dinamali:** borehole and underground cisterns built by the project. However, the borehole is negative. One of the cisterns contained water at the time of the assessment mission.

85. The construction and rehabilitation of water infrastructures is also one of the main outputs of this component, responding to an essential need of the population, all the more crucial as climate change threatens the country's water availability[52]. As indicated in the 2017 work plan, each borehole construction project is preceded by a preliminary technical study, followed by the launch of contracts

[51] Final report; RVE; PIR 2023; data collected during the evaluator's field mission
[52] MEDD (2017). Modelling of five aquifer systems in the interior regions of the Republic of Djibouti. Assessment of the joint impact of climate change and human activities on the current and future availability and sustainability of groundwater resources.

to select candidates and purchase equipment. According to the PIR 2023, these technical studies should have taken into account the hydrological study (output 1.2) so that these works take into account climate projections on water reserves, but this could not be fully validated at this stage. However, this essential process led to several delays in the construction of these infrastructures. In addition, the increased budget for the Marsaki dike came at the expense of two boreholes in the Tadjourah region[53].

All in all, the final project report and the evaluator's mission report three fully operational water distribution systems out of the five planned (see

86. Box 1). The systems in Dinamali and Sourate are non-functional, and the one in Kalaf is partially functional. A visit to the Dinamali site showed us the two cisterns, one of them filled, that were built after the failure of the borehole drilled on this site. The reason why one of the cisterns was empty was not confirmed, and several leads were identified: a leak that could be hidden by mud in the water system, water already used by the community, or insufficient rainfall at the time of the visit. In Sourate, the village chief told the RVE that the community has had no access to water since 2021, despite the arrival of technicians. The RVE refers to problems in the construction of the water system, in particular water conveyance problems given the geography. Finally, in Kalaf, the conveyance system became blocked after construction. The various technical faults are to some extent part of the risks inherent in this type of structure. Although the Rural Hydraulics Department was consulted on the technical aspects of the boreholes, interviews seem to indicate that some of these faults were avoidable, for example by carrying out preliminary boreholes to check water availability.

87. Beyond the technical issues, HYPR 2021, the RVE and the evaluator's mission report community tensions that would have been detrimental to water resource management in the village and are explained by a lack of community participation and involvement, beneficiary selection issues and a lack of monitoring by project teams, particularly in Kalaf and Ad Bouya[54]. In response, the project helped set up water and plot management committees at these two sites. In addition, the selection of beneficiaries has always been carried out with the support of customary authorities.

88. Additional repairs will be required to water reservoirs (e.g. to repair broken taps at Koudi-Koma and Lilya Bouri) and to the system as a whole (limestone at Kalaf) to ensure the sustainability of the water system after the project. According to interviews with the PMU and UNEP, these multiple failures are attributable to extreme terrain conditions (aridity, winds, presence of minerals in the water) and the low quality of equipment, with sourcing from the lowest bidders. Also, the inefficient use and unsuitable practices of some communities due to a lack of alternatives or appropriate support has led to the breakage of equipment such as pipes to cope with the low water flow in some plots. On the other hand, the water supply system in Kalaf was repaired thanks to UNICEF funding after the end of the project.

89. Several activities were abandoned during the course of the project, including the construction of gabion walls in the Hanlé region (activities 1.1.3 and 1.1.4), a pilot study on the use of hybrid solar and wind pumps for boreholes (activity 1.1.9), the acquisition of hydrological monitoring equipment in Hanlé and Tadjourah (activity 1.2.3), and a pilot study on the use of recycled grey water from mosques for irrigation (activity 1.2.4) . As indicated in the 2017, 2018, 2019 PIRs, the cancellation of Component 1 activities is essentially linked to the underestimation of construction and rehabilitation costs for the Marsaki dike, which was prioritized to the detriment of these activities.

[53] MTR, p.34.
[54] PIR 2019 p.5; HYR 2021 p.2

Component 2: Ecosystem rehabilitation, restoration and resilience

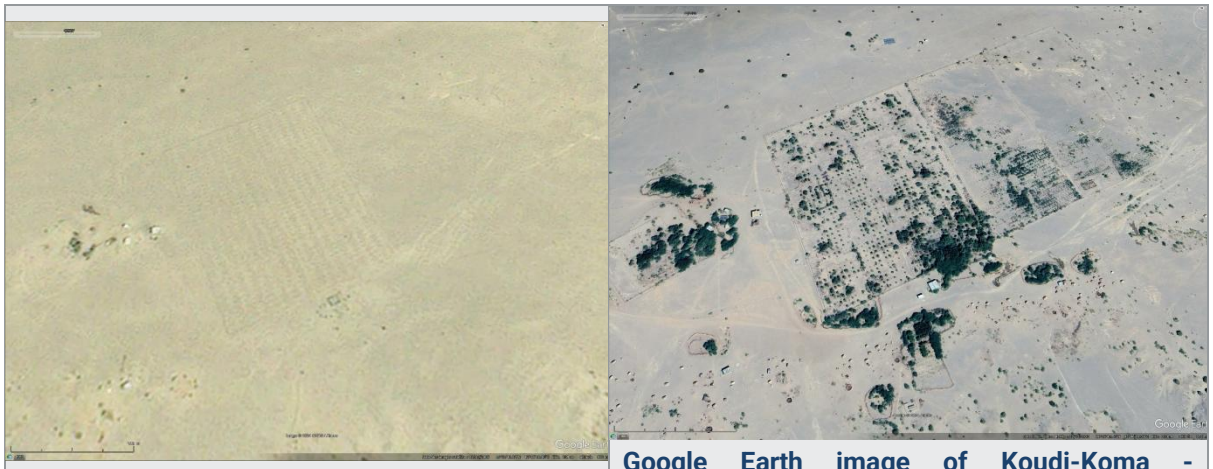
Table 5. Component 2 deliverables and achievements

Outputs and outcomes	Delivered outputs	Targets
Outcome 2: Fragile ecosystems are productive and resilient to climate change		
Output 2.1. Plant cover restoration and soil stabilization in acacia forests at Hanlé	• Koudi-Koma: 4.5ha out of 10ha planted/restored • Liliya Bouri: <1ha planted out of 5ha planned and the nursery is no longer in operation. • Community awareness-raising activities on the effects of climate change and the importance of adaptation.	2.1. Area of climate-resistant acacia forest restored in Hanlé and Tadjourah: Target: 15ha Value: 4.5ha
Output 2.2. Restored mangroves in the central coastal areas of Tadjourah	• 1.1ha of mangroves planted out of a planned 4ha • Development of a guide to mangrove restoration in Djibouti.	2.2. Area of climate-resilient mangroves restored in the central coastal zones of Tadjourah: Target: 4ha Value: 1.1ha 2.3 Awareness and capacity of local communities to protect restored ecosystems : Target: 80%. Value: 100%.

Source: Final report; RVE; PIR 2023; data collected during the evaluator's field mission.

90. Reforestation activities focused on two sites in Hanlé (Koudi-Koma and Liliya Bouri). As attested by the reforestation technical assistant's report in December 2019, the acacia reforestation site is located to the east of the Koudi-Koma agropastoral perimeter, to protect the perimeter from wind and silting (Figure 6). GPS data used during the RVE confirmed a total planted area of 4.5ha. At the time of the evaluator's field mission, the restoration perimeter appeared to be well fenced but partially reforested, as illustrated in the RVE report. At Liliya Bouri, the community claims to have planted 200 trees, but unfortunately the area planted is almost non-existent according to the RVE, mission observations and satellite photos (Figure 1). This can be explained by a high rate of tree loss, which may be linked to the particularly difficult climatic conditions on this plot (strong winds, insufficient water and soil quality for cultivation).

Figure 6. Google Earth satellite images of agricultural and restoration activities at Koudi-Koma between 2006 and 2023



Google Earth image of Koudi-Koma- 10.12.2006

Google Earth image of Koudi-Koma - 22.12.2023

Figure 7. Google Earth satellite images of agricultural and restoration activities at Liliya Bouri between 2007 and 2023

Google Earth image of Liliya Bouri - 05.07.2007

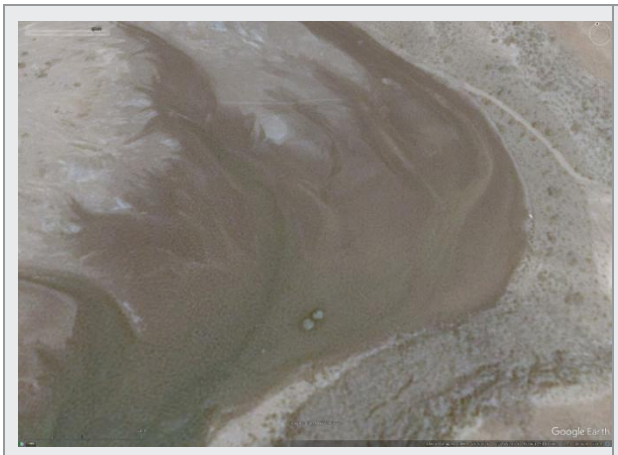
Google Earth image of Liliya Bouri - 09.12.2023

91. Mangrove restoration activities were initially planned for two sites, Kalaf and Raysali. At Kalaf, despite two attempts to build a nursery and the support of an international expert from PERSGA (the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden), PIR 2020 explains that the choice of the site was not favorable, as there was no place sheltered from the wind. There is also no easy access to fresh water, and the plants are exposed to animals[55]. The activity was therefore abandoned on this site. The Raysali site is described in the mangrove restoration report as offering an ideal context for mangroves[56]. However, the number of plants reported at Raysali varies according to source and year[57] and it is also difficult to estimate the survival rate between what was

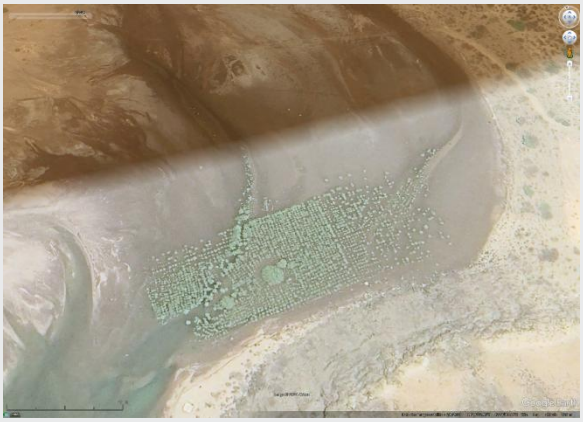
[55] Final report; RVE.
[56] Mangrove technical report, p.30
[57] The project document estimates around 5,000 seedlings per year; the MTR indicates that 3,500 propagules are already replanted in 2019; the PIR 2019 indicates 2,500 mangroves planted in the nursery; the mangrove technical report estimates 15,000 seedlings produced by the project in 2020; and the RVE shares that field staff are talking about 30,000 seedlings per year for six years (2017-2022), i.e. 180,000 seedlings.

planted and what survived to the end of the project. According to the intuitions relayed during the RVE, the warden of the area would estimate a success rate of two-thirds, but this is not based on any calculation. Several reports indicate that 3 ha of mangroves have been replanted[58] but 1.1 ha remain at the end of the project[59]. The target for this indicator was revised downwards from 10 ha to 4 ha during the baseline study and then to "at least 3 ha" by the MTR, notably due to the abandonment of the Kalaf site and the limited surface area available for mangrove development in the Raysali area[60]. Despite the efforts of the mangrove assistant to find another suitable site for mangrove restoration, he was unable to do so[61].

Figure 8. Google Earth satellite images of restoration activities at Raysali between 2016 and 2023



Google Earth image of Raysali- 05.25.2016



Google Earth image of Raysali- 06.09.2023

92. These restoration and reforestation activities were accompanied by specialized assistants to raise community awareness of the importance of this work and involve them in its implementation. Quarterly courses were organized on forestry techniques for reforestation and restoration of acacia and mangroves[62]. Around thirty people, including ten women, were trained in mangrove restoration[63]. The mangrove assistant, trained as part of another project (PERSGA), provided a report on mangrove restoration best practices, detailing analyses and recommendations for continuing and improving the results of these activities. The aim of this report was to have clear and precise recommendations to support mangrove restoration processes across the country. As indicated in PIR 2020, the two sites selected for restoration and reforestation (Hanlé plains and the Tadjourah coast) are climatically fragile and heavily dependent on irrigation systems[64]. Nevertheless, the lessons learned document indicates that the species selected for reforestation were local, resilient to the hot and arid climate, with added ecological value (feeding livestock). Beyond these results, it is important to point out that the targets for this product have also been revised downwards, as indicated in the PIR 2023 and the OIOS audit, due to budget reallocation but also to accumulated delays. Indeed, the lessons learned document[65] stresses that acacia forest restoration activities were dependent on the construction and rehabilitation of water infrastructures. These activities were therefore implemented late in the project, which may explain the partial achievement of the targets initially set. Nevertheless, RVE stresses that where

[58] For example, the minutes of the PSC meeting in September 2019
[59] RVE, p.36
[60] This change proposed by the MTR was endorsed at the PSC meeting in September 2019 and has been taken up, for example, in PIR 2020 and the OIOS audit.
[61] MTR p.35; PIR 2019
[62] RVE p.25
[63] PIR 2020
[64] Final project report
[65] Best practices and lessons learned to ensure the sustainability of project results, Lesson 3, p.5.

restoration and reforestation activities have been implemented, they are of good quality, which was verified during the evaluator's mission[66].

Component 3: Sustainable and resilient livelihoods

Table 6. Component 3 deliverables and achievements

Outputs and outcomes	Delivered outputs	Targets
Outcome 3: Sustainable, climate-resilient livelihoods that maintain ecosystem services		
Output 3.1. Productive oasis ecosystems that provide livelihoods and ecosystem services.	• 107 households with an improved irrigated agro-pastoral plot. • 16.27ha on 30ha of irrigated agro-pastoral plots used by the communities. • Agricultural training at 4 sites (Koudi-Koma, Liliya Bouri, Ad Bouya and Kalaf) with 329 people trained and between 12 and 20 tree species (fruit, crops, forage) planted. • Forage production 4.3 tons/year (average). • Activities 3.1.10 and 3.1.12 cancelled	**3.1** Number of households with an improved irrigated agro-pastoral plot, by gender. Target: a) 33 at Koudi-Koma, 42 at Liliya Bouri, 15 at Sourate, 120 at Kalaf, 8 at Darkenlé, 16 at Ad Bouya (total: 234) b) Half of the households benefiting from an agro-pastoral plot have taken up farming or developed their farming activities in the last 3 years at the end of the project. Value : a) 32 in Koudi-Koma, 42 in Liliya Bouri, 16 in Ad Bouya, 0 in Darkenlé, 16 in Kalaf and 1 in Sourate. b) 60% of households benefiting from an agro-pastoral plot engage in agriculture [67] **3.2** Area of irrigated agro-pastoral plots. Target: 30ha Value: 16.27ha **3.3.** Number of beneficial species cultivated per agro-pastoral plot. Target: over 8/farmer Value: between 12 and 20 3.4. Average annual forage and crop production. Target: 8t/ha/year for crops; 30t/ha/year for forage Value: 4.3 t/year for forage and fragmentary data for crops not calculable for all species and all villages.
Output 3.2. Increased, diversified and resilient livelihoods through the introduction of sustainable alternative economic development activities.	• Training on sustainable agriculture and forestry techniques for reforestation practices carried out quarterly in all target villages. • 336 families trained in poultry farming, crafts and dairy production • 125 chickens distributed (Kalaf, Ad Bouya) and 25 coops built (18 women out of 25 people) • 1 dairy station set up in Dinamali (18 women) and 1 dairy station in Ad Bouya (16 families)	3.5. Number of households with improved access to alternative livelihoods, disaggregated by gender. Target: 280 households Value: 336 homes

[66] RVE, p.36
[67] This figure comes from the final project report, but we don't have the detailed calculations to validate it.

Outputs and outcomes	Delivered outputs	Targets
	• 40 women in Dinamali and 20 in Raysali-Ad Bouya trained in handicrafts • Activities 3.2.1 and 3.2.4 cancelled	

Source: Final report; RVE; PIR 2023; data collected during the evaluator's field mission.

93. The project aimed to set up 30 ha of irrigated agropastoral plots, but PIR 2023 and RVE report that only 16.27ha[68] were operational at the end of the project, mainly in Koudi-Koma, Ad Bouya and Liliya Bouri. It is therefore logical that the majority of households that were able to benefit from an improved irrigated agropastoral plot were ultimately concentrated in these three sites[69]. As indicated in the CTA mission report of September 2019, plot construction and operation was faster in Koudi-Koma than in Liliya Bouri, because the population of Koudi-Koma is more sedentary and more accustomed to agricultural practices, as opposed to Liliya Bouri, where agriculture is a new activity. As a result, 107 households out of the 234 initially planned have benefited from improved irrigated agropastoral plots thanks to the project, mainly in Koudi-Koma, Ad Bouya and Liliya Bouri[70]. Interviews with the project team, RVE and PIR 2023 explain this result by the fact that these are the sites that benefited from the most efficient irrigation system throughout the project. Indeed, the final report, the RVE and interviews with communities confirm that the agricultural activities developed were only possible thanks to the irrigation systems provided or improved by the project. In addition, the high level of poverty in some communities has also had an effect on plot maintenance, with individuals having to find ways to feed themselves to the detriment of agricultural work, the returns on which were not immediate[71]. This was particularly the case in Liliya Bouri, where communities turned to activities with faster returns (livestock breeding, charcoal sales)[72].

94. With regard to the production of these plots, the project aimed at the specific production of fodder to feed livestock on a sustainable basis. During the evaluator's mission, it was possible to see forage production activities on the Ad Bouya, Koudi-Koma, Liliya Bouri and Kalaf sites. However, it is difficult to estimate the precise volume of production. The RVE indicates a total fodder production of 1,225 t/ha, while the MEDD estimates an average of 4.3t/year[73], which in both cases remains below the target of 30t/ha of fodder, which nevertheless seems high given the measures taken during the RVE. The project also aimed to produce new market garden species for local subsistence. The RVE indicates that it is difficult to calculate a precise figure for actual production[74]. On several sites, difficulties have been reported by communities, notably insect pests (bugs, locusts) that have affected forage and vegetable production. Nevertheless, at the time of the evaluator's mission, several crops were visible or had been reported by local people[75]. Data from MEDD and the beneficiaries interviewed indicate that the project has exceeded its targets in terms of the diversity of beneficial species cultivated[76].

[68] RVE reports the following measures: 1ha in Ad Bouya; 0.4ha in Sourate; 0.97ha in Kalaf; 9.13ha in Koudi-Koma; 4.77ha in Liliya Bouri.
[69] The RVE indicates that 32 households in Koudi-Koma, 42 households in Liliya Bouri and 16 households in Ad Bouya were active on irrigated plots. In Kalaf, only 16 households were active, in Sourate 1 household and in Darkenlé 0 (p.34).
[70] RVE, p.34.
[71] CTA mission report, September 2019, p.2
[72] TM mission report, November 2019, p.1
[73] Final report, p.9
[74] RVE, p.45.
[75] These include date palms, beet, eggplants and green chillies in Ad Bouya; tomatoes and peppers in Sourate; palm trees in Koudi-Koma; and fruit trees in Liliya Bouri.
[76] RVE, p.40.

Figure 9. Google Earth satellite images of agropastoral activities in Kalaf between 2019 and 2023

Google Earth image of Kalaf- 06.04.2019 | **Google Earth image of Kalaf - 24.08.2023**

95. In addition to agricultural activities, the project has also developed milk production, poultry farming and handicrafts to boost the livelihoods of the target communities. A small dairy has been set up in Ad Bouya and Dinamali. Interviews with these two communities during the evaluator's mission confirmed that training had been provided in milk storage. However, in Ad Bouya, the mini-dairy did not contain any milk at the time of the evaluation mission, but served instead as a refreshment and storage area. Poultry farming has also developed in Kalaf and Ad Bouya. In Ad Bouya, hens were still present at the time of the evaluator's mission, and the local population claimed to consume both eggs and hens. Chicken coops have also been built in Kalaf, and 15 women claim to have been given hens to look after. Some, however, had to be replaced by the village chief. In both cases, the beneficiary communities confirm that they have been trained to look after their hens[77]. It's important to note that this activity mainly involves women: of the 25 people involved, 18 are women[78]. Finally, the project has supported the practice of handicrafts among 30 women in Dinamali[79] and between 21 and 23 women in Ab Bouya and Raysali[80]. For this activity, these women report having received technical training to learn how to weave, and they have been supported by the Tadjourah women's association to structure their activity[81].

96. Agricultural, poultry, dairy and artisanal activities were supported by dedicated technicians who provided training to the targeted communities. The PIR 2022, the final report and the RVE estimate that 329 individuals and 336 families received training in agricultural and veterinary practices, and in dairy, artisanal and poultry production respectively. During the evaluator's mission, several beneficiary communities mentioned these training courses as having been useful in setting up these activities. Such training seems essential, given that the activities proposed by the project are not rooted in socio-cultural practices. Indeed, as a local representative from one of the target regions said, "you have to make people believe in agriculture". The women who received training in poultry farming and handicrafts also stated during interviews that this was not part of their know-how, but they nevertheless rely on their experience in livestock breeding and their tradition of weaving flat, monochrome mats. The choice to develop new activities increased the risk of limiting the participation and ownership of the

[77] Based on community interviews.
[78] Final report, p10: 15 women in Kalaf and 3 women and 7 men in Ad Bouya.
[79] Interviews conducted by the evaluator
[80] RVE estimates the number of women trained in the craft industry at 21, while PIR 2023 puts the figure at 23.
[81] Interviews conducted by the evaluator

beneficiary communities, as identified as early as the MTR[82] and reported in several of the PIRs[83]. Finally, the project explored the possibility of setting up a "*cash for work"* scheme to increase community mobilization, but this idea was ultimately not pursued , due to the risk identified by the government in terms of sustainability at the end of the project[84].

97. During the course of the project, several activities of component 3 were cancelled, such as the installation of a drip irrigation system for at least 15 families in Hanlé and Tadjourah, as it was not suited to the characteristics of the area (risk of silting up) and was replaced by other irrigation systems (activity 3.1.10), a financial assessment to identify potential sources of funding (micro-credits) (activity 3.1.12), the allocation of training and equipment needed to practice beekeeping (activity 3.2.1) and the development of microfinance from local banks and/or microfinance institutions to develop new value chains (activity 3.2.4). The 2019 and 2020 work plans specify that activities linked to access to financing have been cancelled as they did not ultimately correspond to the needs of populations targeted by the project, as they are more closely linked to marketing of products, which could only come at a later stage, once production had reached a certain level (see section on Effects). Furthermore, HYPR 2022 states that beekeeping activities did not ultimately correspond to environmental and socio-economic conditions, in addition to a lack of interest in the activity. They were replaced by poultry farming activities better suited to the context and needs of the communities.

Component 4: Institutional capacity for adaptive development and community resilience

Table 7. Component 4 deliverables and achievements

Outputs and outcomes	Delivered outputs	Targets
Outcome 4: Increased capacity of institutions and communities to adapt to climate change		
Output 4.1. Strengthening the institutional and technical capacities of local and national authorities.	• Two series of workshops organized in October 2022 and March 2023 to present the results of the climate modeling and vulnerability report, 69 participants • Two theses produced by two Masters students on project themes • Creation of the website https://environnement.gtech.dj/ • Organization of an annual environment week (awareness-raising, exchanges, promotion of project results). In 2021, on mangrove ecosystems in Djibouti; in 2022, on the promotion of EbA solutions. • Activities 4.1.3 and 4.1.4 cancelled	4.3 Number of projects sharing information through the LDCF project website Target: At the end of the project, the Ministry of the Environment's website will be updated with a project web page including all important documents (studies, lessons learned, etc.). Value: Site being finalized with a dedicated page for the LDCF2 project 4.4 Number of research projects to assess the medium- and long-term costs and benefits of LDCF project interventions. Target: 2 Value: 2
Output 4.2. Institutional capacity building at local level for climate change adaptation	• Two agricultural production cooperatives created in Koudi-Koma and Liliya Bouri • 191 students and teachers (65 girls) from Kalaf, Sourate, Ad-Bouya and Liliya-Bouri invited to take part in workshops on climate change and EbA. Around 40 students attended, making a total of around 160 students.	4.1 Number of existing and active agropastoral plot committees and cooperatives Target: 1 cooperative/project site Value: 2 cooperatives 4.2 Number of training courses on climate change for teachers

[82] PIR 2019, p.8
[83] PIR 2019: limited involvement of beneficiaries in Liliya Bouri regarding agropastoral activities (p.8); PIR 2020: lack of involvement in Liliya Bouri (p.13); HYR 2021: limited involvement in Kalaf and Ad Bouya due to lack of follow-up by the project team (p.2).
[84] PIR 2022, p.12

Outputs and outcomes	Delivered outputs	Targets
using an ecosystem-based approach.		Target: 4 training courses Value: 4 training courses

Source: Final report; RVE; PIR 2023; data collected during the evaluator's field mission.

98. In order to strengthen the institutional and technical capacities of local and national authorities, the project organized two workshops in October 2022 and March 2023 to present and disseminate the results of the climate modeling and vulnerability report. As indicated in the workshop report, these working sessions, led by the MEDD, provided an opportunity to present several climate scenarios and to place the project in Djibouti's institutional context, as well as to present the project's exit strategy. An exchange session at the end also served to address participants' doubts[85]. These workshops took place in the regions and in the capital, and included all the stakeholders represented by the 69 participants[86]. The participant lists reflect a diverse participation, including representatives from various ministries, local authorities, community representatives and NGOs.

99. In addition, the project supported the completion of two Masters theses by students attached to the University of Djibouti, directly related to the project's activities, namely a study of the dynamics of watersheds linked to flooding in Tadjourah, and a study of vulnerability and adaptation options to climate change: the case of local communities in the Tadjourah and Dikhil region. These two theses were selected and supported because they helped to generate knowledge on adaptation solutions in the two regions targeted by the project. As indicated in PIR 2023, one of the two students was subsequently recruited by the project as a capacity building and awareness raising consultant for teachers in schools, thus sharing the knowledge acquired during his thesis. According to the PMU, these two theses should be posted on the Ministry's website, but they are not available there at present.

100. The project was also to support the redesign of a website for the Djiboutian Ministry of Ecology and Sustainable Development (MEDD), in order to promote the work carried out on the subject of adaptation to climate change and to have a page dedicated to the LDCF2 project. To date, the site contains a short, descriptive presentation of the project, which does not reflect the project's results or lessons learned[87]. A more analytical article was published in April 2021 on the UNEP website to highlight the EbA approach and the project's initial results[88]. The project also enabled the MEDD to organize an Environment Week on key project themes. The final report mentions the 2021 edition on mangrove ecosystems in Djibouti, and the 2022 edition on the promotion of ecosystem-based adaptation solutions[89]. Finally, four lessons-learned notes on key project themes (beneficiary participation; climate change mainstreaming; post-project sustainability; and project management) were produced between 2019 and early 2023 by the project team, in coordination with MEDD. They were also shared with the TMs of UNEP's Adaptation to Climate Change unit to inform, among other things, the preparation of the LDCF4 project[90]. In March 2024, these sheets were also shared with the United Nations Country Office in Djibouti.

101. With regard to capacity building at local level, the project organized training and awareness-raising sessions on the effects of climate change for elementary school teachers and pupils. PIR 2023 reports that four four-day workshop sessions were held at four project sites (Ad Bouya, Kalaf, Sourate

[85] Workshop report, April 2023.
[86] Workshop report, p.23-31: 24 participants in Tadjourah, 22 participants in Dikhil and 23 participants in Djibouti.
[87] https://environnement.gtech.dj/IMG/pdf/fiche_de_projet_hanle-tadjourah-2.pdf
[88] https://www.unep.org/news-and-stories/story/flood-walls-and-forests-help-djibouti-adapt-climate-change
[89] https://www.facebook.com/people/La-Semaine-Nationale-de-lEnvironnement-Djibouti-2022/100086412621803/
[90] PIR 2022

and Liliya Bouri), covering all project schools, between December 2022 and March 2023. Each session module was made up of theoretical and practical sessions for pupils, and two sessions dedicated to teachers[91]. The final training report states that the practical sessions provided an opportunity to enhance and explain the work carried out under the project (training in reforestation practices, visits to agropastoral plots). The concepts presented were adapted to the target audience - students or teachers - so that targeted actions could be carried out depending on the audience. The minutes of the September 2019 and March 2022 PSC meetings illustrate the importance emphasized by the Djibouti authorities of holding these awareness-raising sessions in schools, in order to disseminate best practices within the communities. During exchanges with the project communities, the evaluator noted a limited understanding of the issues involved in climate change, despite the observation of certain changes in weather conditions ("it doesn't rain on time" in Darkenlé; "there's less rain" in Kalaf ; "higher sea levels" and drought episodes in Raysali; "intense rains" and drought episodes in Sourate; "increasingly hot summers" in Liliya Bouri; and "more insects on crops" in Dinamali), as well as a limited understanding of the project's objectives and its link with climate change[92]. The RVE report confirms that, with the exception of Ad Bouya, knowledge in this area is rather low. The awareness-raising assistant's reports make no mention of awareness-raising or training on climate change, reporting instead support for technical training and agricultural and restoration activities[93].

102. Finally, the project aimed to strengthen local organizations through the creation of cooperatives and plot committees. PIR 2022 mentions the creation of community committees for water management set up in 2021 in Liliya Bouri (7 active members including 4 women), Kalaf (10 active members including 5 women) and Ad Bouya (7 active members, zero women). It also indicates the existence of a small agricultural community association, created in 2017 and containing 10 active members including 4 women. Although the PIR 2023 and the final report state that each project site has an agropastoral committee, the RVE does not confirm this assertion. Moreover, it would appear that agricultural associations already existed prior to the project, as on the Hanlé sites[94]. Beyond the number of associations and cooperatives existing at the end of the project, PIR 2023 and RVE report that these structures mainly provide informal technical support, without any real entrepreneurial vision or structured governance. In the end, it is the existing cooperatives in Koudi-Koma and Liliya Bouri that seem the most structured according to the final report, given the progress of their agricultural activities. In Kalaf and Ad Bouya, the communities interviewed have set up and intend to set up an agricultural cooperative[95].

103. The activities of training a community-based early warning management unit (4.1.3) and organizing annual workshops for an inter-ministerial committee on climate change (4.1.4) were cancelled as they were not deemed relevant to this project in the context of the targeted communities, given that other activities identified as priorities for the project lacked budget.[96]

Outcomes achievement

104. As illustrated in the theory of change (Figure 4), project outputs are expected to lead to the realization of four main effects.

[91] Final report on climate change training and awareness-raising for schoolchildren, p.5
[92] Interviews conducted during the evaluator's visit to project communities
[93] RVE report, p. 24.
[94] Interview with the project team
[95] Interviews conducted during the evaluator's visit to project communities
[96] 2017 work plan and 2020 work plan

Outcome 1: The negative effects of droughts and floods are reduced or avoided

105. The construction of dikes and gabion walls to protect communities from flooding during intense seasonal rains is one of the main activities designed to help achieve this outcome. Documentation and interviews from the many stakeholders met indicate that the rehabilitated dike in Tadjourah has already effectively protected the Marsaki neighborhood during floods in 2019-2020, one of which even damaged the dike[97]. According to discussions with the Marsaki community, the dike effectively prevents floodwater from entering the town, with all the debris it carries. The feasibility study estimates protection for around 10 years[98]. The LDCF 4 project includes rehabilitation work on the banks of the wadi in Marsaki to extend its lifetime in the face of climate change[99].

106. On the other hand, while eight sites were initially slated to benefit from gabion walls, only one of these sites ultimately benefited from this aspect of the project (Marsaki)[100].

107. Efforts to build or rehabilitate irrigation systems in the various project sites led to improved access to water in several communities, to varying degrees. According to RVE, four communities (Lilya Bouri, Koudi-Koma, Dinamali and Ad Bouya) had improved access to water by the end of the project, helping to meet an essential survival need and enabling them to cope better with drought. In a fifth community (Kalaf), whose water supply system built by the project was no longer functional at the end of the project, also benefits from increased access to water, the system having been rehabilitated by a UNICEF project after the end of the LDCF 2 project. In addition, Dinamali benefits from an underground cistern enabling it to store rainwater for several months.[101]

108. The benefits derived from this increased access to water vary from site to site, depending on needs (number of inhabitants, other existing systems), water flow, quality and intended use. For example, in Liliya Bouri, where a borehole has been rehabilitated for restoration and agricultural perimeters, the water flow is high, but the warm, mineral water is not conducive to market gardening. In most of the communities visited, the irrigation systems built or rehabilitated complement existing boreholes. Most are thus dedicated to agriculture, facilitating the realization of the project's other activities. In Darkenlé, where the borehole failed, the community has virtually no access to water. However, management of the water points remains deficient due to poor community organization. Broken taps lead to wastage, and water does not reach all plots.

Outcome 2: Fragile ecosystems are productive and resilient to climate change

109. Overall, the area restored is below the project targets, and well below what was planned in the ProDoc, which significantly limits the achievement of Outcome 2. Nevertheless, as mentioned above, the RVE and the site visits carried out as part of this evaluation confirm the rehabilitation of around 4.5 ha of acacia forests and 1.1 ha of mangroves.

110. At Koudi-Koma, 4.5 ha of acacia forests have been planted within a perimeter, and are beginning to reach a size and density conducive to the generation of ecosystem benefits, including shade and habitat for birds and insects. At Lilya Bouri, although the reforestation perimeter has not worked, the agricultural perimeter has many mature trees, including several varieties of acacia and other sources of fodder. As well as helping to provide fodder, these trees provide shade for the rest of

[97] PIR 2020 and publication on the UNEP website (https://www.unep.org/fr/actualites-et-recits/recit/djibouti-sadapte-aux-changements-climatiques-grace-aux-digues-et-aux)
[98] CAGC (2016). Hydrology of Oued Marsaki in Tadjourah. Confortement de la digue de Marsaki, p.22. The study estimates that the flood height for an event with a return period of 10 years is 2.2 m.
[99] CEO-Endorsement Document, Planning and implementing Ecosystem based Adaptation (EbA) in Djibouti's Dikhil and Tadjourah regions (LDCF-4), p.75.
[100] CEO-E LDCF-2
[101] The second cistern appears to be damaged and contained no water at the time of our visit to the community.

the emerging vegetation, protection from the wind and could also help to manage soil moisture, although this could not be validated as part of this assessment. Numerous natural regrowths are observed.

111. The Raysali mangrove is well established on part of the perimeter, with natural flowering and regrowth. The mangrove technical assistant's report also indicates good root development to withstand a hurricane, favored by the choice of *Avicennia marina* for 90% of the reforestation[102]. The report mentions that "this species contributes to the fixation of sediments and the coastline" and works in conjunction with burrowing crabs (*Gelasimus vocans)* to reoxygenate muddy sediments. According to the report, the young mangrove has acted as a buffer during at least one storm, and may even have protected nearby corals[103]. These different functions are likely to protect the area from the predicted effects of climate change, such as coastal erosion and coral bleaching. According to project reports, the presence of the mangrove has increased the number of fish in the area and attracted tourists[104]. During the assessment mission, the increased presence of fish was also mentioned in interviews with the community, and tourist boats were also spotted not far from the site.

112. The mangrove assistant's report also mentions the importance of tackling the root causes of mangrove destruction, and clearly identifies the various threats thinking about mangroves in Djibouti, particularly those linked to climate change. In Raysali, the main cause of mangrove disappearance is identified as logging for housing, a threat that is countered by the fenced perimeter and the forest ranger, as well as by raising community awareness of the benefits of mangroves. The fence and ranger also protect the site from camels. The report does not, however, explain how the Raysali mangrove will cope with rising sea levels (linked to climate change), noting in passing that "if this rise is significant and very rapid (or if there is a lack of reception space, for example in Raysali and Damerjog), this could lead to its disappearance"[105].

Outcome 3: Sustainable, climate-resilient livelihoods that maintain ecosystem services

113. At the four sites where agroforestry has been supported (Ad Bouya, Kalaf, Koudi-Koma, Lylia Bouri), the effects on livelihoods are mixed. Overall, production is essentially subsistence, for both market gardening and fodder. Market gardening, which has enjoyed limited success, has so far made only a small contribution to income generation, with the sale of some surpluses to neighbors or to the village[106]. Interviews with the communities indicate that the local availability of produce is nevertheless appreciated by the communities, particularly by women who no longer have to travel to town to obtain it. Market garden production is too limited to be marketed. Fruit growing is not yet well developed or marketed, as trees take longer to develop.

114. Forage production has met with some success, helping to feed livestock and thus sustain a traditional livelihood challenged by climatic hazards, while providing an alternative to overgrazing. Benefits in terms of income generation have been reported in Koudi-Koma (85 USD/month for an agropastoralist)[107] and in Ad Bouya (168 USD/month)[108], the volume of production being more conducive to marketing[109].

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[102] LDCF-2 Final report (June 2023).
[103] MEDD (2020). Best practices and lessons learned report on mangrove restoration in Djibouti.
[104] PIR 2020.
[105] MEDD (2020). Best practices and lessons learned report on mangrove restoration in Djibouti.
[106] MEDD (2022). Quarterly report on the sustainable management of natural resources / agriculture consultation, October to December 2022.
[107] MEDD (2023). Quarterly report of the consultation on sustainable management of natural resources / agriculture, January - March 2023.
[108] PIR 2023.
[109] MEDD (2022). Quarterly report on the sustainable management of natural resources / agriculture consultation, October to December 2022.

115. However, agriculture is not yet a sustainable and resilient livelihood. One of the main constraints it faces is its dependence on access to water. Even a few weeks' interruption in supply can destroy a crop or lead to the abandonment of plots. In Kalaf, where the water supply has been irregular, only a small proportion of plots are currently under cultivation. This livelihood depends to a large extent on the ability to maintain, manage and quickly repair the water infrastructure, but also on the effects of climate change on the hydrology of the various sites.

116. The extreme conditions at the various project sites certainly represent a major barrier to agricultural productivity, which the project is addressing by selecting species and varieties suited to these conditions, and by making use of nurseries and windbreaks. Nonetheless, conditions are hardly conducive to market gardening, and this situation will only worsen with the predicted temperature changes. Fodder production using grasses and forage trees, as well as fruit trees, looks more promising[110]. This production also contributes to the generation of ecosystem services (see section on Outcome 2).

117. Forage production is also faced with a lack of knowledge and skills needed to manage production properly. The training and coaching provided, while comprehensive and useful, are not yet assimilated, and long-term support is needed[111]. Thus, each season brings its own challenges, such as different climatic hazards or predators, and agropastoralists are not prepared to face them, especially those for whom farming is a new practice.

118. Interviews with communities and various reports reveal that motivation is difficult to maintain, particularly at Lylia Bouri[112]. In addition to being arduous, agricultural work requires a high level of commitment and good planning skills, which are hardly compatible with traditional practices. Plot work often competes with other activities (daily chores, day jobs) or with the mobility needs associated with transhumance. The fact that the results are only visible after several months of work is a major barrier to such commitment, but the observation of successes reinforces motivation.

119. Low level of community organization is a barrier to both production and marketing. It limits communities' ability to maintain equipment and manage water equitably[113]. The plots of land left by transhumant farmers are abandoned and cannot be taken over by the community. The small scale of individual production also limits commercialization, where it is possible. Lack of market information also limits commercialization.

120. The various project stakeholders (PMU, specialists and local representatives) have different visions of how to counter this disengagement to take advantage of the agricultural potential of the Djiboutian plains, with some advocating more extensive, market-oriented agriculture, while others consider that smaller, individual gardens would be more promising. In reality, conditions vary significantly from one site to another, notably in terms of: access to water, environmental/agricultural conditions, alternative sources of income, level of sedentarization, distribution of roles (men, women, children), level of associativity or collaboration (as opposed to the individualism characteristic of nomadic peoples), farming experience, access to markets, etc., and all these factors (and more) can influence the success of farming activities.

121. According to discussions with women in Dinamali, the handicraft activities carried out represent an additional source of income for the women. The PIR 2022 mentions that a sale carried out between July and September 2021 brought in an average of 70 USD for each of the women who

[110] ARIA Technologies, ACTERRA, AGRER (2022). Technical report of the climate modeling and climate change vulnerability study.
[111] CTA mission report, September 2019, p. 3.
[112] CTA mission report, January 2019, September 2019, November 2019, Agronomy consultant mission report, August 2019, December 2019.
[113] MEDD (2023). Quarterly report of the consultation on sustainable management of natural resources / agriculture, January - March 2023.

participated. However, this income remains limited and irregular, depending on third-party sales. The training they received also enabled them to organize themselves to obtain the materials they needed to continue their activities.

122. Although a new practice for communities, poultry farming has been very successful, and in some communities there is a strong demand for ways to increase production. Even if the distribution of hens has mainly been aimed at women, ownership is strong for both men and women. The species chosen seems well adapted to local conditions, providing food (eggs, chicken) and additional income.

123. Finally, the veterinary training courses were much appreciated, particularly those on goats[114]. Interviews with the MAEPE-RH and with communities confirm that the medicines provided met a need and came at the right time. Although it is difficult to assess the scope of this activity, it has certainly helped to reinforce livestock practices. No information is available on the effects of the two mini-dairies installed by the project, and their benefits were not mentioned during meetings with the communities. This activity met the identified need to better process and preserve milk for marketing[115], but could also have helped prevent brucellosis, a disease linked to unpasteurized milk and present in Ad Bouya[116]. However, the RVE report mentions economic activities linked to the preservation and sale of milk in Ad Bouya.

Outcome 4: Increased capacity of institutions and communities to adapt to climate change

124. The wording of this outcome is particularly broad, and the cancellation of certain activities compromises its scope.

125. By generating various studies on hydrology, climate change and vulnerability, the LDCF 2 project is helping to increase the knowledge base relevant to climate change adaptation. The students' theses are particularly relevant, and their usefulness has been demonstrated by the involvement of these same students in project activities after the end of their thesis, as validated by the PMU.

126. The workshops to disseminate the results of the modeling and vulnerability study were fairly wide-ranging in terms of participants, having been held in Tadjourah, Dikhil and Djibouti-city.

127. According to the PMU, all these studies are in the hands of the MEDD and therefore available to the public. However, they are not currently publicly available, so a specific request must be made to the MEDD in order to gain access to them (and therefore to know of their existence beforehand). Some of these studies have been shared with the team responsible for developing a future GEF project in Djibouti.

128. Although useful, the above studies and workshops are unlikely to have a wider effect on the capacity of national and regional institutions to plan for adaptation to climate change. At regional level, these capacities are also very limited due to limited resources and the absence of local MEDD offices. At national level, more in-depth capacity-building work involving all the relevant players would have been necessary to bring about change.

129. Communities' limited understanding of climate-related issues and the rationale for project activities limits their ability to adapt, by limiting the motivation to anticipate risks and prepare for them. This low level of understanding can also affect communities' decisions as to which measures to prioritize under the project. Awareness is indeed considered one of the main factors for measuring vulnerability in the RVE[117] and should support the project's adaptation efforts.

[114] DEDD (undated). Breeding training report.
[115] DEDD (undated). Progress report on livestock training.
[116] DEDD (undated). Breeding training report.
[117] RVE, p.24.

Likelihood of impact

130. The impact that the project sought to achieve, as formulated in the TOC, was to improve the socio-economic conditions of Djiboutian communities in a sustainable way, despite climate change. Although not presented as such in the TOC, the effects can lead to this impact in three ways, namely (i) by improving community resilience through various measures (Outcomes 1 and 3), (ii) by strengthening ecosystem resilience (Outcome 2), and (iii) by building institutional capacity in climate change adaptation (Outcome 4). While Outcomes 1, 2 and 3 are more localized in scope, the impacts associated with Outcome 4 could be on a local, regional or national scale.

131. The Table 8 summarizes impact probabilities for each project site.

Table 8. Likelihood of impact for the various project sites

Likelihood of impact	Locations	Nature of impacts and justification
High likelihood of impact	Marsaki	Protection of a district in the town of Tadjourah against seasonal flooding from the wadi Marsaki. The benefits of the dike have already been seen in flood protection in recent years, including 2019. Rehabilitation of the dike has protected an area where the construction of housing (local communities and second homes) and a hotel were planned, thus promoting the town's socio-economic development. However, protection will be limited by the fact that climate projections were not taken into account during construction. As a result, the structure offers protection only for a 10-year return flood[118] and climate change could shorten this period.
	Raysali	The area of rehabilitated mangrove appears to have remained stable over the past year. Despite the relatively limited area of restored mangrove, benefits have already been observed such as increased fish presence and protection against storms. A natural expansion of the mangrove could increase these impacts and generate others, but the likelihood of this occurring is unknown given that it was not possible to identify more suitable surface area during the project (see Outputs section). On the other hand, the likelihood of deriving socio-economic benefits from the mangrove is low, given the distance between the mangrove site and the village and the limited capacity for fishing or tourist services.
Medium likelihood of impact	Ad Bouya	Opportunity to generate additional income from farming, poultry, dairy and craft activities. Poultry farming and agriculture are also conducive to better nutrition. The increased availability of fodder has a good chance of helping to strengthen livestock herds, a source of food and income. The opportunity for community members to benefit from several additional sources of income and food reinforces the project's potential contribution to community resilience, especially as women are important beneficiaries of these activities. According to RVE, the community's vulnerability has decreased by 20% since the start of the project (28% for women), mainly due to the diversification of income sources (more than 2, promoted by the project), and better action against climate change. However, vulnerability remains high for other factors, including episodes of hunger (3 times in the last 3 years).
	Koudi-Koma	The agricultural and restoration perimeters, still in operation several months after the end of the project, could generate benefits in terms of income (market gardening, fodder), food availability and ecosystem services. The community is showing interest and organizational capacity to manage the perimeters and maintain the nursery. Some intra-community tensions could limit the impact. According to RVE, vulnerability has decreased significantly (33%), from medium/high to low. It decreased more for women (43%) than for men (25%) to, possibly due to the involvement of women in the farming association and nursery

[118] CACG, Global Consulting, (2016) Hydrology of Oued Marsaki in Tadjourah Confortement de la digue de Marsaki, p.22.

Likelihood of impact	Locations	Nature of impacts and justification
		management. Contrary to what RVE indicates, the project did not greatly diversify sources of income, which limits the likelihood of impact[119].
Limited likelihood of impact	Kalaf	Good success with poultry farming, but agriculture suffered from water access problems which interrupted production and led to the abandonment of several plots. Following the end of the project and the rehabilitation of the system by UNICEF, agriculture has resumed, and could potentially generate profits. According to RVE, vulnerability decreased by 7% over the duration of the project, but remains very high, particularly in terms of livelihoods.
Low likelihood of impact	Lilya Bouri	Fodder production has some potential, but market garden production is not functioning and marketing potential is low due to remoteness. No other livelihoods have been supported in this area. In this sense, the RVE data are difficult to explain, as the vulnerability analysis indicates that the project supported 2 or more additional livelihoods. The RVE indicates that vulnerability has decreased significantly (47%), with vulnerability decreasing less for women (39%) than for men (53%). Elements linked to the understanding of climate issues and the implementation of climate actions contribute to this result.
	Dinamali	Handicraft generates certain financial benefits for women, and holds out the prospect of greater autonomy. This is reflected in the RVE, which indicates a 44% reduction in women's vulnerability, compared with 5% for men, for an average of 31%. However, this reported reduction seems exaggerated in view of the scale of the income generated. The potential for growth in these revenues is also limited without additional training.
	Sourate	Despite the failure of the project's activities and the precarious situation of access to water in this community, the agricultural perimeter has been revived through new initiatives, and is managed collectively for the community. Date palms planted there are beginning to produce fruit, and some market gardening has been undertaken. It is therefore possible that the establishment of this perimeter, together with awareness-raising activities, could contribute to future benefits. The vulnerability of the site has not been analyzed by RVE.
No likely impact	Darkenlé	Due to the lack of access to water, no activities have been carried out on this site, and the population remains in a situation of high vulnerability, which has not changed (according to the RVE, which reports a 2% decrease).

132. Rehabilitation of the Marsaki dike is therefore the activity most likely to have a visible impact. Restoration activities also have a good likelihood of enhancing ecosystem services at Raysali and Koudi-Koma, although access to water remains a determining factor at Koudi-Koma. Some agricultural activities, for example at Lylia Bouri, contribute to enhancing ecosystem services, given the nature and diversity of the species cultivated.

133. Overall, several communities have access to a wider range of livelihood options, which could potentially contribute to their resilience in the face of climate challenges, if they manage to do so over the long term. However, almost all the people we met said they were not yet able to put money aside, as most of their income was immediately used to meet their needs. However, as emphasized in the RVE, the main factor defining the likelihood of impact remains continued access to water of sufficient quality and quantity. Thus, the RVE mentions that "The vulnerability of the beneficiaries and the success of the project seem to be closely linked to the functioning of the water supply system which, in the district of Tadjourah, blocked the functioning of other components of the project and, in the district of Dikhil, actually improved living conditions"[120]. Other factors such as short-term difficulties or successes,

[119] The detailed RVE data indicate that the project supported 2 livelihoods, which does not appear to be the case. In addition, data on hunger episodes are diametrically opposed between men and women.
[120] RVE, p.25.

community organization capacity, and access to markets are also decisive. In at least two communities (Koudi-Koma and Ad Bouya), a community member has developed his own agricultural perimeter by observing the success achieved in the perimeters. In Ad Bouya, this is a woman[121].

134. Thus, at each site, it was the unique combination of multiple factors that determined the level of success of the interventions. In addition, although the feasibility of the various activities was determined according to the conditions at each site and the interest of the communities, certain implementation models could have been better adapted to local conditions, such as the decision to build community perimeters rather than individual ones, or the decision to promote market gardening among certain populations for whom this is not the practice. In addition, the impact analysis indicates that the likelihood of having a real influence on community resilience is higher on sites where several activities have been tried, since this enables results to be obtained even if certain activities fail, while promoting greater diversification of potential sources of income.

135. The RVE data seem to indicate that the few activities aimed specifically at women (handicrafts, poultry farming) have not only been successful, but have had a disproportionately positive effect on women's vulnerability. Although these data should be used with caution, due to the inconsistencies mentioned above, given women's high level of vulnerability due in part to their traditional roles, it seems plausible that even a small increase in income-generating capacity could translate into an increased sense of empowerment, as reported in Dinamali. However, no analysis has been carried out regarding the use or impact of the additional income on women, and it is quite possible that it is simply added to family incomes.

136. The likelihood of the project having an impact on institutional capacities is low, given their limited scope and the fact that they do not meet the important needs of local and national authorities to improve climate awareness.

137. All the project's activities are of low environmental risk. However, the failure to take climate projections into account when planning activities could result in maladaptation. Indeed, the hydrological study carried out in 2017 issues negative conclusions regarding the situation of aquifers, particularly in Tadjourah, where the situation is described as "critical".[122] Promoting activities that rely heavily on water, such as market gardening, could therefore increase rather than decrease vulnerability. This was demonstrated in the project by the abandonment of activities in several project sites. The Climate Vulnerability Report, produced in 2022, recognized a "strong" to "very strong" level of vulnerability of farming in the project areas[123]. The risk is higher when the proposed activities are new and to the detriment of other activities potentially less at risk (e.g. fruit or forage trees, certain types of livestock farming...). However, options are limited on many sites, and all activities require a minimum level of access to water.

138. Similarly, the Marsaki dike was built without taking climate projections into account, potentially creating a false sense of security among the population, since it needs to be raised to truly protect the town against the effects of climate change. This fact was emphasized by UNEP in the PSC meeting and accepted by the MEDD and the Tadjourah authorities. The decision to go ahead was therefore taken in full knowledge of the facts, with the idea of obtaining additional funding to raise the dike in the future[124].

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[121] RVE and interviews with Ad Bouya.
[122] MEDD (2017). Modelling of five aquifer systems in the interior regions of the Republic of Djibouti. Assessment of the joint impact of climate change and human activities on the current and future availability and sustainability of groundwater resources, p.186.
[123] P.15
[124] PSC minutes January 2017.

139. The three indicators related to the project's objective were achieved, as described below:

Table 9. Level of achievement of project's objective indicators

Indicator	Target	Level of achievement
Number of climate change adaptation training activities and number of staff trained (disaggregated by gender) in integrating climate change adaptation into development	2 training sessions	Target achieved - 2 series of workshops organized in October 2022 and March 2023 on climate modelling and vulnerability assessment - Total participants: 69 participants (10 women; 59 men)
Number of people trained (disaggregated by gender) in climate-resilient livelihoods	200 people	Target achieved - Total of individuals trained: 329 people (at least a first training in climate-resilient agriculture or alternative economic activities), out of which 183 women (56%).
Percentage change in vulnerability of people living in project areas (disaggregated by gender)	45% increase in vulnerability and risk assessment (VRA) scores	Target partially achieved - The average index for the districts, regardless of gender, is 14.5 (medium vulnerability) for Hanlé and 21.5 for Tadjourah (high vulnerability), bringing a reduction in the in vulnerability by 37% in Hanlé and 11% in Tadjourah

140. The final evaluation did not identify any significant negative impacts of the project. However, waste management is an important issue in Djibouti, and this was reflected at some of the project's construction sites, which could have been cleaned up better after the work. The disposal of plastic bags used for nurseries could also have been better considered, particularly at Raysali where the bags often end up in the sea.

Criteria	Summary of the analysis	Performance
D. Effectiveness		**MS**
1. Outputs achievement	Outputs achievement was significantly delayed and modified throughout the project. Targets were progressively lowered due to project delays and operational constraints. Nevertheless, several activities were implemented as planned and resulted in the achievement of key outputs for the four project components.	**MS**
2. Outcomes achievement	The outcomes planned for the project have been partially delivered. Despite major delays in the early years of the project, significant catch-up has been achieved in terms of field activities. The outcomes that have been delivered have on the whole generated good direct effects/results, thanks to constant efforts to adapt and resolve problems.	**MS**
3. Likelihood of impact	The likelihood of project impact varies according to the activities, sites and communities targeted by the project. The Marsaki dike has a high likelihood of impact. Agricultural perimeters and restoration activities, although reduced compared to the initial targets, have a good likelihood of impact. As far as agricultural production is concerned, its vulnerability negatively affects the likelihood of impact, particularly in relation to access to water. The success of income-generating activities increases the likelihood of impact on these sites. Finally, as institutional strengthening activities have had a minimal impact, their likelihood of impact on Djiboutian society remains low.	**MS**

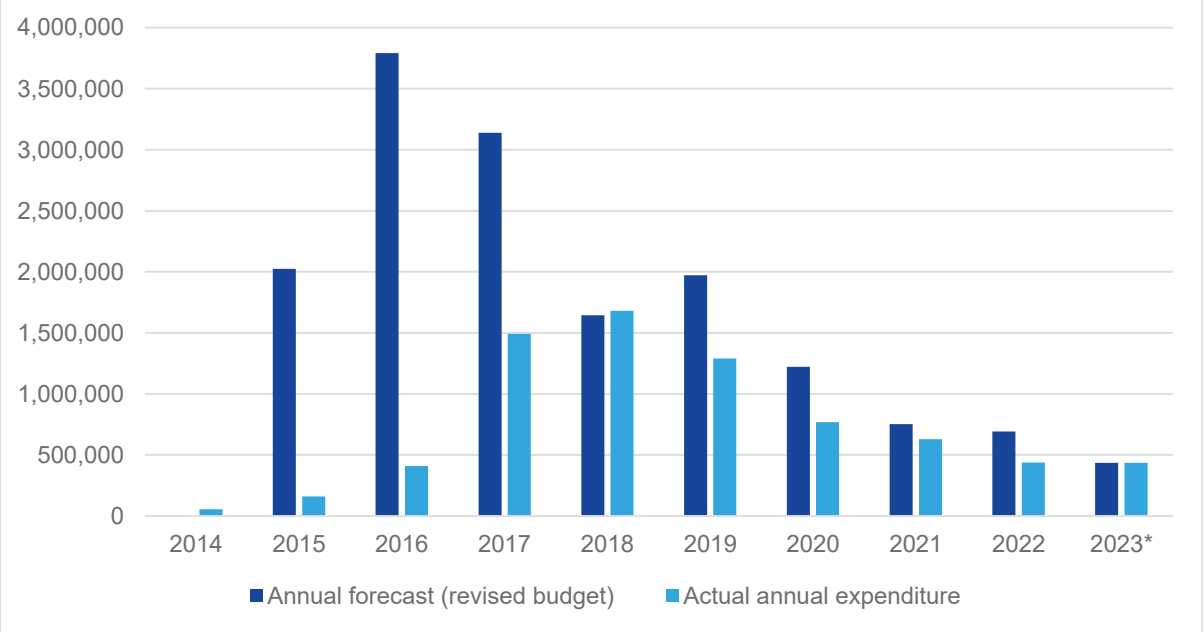
E. Financial management

Disbursement

141. The project's financial data indicate that the entire budget has been, or is in the process of being, spent. According to the PMU, only the expenses related to this final evaluation and another invoice remain to be processed. Total project expenditure will reach 7,345,112 USD, or 99.8% of the budget.

142. The Figure 10 shows the amounts planned and spent for each year of the project, based on the revised budgets prepared each year. The significant delays in disbursements during the first three years of the project, when only 8% of the budget was spent, are visible here. Between 2017 and 2019, 61% of the budget was spent, an average of 20% per year. Since 2020, the year in which the COVID-19 pandemic began, the annual disbursement rate has fallen again, but the second extension has seen the entire budget spent.

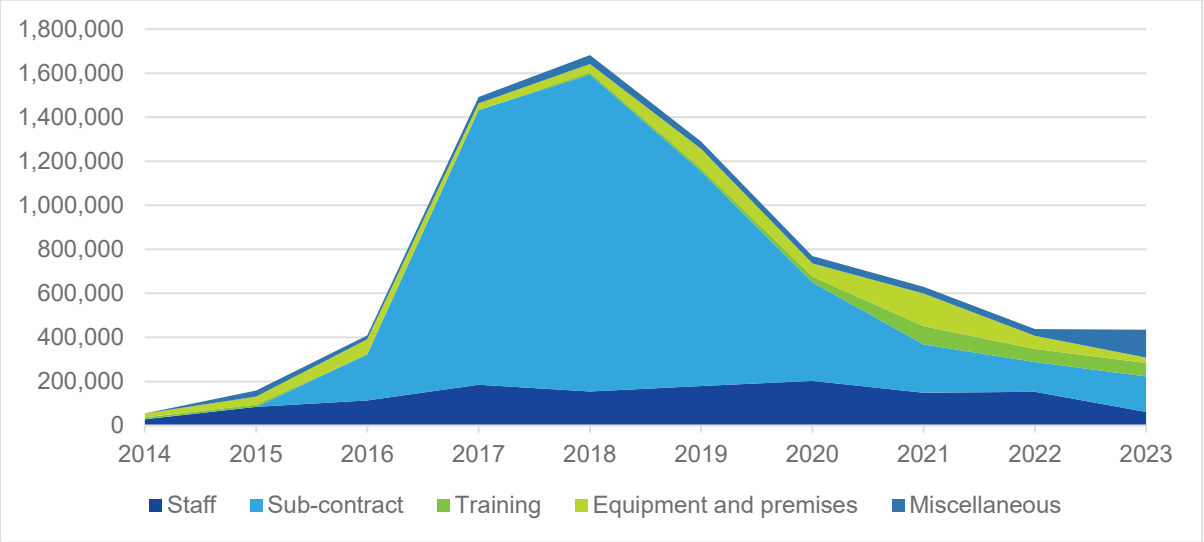
Figure 10. Annual expenditure, planned and actual (total project, USD)[125]



143. This decrease in the disbursement rate over the last few years illustrates not only the spreading of expenditure due to expansion, but also represents the shift from major infrastructure investments ("sub-contract" and "equipment and premises" categories) to training and technical support activities from 2020 onwards (Figure 11). For the three years with the highest expenditure, the average was USD 1.49 million, 85% of which was spent on infrastructure.

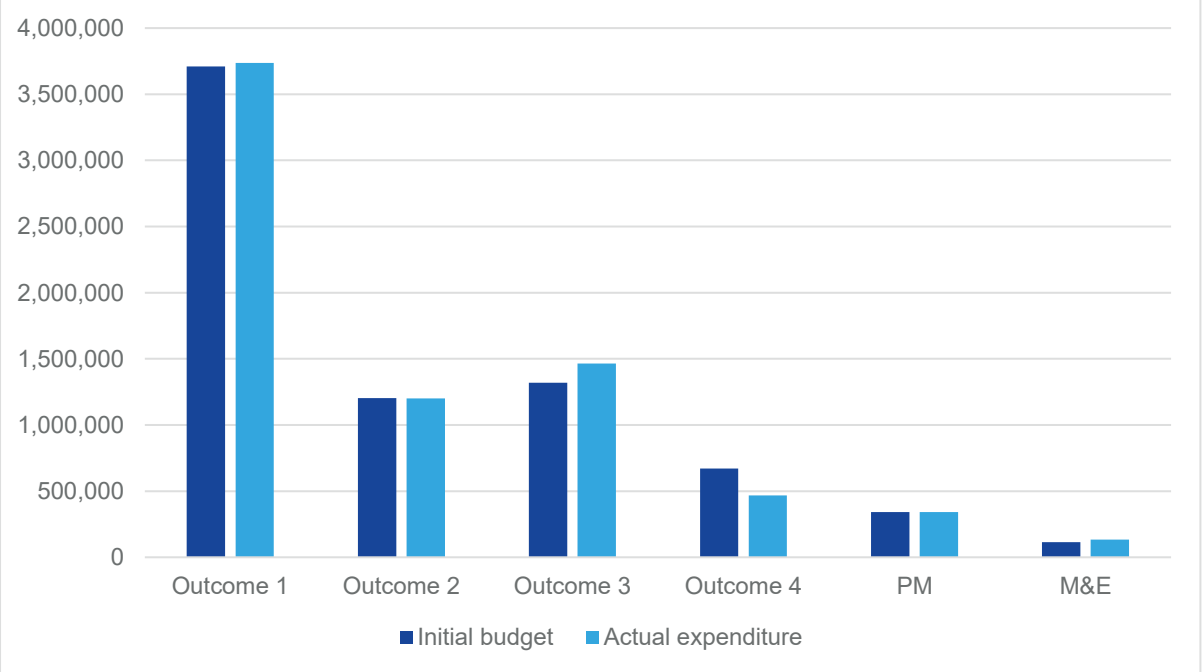
[125] Revised budgets for 2015 to 2013, Expense reports Q4 2015 to 2023 (2018 missing). For 2021, the revised budget following the project extension (v. August 2021) has been used.
*Data for 2023 include expenses incurred and not yet paid, as well as an amount of 220,000 USD to be disbursed by UNEP for the MTR, TR and climate modeling study.

Figure 11. Annual expenditure by budget component (USD)[126]



144. Despite cost overruns on certain elements of Component 1, the budget for Outcome 1 varied by only 1%, as expenditure was reallocated within the component, notably by cancelling the construction of gabion walls at Hanlé and the cancellation of certain activities. The budget for Outcome 2 remained unchanged, but that for Outcome 3 increased by 11% over the whole project, while that for Outcome 4 decreased by 31%. The budget for project management remained unchanged, while that for monitoring and evaluation increased by 17%.

Figure 12. Project expenditure by component, planned and actual (total project, USD)*



145. In addition to sometimes significant reallocations between budget lines within the same component to adapt to changing priorities and needs in the field, several budget lines were used to cover PMU personnel expenses. Indeed, as mentioned in the MTR, due to project extensions, the budget for the PMU (excluding the CTA) has been exhausted since the end of July 2018. From the budget

[126] Revised budget 2023

revisions, it can be seen that the lines for project staff (excluding the coordinator) have increased significantly. Thus, the initial budget of 153,600 USD supposed to cover the salaries of the financial manager (BL. 1301), a national technical assistant (later replaced by a secretary BL. 1302) and two focal points (BL. 1303) has risen to 239,600 USD with the hiring of the assistant to the coordinator (BL. 1304), two drivers (BL. 1305) and two technical assistants (BL. 2121 and 2122). At the end of the project, all these lines totaled 513,700 USD, i.e. 3.3 times the initial budget. In addition, the project coordinator's salary (BL.1101), initially planned for 48 months, was paid over a period of 110 months. Although this budget line was not modified, a total of 124,000 USD was taken from various budget lines. In total, an additional 399,000 USD had to be disbursed to cover PMU salaries during the two project extension periods, in addition to CTA's budget, which increased by 47%[127].

146. The project reports having mobilized 100% of the planned co-financing, for a total of USD 14,170,000. This funding would come from the projects presented in the Table 10 and further detailed in Annex IV. Summary of co-financing information and statement of project expenditure by component

Table 10. Co-funding for the LDCF 2 project[128]

Project	Amount of co-financing (USD)
IFAD - PGIRE This project aims to sustainably improve the living conditions of vulnerable rural households and build resilience to climate change in rural areas. It aims to improve the incomes of poor households, including rural women and young people, and their sustainable access to water and grazing resources.	500 000
UNEP-IUCN-WAMIP: "Improving awareness and knowledge of pastoralism" This project aims to: i) improve knowledge of pastoralism as a land ecosystem management option; ii) contribute to the long-term, adaptive management of landscapes in Africa, Asia, Europe and South America that are vulnerable to climate change; and iii) draw political attention to pastoralism as a land management option.	270 000
African Development Bank : Water supply and sanitation project The aim of the program is to achieve a sustainable improvement in the living conditions of rural populations in Djibouti, through the following activities: i) the construction of water management infrastructures; ii) awareness campaigns to promote hygiene; iii) the creation of water management committees; and iv) the training of local communities in the maintenance of water management equipment.	3 00 000
UNEP: Food security in agriculture-dominated landscapes in Africa (EbAFoSA) The project focuses on strengthening the ecological resilience of food systems and improving food security through ecosystem-based adaptation (EbA) approaches in sub-Saharan African countries.	600 000
UNEP-European Commission ENTRP project: "Capacity building for coastal ecosystem-based adaptation in Small Island Developing States (SIDS)". The project helps countries and regions to develop and apply EbA approaches to maintain and improve the resilience of tropical coastal ecosystems and the' services they provide to coastal communities in SIDS.	500 000
PROMES-GDT PROMES-GDT aims to 'improve' access to water (surface rainwater harvesting, construction of key infrastructure such as reservoirs and water basins), sustainable land management, improved livestock production and the protection and safeguarding of threatened forest areas.	3 000 000
PRODERMO PRODERMO's objectives are to: i) increase rural communities' access to water; ii) strengthen their capacity to manage water; and iii) strengthen their capacity to manage agropastoral resources. The project promotes a participatory approach to community development.	5 800 000
Total	**14 170 000**

[127] Budget Revision 2023 and data provided by the PMU.
[128] PIR 2023.

147. Overall, 90% of this co-financing comes from projects run by the MAEPE-RH (Ministry of Agriculture), while 10% comes from UNEP projects[129]. The various PIRs and interviews testify to the difficulty of gathering co-financing data, even when concrete collaborations were taking place in the field. Obtaining information on projects carried out by a ministry other than the MEDD was particularly difficult[130]. Despite the time elapsed since project approval, 96% of co-financing mobilized came from "baseline projects" identified in the ProDoc. This also complicated the collection of information, as there was no institutional memory at the end of the projects[131].

Compliance with UNEP financial policies and procedures and completeness of financial information

148. Financial documentation is complete and clear. Quarterly budget revisions and expenditure reports provide an update on expenditure and describe movements between budget lines, but notes on these movements are not available for all years. Only the reallocations linked to the project coordinator's salary are not clearly shown in the budget revisions and expenditure reports, as they were covered by various budget lines. Overall, the additional project management costs were covered by the budgets of the various components, enabling the project management budget to remain stable.

149. Audit reports are available for all years from 2014 to 2023. Comments made each year are generally addressed the following year. The only persistent comment is that recommending the adoption of an IT program to manage project finances, the response issued by the MEDD being that it does not have the financial and human capacity to adopt such a system. An interview with the PMU indicated that it was sometimes difficult to respond to detailed requests from the auditors in the absence of automated invoice processing.

150. MTR reports issues with the preparation of cash advance requests that interfered with project activities in the early years. Interviews with the PMU no longer report such issues. The training received by PMU members probably facilitated this process. A total of 18 cash advances were made under this project.

151. No communication issues within the PMU (including with CTA) and between the PMU and TM. On the contrary, collaboration is described as very good by the various parties involved.

Criteria	Summary of the analysis	Performance
E. Financial management		**S**
1.Financial performance	Despite very low expenditure during the first three years of the project, financial execution has seen a significant catch-up since 2017. The final disbursement rate is almost 100%, and the planned co-financing with the Djibouti authorities and UNEP has been fully mobilized. The budgets for components 3 and 4, as well as the M&E budget, have been modified by more than 10%.	**S**
2.Quality and consistency of financial reporting	The financial documentation is complete and the cash flow issues reported at the start of the project have been resolved.	**S**

[129] LDCF-2 Final report
[130] PIR 2022, p.9.
[131] PIR 2022, p.9.

F. Efficiency

Cost-effectiveness

152. In terms of efficiency, the main finding is that many of the project targets were reduced, some significantly, but the entire budget was still spent. In addition, a significant number of targets (including revised targets) were not achieved. According to the RVE report, out of 18 targets, 6 were achieved, and 9 were not[132]. This further reduces the cost-effectiveness of the project, compared with what was planned. Several reports point out that these targets were unrealistic.

153. The reduction in the retention wall construction target is particularly significant, as it has been reduced from 7.7 to 1.7 km (division by 4.5), while costs have exceeded those initially forecast for the six walls (i.e. 1,081,200 USD) by 44%, reaching 1,553,283 USD. This represents 21% of the project budget. Cost-effectiveness is also negatively affected by the fact that the Marsaki dike is only a short-term climate change adaptation measure, and will need to be upgraded to prolong its effectiveness. This reallocation of funds was also accompanied by a downward revision of targets in terms of the number of boreholes and reservoirs in Hanlé and Tadjourah[133]. The reasons cited by UNEP and the PMU for these significant cost overruns include poor price estimates during project formulation, and the need to import materials, particularly gabions.

154. The reduction in restoration targets is also significant: from 100 ha to 15 ha for acacias, with 4.5 ha restored by the end of the project. Restoration of mangrove forests, initially planned at 10 ha, was reduced to 3 ha, with 1.4 ha achieved. The targets set when the project was formulated were deemed unrealistic, and were in fact reduced in the baseline study (to 20 ha for acacias and 4 ha for mangroves)[134]. The results achieved in restoration nevertheless reflect the sustained efforts of the various stakeholders to adapt to the constraints of the terrain, climatic hazards and community priorities. This also applies to agricultural activities.

155. Difficulties linked to the vagaries of the weather dotted the project from start to finish. These external factors, although identified at the project formulation stage, were not sufficiently taken into account in the planning of activities, particularly the construction of nurseries and the choice of agricultural equipment[135]. According to UNEP, this is partly due to the obligation to choose the lowest bidder and the high cost of acquiring imported products, but it is also part of a process of learning which techniques are best suited to local conditions. This issue is all the more important as this is a climate change adaptation project, which should have integrated present and future climate considerations into its activities from the outset. This was undertaken in 2019[136], and responsibility for ensuring this integration was assigned to the CTA[137]. Site visits reveal that the identification of construction methods suited to local conditions improved over the course of the project, and in particular led to the development of a lessons learned document[138]. As an example, the Koudi-Koma nursery is now made of reinforced concrete to withstand the wind, but a solution to prevent the destruction of the protective cloths has yet to be identified. These rehabilitation and protection measures were not initially planned, and have therefore led to budget reallocations and changes in activities.

[132] P. 46
[133] PIR 2017
[134] Baseline study, 2017
[135] PIR 2018, p.6 and p.8
[136] PIR 2019, p.25.
[137] Lessons learned - Integrating climate change.
[138] Lessons learned - Integrating climate change.

156. Irrigation system issues particularly affected the project, constituting a prerequisite step for all activities. At this level, the project collaborated with the PRODERMO project on two sites (Lilya Bouri and Darkenlé), to share the work, thus generating savings and synergies. However, both sites present irrigation difficulties, with the Lilya Bouri site being too mineral for agriculture and the Darkenlé site producing water that is too hot, with consequences for activities. The borehole in Darkenlé, retroceded to the Rural Hydraulics Department, has not been repaired, and no activity has been undertaken on this site. Hiring external experts for the drilling work, rather than using specialists from the hydraulics department, is presented as an efficiency measure, since it would not necessarily be possible to carry out the work at the time required by the project.

157. Project management costs also affected project efficiency. On the one hand, the project team was gradually expanded to include an assistant coordinator, drivers and technical assistants. The roles of focal points and technical assistants proved essential to the success of the project, but the roles of assistant coordinator and awareness-raising assistant were not maintained beyond 2020. As discussed in the Financial Management section, over the whole project, the PMU (excluding the CTA) generated additional costs of around 400,000 USD, for a total of 734,700 USD, or 10% of project expenditure. According to the MTR, these costs were initially forecast at 5%, then at 7% at mid-term[139].

Timeliness

158. The project encountered major delays. Initially scheduled to last four years, it took almost nine. The sequence of project activities, though logical, lent itself to delays. In its design, the project seems to have been conceived in a sequential manner, although this was not integrated into the implementation modalities: i) study and recruitment phase; ii) water infrastructure construction phase; iii) agropastoral practice development and training phase. These three stages are interdependent: after the start-up phase, the process called for several studies to define the activities. This would be followed by the construction or rehabilitation of irrigation systems and other works (demarcation of perimeters), necessary for the start of field activities with communities. This is an ambitious four-year plan, which leaves for the end activities involving a long process of behavioral change with the communities. In reality, each of these stages has been significantly delayed, and the delay accumulated in the first phase has penalized all the other activities. This explains why agricultural and restoration activities only took place at the end of the project, and only to a limited extent.

159. Delays in project execution were a major challenge, contributing in particular to the increase in management costs. These delays occurred mainly in the early years of the project (see Figure 10) and necessitated the first extension of the project. According to MTR, these delays were attributable to delays in recruiting the PMU (see Nature of external context section), difficulties in applying national procurement processes, processes for disbursing funds through the Ministry of Economy, and lack of equipment to carry out drilling[140]. Several speakers noted that the LDCF 2 project was the first of its size to be executed by the MEDD, which of course came with a learning curve. Dependence on imported materials was also a factor causing delays, particularly with regard to the construction of the Marsaki dike (see Nature of external context section). Other factors affecting the project at these early stages and cited by the MTR include both capacity issues within the PMU and, to a lesser extent, the rotation of UNEP task managers at the start of the project (until 2016)[141].

160. The aforementioned climatic hazards also affected the progress of the project, with the need to rebuild or restart certain activities. Mangrove seedlings must remain in the nursery for 6 months before being transplanted, and propagules can only be harvested in a certain season[142]. Destroying

[139] MTR, p. 43
[140] MTR, p.45
[141] MTR, p.45.
[142] MEDD (2020). Best practices and lessons learned report on mangrove restoration in Djibouti, p.26

nurseries therefore entails considerable delays. Similarly, restoration work is difficult and slow-moving due to extreme climatic conditions. These factors contributed to the need for the second project extension request[143].

161. Several reports highlight the difficulties of mobilizing communities in agricultural activities, notably the reports of the agricultural technician. As discussed in the Effectiveness section, this is a new practice for many communities. The project team had to invest considerable effort in finding approaches to strengthen community ownership of agricultural activities. Although the costs and delays associated with these efforts are difficult to estimate, it certainly affected the progress of activities.

162. The COVID-19 pandemic caused significant delays to the project, justifying the two-year extension (see Nature of external context section).

163. The Table 11 summarizes the various constraints that affected the project's progress, according to whether they were external or internal to the project. Some external constraints are also considered internal, since they had been identified as project risks and could have been better anticipated.

Table 11. External and internal constraints encountered by the project.

Constraints	External	Internal
Delays at the start of the project related to recruitment / contracting / cash flow and generally to learning how to manage a project of this size.		X
Cost overruns	X	X
Overestimation of certain targets		X
Number of intervention sites, distance between sites		X
Business slowdown/stop due to COVID-19 pandemic	X	
Difficulty recruiting certain technical experts	X	
Low community support for certain activities		X
Climatic hazards affecting project sites	X	X
Equipment failure due to extreme conditions	X	X
Dependence on other projects and institutions for access to water at certain sites	X	X

Criteria	Summary of the analysis	Performance
F. Efficiency	The cost-effectiveness of the project was affected by the reduction in targets, and by the fact that some targets were ultimately not achieved. The implementation of certain activities required additional resources (strong team commitment, budget revisions), not least because the project targets were unrealistic. Delays experienced at the start of the project (recruitment, procurement, imports), then those linked to the COVID-19 pandemic, meant that the project lasted nine years instead of four. As a result, project management costs soared. A number of external factors causing delays had been identified when the project was formulated, but could not be avoided. This is particularly true of climatic hazards, which were not sufficiently taken into account upstream of the activities, but which had a significant impact.	**MU**

[143] PIR 2021, p.12.

G. Monitoring and reporting

Design and budget monitoring

164. The ProDoc includes a comprehensive monitoring and evaluation (M&E) plan, with planned M&E activities and their indicative budget, with a clear indication of the responsible entities and expected timeframes. No information was included in the monitoring plan during the first two years of the project, given the delay in activities during this period.

165. Although completed late (in 2017), the baseline study is of good quality. It enabled to reassess the project's feasibility, and also to adjust certain project targets to the realities of the local context. In a way, the baseline study acted as a fresh start for the project. In particular, it enabled to review the project's results framework (formulation of certain outcomes and results to be achieved, indicators and project targets).

166. Indeed, the project's results framework underwent several changes during its implementation. Firstly, the very broad formulation of outputs and outcomes raised questions about the project's ability to achieve such high levels of change. By being so broad, these outcomes constitute vague targets to which the project was only able to make a very partial contribution, to the extent that reducing targets or removing activities might not affect the project's performance vis-à-vis these outcomes. This was the case, for example, with Outcome 4 "Increased capacity of institutions and communities to adapt to climate change". Although output 4.1 covers both local and national authorities, there are no indicators reporting progress for national institutions, as these were dropped during the baseline study. Although some activities have been carried out in support of institutions, they have no direct effect on project performance. In addition, some outputs are not precise enough, and are closer to formulations of effects. This is the case, for example, with output 1.1 "Protective measures against droughts and floods in cities and settlements".

167. Secondly, the indicators defined at the start of the project also had to be reviewed. The indicators as defined in the ProDoc results framework are considered SMART[144] in a general way, but they are not clearly attributed to an outcome, output or activity, which creates confusion about what is to be reported and what they measure. Furthermore, the project design does not include specific indicators to measure the results of activities for women, whereas specific indicators are available and would have enabled better monitoring of gender-related results.

168. Finally, the definition of the targets to be achieved within the framework of the project was reviewed, notably during the baseline study and then during the mid-term review. As detailed in section **Error! Reference source not found.** (Effectiveness) of the report, the project has undergone several r evisions of targets and indicators, reflecting the project's operational modifications (cancellation of certain activities, modifications, revision of achievable targets given the context). These modifications were proposed by the baseline study and then the MTR, and were respectively acted upon by the 2017 and 2019 PSC with all stakeholders.

169. All these factors, already identified in the MTR, have made it difficult to monitor project results (changes in targets, confusion between output and outcome indicators) and have prevented us from measuring certain achievements made by the project (lack of gender-specific targets).

[144] Specific, Measurable, Achievable, Relevant, Time-bournd

Monitoring project implementation

170. Monitoring of project implementation has been carried out by the project team and reported through reporting documents such as annual PIRs (annual progress reports) and HYPRs (half-yearly progress reports). These have been produced for all years of the project, and all contain a section on monitoring project activities and indicators. Nevertheless, the MTR insists that data collection could have included data linked to environmental conditions (water availability for example) which had a direct impact on the completion of certain activities. This more comprehensive monitoring could have benefited the project and strengthened knowledge[145]. Also, as indicated in the MTR, expenses related to the monitoring of activities and the reporting of indicators were not financed by the M&E envelope dedicated to this type of activity. Thus, the MTR was the project's first M&E expense.

171. The project benefited from an MTR, which provided an opportunity to review the project's progress and monitoring practices. The analysis of the recommendations made during the MTR shows that most of them have been integrated by the project team in the further implementation of the project. A result verification exercise (RVE) was carried out in May 2023. This exercise, carried out by an external firm, is a good practice for providing an outside view of the project's results, in consultation with the project team, and for preparing the final evaluation. The RVE analyzes the achievement of indicators in relation to predefined targets, and the implementation of activities in each site covered by the project. Finally, the project team also produced a lessons-learned document covering four main areas of project implementation: i) beneficiary participation; ii) mainstreaming climate change; iii) post-project sustainability; and iv) project management. These four themes echo the recommendations of the MTR. This exercise therefore enables us to take a step back and analyze the successes and challenges encountered in project implementation.

Reporting

172. The project team has complied with UNEP reporting requirements with the preparation of annual PIRs and HYRs (half-yearly) from 2015 onwards. They follow UNEP templates, and their analysis throughout project implementation shows an improvement in the information reported, which is more detailed and accurate. Training of the project team has therefore improved the quality of the reporting exercises. This evolution is also a sign of better coordination within the project team, thanks to monthly meetings and more regular CTA missions, as decided from 2018 onwards.

173. The project benefited from the support of a CTA throughout its duration, whose role was to provide technical support for project implementation and reporting. However, the budget for this seems limited in relation to the task, especially given the need to strengthen the capacity of the national teams. The various contracts awarded provided for around three days per month, sometimes including mission time, which was described by one of the CTAs we met as largely insufficient. The addition of specific responsibilities in 2022-2023 related to the integration of climate change adaptation into project activities and the compilation of lessons learned has not been accompanied by an increase in the level of effort allocated.

174. The project team also produced detailed work plans and budgets each year, taking into account successive modifications (revision of the results framework, cancellation of certain activities, requests to extend the project without cost). The first available work plan dates back to 2017, probably due to numerous operational delays and recruitment difficulties at the start of the project. The first budget developed by the project dates from 2015 and was followed by budgets for all project years up to 2023. Given the operational changes that the project has undergone, the annual budgets each time show the discrepancies between the budget forecast in the ProDoc, what has been consumed and what is

[145] MTR recommendation no. 5

planned for the coming year. Some budgets only make this comparison with the previous year's forecast, and not with the initial budget.

175. PSC meetings were held in Djibouti on a regular basis with all stakeholders. All the PSC mentioned above were attended by the entire project team, the MEDD, the national public institutions involved in the project and representatives of the two target regions, as provided for in the CEO-Endorsement[146]. However, UNEP's presence was not systematic, with UNEP attending two-thirds of the PSCs[147], sometimes due to poor internet connectivity. According to UNEP, PSC agendas and presentations were systematically developed in collaboration with UNEP and validated in writing, and the CTA, who was present at all PSC, worked closely with UNEP in their preparation. The audit conducted by OIOS notes that UNEP's absence from some PSC meetings may have been detrimental, as it meant that certain strategic decisions for the project were taken by the Djiboutian stakeholders and the project team without UNEP, in particular at the September 2019 COPIL, where all changes to the project objectives based on the MTR proposals were adopted. Nevertheless, and despite the absence of UNEP at this meeting, email exchanges confirm that discussions were held between UNEP, CTA and the project coordinator prior to the PSC meetings to jointly validate these changes.

176. CTA and TM mission reports were produced for each mission. These reports are detailed and cover all the issues dealt with during these trips, i.e. progress on the implementation of activities, observations made during trips to project sites, main observations and recommendations for next steps, mission program and list of people met. These reports were shared with the project team and fed into project monitoring.

177. Finally, the specialized experts mobilized as part of the project (reforestation, restoration, awareness-raising, veterinary training) produced monitoring reports or final activity reports. Follow-up reports of quarterly activities over the period 2018-2022 from the mangrove assistant were made available to the evaluators, as well as a final report which includes an analysis of the activities carried out under the LDCF2 project and above all recommendations and lessons learned for the restoration and planting of mangroves in Djibouti. The assistant in charge of nursery construction has provided three activity monitoring reports (October, November and December 2019). These reports seem succinct and do not put the results of this activity into perspective with the context of the selected sites, in order to improve the achievement of objectives. Final reports for the handicrafts, agriculture and poultry activities have also been produced, detailing the context of the project, the objectives of these activities and the results produced. Each report also contains a section of recommendations, but these are not systematically taken up by the project for two main reasons. On the one hand, some of the recommendations do not seem suitable for achieving the project's objectives in the given context[148]. On the other hand, some recommendations are relevant but cannot be implemented within the scope of this project for lack of time or budget[149] and would be useful for future projects. Finally, several follow-up and technical reports were produced by the technician in charge of these training courses. These reports are generally rather pedagogical and seem to be adapted to the target audience. All the technical reports in this project have been reviewed by the project coordinator, the CTA and the TM to ensure that the reports are of good quality and are used, where relevant and possible, for the implementation of project activities.

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[146] P.75

[147] Assertion based on available documentation: November 2014, January 2017, August 2018, January 2019, June 2020 and March 2022

[148] See, for example, the last recommendation in the report on the monitoring of handicraft activities with women: use the good operational results of this activity to initiate a policy dialogue with the Djibouti government for the economic empowerment of rural women.

[149] See, for example, in the poultry activity monitoring report: "Carry out monthly monitoring to ensure the continuity of poultry farming" (p.16).

Criteria	Summary of the analysis	Performance
G. Monitoring and reporting		**S**
1. M&E design and implementation	At the start of the project, the M&E plan was complete and well implemented, including a baseline study (carried out late), an MTR, an RVE and a final evaluation. While the baseline study and MTR did not address the substantive issues, they did help to improve the results framework. Most of the recommendations made by the MTR were adopted by the project.	**HS**
2.Project reporting	Project reporting meets UNEP's requirements, and the gradual improvement in the quality of reports reflects improvements in capacity (particularly following training) and coordination within the team. Work plans and budgets are available for each year, along with their revisions. PSC meetings were held regularly and covered relevant topics. Although the audit report carried out by OIOS highlights the absence of UNEP when certain strategic decisions were taken, all PSC meetings were prepared in advance with UNEP and/or included the participation of the CTA. The TM and CTA mission reports are available, as are most of the technical reports.	**S**

H. Sustainability

Socio-political sustainability

178. The LDCF 2 project has promoted several income-generating activities as well as restoration activities, most of which are not activities traditionally carried out by the beneficiaries. Ownership levels vary according to the activities and communities involved, and those generating short-term benefits and not requiring a significant investment of time (poultry farming, handicrafts) seem to have generated greater buy-in, conducive to medium-term sustainability. Market gardening seems more difficult to establish, while fodder production is attracting interest but also faces difficulties, and their sustainability is not assured. Communities still lack sufficient capacity to ensure sustainable practices, which are particularly difficult in local conditions.

179. Restoration activities benefit from community support, the result of good awareness-raising. Maintenance of the perimeter at Koudi-Koma is still assured, and the nursery is operational, maintained by the Koudi-Koma Agricultural Association. In Raysali, the mangrove benefits from some maintenance by the community, but the nursery is abandoned.

180. The sustainability of these activities is not supported by a good understanding of climate issues and the need to adapt. The communities involved in restoration are, however, aware of the ecosystem services they support, particularly at Raysali. The construction of plant barriers against the wind is one of the benefits appreciated, as expressed by community members at Lilya Bouri.

181. At the political level, support for environmental and climate issues continues at both regional and national levels. The LDCF 2 project was the first of this scale to be executed by the MEDD, which has since mobilized three other LDCF projects representing 19 million USD in LDCF grants and 80 million USD in co-financing, in addition to multiple GEF projects on other themes (biodiversity, land degradation). Interviews indicate that this project has enabled the Ministry to familiarize itself with the norms and requirements of managing this type of project, which has favored the continuity of efforts to mobilize funds for environment and climate change projects.

Financial sustainability

182. Financial sustainability is closely linked to technical sustainability. Thus, the sustainability of most results depends on continued access to water. At this stage, none of the communities (with the possible exception of Koudi-Koma) has the financial and technical capacity to maintain or repair the

irrigation systems. Spare parts are available from MEDD for the communities, but many broken taps remain unchanged, leading to wastage or loss of access to water. More extensive repairs are the responsibility of the Rural Hydraulics Department, as the boreholes drilled have been handed back to it. Although this was not expressed openly during the interviews, the financial capacity of the department to take on these new project boreholes is probably limited. The problem of the faulty pump at Darkenlé is known, but the acquisition of a replacement high-temperature pump is costly and does not seem to be a priority.

183. This dependence on access to water and on the intervention of the MAEPE-RH (to which the Rural Hydraulics Department is attached) constitutes a major risk for the sustainability of the project's results. The sustainability of access to water must also be considered in the light of hydraulic and climatic vulnerability studies, which predict high risks at this level.

184. Other income-generating activities appear to be relatively sustainable. Interviews indicate that women involved in handicrafts are able to reinvest their earnings to buy additional materials. They expressed interest in training to learn how to make handicrafts from recycled plastic bags, which would reduce their input costs. Poultry farming also appears to be sustainable, as species selection has proved adequate for local conditions. In Kalaf, there is a strong demand for larger poultry houses. This reflects both the high potential perceived by the communities, but also a lack of capacity to reinvest in their operations due to high levels of poverty.

185. The dependence of successful restoration activities on additional funding is limited, but exists nonetheless. At the very least, a certain amount of fence maintenance is required to protect the sites.

186. Questions about the sustainability of the Marsaki dike have been presented in previous sections, particularly in relation to the need to raise the dike to adapt it to predicted climate change. However, it will also be necessary to provide funding for its maintenance, an issue raised back in 2017 by the president of the Tadjourah regional council[150]. To date, the local authorities are still unclear on this aspect. According to interviews, the recently launched LDCF 4 project plans to raise and maintain the dike over the next few years. However, the project document refers instead to reinforcing it by planting vegetation cover[151], an option whose feasibility is uncertain in local conditions.

Institutional sustainability

187. The MEDD provides leadership and continuity, ensuring that subsequent projects are guided by the results of ongoing projects and the need for continuity. However, the difficulty of acting jointly with other ministries and national institutions beyond PSC's activities is a major barrier to sustainability, in several ways. On the one hand, the Rural Hydraulics Department is not responsible for the construction of the boreholes, yet it is retroceding their ownership and therefore their maintenance, without any budget for this maintenance. On the other hand, because of their limited involvement in the project, several of the people interviewed claim not to be aware of the project's activities, which also affects the possibility of following them up. This is particularly true of the PGIRE project, which has provided co-financing for the project. Finally, this is a missed opportunity to strengthen climate action through Djibouti's institutions and generate synergies. For example, the hydraulic and climate studies were not produced by the CERD, but by its staff (independently of the institutions), which limits their adoption and dissemination by the CERD for future use.

188. At regional level, the capacity of institutions to maintain and promote business continuity is limited. During the project, information was relayed by project focal points. The MEDD has no local

[150] PSC meeting October 2017.
[151] CEO-Endorsement Document, Planning and implementing Ecosystem based Adaptation (EbA) in Djibouti's Dikhil and Tadjourah regions (LDCF-4), p.75.

presence, and regional councils do not have easy access to sector representatives in the capital. Deconcentrated administrations (prefects), for their part, do not have the capacity to promote this continuity.

189. The work done to organize the communities is essential to reinforce the sustainability of the results and enable the communities to envisage scaling up their activities. The more structured associations at Koudi-Koma and Lilya Bouri could therefore contribute to this sustainability. Those at other sites still need to be strengthened.

Scalability and replicability

190. Beyond the benefits generated by this project, the lessons generated are of great value, and their documentation through lessons learned documents have the potential to contribute to the identification of viable options for adaptation in Djibouti, notably the best practice report on mangrove restoration which incorporates lessons from the LDCF 1 and LDCF 2 projects. Indeed, these lessons reflect the complexity of the local context and the need to develop tailor-made adaptation measures (with realistic targets) for each community, as well as the need to accompany change over time.

191. Rather than identifying one or more successful elements and scaling them up across a large number of sites, the results of this project provide food for thought for identifying the conditions for success for different adaptation approaches that can be implemented at other sites. One example is the differing success of agricultural activities, depending in particular on the level of sedentarization and pre-existing farming experience.

192. The elements to be strengthened and disseminated on a large scale are more of an institutional and technical nature, such as the results of climate and hydrological studies and the need to take climate change into account at a very early stage of the project and in a systematic way.

193. The agricultural specialist's report identifies some opportunities to scale up for more successful producers. However, further market analysis and organizational capacity building would be required as a first step. It would also be important to integrate an analysis of the vulnerability of these options to climate change.

Exit strategy

194. Efforts to prepare an exit strategy have been reported since 2018[152] with the aim of integrating a long-term vision into project activities. This strategy is therefore an integral part of the project. From the outset, the importance of awareness-raising activities was emphasized. Preparation of the exit strategy began in September 2020 with the preparation of a work plan by an external consultant, but was delayed by constraints linked to the COVID-19 pandemic. Activities began in earnest in April 2021, and the strategy was finalized in December 2022. The development of this strategy involved consultations with communities and institutions, as well as an analysis of institutional capacities, which were able to feed into project implementation before the strategy was finalized.

195. This strategy includes a list of post-project responsibilities for the project's results and the various retrocession or other agreements to be drawn up to achieve them. It clearly identifies the priorities for project sustainability, i.e. :

- Protect and maintain sustainable hydraulic infrastructures to improve water supply to existing perimeters
- Capacity building, coaching, organizing beneficiary communities

[152] PIR 2018

- Providing perimeters with agricultural equipment and tools
- Diversifying and strengthening income-generating activities

196. This strategy is ambitious, and its full implementation over the remaining 6 months of the project did not seem possible . While some elements have been achieved, such as the acquisition of maintenance equipment for hydraulic infrastructure and the signing of official agreements for the retrocession/allocation of infrastructure, other capacity-building activities needed more time to become sustainable, such as agricultural or restoration activities. The strategy also stressed the importance of supporting community organization, which was only partially achieved. The strategy adopted was therefore to promote the continuation of the project's efforts through other projects. Thus, the LDCF 4 project, launched in January 2024, plans to continue activities at the two sites in Hanlé (Kouri-Koma and Lilya Bouri), and three sites in Tadjourah (Sourate, Kalaf and Ad Bouya), in addition to carrying out work on the Marsaki dike. The project will also carry out gabion wall works in Tadjourah, which were initially planned under LDCF 2 but had to be abandoned[153]. The project will be able to take direct account of the lessons learned from the LDCF 2 project. The PGIRE[154] project, although not directly coordinating with LDCF 2, will also be working on the two sites in Hanlé as well as in Ad Bouya and Sourate, focusing on irrigation issues. In line with its activities to deconcentrate the services of the Rural Hydraulics Department, the project is building two regional bases that will enable hydraulic equipment to be kept locally and improve local services to reinforce the continuity of water supply for beneficiaries[155]. One of these bases is located in Tadjourah, more precisely in Marsaki.

197. As mentioned above, the project has also coordinated with UNICEF to take charge of the rehabilitation of the Kalaf pipeline, which has enabled agricultural activities to resume. None of these projects currently foresees the continuation of efforts in Dinamali and Darkenlé, where the need for access to water is particularly acute.

Criteria	Summary of the analysis	Performance
H. Sustainability	The project faces several challenges limiting the sustainability of results, and additional funding will be required to maintain some of the investments, consolidate some of the gains and continue some of the activities. The project has generated valuable lessons for the implementation of adaptation activities or projects in Djibouti, and an ambitious project exit strategy that adequately identifies the elements to be strengthened.	**MS**

I. Factors and processes affecting project performance

198. The factors and processes that affected the project's performance are cross-cutting elements, most of which have been discussed in the previous sections. The Table 12 summarizes the key elements related to this question.

[153] UNDP. LDCF 4 Project Document.
[154] See project description in Annex IV. Summary of co-financing information and statement of project expenditure by component
[155] IFAD (2020). PGIRE: Design report. Main report and annexes.

Table 12. Factors and processes affecting performance

Factors	Key elements	Rating
Preparation	The time elapsed between project approval (March 2014) and start-up (November 2014) is, all in all, fairly short, but little information is available on this phase. The first disbursement was requested in August 2014, five months after approval. The project's start-up phase does not seem to have been conducive to reflection on possible revisions to be made to the project, in response to the risks identified during the project design phase. Indeed, in the documentation made available to the evaluators, there is no indication of any work to revise certain important elements of the project (budgets, types of activities, identified risks). Only the baseline study carried out in 2017 enabled the project's indicators and targets to be revised, and provided a more in-depth diagnosis of the needs identified for each site. Based on an analysis of available documents, the preparation phase lasted a total of 3 years (2014-2017). This significant timeline is due to delays in recruitment and in the awarding of contracts for preliminary studies and the purchase of infrastructure equipment.	MU
Quality of project management	The quality of project management improved throughout project implementation, thanks to i) strong motivation and involvement of PMU members and the UNEP team, ii) capacity building and a UNEP training system set up on project management topics, iii) communication arrangements between the team that enabled increasingly fluid exchanges, and iv) more clearly defined roles and responsibilities for each position. Implementation of the project encountered a number of obstacles, both in administrative, financial and staff recruitment terms, and in technical terms (difficult climatic conditions). A significant proportion of the risks identified in the ProDoc were realized (considered "substantial" or "high" in the PIRs). In view of the difficulties encountered during implementation and the extension of the project's duration, the size of the project team was revised to include technicians based locally in the communities.	S
Stakeholder engagement	Although PSC meetings were held on a regular basis (once or twice a year throughout the project), involving all the national and regional institutions concerned by the project, the evaluation revealed insufficient commitment on the part of the stakeholders. This is particularly the case for national institutions likely to provide expertise in a specific field (agriculture, hydrology, livestock breeding) or institutions with direct responsibility for implementing or monitoring certain activities. Despite the participatory approach promoted by the project (selection of beneficiary communities for certain activities, selection of certain individuals motivated to carry out certain activities), project monitoring documents report a lack of ownership of the project by the target communities, particularly at start-up and for new activities such as agriculture. This was a direct obstacle to the implementation of certain project activities, but above all to their sustainability. To	MS

Factors	Key elements	Rating
	remedy this, the project team proposed, for example, the deployment of specialized technicians to the communities to reinforce their ownership. Another idea was to draw up contracts with community members to formalize their commitment to the project, but this idea was not put into practice.	
Human rights and gender equality	The project's formulation takes little account of gender-related aspects in the achievement of objectives (no dedicated indicators or targets). Furthermore, an in-depth analysis of gender-related barriers was not carried out at the outset. This failure to take gender aspects into account from the outset of the project has not encouraged the project to carry out dedicated monitoring (no dedicated gender member in the PMU, no gender-related indicators), despite the fact that some activities appear to have benefited the project's female beneficiaries (handicrafts, poultry farming). Measuring these results is therefore difficult, given the lack of an analytical framework (disaggregation by gender is insufficient). However, gender mainstreaming aspects have gradually been taken into account in project monitoring (dedicated section in the PIRs following the MTR). As the project took place in two regions of the country, it would have benefited from a better understanding of the differentiated needs of the nine target communities, so as to adapt the proposed solutions to the context (community organization, demographic situation, etc.).	MU
Environmental and social guarantees (ESS)	ProDoc does include ESS issues in its analysis (see the ESS Checklist), but the environmental and social impact assessment (ESIA) was only carried out in December 2018, i.e. 4 years after the official start-up of the project and after the start-up of infrastructure activities (drilling, dam). Nevertheless, this study appears to cover all points related to environmental and social safeguards and proposes an adapted environmental and social management plan (ESMP) monitoring matrix. There is no specific monitoring of UNEP's environmental footprint through this project. In the course of the project, these issues were monitored on a case-by-case basis and appeared in the PIRs following the MTR. This more precise monitoring made it possible not only to note environmental aspects that had not been taken into account, but also to monitor social issues throughout the project. In this respect, a complaints management mechanism was put in place. Nevertheless, this system allowed direct contact with project staff (coordinator, on-site technicians), which raises the question of the neutrality of the handling of these complaints.	MS
Country ownership and commitment	At national level, ownership is mixed. The DEDD seems to have been heavily involved in the implementation, monitoring and communication of results. Nevertheless, and as explained above, the involvement of other national institutions was largely through participation in the project's PSC. Greater involvement on their part would have made it possible to incorporate their expertise into the project's results and ensure their sustainability. When activities to disseminate the project's results (feedback workshops, events) were set up, there was a good level of participation and commitment.	MS

Factors	Key elements	Rating
	Nevertheless, the question remains as to whether these national players have a lasting understanding of the issues involved in EbA. At regional level, the authorities (prefects) were involved throughout the implementation and contributed to its success. At local level, beneficiary ownership varied from community to community and from activity to activity. Generally speaking, the project sought to strengthen local ownership through a number of solutions (on-site technicians, a cash-for-work system - which was not implemented in the end -, training, strengthening of community organizations).	
Communication and awareness-raising	The studies and communication documents produced by the project are of interest to a wide range of players (public, private, NGOs, local communities), and their dissemination may serve to guide other interventions in the same field. The project has produced both technical material (climate modelling) and communications for the general public (article on the UNEP website) to reach all relevant audiences. The MEDD website has yet to be operationalized. Awareness-raising and training activities appear to have been relevant and adapted to different audiences (awareness-raising for schools, technical training for beneficiaries). Nevertheless, interviews held with communities for this evaluation show a low level of understanding of the project's purpose and the climate issues it was intended to cover.	S

Note on factors and processes affecting performance : MS

VI. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

Strengths

199. Conclusion 1: The rehabilitation of the Marsaki dike and the successful restoration activities have the highest likelihood of impact in the short term.

- The project rehabilitated a 1.6 km dike protecting the Marsaki district of Tadjourah. The rehabilitated dike has already protected the Marsaki district, home to several thousand residents, from various floods.
- Ecosystem restoration totalized 4.5 ha of acacia forests in Koudi-Koma and 1.1 ha of mangrove forests in Raysali. In these areas, the restoration was of good quality and is reaching a development stage conducive to the generation of ecosystem services, including shade and habitat for birds and insects as well as protection of the coastline against storms.

200. **Conclusion 2: By the end of the project, four communities out of seven had improved access to water**, helping to meet an essential survival need and enabling them to cope better with drought.

201. **Conclusion 3: Agropastoral and other income generating activities were more successful in communities with (i) well-functioning irrigation systems, (ii) previous farming experience, (iii) more advanced sedentarization, (iv) pre-existing community organization, and (v) where activities proposed were aligned with local practices, including gender and age group roles.** The uptake of market gardening is limited due to it being a new practice in most communities, to the arid conditions (and its dependence on water), to its often-limited compatibility with traditional practices, and to limited community organization. Fodder production fared relatively better than market gardening, with a few examples of income generation through the sale of fodder. This contributes to feeding livestock and thus sustaining this traditional means of subsistence. New income generating activities that build on existing practices, such as poultry and handicrafts, have been successful and have contributed to income generation, especially among women. Ownership of these activities is strong, and they continue despite the end of the project. The implementation of various activities on a single site increased the likelihood of strengthening resilience.

202. **Conclusion 4: The RVE reported an average decrease of the vulnerability risk assessment (VRA) index of 37% for the region of Hanlé and 11% for Tadjourah.** In Ad Bouya and Koudi-Koma, the VRA index decreased by 20% and 34% respectively. In both communities, this decrease was more important for women than for men, reaching respectively 28% and 43% for women. In Ad Bouya, this is driven by the diversification of income sources and better action against climate change, while in Koudi-Koma, it is likely due to the engagement of women in the farming association and nursery management. At the other end of the spectrum, in Darkenlé, where access to water could not be established preventing other project activities, the VRA decreased by 2%.

Weaknesses

203. **Conclusion 5: The success factors of water supply construction or rehabilitation were not systematically considered,** leading to the observed mixed results, including the site of Darkenlé which was abandoned. This includes the need to ensure continuous water availability in terms of quantity and quality, intermediate testing during excavation, adequate equipment and construction, ensuring communities have the capacity to operate and maintain the system, and ensuring engagement of relevant authorities in maintenance and repairs.

204. **Conclusion 6: The limited understanding of climate change and adaptation issues among targeted communities limits the incentives to adapt to upcoming climate change and affects household decisions on adaptation measures to prioritize**. Awareness-raising activities carried out with schoolchildren and their teachers are relevant and complement the training activities received by parents during the various project activities. However, understanding of climate and adaptation issues remains low.

205. **Conclusion 7: Where the project strengthened existing community organizations, these contributed to enhance and sustain project results.** However:

- New associations are struggling to take shape, limiting the potential for income-generating activities.
- Some community tensions have been detrimental to water resource management.
- Sustainability is more likely in communities with stronger community organization (Koudi-Koma and Lilya Bouri)
- The importance of local organizations to support results and long-term impacts was underestimated.

206. **Conclusion 8: By not adequately considering climate change projections in the design of key activities, the project may be promoting maladaptation**, in two ways:

- Unless the dike height is increased, it is not expected to withstand projected climate changes beyond a 10-year horizon. It was already damaged by a flood, and repaired by the project, since its rehabilitation. Meanwhile, the population and construction in Marsaki keeps growing. The government committed to mobilizing additional funding (including from the LDCF 4 project) to address this issue.
- While projections on water availability are concerning, the project supported several activities relying heavily on water access, with inadequate assessments on water availability. Agriculture, and in particular vegetable gardening, require sufficient and constant access to quality water, and was rated as highly vulnerable in a study conducted by the project.

207. **Conclusion 9: Through LDCF 2, the MEDD built its capacity to mobilize and manage large environmental and climate change projects and has been doing so successfully**. But the continuity of project activities and of climate change adaptation efforts, in particular the sustained operation and maintenance of infrastructure is uncertain considering that many of the institutions to which these infrastructures were handed over as part of the exit strategy have low capacity and resources to do so and have to prioritize. Their limited involvement during project implementation has hindered and will continue to hinder coordination and collaboration on maintaining this infrastructure, which adversely affects the sustainability of interventions. Regional institutional capacities, although in the process of decentralization, are still too limited to support the continuity of results. The capacities of other national institutions to implement climate change measures remains insufficient.

208. Conclusion 10: The project has generated and documented valuable lessons, but they have been insufficiently disseminated. As several institutional capacity-building activities targeting national institutions were canceled and knowledge dissemination was limited, the project will have only marginal effects on national capacities for adaptation to climate change beyond those of the MEDD.

209. **Conclusion 11: The project team was able to identify risk mitigation measures and adapt throughout the project.** The project faced many challenges related to its design (conceptual challenges) and its implementation (operational challenges), which required adapting implementation approaches along the way. The LDCF 2 project adjusted the structure of the PMU to provide more

continuous support for activities such as agriculture and mangrove restoration. It also adapted the implementation of activities to the local socio-economic context, when it was feasible.

Conceptual challenges

210. **Conclusion 12: The project's Theory of Change did not adequately consider the availability and capacity to access and manage water resources as a prerequisite for other project activities.** In the three communities where water infrastructure failed (Kalaf, Sourate and Darkenlé), this significantly affected project results. In Lilya Bouri, water is unsuitable for market gardening.

211. **Conclusion 13: The complexity of the local context was not adequately considered in activities and budget, and targets were overestimated.** The local conditions were harsh or even inadequate for some restoration and agropastoral activities, which limited the scale and quality of results. In this extreme context, there are limited adaptation options, and most are dependent on adequate water supply infrastructure. Subtle variations in the environmental context and cultural differences between communities (e.g. gender dynamics, levels of sedentarization) also affected results and would have required greater differentiation in implementation modalities.

212. Djibouti is also highly dependent on imports, which often involves delays and price fluctuations. While these risks were identified during project design, they were not adequately incorporated in activities and budgets. From the project design, what the project could realistically achieve was therefore overestimated. As a result, many targets were reduced and several activities were cancelled, reducing the overall cost-effectiveness of the project. In particular, some restoration targets surpassed the capacity of the sites identified.

213. **Conclusion 14: The processes to select beneficiaries and activities are not sufficiently strong to ensure equity and success of activities.** Beneficiary selection through traditional leadership structures is necessary to ensure community buy-in, but it does not help overcome entrenched discriminatory practices based on ethnicity, gender or age.

214. Furthermore, even though activities for each site were selected with communities, this is not sufficient to guarantee success, as the interests they express are often based on incomplete or inaccurate information, and other context factors influence effectiveness. In the case of agriculture, there is strong interest from communities, but the type of work involved is often incompatible with traditional practices and competes with other activities such as transhumance.

Operational challenges

215. **Conclusion 15: Inadequate cost estimates at project design led to conflicting priorities between urban protection and rural water supply, leading to sub-optimal impacts**. The need to import materials and the long time elapsed between project design and implementation also contributed to inadequate budgeting of some activities. This led to significant cost overruns for the rehabilitation of the Marsaki dike, which required (i) the cancellation of several other dikes and boreholes in rural areas, and (ii) a lower dike height that does not take into account climate projections.

216. Procurement processes did not adequately consider the added cost of equipment that withstands arid conditions on project sites, and several investments were damaged or destroyed by extreme weather (Including faucets, pipes, fences and nurseries). In both cases, the additional costs of adaptation to climate change were not adequately considered.

217. **Conclusion 16: The project timeframe was insufficient to deliver the expected results.** Initially scheduled to last four years, it took almost nine, which significantly increased the costs for project management. Decisions on infrastructure measures and project activities had to be made before the results from key studies undertaken by the project aiming to assess climate risks were available.

Furthermore, the time required for, and the complexity of undertaking restoration activities were not adequately considered. Several such activities were undertaken very late in the project, and results are either not visible or not at a stage where they can be self-sustained.

218. This is also true for work with communities, where the behaviour changes expected from communities take time to achieve and continued support. In particular, the project design did not sufficiently consider the time and effort required for introducing new practices, such as horticulture among pastoralist communities, and the role of community organizations in supporting it. Communities do not yet have the full range of skills to support their farming practices, and motivation is often difficult to maintain.

219. **Conclusion 17: In a context where rural communities are small and dispersed, the project insufficiently sought to leverage synergies and coordinate interventions within and between the communities supported**. The project supported nine project sites across two regions, with a wide range of activities, and highly variable success rates. While individually, each successful activity may contribute to adaptation and resilience, these will be limited by the scale and intensity of interventions. Except for some exchanges between Lilya Bouri and Koudi-Koma, all activities were one-offs, and potential impacts depended exclusively on the success of each specific activity.

Key strategic questions

KSQ1: To what extent has the project promoted adaptation and what benefits has it generated in terms of climate impacts? Have climate change and its impacts been sufficiently taken into account in project implementation?

220. The LDCF 2 project has promoted adaptation to climate change insofar as it addresses issues and sites that are particularly exposed and vulnerable to its effects. In this way, it has helped to address the most direct impacts on communities (drought, wind) and their low capacity to adapt, which is largely dependent on high levels of poverty. The project also helps to continue the trend away from cattle farming, which is already no longer viable under current climatic conditions.

221. The limitation of this support for adaptation, however, lies in the limited consideration given to climate change in the project and the solutions it proposes. Interviews with various stakeholders (representatives of other projects, regional representatives, communities) indicate that the activities proposed by the project do not differ from those proposed by development projects (non-climate). This is partly, but not exclusively, due to the lack of concrete data at the start of the project. This includes the choice of drilling sites, agricultural activities (particularly market gardening) which are particularly vulnerable to climate change, and the Marsaki dike. That said, most activities have (initially or progressively) taken account of the extreme climatic context of the project sites, for example in the choice of species to be promoted. However, it is difficult to know whether species adapted to the current climate will be adapted to the future climate. A slightly more integrated approach to adaptation and resilience at the target sites would have had the advantage of diversifying the available means of adaptation. The project's numerous sites are relatively scattered, and many were able to benefit from only one or two activities.

KSQ2: Have the arrangements in place enabled the project to be implemented effectively? Based on this experience, what improvements could be made to the implementation structure for future similar projects in the country?

222. The evolution of the PMU's constitution over the course of the project bears witness to the efforts made to find an appropriate implementation structure. The presence of focal points in each region is definitely an asset, as is the decision to hire technicians at community level to provide support.

The role of the coordinator's assistant proved superfluous, and the idea of assigning responsibilities related to climate expertise to the CTA is effective and should be foreseen from the outset of a project with a substantial level of effort and budget.

223. The implementation structure with the MEDD is adequate and has fostered strong ownership and capacity building at this level. However, climate change is a cross-cutting issue that requires ownership and capacity building across the government apparatus. For a first project of this size carried out by the MEDD, hiring individual experts to carry out some of the work is likely to have facilitated contracting and avoided further delays. However, it would be advantageous and even necessary to consider mechanisms to enable the active involvement of other ministries and institutions in the project, in order to facilitate ownership, capacity building, and longer-term societal benefits term. This would also strengthen the project's implementation capacity. Indeed, at its peak, the project managed to disburse almost 1.7 million USD in one year, and this when expenditure was mainly on infrastructure, but much less when activities mainly comprised technical support. MEDD alone would hardly have been able to disburse more than 7 million in four years. This ability to disburse and advance project activities on several fronts simultaneously would be enhanced by the use of mechanisms that encourage execution across several entities (ministries, institutions or other international organizations).

KSQ3: How successful was the project in ensuring the involvement and participation of all beneficiaries, and how could this have been maximized?

224. The evaluation mission and the documentation do not really provide an overview of this issue, but they do enable us to observe both the difficulties encountered in establishing this commitment and the efforts made to this end.

225. First of all, the fact that interest in participating is taken into account when selecting beneficiaries is an asset. Going through the traditional authorities to make this selection strengthens the social acceptability of the project, but does not necessarily reach the most vulnerable people (in a situation of exclusion from their community) or overcome certain ethnic barriers.

226. Engagement has been an issue throughout the project, particularly with regard to agricultural activities. Despite the interest expressed, these activities are far removed from community practices, which probably led to the difficulties of engagement and participation. Learning how to farm is a complex process, especially under local conditions. Different modalities were tested or envisaged by the project to reinforce and maintain participation. Commitment improved when success stories helped to motivate beneficiaries. The following options could also be considered:

- The continuous and long-term support from an agronomist. In the final year of the project, three agronomists were hired to work respectively on agricultural activities in Kalaf and Darkenlé, on agricultural activities in Ad-Bouya and Sourate, and on agricultural activities in Koudi-Koma and Liliya-Bouri. The results reported in PIR 2023 testify to close support that has increased community participation rates in activities and better returns on these practices. This positive first step demonstrates the value of a long-term presence of an agronomist to offer more regular/frequent follow-up, by being based close to the communities supported. This would guarantee constant involvement, right from the start of activities.
- Adapting supply to local capacities and interests. In particular, for nomadic or semi-nomadic communities, prioritize low-maintenance, fast-growing forage and agroforestry production. Communities with farming experience may be more motivated by the possibility of marketing their products. Farming seems to benefit from a favorable a priori attitude on the part of the communities, which fades once confronted with the reality of the activities. Decision-making on activities must therefore be accompanied by a reciprocal exchange of information.
- The proposal of different agricultural models at different sites, ranging from community vegetable gardens (entirely communal perimeters) to individual gardens. In addition to the level

of sedentarization and previous experience in agriculture, the evaluation mission observed that the roles related to agriculture within households differed from one community to another.

- Strengthening community organization, by advocating models that allow work time and costs to be shared. A credit group model with an initial investment (possibly co-financed by the project) could be envisaged to enable more vulnerable people to have access to regular income before the harvest.
- Encourage exchanges of experience between communities, so that they can see and share results.
- Ensure continuity of access to water (through various mechanisms, including possibly training local technicians).

KSQ4: What are the main good practices and lessons learned from project implementation? How can these best practices be integrated into future similar projects, such as LDCF 4, to maximize their effectiveness?

227. See the section on lessons.

KSQ5: To what extent has the project ensured the long-term impact of its activities?

228. See conclusions on sustainability. At this stage, some of the most important activities require additional efforts to be sustainable. The approach to ensuring this continuity is to involve new projects, most notably the recently launched LDCF 4, which is also being implemented by UNEP and executed by MEDD.

UNEP Evaluation Office Validation of Performance Ratings:

The UNEP Evaluation Office formally quality assesses (see Annex VII) management led Terminal Review reports and validates the performance ratings therein by ensuring that the performance judgments made are consistent with evidence presented in the Review report and in-line with the performance standards set out for independent evaluations.

The Evaluation Office assesses a Terminal Review report in the same way as it assesses the initial draft of a Terminal Evaluation report. It applies the following assumptions in its validation process:

– That what is being assessed is the contents of the report and the extent to which it makes a consistent and justifiable case for the performance ratings it records.

- That the consultant has, within the report, presented all the evidence that was made available to them.

- That the Review has been based on a robust Theory of Change, reconstructed where necessary, which reflects UNEP's definitions at all levels of results.

- That the project team and key stakeholders have already reviewed a draft version of the report and provided substantive comments and made factual corrections to the Review Consultant, who has responded to them. The Evaluation Office assumes, therefore, that it has received the Final (revised) version of the report.

In this instance, the Evaluation Office finds that most of the ratings awarded are validated and confirms the overall project performance rating at the '**Moderately Satisfactory**' level. The quality of the Report is assessed at the Satisfactory level.

Summary of project findings and ratings[156]

Criteria	Summary of the analysis	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
A. Strategic relevance		**S**	**Rating validated**	**S**
1. Alignment with UNEP strategy and program of work	The project is aligned with the strategic priorities of the GEF (LDCF and SCCF), UNEP and UNDAF.	**S**	Rating validated	S
2. Relevance to regional, sub-regional and national environmental priorities	The project is in line with the country's national development strategies, as well as its adaptation and NDC strategies. The project meets the challenges identified in the two target regions.	**S**	Rating validated	S
B. Quality of project design	The quality of the project's design is moderately satisfactory, because even if the project responds to the country's priorities, the number and diversity of the proposed activities seem difficult to implement, as they require enhanced coordination and synergies. Furthermore, the analysis of the partners' capacities seems insufficient to best define the project's expected results and capacity-building needs. Lastly, the project was hampered by a failure to take account of the risks associated with water availability and the effects of climate change, and by underestimates of the budgets allocated to activities. Other aspects of the project's design are detailed in the following section **Quality of project design**.	**MS**	**Rating validated**	**MS**
C. Nature of the external context	The external context has had a significant impact on project implementation. Firstly, climatic hazards greatly complicated the execution of several agricultural and restoration activities, and caused damage to infrastructure built by the project. Secondly, the project faced difficulties in recruiting staff and national consultants with the skills required for the project. This led to team instability and delays. In addition, infrastructure and equipment activities were penalized by the need to import materials. This not only led to delays, but also to cost overruns and even impacted on implementation quality. Finally, the project had to adapt to the restrictions associated with the	**MS**	**Rating validated** *(Nature of External Context is rated against a 'favourability' scale i.e. MF)*	**MF**

[156] Most criteria will be rated on a six-point scale as follows: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability and Likelihood of Impact are rated, also on a six-point scale, from Highly Likely (HL) down to Highly Unlikely (HU) and Nature of External Context is rated from Highly Favourable (HF) to Highly Unfavourable (HU).

Criteria	Summary of the analysis	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
	COVID-19 pandemic by revising work plans, budgets and implementation methods. Although some elements of the external context are also part of internal planning, they have had a significant impact on the project. The nature of this context and the efforts made to address it have been taken into account in the rating of effectiveness, efficiency and sustainability.			
D. Effectiveness [157]		**MS**	**Rating Validated**	**MS**
1. Outputs achievement	Product achievement was significantly delayed and modified throughout the project. Targets were progressively lowered due to project delays and operational constraints. Nevertheless, several activities were implemented as planned and resulted in the achievement of key outputs for the four project components.	**MS**	The Evaluation Office assesses the availability of outputs, based on the report text as MS, given that 62% of the outputs read as fully delivered (1.1, 1.2, 3.2, 4.1 and 4.2) while the others are partially available.	MS
2. Outcomes achievement	The products planned for the project have been partially delivered. Despite major delays in the early years of the project, significant catch-up has been achieved in terms of field activities. The products that have been delivered have, on the whole, generated good direct effects/results, thanks to constant efforts to adapt and resolve problems.	**MS**	The Evaluation Office assesses the achievement of outcomes as MS, given that outcome 1 reads as fully achieved and the other three as partially achieve.	MS
3. Likelihood of impact	The likelihood of project impact varies according to the activities, sites and communities targeted by the project. The Marsaki dike has a high likelihood of impact. Agricultural perimeters and restoration activities, although reduced compared to the initial targets, have a good likelihood of impact. As far as agricultural production is concerned, its vulnerability negatively affects the likelihood of impact, particularly in relation to access to water. The success of income-generating activities increases the likelihood of impact on these sites. Finally, as institutional strengthening activities have had a minimal impact, their likelihood of impact on Djiboutian society remains low. By not adequately considering	**MS**	Conclusions 8 and 9 do not support the summary analysis of likelihood of impact in this table, rather they indicate that the Marsaki dike is not likely to withstand climate change over the next 10 years, which is in contrast to the project objective : 'to increase the resilience of Djibouti's society and economy to the effects of climate change…' (Likelihood of Impact is rated against a 'likelihood' scale)	MU

[157] Where a project is rated, through the assessment of Project Design Quality template during the evaluation inception stage, as facing either an Unfavourable or Highly Unfavourable external operating context, the overall rating for Effectiveness may be increased at the discretion of the Evaluation Consultant and Evaluation Manager together.

Criteria	Summary of the analysis	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
	climate change projections in the design of key activities, the project may be promoting maladaptation.			
E. Financial management		**S**	**Rating validated**	**S**
1.Financial performance	Despite very low expenditure during the first three years of the project, financial execution has seen a significant catch-up since 2017. The final disbursement rate is almost 100%, and the planned co-financing with the Djibouti authorities and UNEP has been fully mobilized. The budgets for components 3 and 4, as well as the M&E budget, have been modified by more than 10%.	**S**	Rating validated	S
2.Quality and consistency of financial reporting	The financial documentation is complete and the cash flow issues reported at the start of the project have been resolved.	**S**	Rating validated	S
F. Efficiency	The cost-effectiveness of the project was affected by the reduction in targets, and by the fact that some targets were ultimately not achieved. The implementation of certain activities required additional resources (strong team commitment, budget revisions), not least because the project targets were unrealistic. Delays experienced at the start of the project (recruitment, procurement, imports), then those linked to the COVID-19 pandemic, meant that the project lasted nine years instead of four. As a result, project management costs soared. A number of external factors causing delays had been identified when the project was formulated, but could not be avoided. This is particularly true of climatic hazards, which were not sufficiently taken into account at the outset of activities, but which had a significant impact.	**MU**	**Rating validated**	**MU**
G. Monitoring and reporting		**S**	**Rating Validated**	**S**
1. M&E design and implementation	At the start of the project, the M&E plan was complete and well implemented, including a baseline study (carried out late), an MTR, an RVE and a final evaluation. While the baseline study and the MTR did not address the fundamental issues, they did help to improve the results framework. Most of the recommendations made by the MTR were adopted by the project.	**HS**	The Evaluation Office, cognisant of the limitations in monitoring design described in paras 168 and 170, which affected the potential for monitoring implementation, validates this sub-category at the Satisfactory level.	S

Criteria	Summary of the analysis	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
2.project reporting	Project reporting meets UNEP's requirements, and the gradual improvement in the quality of reports reflects improvements in capacity (particularly following training) and coordination within the team. Work plans and budgets are available for each year, along with their revisions. PSC meetings were held regularly and covered relevant topics. Although the audit report carried out by OIOS highlights the absence of UNEP when certain strategic decisions were taken, all PSC meetings were prepared in advance with UNEP and included the participation of the CTA. The TM and CTA mission reports are available, as are most of the technical reports, but the level of effort planned for the CTA role seems insufficient.	**S**	Rating validated	S
H. Sustainability	The project faces several challenges limiting the sustainability of results, and additional funding will be required to maintain some of the investments, consolidate some of the gains and continue some of the activities. The project has generated valuable lessons for the implementation of adaptation activities or projects in Djibouti, and an ambitious project exit strategy that adequately identifies the elements to be strengthened.	**MS**	*Socio-political and institutional sustainability aare validated at the Moderately Likely level, but the sustainability of the achievement of the project's benefits is limited on financial/technical grounds, as described in paras 183 and 184 are Moderately Unlikely. Sustainability ratings are aggregated to the lowest level of the sub-categories as they are considered self-limiting factors.*	**MU**
I. Factors affecting performance		**MS**	**Rating Validated**	**MS**
1. Preparation	The project's preparation involved a number of shortcomings which had a significant impact on the difficulty of implementing the project (unrealistic targets, underestimated costs, wide diversity of activities and sites, constraining phasing of activities).	**MU**	Rating Validated	MU
2. Quality of project management and supervision	The quality of project management improved throughout project implementation, thanks to UNEP's strong support for the PMU and implementation partners. The team demonstrated flexibility and adaptability in responding to the various obstacles encountered during implementation.	**S**	Rating Validated	S

Criteria	Summary of the analysis	Rating	Justification for any ratings' changes due to validation (to be completed by the UNEP Evaluation Office – EOU)	EOU Validated Rating
3. Stakeholder participation and collaboration	Project stakeholders at national and regional level have been involved in the project's governance bodies, but do not seem to have taken ownership of the project beyond that. Moreover, despite the participatory approach promoted, some communities have been reluctant to participate in and take ownership of the project's activities.	**MS**	Rating Validated	MS
4. Human rights and gender equality	The project did not take gender aspects into account from the outset, making them difficult to monitor and measure. A study dedicated to understanding gender aspects, as well as the social characterizations of the target communities, would have enabled greater consideration to be given to human rights and gender equality.	**MU**	Rating Validated	MU
5. Environmental and social guarantees (ESS)	ESS aspects were slow to be covered by the project, which meant that some infrastructures were built under a dedicated ESS plan. These environmental and social aspects were dealt with on a case-by-case basis depending on the activities, without a detailed overall plan.	**MS**	Rating Validated	MS
5. Country ownership and protagonism	Ownership of the project at national level is mixed, despite strong involvement by the DEDD. At regional level, the prefects were involved in implementing activities in their regions. At local level, ownership by beneficiaries is heterogeneous, despite the PMU's efforts to strengthen ownership.	**MS**	Rating Validated	MS
6. Communication and public awareness	The project has produced studies and communication documents which are of interest to many stakeholders and which would benefit from being widely distributed. Despite awareness-raising activities tailored to different audiences, the final beneficiaries demonstrate a low level of understanding of the project's purpose and climate issues.	**S**	Rating Validated	S
Overall project performance		**MS**	**Rating Validated**	**MS**

B. Lessons

229. **Lesson 1: A weak ToC can significantly undermine a project's performance.** In this case, the failure to adequately consider access to water as a pre-requisite for any adaptation measure significantly affected project results. (See Conclusions 2, 3, 5, 7, 8, 9, 12)

230. **Lesson 2:** In the context of Djibouti, **success factors to consider for agropastoral and other income generating activities** include with (i) well-functioning irrigation systems, (ii) previous farming experience, (iii) more advanced sedentarization, (iv) pre-existing community organization, and (v) where activities proposed were aligned with local practices, including gender and age group roles (See Conclusion 3).

231. **Lesson 3: The implementation of various activities on a single site increases the likelihood of strengthening resilience.** This may require supporting less sites and/or generating complementarities and synergies across different communities and activities. The measures supported should form a coherent whole per site or region, rather than a series of individual activities. It also involves planning strategically which activities are more relevant for which site and tailoring implementation modalities, so that they jointly contribute to adaptation, and that the failure of an activity does not compromise overall results. There are opportunities to further leverage synergies between agricultural and restoration activities. (see Conclusions 3, 4, 17).

232. **Lesson 4: Detailed planning of infrastructure activities is essential.** In particular, it is important to include (i) procurement/contracting and equipment delivery deadlines in the schedule; and (ii) dedicated maintenance funding in the budget. For water infrastructures, planning and execution must systematically consider all success factors, including intermediate stages to validate feasibility (presence of water at the drilling point and quality/quantity available). (see Conclusion 5, 12)

233. **Lesson 5: Maintaining a focus on climate change adaptation throughout the project is essential to ensure results and prevent maladaptation.** Although the solutions proposed may be similar to those of development projects, the specific added value of LDCF lies in its contribution to adaptation. The activities undertaken must be defined in terms of observed and future climate change, and the additional effects it will have on already difficult local conditions. This also includes constant communication to communities and various stakeholders on this priority, particularly during training and awareness-raising activities. (See Conclusions 6, 8, 15)

234. **Lesson 6: Climate change increases costs.** The logical corollary of maintaining a focus on climate change adaptation will be that additional costs to do so will be identified. On the one hand, climate risks can no longer be considered as external, low-level risks, but must be adequately integrated and budgeted for. Addressing climate risks, especially in an extreme context like Djibouti's, will require stronger, more expensive equipment and construction. This also means that projects' targets may become less ambitious, due to decreased cost-effectiveness. (see Conclusions 8,13, 15)

235. **Lesson 7: Gaps in environmental and climate change data can significantly hamper climate change adaptation efforts.** In this project, it was visible in the time it took to conduct climate change studies, and the fact that these could not be used to plan project activities. Even then, the information available on climate change projections is insufficient to plan water infrastructure at the site level, and a regional study would be required to assess the status and project the impacts of climate change on water tables, which expand beyond the country's borders (see Conclusions 2, 5, 8).

236. **Lesson 8: Strengthening community organizations is important to support results and long-term impacts.** It has proven crucial in helping manage water infrastructure, but also in supporting project activities. Community organizations can help build commitment, make awareness-raising activities more effective and ultimately enhance sustainability by improving work organization and identifying opportunities for additional business. Long-term support is necessary to structure the organizations properly and ensure that they remain operational. These organizations can also provide leverage to ensure the continuity of restoration activities, for which financial incentives are less strong. (See Conclusions 7, 16)

237. **Lesson 9: Consider with caution the priority given to agriculture as an adaptation measure in Djibouti,** particularly in project sites where this practice is new. Access to water is a critical issue, and has often proved to be beyond the project's control. Furthermore, hydrological data and climate analyses show that this sector is highly vulnerable to climate change. The practice of market gardening is particularly vulnerable, and its adoption is difficult in communities where this is not the custom. Fodder production (grasses and trees) is relatively less vulnerable and easier to adopt, where conditions are favorable. (See Conclusions 3, 8, 9, 12, 16 and Lessons 1, 2, 5)

238. **Lesson 10: Further engagement and capacity-building of institutional stakeholders is necessary to enable effective climate action in Djibouti.** While the capacities of the MEDD have been greatly strengthened, the sustainability of project results, as well as capacity to implement climate change adaptation also depend on other ministries and on regional authorities. Their involvement should go beyond participation in the PSC, and include capacity building, active roles in project implementation, and support to incorporate climate change into their activities and budgets. (see Conclusion 9, 10)

239. **Lesson 11: Continuous risk monitoring and adaptive management are assets in achieving project results.** Even with the best project planning, changes in project implementation approaches may be required to ensure continued progress towards results. Enabling the project implementation team to make the required adjustments has proven to be an asset. (see Conclusion 11)

240. **Lesson 12: Stronger measures are needed to consider the local context across the board in project formulation, adequately incorporating identified contextual risk elements in the project implementation.** This should be done at two levels. At the project level, the project's formulation should better consider the country's context in planning its activities, management structure, targets, budget and duration. Several elements considered as risks in the LDCF 2 ProDoc had significant effects on the project. These include risks linked to climate hazards, availability of water resources, capacity (technical, financial), vandalism and community involvement. Project formulation could also seek to establish a sequence of activities limiting the dependence of the whole project on certain crucial tasks. (See Conclusions 5, 6, 8, 13, 15, 16)

241. **Lesson 13: A strong process is required to select beneficiaries and define specific activities in order to ensure equity and effectiveness.** In addition to interests expressed by communities and local climate risks, this process needs to consider success factors for activities (Lesson 2) and the importance of implementing various activities on the same site (Lesson 3). The proposed solutions and implementation modalities should be adapted to local social and economic conditions, including gender roles, levels of sedentarization, alternative sources of income, internal conflicts, marginalized groups, etc. Similarly, the selection of beneficiaries should include measures to overcome local power imbalances. In addition to consultations on preferred adaptation solutions, this would require a solid socio-economic analysis of the communities upstream of the project, with a view to defining an intervention strategy for each community. This could go beyond the scope of a baseline study, and could take the form of a

feasibility study in the project design phase or during the inception phase. (See conclusions 3, 4, 6, 7, 13, 14)

242. **Lesson 14: Behavior change processes require time and sustained support.** This can be supported by deploying project technical staff as close as possible to the beneficiaries, to ensure that activities are properly implemented and to raise their awareness. It is also necessary to set aside sufficient time to carry out this type of activity, in particular to enable practices to be tested over several seasons. It is preferable to opt for solutions that do not require too abrupt a change in practices, especially if the implementation period is limited. (See Conclusions 11, 16)

243. **Lesson 15: Prioritizing activities that target women and are aligned with their interests and capacities can generate multiple results.** The activities supported by the project (particularly handicrafts and poultry farming) built on traditional practices that are well rooted in women's habits, such as mat-making and livestock rearing, which encouraged their adoption. Their success also demonstrates the potential and interest of women to undertake their own activities, which can be beneficial for their empowerment. (See Conclusion 3, 4)

C. Recommendations

244. **Recommendation 1: Strengthen the design of climate change adaptation projects** by increasing the focus on a strong Theory of Change, better consideration of climate and other context-related risks in planning and budgeting, and improving the flow of activities to overcome limits to climate data availability. This consideration must be internal (climate-proofing) and external (in project activities), and based on prior analysis of existing climate data and projections. The climate risks should not only be identified at project design, but considered as highly likely and budgeted for accordingly. The targets should be established in consideration of the context. The project duration should also consider the time needed to achieve results, including behavior changes at the community level. (see Conclusions 3, 4, 8, 12, 13, 15, 16, 17)

- Application: Current and future projects.
- Responsibility: UNEP

245. **Recommendation 2: Strengthen the process to select beneficiaries and define specific activities.** This is the foundation on which the various project activities at each site are built. It should seek to find common ground between community requests, adaptation needs and context elements and promote equitable benefits from the project. This should lead to a coordinated approach to awareness-raising, training, organizational strengthening and technical support, and also imply the use of an intervention strategy putting forward adaptation to climate change as a goal, leveraging synergies across activities and project sites. This should be informed by a thorough feasibility study carried out at the project design or start-up stage, to better identify the particularities of each community (and in particular gender dynamics) in order to define a coherent strategy tailored to their situation. (See Conclusions 3, 4, 7, 9, 12, 13, 14, 17)

- Application: Future projects.
- Responsibility: UNEP and MEDD

246. **Recommendation 3: Pursue capacity-building of institutional stakeholders in climate change adaptation beyond the MEDD.** The involvement of sectoral ministries, departments and research institutions to date in climate change adaptation has not enabled to build their capacities to effectively implement adaptation measures. Yet, their role is essential and should go beyond a participation to the

PSC. Capacity-building should include training, active participation in project implementation, climate change mainstreaming, and budgeting strategies to ensure funding of climate change adaptation measures. Knowledge management and coordination capacities should also be strengthened. (see Conclusion 9, 10)

- Application: Future projects
- Responsibility: UNEP, MEDD and other institutions

247. **Recommendation 4: Continue and intensify dissemination of project knowledge and lessons.** The project has generated a number of very useful studies for future climate change adaptation projects, as well as many lessons, with lessons-learned documents already prepared, although their dissemination remains limited. They are currently available from the MEDD. It is important to ensure that these documents are disseminated to all interested stakeholders and remain available to the public. The MEDD should therefore ensure that all these documents are integrated into its new website, and identify a range of opportunities and means for disseminating these documents, notably at future events and workshops for other projects. Official transmission to CERD should also be considered. (See Conclusion 10)

- Application: Immediate (short-term)
- Responsibility: MEDD

248. **Recommendation 5: Ensure continuity of support for project activities dependent on other projects for sustainability.** At this stage, UNEP and MEDD should revisit the exit strategy to identify elements whose sustainability is not yet assured and which may not already be covered by other projects, focusing on those with a greater chance of success, such as support for handicrafts in Dinamali. UNEP and MEDD should also ensure that the measures planned under the LDCF 4 project are sufficient to ensure the technical and financial sustainability of the Marsaki dike. It would also be interesting to communicate with other projects on the issue of access to water in Darkenlé, where the situation is critical and not currently supported by other projects. (See Conclusions 2, 3, 4, 7, 8, 16)

- Application: Immediate (short-term)
- Responsibility: UNEP and MEDD

249. **Recommendation 6: Strengthen the gender approach across the board in future projects.** This element is part of the previous recommendation, but deserves special attention, particularly in the context of Djibouti. Future projects should ensure that they have an ESMP and results framework with outputs specific to women, and with associated indicators and targets. This enables monitoring throughout the project and better evaluation of the effects on women. Each project should carry out an in-depth analysis of gender dynamics by community at the start of the project, either as part of a wider study (see Recommendation 5) or as a specific study. The analyses usually carried out during the project design phase do not generally provide sufficient detail to develop a strategy tailored to the specific characteristics of each community. Barriers to women's access should be identified and specific measures planned to reinforce equity in terms of access to project benefits. This will ensure that the project implements activities that have a long-term impact on women's empowerment. Future projects should consider hiring a gender specialist familiar with the national context to reinforce this aspect in all aspects of the project. (See Conclusions 3, 4)

- Application: Future projects.
- Responsibility: UNEP and MEDD

ANNEXES

Annex I. STAKEHOLDERS CONSULTED DURING THE REVIEW

The following interviews were conducted remotely:

- Task Manager
- Both CTAs
- Former project coordinator
- Financial Manager

A field mission was carried out by the project's lead evaluator in Djibouti from January 28 to February 5, 2024, and the following interviews were conducted:

- MEDD Environment Department: Secretary General of the Ministry, Deputy Environment Director and former project coordinator
- Various departments of the Ministry of Agriculture, Livestock and Hydraulic Resources (MAEPE-RH): Livestock and Veterinary Services Department; Rural Hydraulics Department; Agriculture and Forestry Department.
- Representative of the Djibouti National Research Centre (CERD)
- Representative of the National Meteorological Agency (ANM)
- Representatives of other projects: PGIRE project coordinator and LDCF 4 project coordinator
- Local and regional authorities: Prefect of Dikhil; President of the Tadjourah Regional Council
- Other consultants and implementing partners: Agricultural specialist, Tadjourah Women's Association, Mangrove Assistant.

During the mission, all nine project sites were visited (Dinamali, Koudi-Koma, Lilya Bouri, Tadjourah, Sourate, Kalaf, Ad Bouya, Raysali, Darkenle) and specific community interviews were conducted with the help of a translator. In most communities, a group of women beneficiaries was specifically identified and asked questions specific to the activities directed at women.
The mission plan is shown below:

Annex II: REVIEW ITINERARY

Final evaluation field mission program

January 28 to February 5, 2024

Dates	Hours	Activities	Locations and contacts
Saturday, January 27	17H30 19H00	Arrival of the international consultant Planning meeting with the national consultant	Ambouli International Airport
Sunday, January 28	8h30	Former Project Coordinator	
	11h30	**Environment and Sustainable Development Department** *Deputy Director of the Environment, Mr Idriss Ismaël* *Secretary General of the Ministry, Mr Dini Omar*	Boulaos, MEDD
	12H30-13H30	Lunch	
	14H30 16H00 17h00	**Various MAEP-RH departments** *Direction de l'Elevage et des Services Vétérinaires: Dr Abdo Alwan (Focal point)* *Direction de l'Hydraulique Rurale or/and Focal point* *Direction de l'Agriculture et Forestry*	Djibouti, Industrial Zone
Monday, January 29	9H00	**Djibouti Study and Research Center** Dr Omar Assoweh: Climat Change	
	10h00	**National Meteorological Agency** General Manager Focal Point	
	11h30	UNDP LDCF 4 - Coordinator	MEDD
	Lunch		
	14H-14h30	Departure for Dikhil	
	5:00 pm - 5:30 pm	Arrival in Dikhil at Hotel Gobaad	
		Interviews and site visits in Dikhil	
Tuesday, January 30	8:30-9:30 a.m.	Courtesy visits to local authorities (Préfet)	Dikhil
	9h00-17h00	**Dinamali** (site visit and meetings with village representatives and direct and indirect beneficiaries from local communities, especially women) (confirmed)	Dikhil
Wednesday, January 31	7h00 -12h00	**Liliya Bouri** (site visit and meetings with village representatives and direct and indirect beneficiaries from local communities, particularly women) in the morning	Dikhil
	1:00 pm - 4:00 pm	**Koudi-Koma** (site visit and meetings with village representatives and direct and indirect beneficiaries from local	Dikhil

Dates	Hours	Activities	Locations and contacts
		communities, especially women) in the afternoon (confirmed)	
Thursday, February 1st	Early morning (7:00 am)	Departure for Tadjourah	Tadjourah
	11H	Arrival in Tadjourah and Installation	Tadjourah
	10h30	Courtesy visits to local authorities (Préfet) (confirmed)	Tadjourah
	11h30	President or VP of the Regional Council	
		Association des Femmes de Tadjourah pour Artisanat, Mrs Hasna Hassan, President	
		Lunch	Tadjourah
	2PM-4PM	**Marsaki** (site visit first, followed by meetings with village representatives and direct and indirect beneficiaries from local communities, especially women and local residents)	Tadjourah
	16h-17h30	**Sourat** (site visit and meetings with village representatives and direct and indirect beneficiaries from local communities, particularly women)	Tadjourah
Friday, February 2nd	8am-11.30am	**Raysali** (site visit and meetings with village representatives and direct and indirect beneficiaries from local communities, particularly women)	Tadjourah
	2pm-5pm	**Ad Bouya** (site visit and meetings with village representatives and direct and indirect beneficiaries from local communities, particularly women)	Tadjourah
Saturday, February 3rd	7h00-14h00	**Kalaf** (meetings with village representatives and direct and indirect beneficiaries from local communities, particularly women, followed by a site visit) **Darkenlé** (site visit and meetings with village representatives and direct and indirect beneficiaries from local communities, particularly women)	Tadjourah
	Afternoon	Back to Djibouti	
Sunday, February 4th	Morning 9h 10h	**Latest meetings in Djibouti :** Former project consultants (Crafts, Livestock, Agriculture, Water, AGR...) Agriculture: Poultry farming: Exit strategy:	Djibouti
	11h	Secretary General MAEP-RH (PGIRE and ADB project)	Djibouti
	Afternoon	Debriefing with ex-UGP and MEDD	Djibouti
Monday, February 5		Departure of international consultant	

Annex III - Final project result framework – Terminal Review (July 2024)

<table>
<tr><th>Project objective and Outcomes</th><th>Indicator</th><th>Baseline level</th><th>End-of-project target</th><th>Progress achieved at the end of the project (terminal evaluation – July 2024)

Sources: RVE, project documents and data collection field mission</th></tr>
<tr><td rowspan="2">Objective: To increase the resilience of the Djiboutian society and economy to the effects of climate change and enhance the capacity of the government to integrate adaptation into its development planning”</td><td>1. Number of climate change adaptation training events, and number of staffs trained (disaggregated by gender) in integrating climate change adaptation into development</td><td>1. At least one training in adaptation to climate change has been undertaken at the national level.</td><td>1. By the end of the project:

- At least two training workshops on risk assessments with participation of all concerned entities.</td><td>Target achieved

• 2 series of workshops organized in October 2022 and March 2023 on climate modelling and vulnerability assessment
• Total participants: 69 participants (10 women; 59 men)</td></tr>
<tr><td>2. Number of individuals trained, (disaggregated by gender) in climate-resilient livelihoods.</td><td>2.Less than 30 individuals (out of approximately 600 adults in project areas).</td><td>2. At least 200 individuals.</td><td>Target achieved

• Total of individuals trained: 329 people (at least a first training in climate-resilient agriculture or alternative economic activities), out of which 183 women (56%).
• Disaggregated by location and training conduction:

<table>
<tr><th>Training conducted</th><th>Location</th><th>Date</th><th>Number of participants</th></tr>
<tr><td>Poultry farming</td><td>Kalaf
Ad Bouya</td><td>November 2020 and
June 2021</td><td>15 women
10 (3 women)</td></tr>
<tr><td>Craft making</td><td>Dinamali
Ad Bouya - Raysali</td><td>February and May 2021</td><td>40 women
20 women</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Project objective and Outcomes</th><th>Indicator</th><th>Baseline level</th><th>End-of-project target</th><th colspan="4">Progress achieved at the end of the project (terminal evaluation – July 2024)
Sources: RVE, project documents and data collection field mission</th></tr>
<tr><td rowspan="2"></td><td></td><td></td><td></td><td colspan="4"><table>
<tr><td>Milk processing and conservation</td><td>Dinamali</td><td>February 2021</td><td>18 women</td></tr>
<tr><td rowspan="2">Sustainable water management</td><td>Ad Bouya</td><td>February 2021</td><td>15 (6 women)</td></tr>
<tr><td>Kalaf</td><td>July 2021</td><td>60 (21 women)</td></tr>
<tr><td rowspan="4">Agriculture</td><td>Lilya Bouri</td><td>Started early 2018, regularly since July 2021</td><td>42 (16 women)</td></tr>
<tr><td>Koudi Koma</td><td>Started mid-2019, regularly since July 2021</td><td>33 (14 women)</td></tr>
<tr><td>Kalaf</td><td>Started end 2020, regularly since July 2021</td><td>60 (24 women)</td></tr>
<tr><td>Ad Bouya</td><td>Started end 2020, regularly since July 2021</td><td>16 (6 women)</td></tr>
</table></td></tr>
<tr><td>3. The percentage change in vulnerability to climate-related hazards of people disaggregated by gender living in the project areas.</td><td>3. i) Hanlé: High vulnerability for men and women (Score: 23)
ii) Tadjourah: High vulnerability of men (Score: 24) and extreme</td><td>3. By the end of the project, a 45% increase in the VRA scores.</td><td colspan="4">Target partially achieved
Average vulnerability reduction per village in the Hanlè and Tadjourah areas:<table>
<tr><th></th><th colspan="3">Tadjourah</th><th colspan="3">Hanlé</th></tr>
<tr><th></th><th>Adbouya</th><th>Kalaf</th><th>Darkenlè</th><th>Kouddi-Koma</th><th>Lilya Bouri</th><th>Dinamali</th></tr>
<tr><td>Ancient</td><td>24</td><td>23</td><td>23</td><td>20</td><td>25</td><td>24</td></tr>
<tr><td>New</td><td>18</td><td>21,5</td><td>22,5</td><td>13,5</td><td>13,3</td><td>16,5</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Project objective and Outcomes</th><th>Indicator</th><th>Baseline level</th><th>End-of-project target</th><th>Progress achieved at the end of the project (terminal evaluation – July 2024)
Sources: RVE, project documents and data collection field mission</th></tr>
<tr><td></td><td></td><td>vulnerability for women (Score: 26)
iii) Marsaki: High
vulnerability for men and women (Score: 25)</td><td></td><td>
<table>
<tr><td>% change</td><td>25%</td><td>7%</td><td>2%</td><td>33%</td><td>47%</td><td>31%</td></tr>
<tr><td>Average</td><td colspan="3">14.5 (medium vulnerability)</td><td colspan="3">21.5 (high vulnerability)</td></tr>
</table>
New average index by gender and village:
<table>
<tr><td></td><td colspan="3">Tadjourah</td><td colspan="3">Hanlé</td></tr>
<tr><td></td><td>Adbouya</td><td>Kalaf</td><td>Darkenlè</td><td>Kouddi-Koma</td><td>Lilya Bouri</td><td>Dinamali</td></tr>
<tr><td>Men</td><td>18</td><td>22</td><td>20</td><td>15</td><td>13</td><td>19</td></tr>
<tr><td>Women</td><td>18</td><td>0</td><td>25</td><td>12</td><td>14</td><td>14</td></tr>
</table>
</td></tr>
<tr><td rowspan="3">Outcome 1: The negative impacts of droughts and floods are reduced or averted</td><td>1. Length and volume of gabion walls built.</td><td>1. 15 m (15 m3).</td><td>At least 1.7 km (8,200 m3)</td><td>Target partially achieved:
1.6km, 10,560m3</td></tr>
<tr><td>2. Average volume of water available per day for irrigation of agropastoral plots.</td><td>2. 173 m3/d</td><td>2. 1,209 m3/d total.</td><td>Target achieved:
2,664m3/day</td></tr>
<tr><td>3. Number of fully operational water distribution</td><td>3. 20</td><td>3. 5 fully operational water</td><td>Target partially achieved
3 fully functional water distribution systems</td></tr>
</table>

Project objective and Outcomes	Indicator	Baseline level	End-of-project target	Progress achieved at the end of the project (terminal evaluation – July 2024) Sources: RVE, project documents and data collection field mission
	systems in agropastoral plots (including operational boreholes, distribution systems and reservoirs)		distribution systems in Koudi koma, Lylia bouri, Sourat, Kalaf and Ad bouya	
Outcome 2: Fragile ecosystems are productive and resilient to climate change	1. Area of restored Acacia woodland in Hanle.	1. 0 ha	1. At least 15 ha	Target not met • 4.5 ha restored Acacia woodland (in Koudi-Koma)
	2. Area of restored mangroves in central coastal zones of Tadjourah.	2. 0 ha	2. At least 4 ha.	Target not met • 1.1ha of restored mangroves in Tadjourah survived (out of 4.2ha of mangrove planted)
	3.Level of local communities' awareness and ability to protect restored ecosystems	3. 80% of villagers on average are willing to protect or restore the tree cover in the future.	3. At least 80% in each project location are willing to take future action in terms of protection and	Target achieved • 100% of the communities are willing to take future action in terms of protection and restoration of the tree cover

Project objective and Outcomes	Indicator	Baseline level	End-of-project target	Progress achieved at the end of the project (terminal evaluation – July 2024) Sources: RVE, project documents and data collection field mission
			restoration of the tree cover	
Outcome 3: Livelihoods that are sustainable, climate-resilient and contribute to maintaining ecosystem services	1. Number of households with an improved irrigated agro-pastoral plot, by gender.	1. In Koudi Koma, date palm trees are grown but are not growing well as fuel is too expensive for the land to be sufficiently irrigated.	1. a) 33 in Koudi Koma, 42 in Liliya Bouri, 15 in Sourat, 60 in Kalaf, 8 in Darkenlé, 16 in Adbouya. b) Half the households benefitting from an agropastoral plot engaged into farming or developed their farming activities in the last 3 years at the end of the project.	Target partially achieved: • A) 32 in Koudi-Koma, 42 in Liliya Bouri, 16 in Ad Bouya, 0 in Darkenlé, 16 in Kalaf and 1 in Sourate. • B) 60% of households benefiting from an agro-pastoral plot engage in agriculture
	2. Area of irrigated agropastoral plots	2. 3 ha	2. By the end of the project, at least 30 ha of irrigated	Target partially achieved • 16.27ha (only half of the sites successfully reached their targets)

Project objective and Outcomes	Indicator	Baseline level	End-of-project target	Progress achieved at the end of the project (terminal evaluation – July 2024) Sources: RVE, project documents and data collection field mission
			agropastoral plots.	
	3. Number of beneficial species cultivated per agropastoral plot.	3. 0 to 7	3. An average of 8 different species grown on the agropastoral plots (six tree species, 2 fodder species and 3 crops species).	Target achieved • Between 12 and 20
	4. Average annual forage and crop production.	4. Around 4 t of crops and 3.5 t of fodder (to be taken with caution as no accurate accounting is available).	4. At least 8 t by ha by year for crops and at least 30 t by ha by 1 year for fodder in irrigated areas	Target not met • 4.3 t/year for forage and fragmentary data for crops not calculable for all species and all villages
	5. Number of households with improved access to alternative livelihoods,	5. The rate of beneficiary households is estimated at 30 percentage points (37pp	5. By the end of the project, at least 280 agropastoral families will have more	Target achieved • 336 persons confirming having an improved access to alternative livelihoods, out of which 208 are women

Project objective and Outcomes	Indicator	Baseline level	End-of-project target	Progress achieved at the end of the project (terminal evaluation – July 2024) Sources: RVE, project documents and data collection field mission
	disaggregated by gender.	for women and 25pp for men), equivalent to a scoring of 2 (poor access to livelihood assets)	secured livelihoods.	
Outcome 4: Increased capacity of institutions and communities to adapt to climate change	1. Number of existing and active agropastoral plot committees and cooperatives	1. One cooperative are active in 4 villages (Koudi Koma, Liliya Bouri, Adbouya, Kalaf).	1. By the end of the project, at least 2 cooperatives created and working	Target not met: • 2 cooperatives were working at the end of the project
	2. Number of climate change training events for school teachers	2. One teacher declared having information on climate change during his studies.	2. By the end of the project, at least 4 training courses for school teacher.	Target achieved • 4 training courses have been conducted both in Hanlé and Tadjourah for school teachers
	3. Number of projects sharing information	3. 0	3. DEDD website is updated and include a project page for this	Target partially met: • The website is being finalized with a dedicated page for the LDCF2 project

Project objective and Outcomes	Indicator	Baseline level	End-of-project target	Progress achieved at the end of the project (terminal evaluation – July 2024) Sources: RVE, project documents and data collection field mission
	through the LDCF project website.		project, on which all relevant documents, progress reports and lessons learned are shared	
	4. Number of research projects to assess the mid and long-term costs and benefits of LDCF project intervention	0	By the end of the project, at least 2 research projects are funded by the LDCF project.	Target achieved: • 2 research projects were implemented to assess the mid and long-term costs and benefits of LDCF project intervention

Annex IV. Summary of co-financing information and statement of project expenditure by component

Summary of co-financing mobilized for the project:

Project	Amount (USD)	Project overview
PGIRE	500 000	The aim of PGIRE is to sustainably improve the living conditions of poor rural households and strengthen resilience to climate change in rural areas. PGIRE's development objectives are to improve the incomes of poor households, including rural women and youth, and their sustainable access to water and grazing resources. Focusing on participatory development and the implementation of local planning instruments (water and pasture development schemes), these objectives will be achieved by: (i) optimizing water availability to meet the needs of populations, livestock and agropastoral activities; (ii) promoting good agricultural practices for ecosystems that are more resilient to climate change; (iii) strengthening the capacities of public services in charge of water and livestock and agropastoral development; (iv) strengthening the production capacities of rural households, particularly women and young people; (vi) diversifying income-generating activities and economic opportunities; and (vii) improving basic services for rural populations, particularly nutrition, as part of the decentralization process and in collaboration with other stakeholders. The PGIRE is scheduled to run for 6 years, for a total amount of around 13.5 million USD, including a highly concessional IFAD loan of around 6.6 million USD.[158]
UNEP-IUCN-WAMIP project on "Enhancing the awareness and knowledge of pastoralism".	270 000	This project aims to: i) improve knowledge of pastoralism as a land ecosystem management option; ii) contribute to the long-term, adaptive management of landscapes in Africa, Asia, Europe and South America that are vulnerable to climate change; and iii) draw policy attention to pastoralism as a land management option. It also aims to prepare policy frameworks for technical and advisory support to countries on the inclusion of pastoralism in the design, planning and implementation of land-use management based on an ecosystem approach and national green economy agendas. The project has a strong focus on sustainable and climate-resilient livelihoods.
AfDB - MAEPE-RH Project on Water Supply and Sanitation (PWSSRA)	3 500 000	The aim of the program is to achieve a sustainable improvement in the living conditions of rural populations in Djibouti. Project activities include: i) the construction of water management infrastructures; ii) awareness campaigns to promote hygiene; iii) the creation of water management committees; and iv) the training of local communities in the maintenance of water management equipment. The implementation sites for this program are the regions of Tadjourah, Arta and Ali Sabieh. (USD 10.1 million for 2013-2017)

[158] http://www.maepe-rh.dj/images/pdf/2020/PROJET-FIDA_PRESS-BRIEF.pdf

Project	Amount (USD)	Project overview
UNEP Food Security in agriculture-dominated landscapes in Africa (EbAFoSA)	600 000	The project focuses on strengthening the ecological resilience of food systems and improving food security through ecosystem-based adaptation (EbA) approaches in sub-Saharan African countries. The project was implemented in Malawi, Mozambique and Zambia, but the results have been taken on board and replicated throughout Africa thanks to the collection and dissemination of lessons learned from EbA's demonstration projects.
UNEP-European Commission ENTRP project: "Building Capacity for Coastal Ecosystem-based Adaptation in Small Island Developing States (SIDS)".	500 000	The UNEP-European Commission ENTRP project on Enhancing Adaptive Capacity of Coastal Ecosystems in Small Island Developing States (SIDS) supports countries and regions in developing and applying EbA approaches to maintain and enhance the resilience of tropical coastal ecosystems and the services they provide to coastal communities in SIDS. Although the project focuses geographically on SIDS in Africa and the Caribbean, it contributes to parallel co-financing through certain ecosystem planning and management tools and technical guidance to facilitate decision-making. It also contributes to regional capacity-building and the global transfer of best practices and acquired experience, particularly with regard to mangrove management.
PROMES-GDT (baseline)	3 000 000	PROMES-GDT was launched in 2007 by MAPE-RH with support from IFAD, FFEM, WFP, GEF and UNDP. PROMES-GDT contributed to the achievement of the FPMA project objective by focusing on access to water (surface rainwater harvesting, construction of key infrastructure such as reservoirs and water basins), sustainable land management, improved livestock production and the protection and safeguarding of endangered forest areas. The project focuses on various regions of Djibouti, including Dikhil (USD 3 million over 6 years).
Rural Community Development and Water Mobilization Project PRODERMO (baseline)	5 800 000	PRODERMO has been designed to maximize synergies with PROMES-GDT activities and to target areas not covered by PROMES-GDT, namely Hanlé, Tadjourah, and Khor Angar and Oulma in Obock. PRODERMO's objectives are to: i) increase rural communities' access to water; ii) strengthen their capacity to manage water; and iii) strengthen their capacity to manage agro-pastoral resources. These objectives will be achieved through a participatory approach to community development. PRODERMO focused on Tadjourah and Dikhil regions providing similar therefore complementary support than the LDCF-2 project on water resource management, agricultural and livestock development.
TOTAL	**14 170 000**	

Annex V. Main documents consulted

The following documents were reviewed in depth for this evaluation:

- Annual work plans and budgets ;
- Baseline study (2017);
- Financial documents (audits, budget reviews, cash advance requests, co-financing reports, expense reports, etc.)
- Progress reports, such as annual GEF project implementation reports (PIRs), half-yearly progress reports (HYRs);
- ProDoc and CEO Endorsement ;
- Minutes of the project steering committee ;
- Project deliverables: Technical reports, including studies, evaluations and other consultant reports;
- UNEP and CTA missions ;
- Revision of the project's logical framework and budget ;
- Exit strategy documents ;
- Research theses defended as part of the project
- Technical documents produced during project implementation (mangrove restoration, livelihood activities such as poultry farming, reports and recommendations on water resource management, work on climate modeling and vulnerability analysis)
- Notes on lessons learned from the project
- Project communication products (factsheet, success story published on the UNEP website, newspaper articles published on Environment Day, etc.).
- Project results audit report
- List of training courses carried out during the project and beneficiaries who participated

Annex VI. Implementation Plan of Recommendations

Project Title and Reference No.:	**Implementing adaptation technologies in the fragile ecosystems of Djibouti's central plains (GEF ID 5021)**
Contact Person (TM/PM):	**Eva Comba**

	PLANS			
RECOMMENDATIONS	**ACCEPTED (YES/NO/ PARTIALLY)**	**WHAT WILL BE DONE?**	**EXPECTED COMPLETION DATE**	**REPONSIBLE OFFICER/ UNIT/ DIVISION/ AGENCY**
1. Strengthen the design of climate change adaptation projects by increasing the focus on a strong Theory of Change, better consideration of climate and other context-related risks in planning and budgeting, and improving the flow of activities to overcome limits to climate data availability	Yes	We take the issue of learning and improvement seriously. We build new programming based on lessons learned from projects that have closed through developing of project lessons learned briefs and sharing those learned with the team. A presentation of the Terminal Evaluation's key findings and recommendations will be developed and shared with UNEP climate change adaptation unit's team to improve future programming In addition, when we design projects, we develop a table of projects that have closed with an analysis of how those lessons learned have been integrated into the new project design. We will pay closer attention to how the theory of change should be strengthened, especially with respect to the assumptions that are made.	October 2025	Task Manager: Eva Comba
2. Strengthen the process to select beneficiaries and define specific activities. This should be informed by a thorough feasibility study carried out at the project design or start-up stage, to better identify the particularities of each community (and in particular gender dynamics) in order to define a coherent strategy tailored to their situation.	Yes	The baseline study that will be conducted at the start of the LDCF-4 project intends to further support the identification of key beneficiaries within key project sites. Beneficiaries will be selected in a participatory way by local authorities and community leaders with support from the project management unit and the government on the basis of baseline study's findings and recommendations. The ProDoc has already taken on board the importance of gender, as outlined in the gender-related targets of the results framework. This effort will be complemented by a gender analysis in project sites of Gobaad Plain and Tadjourah that will assist to better identify the particularities of the respective communities.	February 2026	Task Managers of the new LDCF project in Djibouti: David Meissner

	PLANS			
RECOMMENDATIONS	**ACCEPTED (YES/NO/ PARTIALLY)**	**WHAT WILL BE DONE?**	**EXPECTED COMPLETION DATE**	**REPONSIBLE OFFICER/ UNIT/ DIVISION/ AGENCY**
3. Pursue capacity-building of institutional stakeholders in climate change adaptation beyond the MEDD. Capacity-building should include training, active participation in project implementation, climate change mainstreaming, and budgeting strategies to ensure funding of climate change adaptation measures.	Yes	The risk of "limited inter-sectoral collaboration/ unwillingness to work together or share information (across scale and between sectors) during project implementation and disagreement among stakeholders on the allocation of roles in the proposed LDCF project" has been identified during the design of the new LDCF project. Mitigation measures include: • Empower government departments to lead, support or participate to the execution of activities relevant to their mandate through the establishment of appropriate inter-ministerial agreements. • Pay special attention to build capacity of institutional stakeholders beyond the MEDD with special focus for the Ministry of Agriculture, Water, Fisheries, Livestock and Fishery Resources and Ministry of Decentralisation, the Ministry of Finance, the regional Councils of Dikhil and Tadjourah • Organize biannual PSC meetings and a regular coordination mechanism with relevant line ministries and local authorities as well as co-financing partners to ensure good inter-sectoral coordination and collaboration. • Systematically share results of upcoming feasibility studies and assessments (e.g., Wadi Gobaad infrastructure study, reforestation site assessments) with Project Steering Committee (PSC) members to foster transparency, joint decision-making, and early buy-in It is also planned that during the new project inception, a thorough capacity assessment will be conducted to identify the best, most experienced and locally appropriate options to implement most efficiently and successfully project specific interventions. Implementation arrangements will be further discussed with the MEDD based on the results of this study	December 2026	Task Manager of the new LDCF project in Djibouti: David Meissner

	PLANS			
RECOMMENDATIONS	**ACCEPTED (YES/NO/ PARTIALLY)**	**WHAT WILL BE DONE?**	**EXPECTED COMPLETION DATE**	**REPONSIBLE OFFICER/ UNIT/ DIVISION/ AGENCY**
4. Continue and intensify the dissemination of project knowledge and lessons as they are valuable and have so far been insufficiently disseminated. This should include public access via the new MEDD website and active dissemination to potentially interested institutions.	Yes	Project's lessons learned and the Terminal Evaluation report will also be shared with United Nations Country Team in Djibouti and in particular UNDP who is also managing LDCF projects in the country. The lessons learned developed have strongly informed the design of the new LDCF-4 project and are included in its approved project document. The LDCF-4 project includes a specific output on knowledge and awareness raising including the development of an awareness raising strategy. The project will also capture lessons learned including evidence-based information on EbA and successful adaptation intervention on a regular basis, share them on the project's website and present them during a large-scale sensitization workshop and awareness raising campaigns. Follow-up will be done with the MEDD to ensure that the webpages of the closed project as well as new project are accessible, up-to-date and include key project documents A national expert in communication and sensitisation will be recruited to deliver communication and knowledge activities and will be supported by the Chief Technical Advisor and an international M&E expert.	December 2025	Project Task Manager: Eva Comba Task Manager of the new LDCF project in Djibouti: David Meissner
5. Ensure continuity of support for project activities that depend on other projects for their sustainability. Review the exit strategy and identify elements whose sustainability is not yet ensured. Actively reach out to other projects to ensure sustainability gaps are bridged.	Yes	The LDCF-2 exit strategy recognizes the need for long term support to be provided to target communities on key areas including agriculture and reforestation. Those EbA activities require time to ensure full adoption of the climate resilient practices introduced and require behavior change to secure long-term impacts. To ensure post project sustainability, the LDCF-4 project has been design to provide continuity of support to the target communities of the LDCF-2 project in Hanle and Tadjourah through key activities including agricultural trainings, community awareness-raising, acacias reforestation and monitoring.	December 2026	Task Manager of the new LDCF project in Djibouti: and David Meissner

	PLANS			
RECOMMENDATIONS	**ACCEPTED (YES/NO/ PARTIALLY)**	**WHAT WILL BE DONE?**	**EXPECTED COMPLETION DATE**	**REPONSIBLE OFFICER/ UNIT/ DIVISION/ AGENCY**
		The Chief Technical Advisor (CTA) of the new LDCF project will be responsible to support the review of the LDCF-2 project's exit strategy and the incorporation of relevant elements into the new LDCF-4 project's implementation and sustainability strategy (output 3.5).		
6. Strengthen the gender approach across the board in future projects, notably by integrating specific indicators and targets into the results framework and environmental and social management plan, and by clearly identifying barriers to women's access and measures to address them. This should be informed by a thorough analysis of gender dynamics by community and supported by the inclusion of a gender expert for the project.	Yes	The new LDCF project includes a gender assessment and gender action plan that will be complemented by a gender analysis at community level at project inception phase. A full-time national gender consultant as part of the PMU, and the periodic input of an international consultant will guide this gender approach in close coordination with the Project Manager. The results framework of the approved ProDoC of the new LDCF-4 includes various gender related targets including at project objective level and well as a specific gender related output.	June 2026	Task Manager of the new LDCF project in Djibouti: David Meissner

Annex VII. Quality Assessment of the Terminal Review Report

Review Title: Implementing adaptation technologies in the fragile ecosystems of Djibouti's central plains (GEF ID 5021)

Consultants: Baastel (G Quesne; M Gonzales; H Verrue and H Rayaleh)

All UNEP Reviews are subject to a quality assessment by the UNEP Evaluation Office. This is an assessment of the quality of the review product (i.e. Main Review Report).

	UNEP Evaluation Office Comments	Final Review Report Rating
Report Quality Criteria		
Quality of the Executive Summary Purpose: acts as a stand alone and accurate summary of the main review product, especially for senior management. To include: • concise overview of the review object • clear summary of the review objectives and scope • overall review rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria • reference to where the review ratings table can be found within the report • summary response to key strategic review questions • summary of the main findings of the exercise/synthesis of main conclusions • summary of lessons learned and recommendations.	Final Report: The Executive Summary presents an adequate overview of the Review's findings, which are summarised under the performance criteria ratings as well as in the summarised conclusions, lessons and recommendations.	5
Quality of the 'Introduction' Section Purpose: introduces/situates the evaluand in its institutional context, establishes its main parameters (time, value, results, geography) and the purpose of the review itself. To include: • institutional context of the project (sub-programme, Division, Branch etc) • date of PRC approval, project duration and start/end dates • number of project phases (where appropriate) • results frameworks to which it contributes (e.g. POW Direct Outcome) • coverage of the review (regions/countries where implemented) • implementing and funding partners • total secured budget • whether the project has been reviewed/evaluated in the past (e.g. mid-term, external agency etc.) • concise statement of the purpose of the review and the key intended audience for the findings.	Final Report: This short section provides some of the required information, while other details are presented under 'The Project'.	5

	UNEP Evaluation Office Comments	Final Review Report Rating
Quality of the 'Review Methods' Section Purpose: provides reader with clear and comprehensive description of review methods, demonstrates the credibility of the findings and performance ratings. To include: • description of review data collection methods and information sources • justification for methods used (e.g. qualitative/ quantitative; electronic/face-to-face) • number and type of respondents *(see table template)* • selection criteria used to identify respondents, case studies or sites/countries visited • strategies used to increase stakeholder engagement and consultation • methods to include the voices/experiences of different and potentially excluded groups (e.g. vulnerable, gender, marginalised etc) • details of how data were verified (e.g. triangulation, review by stakeholders etc.) • methods used to analyse data (scoring, coding, thematic analysis etc) • review limitations (e.g. low/ imbalanced response rates across different groups; gaps in documentation; language barriers etc) • ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected. Is there an ethics statement? E.g. *'Throughout the review process and in the compilation of the Final Review Report efforts have been made to represent the views of both mainstream and more marginalised groups. All efforts to provide respondents with anonymity have been made.*	Final Report: This section describes the review methods adequately. Although it provides a list of interviewees by office, it does not show the size of the sample interviewed against identified respondents, nor the response rate. The Evaluation Office notes that all 9 implementation sites were visited.	4.5
Quality of the 'Project' Section Purpose: describes and verifies key dimensions of the evaluand relevant to assessing its performance. To include: • *Context:* overview of the main issue that the project is trying to address, its root causes and consequences on the environment and human well-being (i.e. synopsis of the problem and situational analyses) • *Results framework*: summary of the project's results hierarchy as stated in the ProDoc (or as officially revised) • *Stakeholders:* description of groups of targeted stakeholders organised according to relevant common characteristics • *Project implementation structure and partners:* description of the implementation structure with diagram and a list of key project partners • *Changes in design during implementation:* any key events that affected the project's scope or	Final Report: The report presents a project description, covering each of the sub-categories. Table 1 effectively displays the changes in the expected project achievements (i.e. targets) over time.	5

	UNEP Evaluation Office Comments	Final Review Report Rating
parameters should be described in brief in chronological order • *Project financing:* completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing		
Quality of the Theory of Change Purpose: to set out the TOC at Review in diagrammatic and narrative forms to support consistent project performance; to articulate the causal pathways with drivers and assumptions and justify any reconstruction necessary to assess the project's performance. To include: • description of how the *TOC at Review*[159] was designed (who was involved etc) • confirmation/reconstruction of results in accordance with UNEP definitions • articulation of causal pathways • identification of drivers and assumptions • identification of key actors in the change process • summary of the reconstruction/results re-formulation in tabular form. *The two results hierarchies (original/formal revision and reconstructed) should be presented as a two-column table to show clearly that, although wording and placement may have changed, the results 'goal posts' have not been 'moved'.* This table may have initially been presented in the Inception Report and should appear somewhere in the Main Review report.	Final Report: The Review adopts the reconstructed TOC from the Mid Term Review, which goes beyond the dimensions required by the Evaluation Office. The TOC combines project outcomes with Intermediate States which limits the understanding of both the ambition of the project and the expected progression of change. The TOC does include assumptions and drivers appropriately. The narrative discusses how the project was expected to drive the intended change process under each of the four outcomes.	4
Quality of Key Findings within the Report Presentation of evidence: nature of evidence should be clear (interview, document, survey, observation, online resources etc) and evidence should be explicitly triangulated unless noted as having a single source. Consistency within the report: all parts of the report should form consistent support for findings and performance ratings, which should be in line with UNEP's Criteria Ratings Matrix. Findings Statements (where applicable): The frame of reference for a finding should be an individual review criterion or a strategic question from the TOR. **A finding should go beyond description and uses analysis to provide insights that aid learning specific to the evaluand.** In some cases a findings statement may articulate a key element that has determined the	Final Report: The report draws on evidence gathered during a separate 'results verification exercise' which verified achievements on the ground. The report findings are consistent and the findings – in the form of conclusions, lessons and recommendations – provide analytical insights that are of value to UNEP.	6

[159] During the Inception Phase of the review process a *TOC at Review Inception* is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions), formal revisions and annual reports etc. During the review process this TOC is revised based on changes made during project intervention and becomes the *TOC at Review*.

	UNEP Evaluation Office Comments	Final Review Report Rating
performance rating of a criterion. Findings will frequently provide insight into 'how' and/or 'why' questions.		
Quality of 'Strategic Relevance' Section Purpose: to present evidence and analysis of project strategic relevance with respect to UNEP, partner and geographic policies and strategies at the time of project approval. To include: Assessment of the evaluand's relevance vis-à-vis: • Alignment to the UNEP Medium Term Strategy (MTS), Programme of Work (POW) and Strategic Priorities • Alignment to Donor/GEF/Partners Strategic Priorities • Relevance to Regional, Sub-regional and National Environmental Priorities • Complementarity with Existing Interventions: complementarity of the project at design (or during inception/mobilisation[160]), with other interventions addressing the needs of the same target groups.	Final Report: This section discusses all required elements of strategic relevance, albeit combining some sub-categories.	5
Quality of the 'Quality of Project Design' Section Purpose: to present a summary of the strengths and weaknesses of the project design, on the basis that the detailed assessment was presented in the Inception Report.	Final Report: The report provides an appropriate analysis of key dimensions of the project design. The Evaluation Office of UNEP assumes that further detail was provided in the Review Inception Report.	4.5
Quality of the 'Nature of the External Context' Section Purpose: to describe and recognise, when appropriate, key external features of the project's implementing context that limited the project's performance (e.g. conflict, natural disaster, political upheaval[161]), and how they affected performance. While additional details of the implementing context may be informative, this section should clearly record whether or not a major and unexpected disrupting event took place during the project's life in the implementing sites.	Final Report: The report provides an interesting description of the context within which the project operated and some of the factors that affected its performance. The section includes, and goes beyond, the Evaluation Office expectations and guidance, which focuses on major external and unanticipated factors. The effects of climatic hazards, which may not have been entirely unexpected (para 85), and of COVID-19, which was totally unexpected, are described.	4.5
Quality of 'Effectiveness' Section **(i) Availability of Outputs:** Purpose: to present a well-reasoned, complete and	Final Report: The report provides a highly-detailed analysis at output level, including	6

[160] A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.

[161] Note that 'political upheaval' does not include regular national election cycles, but unanticipated unrest or prolonged disruption. The potential delays or changes in political support that are often associated with the regular national election cycle should be part of the project's design and addressed through adaptive management of the project team.

	UNEP Evaluation Office Comments	Final Review Report Rating
evidence-based assessment of the outputs made available to the intended beneficiaries. To include: • a convincing, evidence-supported and clear presentation of the outputs made available by the project compared to its approved plans and budget • assessment of the nature and scale of outputs versus the project indicators and targets • assessment of the timeliness, quality and utility of outputs to intended beneficiaries • identification of positive or negative effects of the project on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).	evidence provided through the Results Verification Exercise. It assesses the extent to which quantitative targets have been met. It is noted that some outputs – e.g. the retention wall, number of boreholes and reservoirs, but with no reduction in the project budget (paras 154 & 155 Efficiency). Satellite imagery across different time periods is also appreciated. The report provides a summary on page 48 to support its performance rating, but should have provided indications (at least at component level) of what decisions were made that informed the overall MS rating (i.e. which outputs were considered partially or fully achieved).	
ii) Achievement of Project Outcomes: Purpose: to present a well-reasoned, complete and evidence-based assessment of the uptake, adoption and/or implementation of outputs by the intended beneficiaries. This may include behaviour changes at an individual or collective level. To include: • a convincing and evidence-supported analysis of the uptake of outputs by intended beneficiaries • assessment of the nature, depth and scale of outcomes versus the project indicators and targets • discussion of the contribution, credible association and/or attribution of outcome level changes to the work of the project itself • any constraints to attributing effects to the projects' work • identification of positive or negative effects of the project on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).	Final Report: The report provides a descriptive analysis at outcome level, including evidence provided through the Results Verification Exercise. The report provides a summary on page 48 to support its performance rating, but should have provided indications (at least at component level) of what performance decisions were being made that informed the overall MS rating.	5
(iii) Likelihood of Impact: Purpose: to present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact, including an assessment of the extent to which drivers and assumptions necessary for change to happen, were seen to be holding. To include: • an explanation of how causal pathways emerged and change processes can be shown • an explanation of the roles played by key actors and change agents • explicit discussion of how drivers and assumptions played out	Final Report: The report provides a detailed analysis of the longer-lasting effects at intervention site level. It does not, however, provide a discussion of how any assumptions or drivers have affected the intended change process. It does not provide an analysis by causal pathways, which would have deepened the insights generated under this dimension.	4

	UNEP Evaluation Office Comments	Final Review Report Rating
• identification of any unintended negative effects of the project, especially on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).		
Quality of 'Financial Management' Section Purpose: to present an integrated analysis of all dimensions evaluated under financial management and include a completed 'financial management' table (may be annexed). Consider how well the report addresses the following: • *adherence* to UNEP's financial policies and procedures • *completeness* of financial information, including the actual project costs (total and per activity) and actual co-financing used • *communication* between financial and project management staff	Final Report: Although this section does not follow the Evaluation Office guidance on sub-categories, it does give a complete picture of financial management. The figures and table on co-financing provide useful and accessible insights. Figure 10, showing planned versus actual expenditure provides interesting insights into the pattern of delayed disbursement compensated for by the 5 year extended implementation period.	5
Quality of 'Efficiency' Section Purpose: to present an integrated analysis of all dimensions evaluated under efficiency (i.e. the primary categories of cost-effectiveness and timeliness). To include: • time-saving measures put in place to maximise results within the secured budget and agreed project timeframe • discussion of making use, during project implementation, of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. • implications of any delays and no cost extensions • the extent to which the management of the project minimised UNEP's environmental footprint.	Final Report: The report provides a detailed analysis of Cost-Effectiveness and Timeliness and, unusually for Efficiency sections, provides many useful insights and learning. Table 11 provides a helpful categorisation on constraints/delays between external and internal factors.	6
Quality of 'Monitoring and Reporting' Section Purpose: to present well-reasoned, complete and evidence-based assessment of the evaluand's monitoring and reporting. Consider how well the report addresses the following: • quality of the monitoring design and budgeting *(including SMART results with measurable indicators, resources for MTE/R etc.)* • quality of monitoring of project implementation *(including use of monitoring data for adaptive management)* • quality of project reporting *(e.g. PIMS and donor reports)* \	Final Report: The report discusses, in detail, the monitoring of the project under the three required sub-categories.	6
Quality of 'Sustainability' Section	Final Report:	5

	UNEP Evaluation Office Comments	Final Review Report Rating
Purpose: to present an integrated analysis of all dimensions evaluated under sustainability (i.e. the endurance of benefits achieved at outcome level). Consider how well the report addresses the following: • socio-political sustainability • financial sustainability • institutional sustainability	The report discusses, in detail and in a balanced manner, the sustainability of the project under the three required sub-categories. The Evaluation Office takes note of para 184, which appears to identify a fundamental risk to the sustainability of the project's objective. The discussion of scalability and replicability, as well as the review of efforts to prepare an exit strategcy, are useful additions to this section.	
Quality of Factors Affecting Performance Section Purpose: These factors are not always discussed in stand-alone sections and may be integrated in the other performance criteria as appropriate. However, if not addressed substantively in this section, a cross reference must be given to where the topic is addressed and that entry must be sufficient to justify the performance rating for these factors. Consider how well the review report, either in this section or in cross-referenced sections, covers the following cross-cutting themes: • preparation and readiness • quality of project management and supervision[162] • stakeholder participation and co-operation • responsiveness to human rights and gender equality • environmental and social safeguards • country ownership and driven-ness • communication and public awareness	Final Report: A table format is used effectively to provide a brief, but adequate summary of each cross cutting sub-category.	5
Quality of the Conclusions Section **(i) Conclusions Narrative:** Purpose: to present summative statements reflecting on prominent aspects of the performance of the evaluand as a whole, they should be derived from the synthesized analysis of evidence gathered during the review process. To include: • compelling narrative providing an integrated summary of the strengths and weakness in overall performance (achievements and limitations) of the project • clear and succinct response to the key strategic questions	Final Report: This section is organised around 17 conclusions (1-4 on strengths; 5- 17 on weaknesses/challenges). The conclusions are relevant and substantiated. These are consistent with the rest of the report and also bring some freshness to the analysis. The 5 strategic questions posed within the TOR are also appropriately answered in this section.	5

[162] In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UNEP. This includes providing the answers to the questions on Core Indicator Targets, stakeholder engagement, gender responsiveness, safeguards and knowledge management, required for the GEF portal.

	UNEP Evaluation Office Comments	Final Review Report Rating
• human rights and gender dimensions of the intervention should be discussed explicitly (e.g. how these dimensions were considered, addressed or impacted on)		
ii) Utility of the Lessons: Purpose: to present both positive and negative lessons that have potential for wider application and use (replication and generalization) Consider how well the lessons achieve the following: • are rooted in real project experiences (i.e. derived from explicit review findings or from problems encountered and mistakes made that should be avoided in the future) • briefly describe the context from which they are derived and those contexts in which they may be useful • do not duplicate recommendations	Final Report: The 15 lessons duplicate, to some extent, the insights presented in the Conclusions, but are formulated in a way that could be useful for someone designing a similar project.	5
(iii) Utility and Actionability of the Recommendations: Purpose: to present proposals for specific action to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results. Consider how well the lessons achieve the following: • are feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when • include at least one recommendation relating to strengthening the human rights and gender dimensions of UNEP interventions • represent a measurable performance target in order that the UNEP Unit/Branch can monitor and assess compliance with the recommendations. NOTES: **(i)** In cases where the recommendation is addressed to a third party, compliance can only be monitored and assessed where a contractual/legal agreement remains in place. Without such an agreement, the recommendation should be formulated to say that UNEP project staff should pass on the recommendation to the relevant third party in an effective or substantive manner. The effective transmission by UNEP of the recommendation will then be monitored for compliance. **(ii)** Where a new project phase is already under discussion or in preparation with the same third party, a recommendation can be made to address the issue in the next phase.	Final Report: The 6 recommendations all apply to the design and implementation of future UNEP projects and the project team will need to identify a current/emerging project design in order to demonstrate compliance.	5
Quality of Report Structure and Presentation **(i) Structure and completeness of the report:** To what extent does the report follow the UNEP Evaluation Office structure and formatting guidelines? Are all requested Annexes included and complete?	Final Report: The structure of the report does not entirely follow the UNEP Evaluation Office guidance for Management Led Terminal Reviews. It appears to mix in	5

	UNEP Evaluation Office Comments	Final Review Report Rating
	some sub-categories that are included in Mid Term Reviews. However, the report provides a complete analysis of all the areas required by UNEP.	
(ii) Writing and formatting: Consider whether the report is well written (clear English language and grammar) with language that is adequate in quality and tone for an official document? Do visual aids, such as maps and graphs convey key information?	Final Report: The writing is clear and professional and well supported by diagrams and images. Several annexes are missing, including: response to stakeholders comments; review framework; financial management table; brief cv of the reviewer; GEF portal inputs (Task Manager to generate) and recommendation implementation plan (Task Manager to provide)	3
OVERALL REPORT QUALITY RATING		**5**

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1. The overall quality of the review report is calculated by taking the mean score of all rated quality criteria.