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Report No: ICR00004859

IMPLEMENTATION COMPLETION AND RESULTS REPORT

TF017362

ON A

GRANT

IN THE AMOUNT OF US$ 5.76 MILLION

TO THE

Government of Tunisia

FOR THE

TN-OASES ECOSYSTEMS AND LIVELIHOODS PROJECT (P132157)

18 May 2020

Environment & Natural Resources Global Practice
Middle East And North Africa Region

CURRENCY EQUIVALENTS

Exchange Rate Effective Mrach 19, 20120

Currency Unit =	Tunisian Dinar (TND)
2.91 TND =	US$1
0.34 US$ =	1 TND

FISCAL YEAR
July 1 - June 30

Regional Vice President:	Ferid Belhaj
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ABBREVIATIONS AND ACRONYMS

AP	Action Plan
APIOS	Improvement of Irrigation in Southern Oases Program
BP	Bank Procedure
CPF	Country Partnership Framework
CRRAO	Regional Center for Research in Oasis Agriculture
CRDA	Regional Commission for Agricultural Development
CSO	Civil Society Organisation
DGEQV	General Directorate for Environment and Quality of Life
ESMF	Environmental and Social Management Framework
ERR	Economic Rate of Return
GDA	Agricultural Development Group
GEF	Global Environment Facility
INRM	Integrated Natural Resource Management
IRA	Institute of Arid Regions
ISN	Interim Strategic Note
LD	Land Degradation
LDN	Land Degradation Neutrality
MALE	Ministry of Local Affairs and Environment
MENA DELP	Middle East and North Africa Desert Ecosystems and Livelihoods Project
MENARID	Integrated Natural Resources Management in MNA
METMSD	Ministry of Equipment, Territorial Management, and Sustainable Development
MNA	Middle East and North Africa Region
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MoT	Ministry of Tourism
MSME	Micro, Small and Medium Enterprise
MTR	Mid-Term Review
M&E	Monitoring and Evaluation
NGO	Non-governmental organization
NDCs	Nationally Determined Contributions
NPV	Net Present Value
ONTT	Authority for Tunisian Tourism
OP	Operational Policy
PDO	Project Development Objective
PDPO	Oasis Participatory Development Plan
PLR	Performance and Learning Review
PMU	Project Management Unit
SLWM	Sustainable Land & Water Management
TOC	Theory of Change
TOELP	Tunisia Oasis Ecosystem and Livelihoods Project
UNCCD	United Nations Convention to Combat Desertification
WBG	World Bank Group

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P132157	TN-Oases Ecosystems and Livelihoods Project
Country	**Financing Instrument**
Tunisia	Investment Project Financing
Original EA Category	**Revised EA Category**
Partial Assessment (B)	

Organizations

Borrower	Implementing Agency
Government of Tunisia	General Directorate for the Environment and Quality of Life

Project Development Objective (PDO)

Original PDO

The Project Development Objective/Global Environmental Objective is to improve sustainable natural resources management andpromotelivelihoods diversification in the selected oases.

PDO as stated in the legal agreement

The original Project Development Objective / Global Environmental Objective is to improve sustainable natural resources management and promote livelihoods diversification in the selected oases.

FINANCING

	Original Amount (US$)	Revised Amount (US$)	Actual Disbursed (US$)
World Bank Financing			
TF-17362	5,760,730	5,760,730	5,758,522
Total	**5,760,730**	**5,760,730**	**5,758,522**
Non-World Bank Financing			
Borrower/Recipient	0	0	0
Total	**0**	**0**	**0**
Total Project Cost	**5,760,730**	**5,760,730**	**5,758,522**

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
11-Jun-2014	04-Aug-2014	28-Jun-2017	30-Nov-2019	30-Nov-2019

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US$M)	Key Revisions

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Highly Satisfactory	Satisfactory	Substantial

RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US$M)
01	31-Oct-2014	Satisfactory	Satisfactory	0
02	12-Feb-2015	Satisfactory	Satisfactory	.60
03	21-Aug-2015	Satisfactory	Satisfactory	.60

04	23-Feb-2016	Satisfactory	Satisfactory	1.29
05	06-Sep-2016	Satisfactory	Satisfactory	2.14
06	04-Nov-2016	Satisfactory	Satisfactory	2.43
07	10-May-2017	Satisfactory	Satisfactory	3.35
08	26-Nov-2017	Satisfactory	Satisfactory	3.82
09	22-May-2018	Highly Satisfactory	Highly Satisfactory	4.31
10	28-Nov-2018	Highly Satisfactory	Highly Satisfactory	5.03
11	31-May-2019	Highly Satisfactory	Highly Satisfactory	5.76

SECTORS AND THEMES

Sectors

Major Sector/Sector	(%)
Agriculture, Fishing and Forestry	**67**
Other Agriculture, Fishing and Forestry	67
Water, Sanitation and Waste Management	**33**
Other Water Supply, Sanitation and Waste Management	33

Themes

Major Theme/ Theme (Level 2)/ Theme (Level 3)	(%)
Urban and Rural Development	**0**
Rural Development	5
Land Administration and Management	5

Environment and Natural Resource Management	**0**
Environmental Health and Pollution Management	21
Air quality management	7
Water Pollution	7
Soil Pollution	7
Renewable Natural Resources Asset Management	47
Biodiversity	47
Water Resource Management	26
Water Institutions, Policies and Reform	26
Private Sector Development	**100**
Jobs	100

ADM STAFF

Role	At Approval	At ICR
Vice President:	Inger Andersen	Ferid Belhaj
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Director:	Junaid Kamal Ahmad	Karin Erika Kemper
Practice Manager/Manager:	Charles Joseph Cormier	Lia Carol Sieghart
Project Team Leader:	Taoufiq Bennouna	Taoufiq Bennouna
ICR Co Author:		Taoufiq Bennouna

I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

1. **Country context**: Tunisia was one of the fastest growing economies in the Middle East and North Africa (MNA) region and had invested substantially in key social sectors before the recent global financial crisis and political revolution unfolded. Tunisia has made good progress in fighting poverty, however, strong regional disparities, long hidden, were a contributory cause to the revolution. The social demands came mainly from remote areas where poverty and unemployment rates are high. Tunisian oases cover 40,803 ha of Tunisia's land area and are home to 10% of the total Tunisian population. Three types of oases are found: Littoral oases, mountain oasis and Saharan oases; each type includes traditional and modern oases. The traditional oases (76.8% of total oasis area), on which this project focuses, are characterized by old plantations, three layers of vegetated surface, high tree density, very fragmented individual plantations with small average size, as well as low yields. They are mainly irrigated from water tables whose levels are under decreasing considerably.
2. **Sector context**: Oases areas have always been important for agricultural production and as trade centers that link remote regions together. Oases provide the main source of employment and income in Southern Tunisia. They have significant socio-economic impact in contributing to food security and livelihood diversification for the wider population. Traditional oases with their three layers of vegetation form an ecosystem suitable for the development of biodiversity and of flora and fauna; as well as for preservation of endangered animal and plant species. Their cultivars are adapted to local conditions and constitute a natural heritage of plants for multiple uses. The date palm is a key element in the resilience of the oasis agro-ecosystem, contributing to the stabilization of soil, moisture, shade and helping to prevent desertification and preserve the local flora and fauna, while providing a livelihood to numerous communities. Date palm production accounts not only for the bulk of the agriculture production, but also for manufacturing and a good portion of commercial services.
3. **Factors threatening Tunisian oases.** At the time of the Project approval, the prevailing perception and opinion among the majority of stakeholders, i.e., key sectoral ministries (Agriculture, Water Resources , and Environment etc.), civil society organizations (CSOs) and non-governmental organizations (NGOs), was that oasis areas were facing severe environmental problems as a result of accelerated degradation of natural resources, increased over-exploitation of groundwater by monoculture of commercial date agriculture and growing urban encroachment, all of this deeply affecting the livelihoods of oasis communities.
4. **Lack of vision**. Most of all, before project preparation, there was a widespread concern about the absence of a vision regarding the development of these fragile ecosystems (covering an area of about 41,710 ha and home to about 950,000 people) and the potentially irreversible consequences of initiatives almost exclusively oriented towards water infrastructure development in new irrigated schemes. Furthermore, from an institutional point of view, development initiatives were designed and implemented by individual entities, often working in isolation, without adequate forms of consultation, in the absence of a common and integrated vision of development. The only official documents supporting new paths to sustainable development, with potential positive impacts on oasis areas, were the *Master Plan for Waters of the South*[1] (for development and use of groundwater), the 1990-2011 *Strategy for the Mobilization of Water resources*, and the *Improvement of Irrigation in Southern Oases (*APIOS) Program, which emphasized tertiary irrigation and drainage systems.
5. **Rationale for Bank Support**: The Project built on the WBG's comparative advantages based on its previous and ongoing engagements and global knowledge. The WBG is currently supporting ground-breaking projects in Tunisia in the areas of social and youth inclusion, lagging regions development, and integrated landscape and ecosystem

[1] Established since 1976.

development. The WBG is also engaging in a holistic, multi-sectoral approach to addressing critical reforms and institutional challenges.

6. **National economic and social priorities**. The Project was intended to contribute to meeting Tunisia's economic and social priorities in oasis areas, particularly in terms of empowering local actors, creating jobs and reducing regional disparities and inequalities between men and women and thereby contributing to poverty reduction. The ambition of the Project was, on the one hand, to focus on an integrated and sustainable development strategy for oasis spaces, while improving the knowledge base about their potential and constraints, and, on the other hand, to set up an innovative experience in a limited number of oases selected according to specific social, economic and geographic parameters. However, the Project faced considerable challenges: (i) the capacity of grass-roots institutions was limited in particular, agricultural development groups (GDAs) had a hybrid status, being considered at the same time as an association, local entrepreneur and administration; their boards were understaffed, highly dependent on the State as a mentor and lacking adequate information about the rights and the obligations of their members; and (ii) the Project had to fill gender gaps, because in the field of natural resource management, the role of women was limited largely because of traditional values and procedures which evolve only very slowly in the Tunisian rural environment and which give women a secondary place in the control of land (for example, leadership in the GDAs was in the hands of men and women were not represented at all in leadership positions in GDA offices).

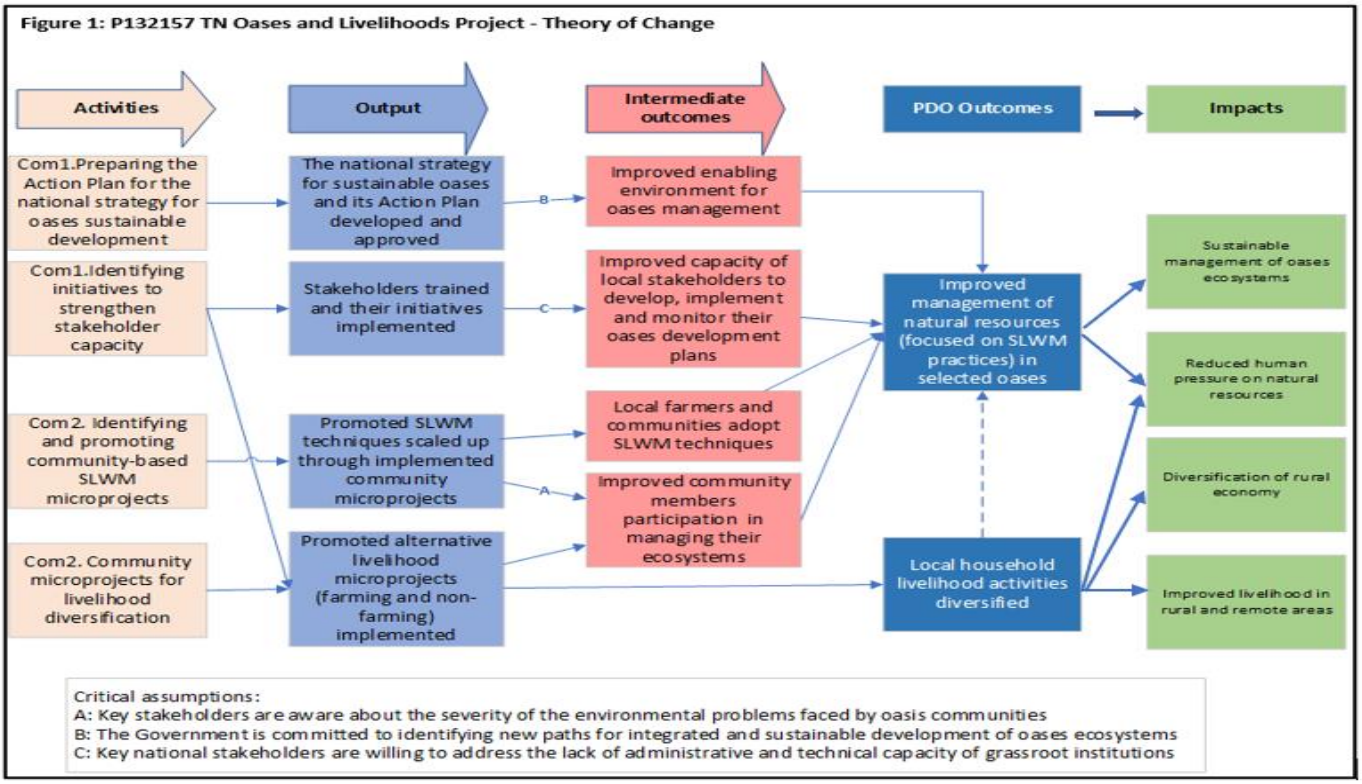
Higher-level Objectives

7. At the time of appraisal, the Project was fully consistent with the Bank's support to Tunisia as outlined in the *Interim Strategy Note* (ISN, FY13-14), which aimed at supporting the authorities in the reforms necessary to prompt private sector-led recovery and job creation, with a focus on openness, opportunity and accountability. The Bank Group support was framed within three areas of engagement: (i) laying the foundation for renewed sustainable growth and job creation; (ii) promoting social and economic inclusion; and (iii) strengthening governance: Voice Transparency and Accountability. The Project was also aligned with the MNA regional strategy through supporting areas with high poverty rates and unemployment; increasing the likelihood of greater agricultural productivity; and promoting governance, inclusion of the poor, job creation, and sustainable growth. In general, the Project was based on key strategies defined by the World Bank (WB) and Global Environment Facility (GEF) in MNA. It contributed to:
    - The GEF-5 strategic objectives on Biodiversity (BD) and Land degradation (LD), mainly contributing to the BD-2: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors; and GEF-LD-1 Agriculture and Rangeland Systems.
    - The regional *GEF Integrated Natural Resources Management in the Middle East and North Africa Region Program (MENARID)*, whose overall objective was to promote integrated natural resource management (INRM) in the production landscapes of the MENA region and improve the economic and social well-being of the targeted communities through the restoration and maintenance of ecosystem functions and productivity.
    - The Middle East and North Africa Desert Ecosystems and Livelihoods (MENA-DELP) Program (P130343) whose objective was to strengthen cooperation among selected organizations of beneficiary countries in areas of sustainable management of desert ecosystems.
    - The recommendations of a study conducted by the *Ministry of Environment (MoE)* in 2009 about potential *ecotourism circuit,* linking the rich cultural and historical sites of desert areas. At the time, the *Government of Tunisia (GoT)* was making plans to diversify the country's tourism products in order to continue to deliver sustainable growth and job creation in the sector. In the formulation process for the proposed *2016 National Tourism Strategy*, the Ministry of Tourism (MoT) prepared a comprehensive diagnostic of the tourism sector, which resulted in the identification of key strengths and weaknesses.

Theory of Change (Results Chain)

8. The Project's theory of change (TOC), which was not required at the time of appraisal, is reconstructed for the Implementation Completion and Results Report (ICR) as a tool to provide an ex-post synthesis of the results chain.
9. The project was intended to establish an integrated oasis landscape management approach promoting sustainable land and water practices, and diversified activities leading to diversified local livelihoods. The main channels identified for improved SLWM outcomes included improving enabling environment for oasis management, stakeholder capacity to work with oasis development plans, and community participation in ecosystem management. The project invested in implementing the Action plan for the sustainable development of oasis; strengthening capacity of local CSOs, private entrepreneurs and local institutions in co-management of oasis areas; and identifying and promoting efficient sustainable land and water practices and approaches, biodiversity conservation, and environmental governance. Community microprojects piloted new diversified activities aiming to diversify local livelihoods. They helped in increasing revenues to local households and, therefore, reducing pressure on oases ecosystems.
10. The six oases[2] were selected based on the number of criteria: representativeness of the variety of Tunisian oases (Saharan, coastal and mountain oases), heritage value, pre-existing GDAs and active CSOs, assessed capacity of local people and stakeholders to adopt the participatory approach of the Project, and availability of opportunities for oasis rehabilitation and preservation.

Figure 1: P132157 TN Oases and Livelihoods Project - Theory of Change



Project Development Objectives (PDOs)

11. The Project Development Objective / Global Environmental Objective is to improve sustainable natural resources

[2] Tamerza, Chebika and Mides located in Tozeur Governorate; Noueil located in Kebili Governorate; El Guetar located in Gafsa Governorate and Zarate located in Gabes Governorate

management and promote livelihoods diversification in the selected oases[3].

Key Expected Outcomes and Outcome Indicators

12. The Project expected outcomes were: (i) improved management of natural resources of targeted oases in a sustainable manner; and (ii) diversified livelihoods[4] of oasis communities in targeted oases.
13. The outcome Indicators were as follows:
    - Project beneficiaries:
      1. Direct project beneficiaries (end target: 18,000)
         - Female beneficiaries (end target: 51%)
    - Improved sustainable natural resource management:
      2. Land users adopting sustainable land management practices as a result of the project (end target 700 ha)
      3. Land users adopting sustainable land and water management (SLWM) practices as a result of the Project (number) (end target: 3,000)
      4. Number of local species that have been reintroduced in selected oasis (end target: 20 species)
    - Diversified livelihoods of communities in selected oases:
      5. Households adopting diversified activities as a result of the Project (percentage) (end target: 30%).

Components

14. **Component 1: Strengthening Capacities for Sustainable Management of Oasis Ecosystems** (US$ 1,031,830 from GEF, US$ 257,000 from Government, and US$ 18,000 from beneficiaries)

    Sub-component 1.1: Action Plan (AP) for the national strategy for sustainable development of Tunisian oases. This sub-component financed: (i) preparation of the *Action Plan* of the national strategy for the sustainable development of the oases; (ii) development and implementation of a communication strategy (to be funded by the Government); and (iii) preparation of monographic profiles for each of the 210 Tunisian oases, including status of wildlife and biodiversity, together with a Web-based Geographic Information System (GIS). These activities were to be implemented through the organization of consultative workshops, provision of consultants' services, goods, and training.

    Sub-component 1.2: Strengthening the capacities of stakeholders. this sub-component financed two groups of activities: (i) training and technical assistance for the benefit of local and national stakeholders on topics related to participatory approaches, biodiversity protection, environmental governance, Sustainable Land and Water Management (SLWM) techniques, and initiatives aimed at diversifying local livelihoods and preparing community-driven subprojects; and (ii) specific support to oasis biodiversity-related activities carried out by national specialized institutions recruited as consultants

    Sub-component 1.3: Monitoring and evaluation (M&E) of Project activities. The sub-component financed consultants' services, goods and training for establishment of an M&E system, which was to be fully aligned with those of other projects concurrently operating in the areas of land management, biodiversity valorization and conservation and ecosystem management.

15. ***Component 2: Supporting the Implementation of the Participatory Local Development Plans (PDPOs)*** (US$ 4,434,000 from GEF, US$ 240,000 from beneficiaries)
16. The elaboration of the Oasis Participatory Development Plan (PDPO) for each of the six targeted oases had taken place before the beginning of the Project implementation. Each PDPO included key activities to be carried out in each oasis, including the nature and type of micro-projects to be supported. The Implementation of the PDPOs was thus achieved through micro-projects funded by matching grants executed by beneficiaries (GDAs, local NGOs, CSOs, Small entrepreneurs, …). These matching grants financed the acquisition of goods, technical assistance,

[3] GEF grant agreement number TF017362, Oases Ecosystems and Livelihoods Project, page 4.
[4] Livelihood is defined in this project as a set of activities seeking securing the necessities of life and diversifying source of income

infrastructure improvement, technical studies, and trainings. Selected sub-projects had strong focus on creating climate-friendly job opportunities and diversifying livelihoods especially for women and youth. The private sector has been also catalyzed. The Project Operation Manual (POM) spelled out funding mechanisms, eligible investments, eligible project promoters, and evaluation and performance criteria.

Sub-component 2.1: Community micro-projects in the area of sustainable land and water management (SLWM) and biodiversity. The main objective of this subcomponent was to strengthen the management of oasis natural resources by scaling up SLWM and biodiversity conservation techniques aimed at: (i) Protecting oases against flooding, sand invasion, and wild boars; (ii) Improving the productivity of agricultural activities and the oasis exosystemic services by scaling up SLWM practices; and (iii) Restoring and protecting oasis biodiversity. This sub-component financed consultants' services, goods and training to support micro projects. Activities were implemented through World Bank's community procurement procedures[5].

Sub-component 2.2: Community micro-projects in the area of the diversification of local livelihoods. These community micro-projects were aimed, through the provision of matching grants to beneficiaries, at promoting alternative farming and non-farming activities, which not only generate income and improve living conditions, but also reduce pressure on natural resources and help improve the quality and the sustainability of these resources. These community-based micro-projects were developed to enhance local craftsmen's know-how and support bovine fattening activities and beekeeping and preserve and protect and develop oases' cultural heritage and promote ecotourism. These activities were supported by the provision of consultants' services, goods and training, through World Bank's community procurement procedures.

17. ***Component 3: Project Coordination and Management*** (US$ 294,900 from GEF, US$ 63,000 from Government). This component supported the establishment and functioning of the Project Management Unit (PMU) within the General Directorate for Environment and Quality of Life (DGEQV), of the Ministry of Equipment, Territorial Management and Sustainable Development (METMSD) through the provision of goods, consultants' services and training. It covered: (i) the equipment cost for the Unit; (ii) Project audits; and (iii) the incremental operating costs for the Project.

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

Revised PDOs and Outcome Targets

18. The PDO has not been revised during implementation

Revised PDO Indicators

19. Targets of the following indicators were modified at Mid-Term Review (MTR):
    - Direct project beneficiaries (end target: 18,000):
      - Percentage of women benefitting from the Project: initial target of 51% of female beneficiaries was revised to 35%;
    - Improved sustainable natural resource management:
      - Target number of local species that have been reintroduced in selected oasis was increased from 20 to 30 species.

    Target number of cultivars that are produced, multiplied and distributed was increased from 10 to 70.

Revised Components

20. The components have not been revised during implementation

Other Changes

21. No other change occurred.

Rationale for Changes and their Implication on the Original TOC

22. The revision of some indicators targets during the MTR was carried out to adapt the Project to field realities and to the way local populations were reacting to the activities. This change has no impact on the Project theory of change.

[5] WB 'procurement procedures that has been specifically designed to address procurement in Community-driven development Improved sustainable natural resource management: projects: pubdocs.worldbank.org/en/178331533065871195/Procurement-Regulations.pdf

II. OUTCOME

A. RELEVANCE OF PDOs

Assessment of Relevance of PDOs and Rating **Rating: High**

23. Throughout the implementation period, the Project development objectives have remained highly relevant as the activities planned and implemented have contributed to the sustainable management of Tunisian oasis ecosystems. Most of all, at the time of Project closure, the Project's development objective was fully consistent with the current *Country Partnership Framework* (CPF, FY16-20), re-validated and extended through the *Performance and Learning Review* (PLR, FY16-21). More specifically, the Project directly contributed to the pillars of the CPF/PLR presented in table 1 below. The relevance of the objectives of the Project has been validated by the National Strategy for the Sustainable Development of Oases, the development of which - and subsequent approval - was one of the main activities supported during the preparation of the Project. In addition, the PDO was highly consistent with:
    - *Tunisia 2020*, the Five-year plan launched in 2016, which, defined a new vision of social and economic development and aimed to have a significant impact on the agriculture sector and rural development, with improved incomes for Tunisian farmers, new jobs in rural areas and improved national food security.
    - The *Tunisia's Nationally Determined Contributions* (NDCs) report[6] to the United Nations Framework Convention on Climate Change.
    - The *National Strategy for the Green Economy*[7], particularly with regard to efficient agricultural development in the use of natural resources and the promotion of sustainable tourism.
    - Recent legal texts concerning eco-tourism[8] and background studies aimed at defining the Tunisian strategy for eco-tourism, including national guidelines specifically aimed to improve the tourism industry

Pillars	Objective	Specific project results
CPF Pillar 2, Reducing Regional Disparities	Improve access to and quality of services in lagging regions Enhanced economic opportunities in lagging regions	Opportunities for youth and women increased. About 1,705 jobs created in remote rural areas and the livelihoods of about 4,100 households diversified. Sustainable NRM techniques promoted and the value of local know-how and traditional techniques recognized and valued. Oases participatory management and associated livelihood outcomes stressed. Economic opportunities and improved access to and quality of services in lagging regions enhanced, on the basis of multisectoral approach (agriculture, environment, private sector development, tourism). Integrated natural resources management and biodiversity conservation promoted (in line also with GEF's strategic objectives). A climate of trust and understanding between state actors and CSOs created and co-management of oasis ecosystems through numerous public gender-sensitive consultations, and awareness initiatives promoted
CPF Pillar 3, Promoting increased social inclusion	Promote participation, transparency and accountability Increase opportunities for young men and women	

Table 1: Tunisia CPF/PLR pillars to which the Project contributed

[6] https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Tunisia%20First/INDC-Tunisia-English%20Version.pdf
[7] https://www.uneca.org/sites/default/files/uploaded-documents/SROs/NA/AHEGM-ISDGE/egm_ge-_tunisa_eng.pdf
[8] Minister of Tourism decree of July and October 2013 setting the minimum standards for rural guesthouses and for charming hotels and guesthouses.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome **Rating: High**

24. The Project sought to improve conditions in selected oases through two means: (a) Improved management of natural resources of targeted oases in a sustainable manner, and (b) diversified livelihoods of oasis communities in targeted oases.[9]

Project beneficiaries

- ***Direct project beneficiaries*****:** Achieved at completion: 23,257 beneficiaries, exceeding the end target of 18,000 beneficiaries. This achievement is the result of comprehensive sensitization initiatives set up by the Project and the commitment of all stakeholders.
  - **a.** ***Direct female beneficiaries*** (percentage of female beneficiaries of the total number of beneficiaries): Substantially achieved at completion: 33%, against an end target of 35%. As already mentioned, following the recommendations of the MTR, the indicator was modified in a participatory manner. The target is substantially achieved. It is worth noting that in the first two years this indicator had reached 35%, but subsequently declined. This reduction resulted from the increased number of land and water management sub-projects, which, due to their nature were mainly implemented by men. The indirect positive impact of these projects on women cannot be measured.

25. Number of local species that have been reintroduced in selected oasis (end target: 20 species).

Outcome I: Improved management of natural resource management in a sustainable manner.

- Land area where sustainable land management practices were adopted reached 900 ha significantly exceeding the end target of 700 ha. The number of land users (farmers) adopting sustainable land and water management (SLWM) practices at completion reached 5065 farmers exceeding the target nearly by 70%. This was made possible by regular sensitization campaigns and high level of beneficiary ownership. Major practices adopted by farmers included protection of cultivated land against wild boars; cleaning activities of oases; fruit tree, palm and vegetable and fodder planting, as part of the improvement of biodiversity; improved irrigation systems; and integrated pest management interventions (see more detailed information in Annex 1). Twenty-five new technologies have been demonstrated, and 200 farmers adopted improved agricultural technologies promoted (of which 35.5% women).
- Number of local species that have been reintroduced in selected oasis. Achievement at completion: 32 species against the target of 30. Fully achieved.

26. These achievements were built thanks to the synergetic results of creating a favorable environment for oases developments based on developed knowledge, a national strategy and the related Action Plan for the sustainable management of oases ecosystems, improved capacity of many various stakeholders involved in natural resources management, effective communication strategy and community micro-projects in SWLM. All of these intermediate outcomes have been fully achieved as assessed below.
27. Project contribution to favorable environment for integrated oases development. The project successfully supported numerous activities which helped Tunisia to file knowledge gaps and develop and implement a clear national strategy and related Action Plan[10] for the sustainable management of oases ecosystems, which were validated and approved by all stakeholders and the Project steering committee.
28. These activities greatly contributed to highpoint the importance of oases ecosystems in Tunisia and encouraged the government and its development partners to increase their support toward oasis development: (i) Japan International Cooperation Agency (JICA), which used the oasis strategy and its action plan to support the

[9] See Annex 1 for a more detailed presentation of the results of the activities (by results and intermediate outcomes).

[10] The strategy and action plan documents were edited and printed with the support of the Forest Program (PROFOR). Initially, the project documentation was temporarily housed on the Ministry's website. Subsequently, since the beginning of March 2017, the documentation has been posted on the project's own website (http://www.oasys.tn).

elaboration of a comprehensive strategy for the development of the Tunisian southern region; (ii) European Bank for Reconstruction and Development which is currently preparing a 120 million euros project focusing on improving water facilities in oasis areas; (iii) Millennium Challenge Corporation with the Demand Management and Productivity Project (under preparation) which seeks to improve oases groundwater utilization and increase the income of beneficiaries; and (iv) the International Finance Corporation project (under preparation) which aims to increase competitiveness in the date sector and create new value chains as the dates juice concentrate.

29. Through detailed documentation and inventory work, the Project developed monographies of all traditional Tunisian oases, as well as the first Tunisian Oasis Atlas documenting their main environmental and economic potentials.[11] The geographic, demographic, social, economic and environmental information of these two comprehensive documents greatly shaped the design of the activities of the Project in the targeted oases and were critical to scaling up activities through the new Waha project and initiatives presented above.
30. Mobilizing government funds. The Project formulated a *communication strategy* and related action plan. The main elements are as follows: (i) creation and maintenance of the website (*www.oasys.tn*) to offer all information available on the Project and its activities through various media (videos, progress reports, documents or studies produced by the Project); (ii) use of the key social networks for the dissemination of good practices; (iii) broadcasting of videos or interviews on the radio or on public or private television channels, including on the World Bank website; and (iv) presentation of the Project results at international meetings. At international level, a WB blog and an article (on The Guardian) served to disseminate the Project's activities and achievements. As a result, this strategy has contributed not only to providing a greater visibility to the Project within a wider audience (both at national and sub-regional levels), but also to increasing general awareness on the potential and fragility of oasis landscapes in Tunisia and elsewhere.
31. Improved stakeholders' capacity to work with oasis development plans**.** All the activities mentioned above have been supported and accompanied by numerous training initiatives, many of which were developed in a participatory manner to tailor the capacity building to the specific context, to build the capacities of main actors. In this regard, in March 2016, more than 200 people, representing national, regional and local institutions (in particular, members of the PMU, decentralized technical services, GDA managers (in both target oases and other surrounding oases), civil society organizations and the private sector) participated in the development of six training modules.[12] Overall, capacity building initiatives directly benefited 280 people representing national, regional and local stakeholders.
32. *SLWM microprojects*. Activities related to improved management of natural resource management are grouped into the 4 groups: (i) Plantation of palm and fruit trees; (ii) Rehabilitation / renovation of irrigation infrastructure; (iii) Protection against wild boars and integrated pest management; and (iv) Strengthening of the CGA's capacities. See Table 2 and Annex 1 for a detailed presentation of these microprojects.

[11] The monographs for all the 126 "traditional" oases have been prepared: seven oasis monographs in the governorate of Gafsa, 49 in the governorate of Gabes, 29 in the governorate of Tozeur and 41 in the governorate of Kebili. The monographic profiles are available on the project Website and hard copies have been distributed. These monographs were also used to develop the first Atlas of Tunisian Oases, which was also widely distributed, together with a Geographic Information System (GIS), to cover all the Tunisian oasis landscapes. This documentation is also available to the public at the Project Website. The project published in 2017 a document entitled "The traditional Oases of Tunisia", which filled a gap in current knowledge: this document, posted on the project's Website and distributed on paper, is a synthesis of all studies carried out on traditional Tunisian oases with a geo-referenced digital database developed in a GIS Web platform

[12] The main themes of these modules, developed through eight sessions over 16 days of training, were as follows: techniques and procedures planning; oasis biodiversity protection measures; techniques for sustainable water and land management; diversification of local livelihoods; and administrative management of community micro-projects.

Type of microprojects	Oasis	Micro-projects
Plantation of palm and fruit trees and other plants	Tamerza, Chebika, Mides, Noueil and Zarat	• Rejuvenation of palm trees • Improvement of the fruit trees biodiversity of • Planting about 30,000 olive trees • Improvement of the biodiversity of aromatic & medicinal plants (• Fight against phytosanitary diseases • Removing, crushing & composting green waste
Rehabilitation / renovation of irrigation infrastructure	El Guettar & Noueil El Guettar ; Zarat Chebika Tamerza, Chebika, Mides, El Guettar, Noueil and Zarat Zarat	• Construction/maintenance of 3,100 lm of irrigation network • Cleaning of drains • Construction of irrigation water storage basin (25 l) • Water saving techniques & small water infrastructures • Photovoltaic station (pumping irrigation water)
Protection against wild boars and oasis cleaning	Tamerza, Chebika, Mides, El Guettar, Noueil and Zarat	• Construction of reinforced fences (23,740 lm (150 ha) • Cleaning of 23% of the total areas of the 6 oases (green waste)
Strengthening GDAs capacities	Tamerza	• Strengthening the logistical capacities of GDAs for emergency interventions

Table 2: Examples of SLWM microprojects (see more detail in Annex 1 (B) Table)
A total of 60 microprojects (for a total cost of about US$1,9 million)

Outcome II: Promotion of livelihood diversification

33. The Project contributed to improving local livelihoods and diversifying activities of oasis households. This helped to reduce pressure on the oasis's ecosystem, by creating jobs and supporting income-generating opportunities. For the design and implementation of subprojects related to livelihoods & income-generating activities, the project built on local social capital, solidarity networks and mutual trust and contributed to enhancing collaboration between CSOs and the administration. It also helped catalyze local energies around concrete centers of interest, support collective action and strengthen the links between oasis communities and their environment. Important gender gaps where filled and economic opportunities for women were increased. Various activities favored women's income-generating activities. At the end of the Project about 4,100 (or 47.2%) households adopted one or more diversified activities. Table 3 below presents the most important sub-projects.

Type of microprojects	Oasis	Micro-projects
Income-generating activities	Chebika	Support to women's handicraft activities
	Mides	Construction and equipment of a camping center, and support to several sports club. Income generating activities (carpet sewing; beekeeping; poultry farming)
	Tamerza	Rehabilitation and equipment of the tourist cottage of the small waterfall Support to women's handicraft activities.
	Zarat	Support to women's handicraft activities. Supporting activities of clams' fishermen Improving working conditions of Support for the revitalization of traditional horse-riding
Improvement of living conditions	Tamerza	Improvement of living conditions (beautification of villages, lighting of public spaces, urban equipment).
	Mides	Village beautification
Alternative economic activities for youth	Mides	Supporting identification of eligible microprojects Community youth center
	Chebika	Supporting identification of eligible microprojects
	Tamerza	Supporting identification of eligible microprojects
	Noueil	Support to local school's alumni

Cultural ecotourism	Noueil	Support for the organization of socio-cultural (Festival of mountain oases) (Festival of Noueil, festival Ezzez)
	El Guettar	Construction and equipment of a leisure and tourist center ("Galaa Club" project)
	Tamerza	Ecotourism & cultural activities (touristic clubs and restaurants; ecolodges; cultural festivals; youth centers)
	Mides	Construction and equipment of a new tourist restaurant
	Zarat	Support for the organization of socio-cultural (Oasis days)

Table 3: Examples of some livelihood diversification micro-projects (see more detail in Annex 1 (B) Table)
A total of 59 microprojects (for a total cost of about US$1,7 million)

34. A summary of community microprojects supported under the project is presented below.

Oasis Location	Type of subproject		Total subprojects
	SLWM	*Livelihoods*	
Chebika	6	8	14
El Guettar	13	8	21
Mides	10	8	18
Noueil	7	8	15
Tamerza	15	15	30
Zarat	7	13	20
Total	**59**	**60**	**119**

Table 4: summary of community microprojects supported under the project

Climate change

35. Although not quantified, numerous climate co-benefits were linked to the activities supported by the Project (particularly the deployment of SLWM technologies), namely those which, directly or indirectly, contributed to: improving carbon pools; preventing soil degradation; increasing carbon stock; and restoring lands, favoring the enhancement of native agrobiodiversity and biodynamic agriculture (with high potential for mitigation co-benefits). Investments in oasis ecosystem restoration, such as irrigation networks and tree planting, built adaptive capacity against extreme weather by increasing water availability, supporting food security, and strengthening natural resistance against droughts, floods, wildfires, and other climate-induced natural disasters.

Justification of overall Efficacy Rating

36. The Project has achieved and exceeded the PDO indicators targets. In addition to its quantitative and qualitative results, the Project achieved outcomes which were critical to the new oases projects supported by the Bank and other development partners. This was the case for example for the Action Plan of the National Strategy for the Sustainable Development of Tunisian Oases and the resulting monographies of all traditional Tunisian oases, as well as the development of the first Tunisian Oasis Atlas; (ii) the demonstration of the importance to work and strengthen capacities of GDAs as local action groups and key component for any Territorial Development/Landscape development project; and (iii) the effectiveness of the project approach with combination of adaptation measures for the resilience of the oasis, economic subproject for the resilience of people (both hard investments), and capacity building activities (soft investment). Without the foundation of these achievements, it would be very difficult to ensure properly targeted scaling up based on the agroecological, cultural, and socio-political diversity of the oases in Tunisia. Efficacy is rated *High.*

C. EFFICIENCY

Assessment of Efficiency and Rating — Rating: Substantial

37. Overall, the Project has generated general benefits by contributing to reducing regional disparities and gender inequities and improving social stability and prosperity in the intervention areas. The more important economic benefits are the following : (i) increased agricultural, livestock and artisanal production; (ii) cost savings (in particular for irrigation); (iii) improved yields (as a result of new plantations and training initiatives); (iv) increased share of production generating cash income, increased average producer prices and greater share of benefits for producers; (v) increased production from better soils / water management; (vi) reduction of post-harvest losses and transaction costs; (vii) increased water savings and higher water productivity; (viii) shift to more sustainable land and crop

management practices; (ix) increased share of crops and economic activities with high value added per production unit and/or labor unit; (x) generation of additional employment; (xi) increased incomes for direct and indirect beneficiaries; and (xii) increased fiscal revenues.

38. An economic analysis was conducted at the end of the Project as part of the preparation of the forthcoming Sustainable Oasis Landscapes Management Project (or Waha Project) (P169955), to assess the impact of the TOELP initiatives on local production systems. Overall, the results confirm those of the economic analysis conducted at appraisal, particularly on the three following elements: (i) costs involved in achieving project objectives have been reasonable in comparison with both benefits and recognized norms; (ii) biodiversity and SLWM-related investments have been cost-effective; and (iii) cost-effective policy principles and strategic directions introduced by the Project have been integrated into national strategy / action plans and forthcoming operations (such as the Waha project). More specific results are presented below.
39. The Project is economically viable with a net present value (NPV) of US$ 22 million (US$46 million for sub-projects of sub-component 2.1 and US$2 million for subprojects of sub-component 2.2). The overall economic rate of return (ERR) was 22% (27% for subprojects of sub-component 2.1 and 12% for subprojects of sub-component 2.2) at a discount rates of 6% (in line with the WB recommendations for economic analysis[13] of projects.
40. Under Component 2, the total cost of investments for 119 subprojects (of which 60 subprojects related to SLWM and 59 for local livelihoods and income generating subprojects) was 3,7 million US$. Through these investments, a total of 1,750 seasonal and/or permanent jobs were created (permanent jobs only may be estimated at about 900), whereas 184 micro, small and medium enterprises (MSME) were created and/or supported in particularly poor areas. At least 450 households benefited from the income generating activities with average monthly income comprised between US$106 and 176. The sensitivity analysis of the Project (see Annex 4, Tables 3 and 4, shows results of the analysis of two basic cases)[14].
41. More specifically:
    - For sub-projects of sub-component 2.1 (SWLM), quantitative data (for the 6 sites) shows that 60 sub-projects covering an area of 761 ha implied an investment of TND5.8 million (=US$2.8 million) or TND 7,707/ha (=US$3,670), with an average cost of TND 97,745/sub-project (=SU$46,500). [15]
    - For sub-projects of sub-component 2.2 (Livelihoods), quantitative data for the 6 sites shows that 61 sub-projects involved an investment of TND3,151,061 (=US$1.5 million), with an average cost of TND51,657/sub-project (=US$24,598).[16]
42. The Project has also generated other benefits, that, while not tangible or easily quantifiable, have been significant, contributing to reducing inequities and tensions and improving social stability and prosperity in the Project intervention areas. While before the start of the Project, the role and capacities of the GDAs were questioned by the local institutions, and these structures had many problems to meet the needs of their members, they have become today, thanks to the Project support, solid institutions benefitting from the trust and respect of local institutions and their members. Before the start of the Project, members totaled barely 20 members per GDA, today they exceed by GDA 300 members. The majority of GDAs were in debt before the start of the Project, today the banking accounts of GDAs benefiting from the Project are in surplus; the Tamerza GDA bank account, for example, has a budget equivalent to USD 200,000. These benefits are most likely to persist after the project.
43. In addition to quantified outcomes (see above), among the longer-term environmental benefits by the project, although not entirely visible due to the short duration of the project, the following are particularly important: conservation of ecosystems, habitats and biodiversity; water availability; carbon sequestration; reduced greenhouse

[13] **Note, Chief Economist, SD Dept. January 2016**

[14] The sensitivity analysis conducted at appraisal had shown an added value increase per hectare of between 18.1 and 7.1 (12% and 6%). See also Annex 4, Table 3

[15] See Annex 4, Table 1.

[16] See Annex 4, Table 2.

gases emissions; enhanced resilience and sustainability of oasis landscape systems; and reduced damage caused by wind and water erosion and siltation.

44. The main socio-economic benefits are the following: longer term multiplier effects of strengthened capacities of smallholders and their organizations; income from more diversified products;[17] enhanced food and nutrition security for targeted households; reduced vulnerability to external shocks (notably climate change and instability or decrease of food prices); enhanced livelihoods of oasis communities and households (through investments aimed at diversifying and increasing production and income, including investment specifically addressing women 'needs and priorities); improved water and air quality and health of oasis inhabitants and consumers.
45. Economic efficiency and SLWM practices and technologies was accompanied by enhanced other aspects. Indeed, the different subprojects supported by the Project have helped to create a new awareness among local actors of the environmental, economic and social constraints and challenges of oasis landscapes (concerning, for example, the degradation of natural resources and the loss of traditional practices and local know-how), as well as of the potential of oasis ecosystems to contribute to the fight against poverty and to job creation). They have also given rise to the emergence of an innovative and promising development dynamic, by promoting dialogue between state and non-state actors, enhancing solidarity between actors, valuing local know-how and increasing participation of women and young people in the development process.
46. Administrative efficiency of the project is substantial. The project was closed on time (no extension was required), and all funds were disbursed. This is the result of : (i) the excellent communication established between the PIU, the field teams and the GDAs and microproject promoters, despite the geographical distances between the PMU and the targeted oases and the distances between the oases themselves; (ii) the fact that the criteria for choosing micro-project promoters were respected and implemented efficiently; and (iii) where local civil society associations did not have the capacity required to manage an activity, regional associations were efficiently mobilized (as in the case of the AID Association in Tamerza and the Oxygen Association in Zarat).
47. Specialists in the regional directorates of the concerned sectors (agriculture, tourism, youth and sport, culture, education) were systematically called upon to verify the technical viability of the subprojects. World Bank procurement procedures have been used for the procurement of goods, services and works.
48. PMU provided great operational ad administrative efficiency for an overall smooth implementation of the Project. Communication between the PMU, the field teams and the GDAs and microproject promoters was generally good, despite the geographical distances between the PMU and the targeted oases and the distances between the oases themselves. Specialists in the regional directorates of the concerned sectors (agriculture, tourism, youth and sport, culture, education) were systematically called upon to verify the technical viability of the subprojects. World Bank procurement procedures have been used for the procurement of goods, services and works.
49. The Steering Committee played its role and met at least once a year as required by the Project operational manual. It was during the meetings of the Steering Committee that the list of priority subprojects for each site was presented, discussed and validated.

D. JUSTIFICATION OF OVERALL OUTCOME RATING — Rating: Highly Satisfactory

50. The justification for the Highly Satisfactory overall outcome rating takes the following into account: (i) high relevance and efficacy and substantial efficiency. This overall outcome rating confirms the highly satisfactory project performance during last three years.

[17] It has also to be added that the effects of some initiatives supported by the project are not yet visible on the new palm plantations, since they will only be productive in six or seven years' time and will not reach full production for at least a dozen years.

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

51. Through the Project activities implementation, and mainly under microprojects execution, the Project has contributed to improving women's participation in community activities and economic activities. It consistently supported awareness-raising initiatives regarding social and economic inequalities between men and women. Overall, the Project focused on the involvement of women and women's associations in project activities, in particular for income-generating activities (such as beekeeping, poultry farming, handicrafts, sewing, weaving and activities related to oasis ecotourism) was very important.
52. Despite local cultural constraints, women fully participated (individually or in groups) in identifying and carrying out activities aimed at improving the livelihoods of their domestic units. Poultry and craft activities were carried out by women and cultural and recreational activities (festivals, Galaa Club, Maison de Jeunes) by young people (less than 25 years-old). The enthusiasm and dedication of these women is very promising. In general, most of these activities have been successful, in spite of certain limiting external factors. These include difficult access to markets (for crafts) and difficulties in obtaining food for animals (bees and poultry). Moreover, the job creation capacity of most of these income-generating activities (except ecotourism) has been limited.
53. As noted above, female beneficiaries represented 33% of the total number (402) of people who adopted an improved agricultural technology promoted by the Project. Achievements are significant, because the geographic area covered by the Project is characterized by very conservative social and cultural values, particularly in terms of access to and control over productive assets, participation of women in decision-making and employment opportunities, despite the fact that the real economic role of women in agricultural activities is high. These factors have limited the number of subprojects actually carried out and implemented by women. Finally, at the local level, half of the Project staff were women. This is an important factor in supporting initiatives specifically targeting women (especially young women under 40) and women's associations and has helped increase women's assets, generate income and employment opportunities for women and enable their meaningful participation in key project activities.

Institutional Strengthening

54. The Project helped state and non-state institutions by strengthening their collaboration, building their capacities, and consolidating synergy and collaboration between ministries as well as between different ministerial departments. In addition to the DGEQV, other state and non-state institutions have been involved in the implementation of the Project, including several national and regional research organizations. The Project highlighted the importance of an effective institutional arrangement giving an important role to local GDAs and other CSOs. By adopting a pragmatic approach, the Project has contributed to strengthening the capacities of GDAs and CSO through leadership training, awareness-raising activities for members, identification and implementation of transparent and participatory processes for planning and implementation of inclusive local development. Promising forms of collaboration between GDAs and municipalities were also supported.[18] Finally, the Project supported the key role of the *Regional Commissions for Agricultural Development* (CRDAs). At the beginning, CRDAs were reluctant to get involved in the Project due to lack of trust in GDAs, but gradually they contributed to providing valued technical assistance to GDAs.[19] In addition, other state and non-state institutions were implicated in the implementation of certain project activities, such as Institute of Arid Regions (IRA) IRA and Regional Center for Research in Oasis Agriculture (CRRAO) at the national level, CTD and CRDA at the regional level. Under the specific agreements or

[18] For example, in Tamerza, where the municipality paid the salary of an agent in charge of water management in the oasis of Chebika or in Zarat, where a micro-project was planned and implemented by the municipality itself).

[19] Particularly in Tamerza and El Guettar, relations between the CRDA and the GDAs improved very well and guaranteed the success of many micro-projects. Deconcentrated technical services, which used to operate in independent silos, have gradually been able to adopt a certain degree of collaboration and integration. Thus, for example, the regional branches of the DGEQV actively helped the GDAs to obtain certain required administrative authorizations (in Zarat, for example) and facilitated relations between the GDA and the CRDA (for example in Tozeur).

conventions established with the Project, the members of different associations benefitted from various capacity-building initiatives.[20] All these results are sustainable: at national level, they provide the foundation for innovative inter-institutional synergies and broader reforms; and the local level, they enhanced social inclusion and filled gender gaps.

Mobilizing Private Sector

55. Most of the Project contractors who supplied the equipment and civil works were private contractors. The Project helped boost the local economy as many private entrepreneurs are involved in oasis activities. In the final two years of the Project, many more private and small enterprises were established through micro-projects.
56. The Project also reached out to private companies for trainings, communication, workshops and study tours. These events increased awareness and enhanced the willingness of private companies to invest in oases.

Poverty Reduction and Shared Prosperity

57. The Project had a significant impact on the population of the six targeted oasis areas, through the investment of investing US$3.7 million in remote and lagging areas in order to support 119 microprojects, which benefitted a total of 4,100 households (i.e., about 18,000 people) and created a total of 1,750 jobs, generating significant income (about 450 of the poorest households previously with no income had a monthly income comprised between $106 and $176).The participatory approach, coupled with the introduction of sustainable land management practices, provided communities with opportunities to increase the productivity of their lands, to raise agricultural yields and incomes, to improve their livelihoods and to identify alternative livelihoods. These aspects contributed to poverty reduction and shared prosperity. However, it should be stressed that in the short and medium term these benefits will remain sustainable only if local communities will be supported by a network of local technical services, NGOs, and other technical partners.

III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

58. The overall objectives of the Project – both in terms of PDO results and specific outcomes - were realistic, clearly formulated and with the right level of ambition. The general design of the Project was overall simple, and the components had a clear operational logic – Component 1 supported activities for the Action plan of the National Strategy for sustainable oasis development, communication and capacity-building initiatives at national level, while Component 2 supported pilot initiatives at local level.
59. Potential stakeholders (state actors, such as departments at the MALE and research institutions) and beneficiary groups (GDAs and CSOs in the six selected oases) were adequately identified, and public consultations were organized, although the role of participating institutions had not been clearly spelled out, opening the door to potential administrative bottlenecks.
60. Safeguard documents identified both potential risks and mitigation measures.
61. The design was based on a sound and adequate background analysis and included appropriate timing and sequencing of tasks. It incorporated a participatory, decentralized and flexible approach to local development based on lessons learned from other operations and linked to global strategic best practices.
62. A key element of success was the fact that the elaboration of PDPOs in the six targeted oases had taken place even before the beginning of the Project implementation. Indeed, thanks to funding from the Forest Program (PROFOR), a team of national consultants was able to carry out a detailed assessment of local socio-economic conditions, poverty and household vulnerability and the identification of priority activities in a limited number of oases representative of the variety of Tunisian oasis ecosystems. At the start of the Project, this exercise greatly facilitated the identification,

[20] The experience with the municipalities in Zarat and Tamerza has also been promising. Indeed, the municipalities had operating budgets which enabled them to guarantee the use of the equipment / machines obtained within the framework of the project and were able to provide labor to support the GDAs or CSOs active in their territories.

within the PDPOs, of eligible subprojects by GDAs, Mutual Societies for Agricultural Services (SMSAs), MSMEs and local associations in the areas of land and water management and biodiversity as well as the diversification of local livelihoods.

63. At project appraisal, decentralization reforms had not yet been undertaken, municipalities were still poorly structured, mayors and the elected officials were not yet fully in place and rural areas were not yet integrated into municipal territories. By adopting a pragmatic approach, the Project has contributed to strengthening the capacities of GDAs and CSOs, and established trust and strengthen collaboration between key local stakeholders.

B. KEY FACTORS DURING IMPLEMENTATION

a) Factors subject to government and/or implementing entities control

64. The PMU focused on building good relationships with local communities by supporting awareness initiatives and capitalizing on local values, traditional know-how and good practices. It also supported different forms of partnership with main stakeholders.
    - *At national level*, the Project created synergies with other concerned ministerial departments - such as the Ministry of Culture, the Ministry of Youth and Sports and the MOT.[21] The partnership with the Regional Directorates for Local Affairs and the Environment has produced positive results, particularly by facilitating relationships between GDAs, CRDAs and other administrations. Thanks to the partnerships established with the ministries involved, the Project mobilized additional financial resources for some specific activities. Finally, the Project established important forms of collaboration with national research centers.
    - *At regional level*, the partnership with CRDAs was developed according to two models: (i) one in which the Project and the CRDA implemented complementary actions; and (ii) one where the essential role of the CRDA was to grant the authorizations necessary for the execution of different activities.[22]
    - *At local level* the partnership with municipalities was considered as particularly important.[23]
    - Government and beneficiaries co-financing was on schedule.

b) Factors subject to World Bank control

65. The World Bank project team provided timely and engaged supervision of the Project. The Project was led by one TTL based in Tunis throughout project preparation and implementation. The missions were carried out regularly with effective communication with counterparts. The Bank team consisted of appropriate mix of staff with right technical expertise and provided adequate support during technical missions on safeguards, procurement and FM. This technical support greatly contributed to increase of the project ratings from S to HS nearing completion. The team was proactive in exploring new opportunities for project restructuring and extension of closure deadlines.

c) Factors outside the control of government and/or implementing entities

66. Political and administrative instability in a post-revolution context and macro-economic issues (such as regional disparities and high unemployment rates) affected project implementation. Conservative cultural traditions prevented the Project from fully involving women in its activities (especially on decision-making concerning the nature and the scope of subprojects).

[21] Thus, for example, in festival activities (Zarat) and for the youth center (Mides), the project played a catalytic role and the Ministries of Tourism and Culture provided substantial subsidies. Also, in Mides, the Ministry of Youth and Sports financed the rehabilitation of the *Maison de Jeunes* (youth club) and the Ministry of Culture financed two successive festivals. Likewise, in Zarat, thanks to the determination and strategy of the association carrying the micro-projects funding the festivals, contributions from the Ministry of Culture were obtained.

[22] **F**or example, in Tozeur, the partnership established with the CRDAs involved in water management has been very effective since complementarities have been built. In Mides, the CRDA created the borehole and the project equipped it; in Tamerza, the CRDA built a gabion wall to protect the spring developed by the project and, in Tozeur, the CRDA provided technical supervision to water management works.

[23] In Tamerza and Zarat (where the municipality provided the salary of an agent for the management of irrigation water in Chebika

IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF M&E

M&E Design

67. The design of the M&E system was solid, simple and appropriate, including arrangements concerning data collection, analysis and processing from local level to the PMU. Indicators were adequately identified to monitor progress towards the PDO's objectives. However, the target values were revised at MTR: the percentage of women beneficiaries was considered too ambitious; and the number of species introduced, and the number of cultivars produced and distributed were increased.

M&E Implementation

68. At the beginning of implementation, the use of the M&E system was moderately satisfactory. The main issue identified at the MTR was that the M&E system did not trigger some early warnings (administrative delays. Following the MTR, M&E performance improved - data was systematically collected at local level (with the involvement of beneficiaries), analyzed by the Project team in a systemic manner and validated through field visits and supervision missions. Subsequently, the system has greatly benefited from the creation of a database, which is accessible to the public on the Project website (www.oasys.tn), allowing optimal monitoring of different activities and monitoring of indicators. Progress reports were regularly transmitted to the World Bank and updated before supervision missions. The MTR was conducted in December 2015, and the final evaluation (by the client) in May 2019.

M&E Utilization

69. After the MTR, the PIU consistently used the RFM databases for project management purposes. The Project benefited from having individual databases for each oasis, contributing to identify shortcomings, redirect investments, and coordinate action plans with counterparts to improve project implementation. Most of the improvements in the PDO and implementation performance were associated with better use of the Project RF, which worked as a control panel to alert and orient project interventions. Data generated by the M&E system were comprehensively used by decision-makers, particularly in the context of the preparation of the forthcoming Waha Project) (P169955).

Justification of Overall Rating of Quality of M&E

70. The overall rating of quality of M&E is Substantial. The project M&E was well designed, used during implementation and after project completion in assessing project achievements.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

Financial Management

71. The Project's financial management performance was consistently rated satisfactory. The Project disbursement process didn't face any issue, the disbursed amount at project closing represents 100 percent of the total project available funds.
72. All the disbursements were made on time. The devaluation of the Tunisian currency during implementation allowed the financing of additional activities. Some delays were noted regarding the submission of the audit reports during the two first years of the project[24]. This situation was out of the PIU control because in Tunisia audit is performed by the Supreme Audit Institution (CGF). This institution is understaffed, and in recent years causing delays in all Bank-financed projects audit reports. The delays were reduced progressively, and audited reports were submitted on time since then. The Project has complied with all the planned external audits of the Project financial statements, including the final. Audit reports were all unqualified.
73. The Financial reports of the sub-projects financed by the grant proceeds, were generally submitted above the scheduled deadline, which is 20 days after the end of the reporting period. Among the lessons learnt, we can highlight (i) the need to simplify and standardize such reports, and (ii) to reduce the use of petty cash by subprojects and

[24] The audit report of 2015 was submitted to the bank on the 3rd of November 2016 and the audit report of 2016 was submitted to the bank on the 11th of September 2017, while they were supposed to be submitted no later than the 30th of June of each year.

foresee the use of other equivalent payment tools such as the post cards.

Procurement

74. Overall, the procurement performance under the Project was assessed as Satisfactory. Throughout the duration of the Project, there were no procurement-related issues. Procurement implementation was decentralized in the six selected oasis and was efficiently conducted by related GDAs. Thanks to the Project innovative approach in putting GDAs in the driving seat, they were responsible for conducting the procurement processes of activities related to their oases. Around 300 contracts under the Project were awarded and were completed and liquidated with full payment before the closing date.

Social and Environmental Safeguards

75. Compliance with safeguard policies was highly satisfactory throughout the Project. For the purposes of the environmental assessment, the Project was classified in "category B", with expected environmental and social impacts. The following safeguard policies were triggered:
    - *Environmental Assessment*: Prior to Project implementation, an Environmental and Social Management Framework (ESMF) was prepared. During implementation, ESMPs were prepared for all sub-projects.
    - *Involuntary resettlement*. A Resettlement Policy Framework (RPF) was prepared acceptable to the Bank.
    - *Natural habitats.* This policy was triggered, because on-the-ground works (such as the delineation of trails for ecotourists and/or the creation of an ecolodge) were implemented. The ESMF included mitigation measures to minimize or avoid damage to natural habitats.
    - *Physical and Cultural Resources.* This policy was triggered to address activities which may directly or indirectly impact important cultural, archaeological, religious and aesthetic sites or chance finds.
76. Several safeguard training workshops were organized (for the benefit of local project staff, representatives of GDAs and regional representatives, regional environmental directorates and, on one occasion, heads of subprojects)
77. The Project was essentially designed to meet the social, environmental and economic needs of people living in and around the oases. The planning and implementation of all activities emphasized social inclusion, community engagement and participation, and the protection and restoration of ecosystems. As noted, an in-depth and inclusive consultation process with the targeted communities had been initiated before the Project came into effect with a view to preparing a participatory development plan for each of the six targeted oases. Thereafter, throughout the Project implementation period, the communities were continuously informed and involved in decision-making.
78. During the implementation of the Project, there have been no reports of accidents / incidents related to project activities that had a significant negative effect on the environment, natural habitat, cultural heritage, affected communities, the public or workers. No Resettlement Action Plans (PARs) were prepared, because project activities did not require expropriation or resettlement of people.
79. Physical and culture resources were not adversely affected by project activities. No chance finds were found. The project, however, supported tangible and intangible cultural activities such as: reconstitution of the main passage of the old village of Chebika and rehabilitation of houses; Carpet sewing and weaving -El Guettar & Chebika); organization of festivals and cultural events in Tamerza (Festival of mountain oases), in Noueil (Festival of Noueil, festival Ezzez), in El Guettar (spring festival, pistachio festival) and in the Zarat oasis (oasis days); revitalization of traditional horse-riding practices in the oasis of Zarat; silting and beautification activities (Noueil); artistic embellishment of Tamerza town and Mides village; strengthening Oasis social cultural traditions of irrigation water sharing.
80. Throughout the duration of the Project, grievances from people affected by the Project were registered and resolved.[25]

[25] Out of a total of 12 grievances, 10 complaints were resolved amicably, and one complaint was resolved in favor of the plaintiff. However, for one complaint in particular (concerning the irrigation of a field), the plaintiff did not accept the compensation offered, despite the opinions of two independent assessments.

81. There have been no complaints regarding social safeguards, insofar as the Project activities did not require the expropriation of land or resettlement of people.

C. BANK PERFORMANCE

Quality at Entry

82. Quality at entry was satisfactory. The Project was solidly prepared using comprehensive background and global references about oasis management. The Results Framework design was robust and included correct indicators (with the exception of one already mentioned above). The design incorporated lessons learned from international and national experience in the new proposed approach for oasis management. The project design was technically sound including implementation arrangements and was based on the results of solid diagnostic assessments and aligned with the Bank's engagement strategies and the country priorities and bringing innovative and transformational approaches and activities.

Quality of Supervision

83. The Project was effective from August 04, 2014, to November 29, 2019. Adequate implementation arrangements (including for M&E) were put in place. The Bank team conducted 11 supervision missions (two per year) including MTR mission, and more than 50 monthly formal and informal meetings Supervision mission covered all the aspects of the Project, including fiduciary and social and environmental safeguards. According to the borrowers' evaluation report the World Bank has performed the M&E activities well, submitting to the PMU important and significant recommendations/topics that need adequate attention and directions to ensure that the Project objectives are achieved before the closing date. Close supervision was essential to ensure the quality of Project implementation During Project implementation, the TTL and the Bank team were always available for just-in-time support/responses The TTL continuously provided guidance throughout the process from Project preparation, start-up and closing including on the technical, monitoring, and fiduciary aspects. The WB's staff carried out supervision missions every 6 months and held monthly meetings with the PIU and gave constructive feedback after each meeting and supervision mission. During the supervision missions, the WB staff organized field visits to the Project sites which were very useful to oversee the field conditions at the local level.

84. The Bank team provided close support to the implementing agency beyond the expected implementation support each semester. The Bank team provided timely and adequate guidance and high quality of supervision to the Project. The TTL based in the country office and his team provided adequate technical expertise and hands on training on all the relevant issues and timely overall support to the Project. The Bank team had regular meetings with official and decision-makers about policies and institutional aspects. Given the volatile situation of the country, the Bank team regularly assessed the socio-political environment. The composition of the team members of the supervision mission reflected the fiduciary commitment of the Project, with representatives on technical issues, gender, financial management, procurement and safeguards. The team supported fruitful interactions with the MENA-DELP Program (P130343) on sharing the knowledge base and the Ecotourism and Conservation of Desert Biodiversity (P120561) on community-based participatory Development. The team ensured adequate transition arrangements and valorization of lessons learned, particularly within the context of a new oasis project which aims to scale-up the approach to all Tunisian oases. Finally, the Project had an incredible scaling up effect in Tunisia, MENA and other regions 's landscape portfolio and the team reached out also to the broad WB' Environment, Natural Resources and Blue Economy (ENB) and Agriculture (AGR) Global practices network in the effort to improve implementation. The Implementation Support went behind the boundary of the Project and, for example, involved also the United Nations Convention to Combat Desertification (UNCCD), that considers the Project as one of the best examples of collaboration with the World Bank on Land Degradation Neutrality and desertification issues.

Justification of Overall Rating of Bank Performance

85. Based on the available information, the World Bank Group's performance should be rated Satisfactory.

RISK TO DEVELOPMENT OUTCOME

86. **Sustainability**. The Project enabled the piloting of a new participatory approach for oasis management in six representative oases in Tunisia. The fact that the Government requested a loan from the World Bank to scale-up the approach to all oases in the country is a key element for the sustainability of the Project achievements. The Project established a new pathway to sustainable oasis management that was adopted as well for the forest and rangeland ecosystems in Tunisia through the Integrated Landscape Management project (loan USD 52 million, N° 8722-TN). Beyond the sustainability of financial funds for oases management in Tunisia, are the positive sustainability gains in awareness and capacity development, which are now anchored in local institutions and communities, with positive policy implications for the future.
87. While the above elements are encouraging, there are clear risks concerning: (i) the progress towards reforms favoring decentralization and the involvement of local municipalities and grass-roots organizations in planning and implementing local development; (ii) the volatile economic and political situation in the country; and (iii) the likely severe impacts of climate change to the development outcomes of historical oasis landscapes. The importance of these potential risks cannot be overstated.
88. After the Project's closure, an outbreak of the COVID-19 caused by the 2019 novel coronavirus (SARS-CoV-2) has been spreading rapidly across the world since December 2019. This poses an additional short- and long-term threats to Tunisian oasis and their populations. Human, economic and environmental costs will be huge, and lives, businesses, jobs and livelihoods will be at risk. However, future activities will greatly benefit from the social capital and the resilience that the Project contributed to building.

V. LESSONS AND RECOMMENDATIONS

89. *Biodiversity protection and conservation must be considered as an integral part of agricultural development and natural resource management initiatives*. In fragile ecosystems, like oases, the practice of protecting and preserving the wealth and variety of species, habitats, and genetic diversity proved to be an important element in improving human health, wealth, food, energy and services. Integrating biodiversity protection as part of innovative agricultural policies and programs aiming at protecting plant, animal, microbial and genetic resources for food production, agriculture, and ecosystem functions (such as fertilizing the soil, recycling nutrients, regulating pests and disease, controlling erosion, and pollinating crops and trees). From this perspective small stand-alone GEF projects are valuable if they are strategically designed to pilot an approach that could later be scaled up even though the "blending" of GEF and IBRD/IDA resources does not necessarily need to happen at the same time and could be done in phases).
90. *Environment protection and socio-economic development are inextricably linked.* In spite of its limited funds and scope, the project emphasized the combined benefits of activities aimed at, on the one hand, combatting poverty, improving local conditions, supporting alternative livelihoods, creating jobs and generating income, and, on the other hand, rehabilitating ecosystems and their services, reducing human pressure on fragile natural resources and protecting biodiversity. In future operations combining adaptation measures to enhance oases resilience and economic measures for enhanced resilience of people will be critical for the success of other landscape management projects.
91. *Innovative agricultural techniques and practices are successful and sustainable only if they are the result of intense awareness-raising and capacity-building initiatives at local level.* By supporting the involvement of local municipalities and grass-roots organizations in planning and implementing local development, the project addressed key sustainability issues and created the conditions for scaling up at national and regional levels. In the near future, many of the activities initiated under the project will be sustainable on a larger scale only if local NGOs and GDAs continue to play an important role in supporting various activities and provided that they themselves receive adequate technical support. Grass-roots organizations should be consistently involved in the design and

implementation of SLWM and livelihood diversification subprojects. Moreover, regional and municipal authorities should be empowered to raise funds to support local initiatives and create jobs for the most vulnerable categories of people. Overall, the project has built on past achievements and helped sketch out a pathway to achieving future results at scale.

92. A number of operational factors of quality of project design and supervision are important for the success of the project: the soundness of design, the diagnostic studies of representative oases and planning activities conducted during the preparation phase, the organization of timely supervision missions with appropriate staff, and the quality of the recommendations issued from the mid-term review. An important factor of to the project success is that the same TTL and team (including Bank staff and a small group of external resource persons) were involved in the Project design implementation and supervision, ensuring continuous and homogenous support. These elements should be taken into account in future operations.
93. The project's emphasis on the know-how, experience and involvement of local actors as well the recognition of social capital as the glue that hold oasis communities together, made collaboration, self-help and solidarity possible between all stakeholders. A crucial recommendation is that, in the face of new challenges faced by communities living in arid and vulnerable environments, local traditional knowledge and social capital should be thoroughly mobilized and supported. This will help in future efforts to nurture appropriate administrative and environmental governance, enhance the well-being of local populations, ensure the right integration of local economies into globalization, adopt the right mix of adaptation and mitigation measures against the effects of climate change, and enhance strategies to fill gender gaps. promote women's participation in decision-making: this last is an important element that should be replicated as much as possible.
94. Finally, the importance given to active participation by the project in Tunisian and North-African networks, with a view of enhancing oasis heritage, sharing knowledge and good practices and establishing a common vision or the rehabilitation and economic revitalization of oases is necessary. Therefore, establishing synergy and partnerships between financial and technical partners operating in the arid and semi-arid areas of North Africa and Maghreb is a recommended and important factor to build on for success.

ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: Improve sustainable NRM and promote livelihoods diversification in the selected oases

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Direct project beneficiaries	Number	0.00 30-Sep-2014	18000.00 29-Nov-2019	18000.00 16-Jun-2017	23257.00 29-Nov-2019
Female beneficiaries	Percentage	0.00	51.00 25-Apr-2018	35.00	33.00

Comments (achievements against targets):
Target exceeded for total number of Direct project beneficiaries

For women beneficiaries, target was substantially achieved. The indicator was modified during the MT-Evaluation. This indicator had actually reached 35% in the first two years, but subsequently it declined because of the increased number of land and water management sub-projects which mainly benefited men, because of their nature and scope.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Land area where sustainable land mgt. practices were adopted as a result of proj	Hectare(Ha)	0.00 30-Sep-2014	700.00 29-Nov-2019		900.00 29-Nov-2019

Comments (achievements against targets):
Exceeded

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Land users adopting sustainable land mgt. practices as a result of the project	Number	0.00 30-Sep-2014	3000.00 29-Nov-2019		5065.00 29-Nov-2019

Comments (achievements against targets):
Exceeded

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of local species that have been reintroduced in selected oasis	Number	0.00 30-Sep-2014	20.00 29-Nov-2019	30.00 16-Jun-2017	32.00 29-Nov-2019

Comments (achievements against targets):
Exceeded

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Households adopting diversified activities as a result of the project	Percentage	0.00 30-Sep-2014	30.00 29-Nov-2019		47.20 29-Nov-2019

Comments (achievements against targets):
Exceeded

A.2 Intermediate Results Indicators

Component: Strengthening Capacities for Sustainable Management of Oasis Ecosystems

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Validation of the national strategy for sustainable development of Tunisian Oases by the Project Steering Committee	Yes/No	N 30-Sep-2014	Y 29-Nov-2019		Y 29-Nov-2019

Comments (achievements against targets):
Achieved

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Participants in consultation activities during project implementation (number)	Number	0.00 30-Sep-2014	3000.00 29-Nov-2019		4938.00 29-Nov-2019
Participants in consultation activities during project implementation - female	Number	0.00 30-Sep-2014	20.00 29-Nov-2019		30.00 29-Nov-2019

Comments (achievements against targets):
Exceeded for number of participants and for women participation

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Tunisian Oases with monographic profiles prepared	Percentage	0.00 30-Sep-2014	100.00 29-Nov-2019		100.00 29-Nov-2019

Comments (achievements against targets):
Achieved

Component: Supporting the Implementation of the PDPOs

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Technologies demonstrated in the project areas (number)	Number	0.00 30-Sep-2014	20.00 29-Nov-2019		25.00 29-Nov-2019

Comments (achievements against targets):
Exceeded

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised	Actual Achieved at

				Target	Completion
Clients who have adopted an improved agr. technology promoted by the project	Number	0.00 30-Sep-2014	200.00 29-Nov-2019		377.00 29-Nov-2019
Clients who adopted an improved agr. technology promoted by project – female	Number	0.00 30-Sep-2014	35.50 29-Nov-2019		35.50 29-Nov-2019

Comments (achievements against targets):
Exceeded

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Biodiversity tracking tool completed	Number	6.00 30-Sep-2014	18.00 29-Nov-2019		18.00 29-Nov-2019

Comments (achievements against targets):
Achieved

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised	Actual Achieved at

				Target	Completion
Land degradation tracking tool completed	Number	6.00 30-Sep-2014	18.00 29-Nov-2019		12.00 29-Nov-2019

Comments (achievements against targets):
Achieved

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Cultivars that are produced, multiplied and distributed	Number	0.00 30-Sep-2014	10.00 29-Nov-2019	70.00 16-Jun-2017	151.00 29-Nov-2019

Comments (achievements against targets):
Exeeded

B. KEY OUTPUTS BY COMPONENT

INDICATOR	TARGET	Actual achievement	REMARKS
Direct project beneficiaries (number)	18.000	23.257	Exceeded
Female beneficiaries (%)	35%	33%	Substantially achieved. The indicator was modified during the MT-Evaluation. This indicator had actually reached 35% in the first two years, but subsequently it declined because of the increased number of land and water management sub-projects which mainly benefited men, because of their nature and scope.
Land area where sustainable land management. Practices were adopted as a result of the project (ha)	700 ha	900 ha	Exceeded
Land users adopting sustainable land mgt. practices as a result of the project (number)	3.000	5.065.	Exceeded
Number of local species that have been reintroduced in selected oasis (number)	30	32	Exceeded
Households adopting diversified activities as a result of the project (%)	30%	47,2%	Exceeded

Intermediate Results indicators

INDICATOR	END TARGET	ACHIEVED TARGET	REMARKS
Validation of the national strategy for sustainable development of Tunisian Oases by the Project Steering Committee	Yes	Yes	Achieved.
Participants in consultation Activities during project Implementation (number)	3.000	4,938	Exceeded
Participants in consultation Activities during project implementation – female (%)	20%	30%	Exceeded
Tunisian Oases with monographic profiles Prepared (%)	100%	100%	Achieved
Technologies demonstrated in the project areas (number)	20	25	Exceeded
Clients who have adopted an improved agr. Technology	200	377	Exceeded

promoted by the project (number)			
Clients who have adopted an improved agr. Technology promoted by the project – female (%)	35%	35%	Achieved
Biodiversity tracking tool Completed (GEF)	18	18	Achieved
Land degradation tracking tool Completed (GEF)	18	18	Achieved
Cultivars that are produced, multiplied and distributed (number)	70	151	Exceeded

IN ADDITION:

Action Plan and Communication initiatives

- Organization of national workshop (Gafsa 3-4 June 2014) to start the process of reparation of the Action Plan)
  November 2015: Preparation and approval of the Action Plan of the National Strategy for the Sustainable Development of Tunisian Oases (13 October 2015): National workshop.
- Publication of "The traditional Oases of Tunisia" (2017).
- Design and printing of a presentation brochure (Arabic and French versions) of the project and guides to the project's pilot sites (Arabic and French).
- Website: http://www.oasys.tn/
- Communication strategy and action plan: validated on December 9, 2016.
- Production of documentary films on the project and the intervention sites.

And also:

- Reconstitution of the three floors in the oases of Tamerza, Mides and Chebika, benefitting from combined activities of subprojects (water management, protection against wild boars, biodiversity / restocking);
- Intensification of the production system following the reduction of the water tower;
- Plantation of 30,000 olive trees;
- Increased availability of water for irrigation (for example, 30 liter/second in Mides and 25 liter/second in Chebika); Supply of large quantities of water for supplementary irrigation (estimated at 225 m3 in the oasis of Chebika, 400 m3 in the oasis of Mides and 500 m3 in the oasis of El Guettar);
- Improved irrigation methods by submersion by the introduction of new water-saving techniques;
- New water pumping technique by using photovoltaic energy (leading to a net reduction in farmers' expenses for this item of up to 30%). In Tamerza, the pomegranates and peach trees have already produced their first production.

However, the results of some SLWM subprojects will depend on different factors: in Tamerza, for example, the long-term sustainability of the pomegranate ceratite micro-project will depend on the future capacity of the GDA to supply the necessary products to farmers. In Mides, in spite of positive results of a first year, the fight against citrus infestations will depend on the technical and financial capacities of local GDA. Finally, in terms of protection of biodiversity, many local cultivars, threatened with disappearance, were preserved *in-situ*.

SLWM Activities

- Installation of a composting unit in El Guettar
- Creation of fences for the protection of crops against wild boars. This action made it possible to protect an area of 172 ha for the benefit of 559 farmers.
- Equipment of 6 boreholes in motor pumps and installation of semi-buried seguias and rehabilitation of a basin dating from the colonial era.
- Improvement of irrigation systems and techniques
- Equipment for GDA
- Development of premises (El Guettar)
- Restoration and protection of biodiversity promotion of six different techniques. It involved the acquisition and distribution of 5,000 suckers of date palms, 16,265 seedlings of fruit trees and 1,050 kg of seeds
- Reinforcement of the logistical capacities of the municipalities of Tamerza and Zarat for the cleanliness of cities.
- Construction of 6,000 linear meters of new seguias (cemented canals),
- Rehabilitation of around 1,500 linear meters of existing seguias; (ii) the development of 3 irrigation water storage basins (for a total of 1,170 m^3); and (iii) the installation of a new localized system for saving irrigation water for an area of 8 ha).

Income-generating activities

- Carpet sewing and weaving -El Guettar and Chébika)
- Beekeeping (Zarat)
- Poultry (Nouali)
- Ecotourism: Galaa Club, tourist restaurant, etc. (El Guettar)
- Cultural activities (organization of festivals and cultural events) and horse-riding
- Support to Youth Club (Mides)
- Silting and beautification activities (Noueil)
- Artistic embellishment (Tamerza town and Mides village).
- Beautification and photovoltaic lighting of the Zarat coastal road.

Table : Groups of SLWM microprojects

Group 1: Plantation of palm and fruit trees	**Group 2: Rehabilitation / renovation of irrigation infrastructure**	**Group 3: Protection against the harmful effects of wild boar and integrated pest management against palm and fruit trees and cleaning**	**Group 4:** Strengthening of the capacities of GDAs through the acquisition of equipment
- Rejuvenation of palm trees and improvement of the biodiversity of date palms by planting 8,932 shoots of date palms divided into 26 varieties, including 16 endangered; - Improving the biodiversity of fruit trees, by planting 14,350 plants in the oases of Chbika, Tamerza and Midès, divided into 13 fruit species - Plantation of 30,000 olive trees - Improving the biodiversity of aromatic and medicinal plants, by planting 3,800 plants divided into 4 varieties (Marjoram, Rosemary, Sage and rose), for the benefit of 8 farmers from the oasis of Noueil. - Improvement of vegetable and fodder biodiversity, acquisition and distribution of 500 Kg of local seeds, in the oases of Chbika, Tamerza and Midès, for the benefit of 80 Farmers	- Equipment of a new irrigation borehole (40 l / s), construction of a storage basin for irrigation water (400 m3) and improvement and maintenance of the irrigation system in the western part of the oasis of 1600 ml in Mides, - Installation of a new irrigation system (25 l / s) connected to the Dghima well and a storage basin (225 m3) in Chébika, - Construction and maintenance of the 3100 linear meter of irrigation network, Construction of the new water saving system (6500 ML in buried PVC), rehabilitation of a 500m3 basin, acquisition of 4 pump units, welding group, electric hoist, etc. in El Guettar - Maintenance of the 2400 linear meter of irrigation system, support for the rehabilitation and cleaning of drains (mechanization) and	- Protection against the ravages of wild boars in Chbika, Tamerza, Midès and Zarat, by the construction of reinforced fences on a total length of 23,740 linear meters - Implementation of a pilot program for the integrated pest control of crops in the oases of Tamerza, Midès, Chbika and El Guettar, on a total area of 150 ha, for the benefit of 300 farmers. - Cleaning of 23% of the total area of the 6 pilot oases with a total cleaned area of 207 ha and cleaning of drains over 8,200 ml, and capacity building of GDAs for the sustainability of the achievements of cleaning interventions - Pilot test of '' a new mechanized pollination technique in the oases of Chbika, Tamerza and Midès, on a total area of 6 ha totaling 48 feet of date palms (Deglet Nour, Alig and Khwat Alig).	- Strengthening the logistical capacities of GDAs for emergency intervention in the event of floods (acquisition of backhoe loader (2) and strengthening of the technical and logistical capacities of the GDA of Tamerza for intervention against fires - Reinforcement of the capacities of GDAs for the provision of agricultural services to their members, including cleaning, transport, works relating to the soil and the sanitary state of the oasis - Capacity building of the GDA for the maintenance of the irrigation network (

	equipment and electrification of 26 wells for irrigation in Tamaghza - Installation of a photovoltaic station for pumping water in Zarat - Installation of a new water saving system by irrigation for 8 ha in Nouiel		

ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION

A. TASK TEAM MEMBERS

Name	Role
Preparation	
Supervision/ICR	
Taoufiq Bennouna	Task Team Leader(s)
Blandine Marie Wu Chebili	Procurement Specialist(s)
Mehdi El Batti	Financial Management Specialist
Antoine V. Lema	Team Member
Antoine V. Lema	Social Safeguards Specialist
Leila Chelaifa	Team Member
Mohamed Adnene Bezzaouia	Environmental Safeguards Specialist

B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US$ (including travel and consultant costs)
Preparation		
FY13	4.650	95,760.11
FY14	8.392	266,756.11
FY15	.950	-23,536.18
Total	**13.99**	**338,980.04**
Supervision/ICR		
FY15	5.757	80,842.80
FY16	6.282	80,989.29
FY17	2.500	32,317.96
FY18	1.975	13,563.50

FY19	2.879	32,938.78
FY20	3.356	35,974.57
Total	**22.75**	**276,626.90**

ANNEX 3. PROJECT COST BY COMPONENT

Project Disbursement by component:

Components	Amount at Approval (US$)	Actual at Project Closing (US$)	Percentage of Approval (US$)
Strengthening Capacities for Sustainable Management of Oasis Ecosystems	1,031,830	1,033,136	100.13%
Supporting the Implementation of the PDPOs	4,434,000	4,431,785	99.95%
Project Coordination and Management	294,900	293,594	99.56%
Total	**5,760,730**	**5,758,515**	**99.96%**

Project Disbursement by Category:

Category	Amount at Approval (US$)	Actual at Project Closing (US$)	Percentage of Approval (US$)
1. Goods, Non consulting services, Consultants services, Incremental operating costs and training under Parts 1.1(a)1.1(c)1.2 1.3 and part III of the project	1,326,730	1,326,730	100.00%
2. Subvention pour les microprojets communautaires (Composante II)	4,434,000	4,431,785	99.95%
Total	**5,760,730**	**5,758,515**	**99.96%**

ANNEX 4. EFFICIENCY ANALYSIS

1. The available financial resources of the project have been used in an efficient manner and inputs have been successfully converted into results. Costs involved in achieving project objectives are reasonable in comparison with both benefits and recognized norms (*value for money*). This was also confirmed by an economic analysis recently conducted as part of the preparation of the forthcoming *Sustainable Oasis Landscapes Management Project* (P169955), which shed light on the efficiency of the TOELP initiatives on local production systems.

2. The project focused on what local communities considered to be the main constraints affecting their production systems, namely: reduced availability of irrigation water; relatively long delays between "water distribution tours"; increasing costs of water pumping; excessive land fragmentation; deterioration in the terms of trade of agricultural products compared to inputs (inflation); and increased crop damage (annual crops and fruit trees) following frequent wild boar attacks.

3. Overall, the Project has also generated *general benefits* that can play a major role in reducing inequities and improving social stability and prosperity in the intervention areas and *economic benefits* from more effective citizen consultations and improved social and economic planning.

4. More specifically, the Project has generated the following *tangible economic benefits*: (i) increased agricultural, livestock and artisanal production; (ii) cost savings (in particular for irrigation); (iii) improved yields (as a result of new plantations and training initiatives); (iv) increased share of production generating cash income, increased average producer prices and greater share of benefits for producers; (v) reduction of post-harvest losses and transaction costs; (vi) increased water savings and higher water productivity; (vii) shift to more sustainable land and crop management practices; (viii) increased share of crops and economic activities with high value added per production unit and/or labor unit; (ix) generation of additional employment; (x) increased incomes for direct and indirect beneficiaries; and (xi) increased fiscal revenues. In line with the conclusions of the *Cost-Benefit Analysis* conducted at the time of the preparation of the project, revenues from agriculture and livestock and other diversified activities are expected to constantly increase over a period of 10 years.

5. The Project has also generated other benefits, that, *while not tangible or easily quantifiable, have been significant,* contributing to reducing inequities and tensions and improving social stability and prosperity in the project intervention areas.

- *Among the environmental benefits,* the following are particularly important: conservation of ecosystems, habitats and biodiversity; carbon sequestration; reduced greenhouse gases emissions; enhanced resilience and sustainability of oasis landscape systems; and reduced damage caused by wind and water erosion and siltation.

- *The main socio-economic benefits* are the following: longer term multiplier effects of strengthened capacities of smallholders and their organizations; increased production from better soils / water management; income from more diversified products;[26] enhanced food and nutrition security for targeted households; reduced vulnerability to external shocks (notably climate change and instability

[26] It has also to be added that the effects of some initiatives supported by the project are not yet visible on the new palm plantations, since they will only be productive in six- or seven-years' time and will not reach full production for at least a dozen years.

or decrease of food prices); enhanced livelihoods of oasis communities and households (through investments aimed at diversifying and increasing production and income, including investment specifically addressing women 'needs and priorities); improved water and air quality and health of oasis inhabitants and consumers and improved life expectancy.

6. At all levels, the general economic efficiency of the project is linked to the losses that have been avoided land degradation and biodiversity thanks to the knowledge base generated and managed by the project, as well as to the participatory approaches supported among local stakeholders. More specific economic efficiency is linked to the focus of project activities on potentially sensitive areas and related issues of land and biodiversity degradation.

Quantification of benefits

7. Under Component 2, the total cost of investments for 119 subprojects (of which 60 subprojects related to SLWM and 59 for local livelihoods and income generating subprojects) was 3,7 million US$. Through these investments, a total of 1,750 seasonal and/or permanent jobs were created (permanent jobs only may be estimated at about 900), whereas 184 micro, small and medium enterprises (MSME) were created and/or supported. At least 450 households benefited from the income generating activities with average monthly income comprised between 300 and 500 TND or 106 and 176 US$.

8. Tables 1 and 2 below present economic benefit respectively of subprojects related to SWLM and to livelihoods diversification activities. For the latter category, it should be pointed out that: (i) only half of the livelihood diversification-related subprojects were economic in nature and therefore generated additional income; and (ii) many diversification subprojects had actually social and cultural objectives.

9. The Project is economically viable with a ~~net present value (~~NPV) of US$ 22 million (US$46 million for subprojects of sub-component 2.1 and US$2 million for subprojects of sub-component 2.2). The ~~overall economic rate of return (~~ERR) was 22% (27% for subprojects of sub-component 2.1 and 12% for subprojects of sub-component 2.2) at a discount rates of 6% (in line with the WB recommendations for economic analysis of projects (Note, Chief Economist, SD Dept. January 2016).

Table 1: SWLM subprojects – Sub-component 2.1

(Average exchange rate US$/TD (2016-2019)

Oasis	Nouiel	Tamerza	Mides	Chébika	Guettar	Zarat	Total
Governorate	Kébili	Tozeur	Tozeur	Tozeur	Gafsa	Gabes	6
Subprojects (number)	7	16	10	6	13	8	60
Investment (TD)	583 012	1 484 280	1 095 010	597 960	1 485 245	619 175	5 864 682
Area (ha)	97	80	29	25	450	80	761
Amont/ha (TD)	6 010	18 554	37 759	23 918	3 301	7 740	7 707
Average amount/micr-project (TD)	83 287	92 768	109 501	99 660	114 250	77 397	97 745

Amunt/ha (US$)							3 670

Table 2: Livelihood diversification - Sub-component 2.2

(Average exchange rate US$/TD (2016-2019)

Oasis	Nouiel	Tamerza	Midès	Chébika	Guettar	Zarat	Total
Governorate	Kébili	Tozeur	Tozeur	Tozeur	Gafsa	Gabes	6
Microproject (number)	8	15	9	8	8	13	61
Investment (TD)							3 151 061
Average amount /micro-project (TD)							51 657
Average amount/ microproject (US$)							24 598

Table 3: Sensitivity analysis: Basic case a/ (Excluding costs of component 1)

	Basic case	Increasing costs			Increasing profits		Decreasing profits				Delayed profits	
		+10%	+20%	+50%	10%	+20%	-10%	-20%	-30%	-50%	1 yr	2 yrs
ERR	22%	21%	20%	18%	23%	24%	21%	19%	19%	15%	20%	18%
NPV (million TD)	45	44	43	40	51	57	40	34	32	17	40	34
NPV (million US$)	22	21	21	19	24	27	19	16	15	8	19	16

a/ Including all the costs of the project.

Table 4: Sensitivity analysis - variable a/

	Basic case	Increasing costs			Increasing profits		Decreasing profits				Delayed profits	
		+10%	+20%	+50%	10%	+20%	-10%	-20%	-30%	-50%	1 yr	2 yrs
ERR	27%	26%	25%	22%	28%	29%	26%	25%	24%	19%	24%	22%
NPV (million TD)	49	48	47	45	54	60	43	38	36	21	43	38
NPV (million US$)	23	23	23	21	26	29	21	18	17	10	21	18

10. The Project has significant added value from the Government and development community standpoint. Beyond financing, this added value arises mainly from the Bank's technical input based on international

experience in similar INRM and value chain development projects as well as support to productive alliances, introduction of innovative financing mechanisms for different types of subprojects (an evolution from the "classic" productive community-driven-development/ CDD projects), capacity building of small producers and value chain actors during implementation through training-of trainers methodologies (notably for the ex-ante preparation of PDPOs), knowledge sharing and communication. Such important support has complemented and, to a certain extent, corrected weaknesses in national expertise and business advisory support services to oases producers and their organizations, resulting in increasing the project's development impact in ways that go beyond what could be realized by exclusive reliance on the Government's own institutions or existing national consulting firms.

11. The costs incurred in achieving the project objectives were reasonable in relation to benefits and recognized standards and this led to an optimization of the available resources. Practices, technologies and techniques promoted by the Project, which contributed to protecting biodiversity and improving SLWM, were cost-effective. Economic efficiency was accompanied by qualitative performance. Indeed, the different subprojects supported by the project have helped to create a new awareness among local actors of the environmental, economic and social constraints and challenges of oasis landscapes (concerning, for example, the degradation of natural resources and the loss of traditional practices and local know-how), as well as of the potential of oasis ecosystems to contribute to the fight against poverty and to job creation). They have also given rise to the emergence of an innovative and promising development dynamic, by promoting dialogue between state and non-state actors, enhancing solidarity between actors, valuing local know-how and increasing participation of women and young people in the development process.

12. At national level, without the project, the absence of a proper plan of action for sustainable strategy for oasis management, of in-depths assessments, and of capacity strengthening initiatives for all stakeholders would have had significant and irreversible impact on oasis ecosystems. At local level, in the absence of the project, land degradation and biodiversity loss in the selected oases would have had a significant and growing economic impact on local livelihoods.

13. *From an administrative point of view*, communication between the PMU, the field teams and the GDAs and microproject promoters was generally good, despite the geographical distances between the PMU and the targeted oases and the distances between the oases themselves.

14. The project team generally complied with the specific conditions set out in the financing agreement as far as possible. The criteria for choosing micro-project promoters were also respected as far as possible. Where local civil society associations did not have the capacity required to manage an activity, regional associations were used (as in the case of the AID Association in Tamerza and the Oxygen Association in Zarat).

15. Specialists in the regional directorates of the concerned sectors (agriculture, tourism, youth and sport, culture, education) were systematically called upon to verify the technical viability of the subprojects. World Bank procurement procedures have been used for the procurement of goods, services and works.

16. The Steering Committee played its role and met at least once a year. It was during the meetings of the Steering Committee that the list of priority subprojects for each site was presented, discussed and validated.

ANNEX 5. SUMMURY OF BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

We have read the ICR and we agree with its main elements, including the ratings. This corresponds to the findings of our own final evaluation report (below some excerpts).

Excerpts from the final evaluation report (November 2019)

OVERALL ASSESSMENT
In a pragmatic way, pending the establishment of decentralized institutions (local communities), the project has contributed to strengthening the capacities of GDAs and civil society organizations, by improving the capacities of their leaders, by emphasizing the awareness of their members, by supporting the identification and implementation of transparent and participatory processes for planning and implementing inclusive local development. In addition, certain initiatives have contributed significantly to the consolidation of synergies and collaboration between GDA and different ministerial departments as well as between the departments themselves, a crucial element for future operations. The decentralized technical services, which used to operate in silos independently of each other, were able gradually to adopt a certain degree of collaboration and integration with the local associative fabric.

IMPACTS AND RESULTS
The project is perfectly in line with the political commitment of the Tunisian government and the global objectives of the World Bank aimed at combating poverty, especially in the least developed regions, and sharing prosperity, reducing regional disparities, tackling youth unemployment, reducing economic inequalities between men and women, helping to diversify local livelihoods, improving living conditions and preventing many vulnerable families from falling into chronic poverty.

LESSONS LEARNED AND RECOMMENDATIONS
Biodiversity. The project helped to highlight the importance of operations aimed at systematically integrating the protection of biodiversity in all sectors and taking into account the direct factors for the protection of habitats and species. The main lesson to be learned is that local people have traditional know-how and also that local production practices can be improved to better respect and protect biodiversity by focusing on sectors with significant impacts on biodiversity (agriculture, ecotourism and infrastructure development). A major recommendation concerns the crucial role of concerted initiatives to strengthen the technical capacities of local stakeholders and the implementation of financial mechanisms (such as certification, payment for environmental services, compensation for biodiversity, etc.) to encourage stakeholders to modify any current practice likely to degrade biodiversity.

Socioeconomic development and environmental protection
Lessons learned from the project highlight the very close links between a range of activities aimed, on the one hand, at reducing poverty, improving local conditions, supporting alternative livelihoods and creating jobs and generate income and, on the other hand, reduce human pressure on fragile natural resources and protect biodiversity. In any future program, it will be

important to closely link biodiversity protection and socioeconomic development initiatives and to ensure the creation of sustainable jobs in niche economic sectors, such as high-end bio-production.

Durability
Local NGOs, GDAs and SCOs, which generally have good local roots, will continue to play an increasingly important role in supporting various activities and ensuring the sustainability of certain activities, provided that they receive them. - even adequate technical support from devolved technical services and other partners. It is well known that these associations do not have substantial financial means. However, in the new configuration of decentralization, regional and municipal authorities will have to assume increasing responsibilities and will probably be able to mobilize funds to support relatively inexpensive sub-projects and create jobs for the most vulnerable categories of people. vulnerable.

CONCLUSION
The participatory approach adopted by the project has enabled local stakeholders to adopt innovative techniques for sustainable land and water management and protection of biodiversity, while preserving and enhancing practices, knowledge and skills.

It was, of course, an ad hoc experience that was quite limited in duration and space, with limited financial and human resources. But it was also an extremely promising experience, the lessons of which will be largely capitalized in the general framework of national policies on social and economic development in rural areas, in general, and in the preparation of more projects. large-scale (such as the Waha Project which aims to cover all the historic oases of the governorates of Gabès, Gafsa, Kébili and Tozeur).

ANNEX 6. SUPPORTING DOCUMENTS (IF ANY)

P

- Integrated Safeguards Data Sheet (February 4, 2013) (April 14, 2014)
- Project Information document (PID) (February 6, 2013) (April 24, 2014)
- Grant Agreement (August 4,2014)
- Disbursement Letter (August 4,2014)
- Environmental and Social Management Framework (ESMF) (February 1, 2014)
- Resettlement Policy Framework (RPF) (February 1, 2014)
- Project Appraisal Document (PAD) (May 21, 2014)
- All the Aide-memoirs of the 11 supervision missions
- Implementation Status & Results Report (ISRs) (seven ISRs were posted on the Website):
    i. September 6, 2016
    ii. November 4, 2016
    iii. May 10, 2017
    iv. November 27, 2017
    v. May 22, 2018
    vi. November 28, 2018
    vii. May 31, 2019
- Procurement Plans:
    i. August 9, 2014
    ii. September 1, 2016
    iii. March 27, 2017
    iv. February 7, 2018
    v. June 13,2018
    vi. June 22, 2018
    vii. November 12, 2018
    viii. February 25, 2019
    ix. April 30, 2019
    x. May 27, 2019
- Mid-term Evaluation Report (June 2017)
- Ministère des Affaires locales et de l'Environnement (2019) Rapport d'Evaluation finale du Projet GDEO (Final Evaluation Report) (November 2019)
- Minutes of Steering Committee Meetings
- Annual Progress reports (prepared by the PMU
- Communication strategy and action plan
- Republic of Tunisia (2016) Tunisia 2020. Road to Inclusion, Sustainability and Efficiency
- Republic of Tunisia (2018) National Strategy for the Green Economy
- Programme de Mise à niveau des Etablissements hôteliers (PMNH) : Lignes directrices (Guidelines) (2018)
- GEF-5 related documentation on Biodiversity and Land degradation.