

Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: {ReportNo}

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF US\$ 5,760,730

TO THE

REPUBLIC OF TUNISIA

FOR A

TUNISIA OASES ECOSYSTEMS AND LIVELIHOODS PROJECT (TOELP)

MNSEE
MENA

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

CURRENCY EQUIVALENTS

(Exchange Rate Effective April 13, 2014)

Currency Unit = Tunisian Dinar (TND)
TND 1 = US\$0.725
US\$1 = SDR 1.379

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

APIOS	Irrigation Improvement Program in Oases in Southern Oases
BNG	National Bank of Genes
CDD	Community-driven Development
CFRA	Training Center for Agricultural Recycling techniques
COFIL	Project Steering Committee
CRDA	Regional Agricultural Development Commissariat
CRRAO	Regional Research Center for Oasis Agriculture
CSO	Civil society organizations
DGEQV	General Directorate for Environment and Quality of Life
DPL	Development Policy Loan
ESMF	Environmental and Social Management Framework
FIES	Fact Sheet Environmental and Social Information
FY	Fiscal year
GDA	Agricultural Development Groups
GDP	Gross Domestic Product
GEB	Global Environmental Benefit
GEF	Global Environment Facility
GIS	Geographic Information System
GIZ	International Development Association
IDA	International Development Association
IMF	International Monetary Fund
INS	National Institute for Statistics
IRA	Institute of Arid Regions
ISN	Interim Strategy Note
IUFR	Interim Unaudited Financial Report
JICA	Japan International Cooperation Agency
MA	Ministry of Agriculture
MEATDD	Ministry of Equipment, Territorial Management, and Sustainable Development
MENA	Middle East and North Africa Region
MENA-DELP	Middle East and North Africa Desert Ecosystems and Livelihoods Program
MT	Ministry of Tourism
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
OP	Operational policy
PAD	Project Appraisal Document
PDO	Project Development Objective
PDPO	Oasis Participatory Development Plan

PFS Project Financial Statement
RAP Resettlement Action Plan
RPF Resettlement Policy Framework
SLWM Sustainable land and water management
TD Tunisian Dinar
TOELP Tunisia Oasis Ecosystems and Livelihood Project
WB World Bank

Regional Vice President:	Inger Andersen
Country Director:	Simon Gray
Sector Director:	Junaid Kamal Ahmad
Sector Manager:	Charles Joseph Cormier
Task Team Leader:	Taoufiq Bennouna

TUNISIA
TUNISIA OASES ECOSYSTEMS AND LIVELIHOODS PROJECT (TOELP)

TABLE OF CONTENTS

	Page
I. STRATEGIC CONTEXT	11
A. Country Context.....	11
B. Sectoral and Institutional Context.....	13
C. Higher Level Objectives to which the Project Contributes	16
II. PROJECT DEVELOPMENT OBJECTIVES	18
A. PDO.....	18
B. Project Beneficiaries	18
C. PDO Level Results Indicators	19
III. PROJECT DESCRIPTION	20
A. Project Components	20
B. Project Financing	23
Project Cost and Financing	23
C. Lessons Learned and Reflected in the Project Design.....	23
IV. IMPLEMENTATION	24
A. Institutional and Implementation Arrangements	24
B. Results Monitoring and Evaluation	27
C. Sustainability.....	27
V. KEY RISKS AND MITIGATION MEASURES	27
A. Risk Ratings Summary Table	27
B. Overall Risk Rating Explanation	28
VI. APPRAISAL SUMMARY	29
A. Economic and Financial (if applicable) Analysis	29
B. Technical.....	31
C. Financial Management.....	31
D. Procurement	32
E. Social (including Safeguards).....	33

F. Environment (including Safeguards)	33
G. Other Safeguards Policies Triggered (<i>if required</i>).....	34
Annex 1: Results Framework and Monitoring	35
Annex 2: Detailed Project Description.....	39
Annex 3: Implementation Arrangements	70
Annex 4: Operational Risk Assessment Framework (ORAF).....	95
Annex 5: Implementation Support Plan.....	95
Annex 6: GEF’s Focal areas and Strategies, and incremental costs	104
Annex 7: Economic and Financial Analyses	108
Annex 8: Map of Tunisia.....	113

List of Tables

Table 1: Project Cost and Financing
Table 2: Risk ratings
Table 3: Safeguard policies
Table 4: Risk assessment & mitigation measures
Table 5: FM Action plan
Table 6: Project expenditures by category
Table 7: Procurement analysis and mitigation measures
Table 8: Prior Review thresholds
Table 9: Implementation support plan
Table 10: Staff and skills needed
Table 11: Partners
Table 12: Selected GEF-R Focal Areas: Objectives, Outcomes, and Core Outputs
Table 13: Comparing Project’s expected outcome and outcomes of the MENA-DELP Program
Table 14: GEF Incremental cost Matrix

List of Boxes

Box 1: National strategy for the sustainable development of oases
Box 2: National Guidelines for the preparation of Oasis Participatory Development Plans
Box 3: Key topics for the training of stakeholders
Box 4: Eligibility criteria of community-driven Micro-projects

List of Diagrams

Diagram 1: National, regional and local arrangements (steering, implementing and coordinating project activities)
Diagram 2: Overall funds flow

PAD DATA SHEET*Tunisia**TN-Oases Ecosystems and Livelihoods Project (P132157)***PROJECT APPRAISAL DOCUMENT***MIDDLE EAST AND NORTH AFRICA**MNSEE*

Report No.: PAD835

Basic Information			
Project ID P132157	EA Category B - Partial Assessment	Team Leader Taoufiq Bennouna	
Lending Instrument Technical Assistance Loan	Fragile and/or Capacity Constraints []		
	Financial Intermediaries []		
	Series of Projects []		
Project Implementation Start Date 07-Jul-2014	Project Implementation End Date 04-Jul-2019		
Expected Effectiveness Date 11-June-2014	Expected Closing Date 06-Dec-2019		
Joint IFC No	GEF Focal Area Multi-focal area		
Sector Manager Charles Joseph Cormier	Sector Director Junaid Kamal Ahmad	Country Director Neil Simon M. Gray	Regional Vice President Inger Andersen
Borrower: Government of Tunisia			
Responsible Agency: General Directorate for the Environment and Quality of Life			
Contact: Telephone No.:	Salah Hassini (216-72) 870-679	Title: Email:	General Manager dgeqv@mineat.gov.tn,
Project Financing Data(in USD Million)			
<input type="checkbox"/> Loan	<input checked="" type="checkbox"/> Grant	<input type="checkbox"/> Guarantee	
<input type="checkbox"/> Credit	<input type="checkbox"/> IDA Grant	<input type="checkbox"/> Other	
Total Project Cost:	5,760,730	Total Bank Financing:	0.00
Financing Gap:	0.00		
Financing Source		Amount	
Borrower		0.00	

Global Environment Facility (GEF)	5,760,730
Total	5,760,730

Expected Disbursements (in USD Million)

Fiscal Year	2015	2016	2017	2018	2019	2020	0000	0000	0000
Annual	288037.00	864110.00	1728219.00	1728219.00	1152146.00	0.00	0.00	0.00	0.00
Cumulative	288037.00	1152147.00	2880366.00	4608585.00	5760731.00	5760731.00	0.00	0.00	0.00

Proposed Global Environmental Objective(s)

The Project Development Objective/Global Environmental Objective is to improve sustainable natural resources management and promote livelihoods diversification in targeted traditional oases in Tunisia.

Components

Component Name	Cost (USD Millions)
Strengthening capacities for sustainable management of oasis ecosystems	1,031,830.00
Support the implementation of oasis participatory development plans	4,434,000.00
Project Coordination and Management	294,900.00

Institutional Data

Sector Board

Environment

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Agriculture, fishing, and forestry	General agriculture, fishing and forestry sector	40		
Water, sanitation and flood protection	General water, sanitation and flood protection sector	40		
Energy and mining	Other Renewable Energy	20		
Total		100		

I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes			
Theme (Maximum 5 and total % must equal 100)			
Major theme	Theme	%	
Environment and natural resources management	Biodiversity	20	
Rural development	Other rural development	20	
Environment and natural resources management	Other environment and natural resources management	20	
Environment and natural resources management	Water resource management	20	
Environment and natural resources management	Climate change	20	
Total		100	
Compliance			
Policy			
Does the project depart from the CAS in content or in other significant respects?		Yes []	No [X]
Does the project require any waivers of Bank policies?		Yes []	No [X]
Have these been approved by Bank management?		Yes []	No [X]
Is approval for any policy waiver sought from the Board?		Yes []	No [X]
Does the project meet the Regional criteria for readiness for implementation?		Yes [X]	No []
Safeguard Policies Triggered by the Project		Yes	No
Environmental Assessment OP/BP 4.01		X	
Natural Habitats OP/BP 4.04		X	
Forests OP/BP 4.36			X
Pest Management OP 4.09			X
Physical Cultural Resources OP/BP 4.11		X	
Indigenous Peoples OP/BP 4.10			X
Involuntary Resettlement OP/BP 4.12		X	
Safety of Dams OP/BP 4.37			X
Projects on International Waterways OP/BP 7.50			X
Projects in Disputed Areas OP/BP 7.60			X
Legal Covenants			
Name	Recurrent	Due Date	Frequency

Description of Covenant			
Conditions			
Source Of Fund	Name	Type	
Description of Condition			
Team Composition			
Bank Staff			
Name	Title	Specialization	Unit
Hassine Hedda	Senior Finance Officer	Finance Officer	CTRLA
Marie A. F. How Yew Kin	Language Program Assistant	Language Program Assistant	MNSEE
Jean-Charles De Daruvar	Senior Counsel	Senior Counsel	LEGAM
Li Song	Senior Environmental Specialist	Environmental Specialist	MNSEE
Marie Roger Augustin	Legal Analyst	Legal Analyst	LEGAM
Africa Eshogba Olojoba	Senior Environmental Specialist	Senior Environmental Specialist	MNSEE
Taoufiq Bennouna	Sr Natural Resources Mgmt. Spec.	Team Lead	MNSEE
Walid Dhouibi	Procurement Specialist	Procurement Specialist	MNAPC
Mehdi El Batti	Financial Management Analyst	Financial Management Analyst	MNAFM
Melanie Argimon Pistre	Junior Professional Associate	Junior Professional Associate	MNSEE
Andrianirina Michel Eric Ranjeva	Finance Officer	Finance Officer	CTRLA
Non Bank Staff			
Name	Title	Office Phone	City
Angelo Bonfiglioli	Local Governance Specialist		Vence
Abderrahmane Ben Boubaker	Consultant, Implementation and Community Outreach		Tunis
Locations			

Country	First Administrative Division	Location	Planned	Actual	Comments
Tunisia	Tawzar	Gouvernorat de Tozeur		X	Oasis de Mides
Tunisia	Tawzar	Gouvernorat de Tozeur		X	Oasis de Tamezgha
Tunisia	Tawzar	Gouvernorat de Tozeur		X	Oasis de Chebika
Tunisia	Qibili	Gouvernorat de Kebili		X	Oasis de Noueil
Tunisia	Gafsa Governorate	Gafsa Governorate		X	Oasis d'El Guettar
Tunisia	Qabis	Az Zarat		X	Oasis de Zarat

I. STRATEGIC CONTEXT

A. Country Context

1. **Economy.** Before the outbreak of the revolution in January 2011, Tunisia had generally benefited from favorable financial and economic conditions. However, economic growth remained average and was unable to reach its full potential (real growth per capita stood at 3.5% between 2000 and 2010, while reaching 5.2% for the average upper middle-income countries). In addition, the distribution of the gains from growth had been uneven, particularly in terms of economic and employment opportunities which has probably contributed to the popular uprising. Since the revolution, the economy has experienced significant political uncertainty, with a recessionary shock during the revolutionary years (-2% of GDP), followed by a recovery beginning in 2012 (+3.6%) and a further slowdown in 2013 (estimated at 2.7 %) mainly due to the political crisis and the deteriorating security situation. These events have had a major impact on investment, on the pace of implementation of reforms and has contributed to a slowdown in some economic sectors, such as tourism. Taking into account promising political and institutional developments since January 2014, when the new Constitution was adopted, economic growth is expected to register a slight increase of about 3% for 2014. This growth rate is largely insufficient to have a significant impact on an endemic unemployment, particularly among graduates, which continues to undermine Tunisia. In the short and medium terms, a boost in investment and employment-friendly reforms in the private sector is the best option for the economic development of the country.

2. **Tunisia takes positive approach to transition.** The resolution of the political crisis at the end of 2013, the subsequent adoption of a new Constitution, its promulgation on January 27, 2014 and the appointment of an independent, ‘competence’ government that enjoys broad support among political and civil society stakeholders, provide an important opportunity to complete the transition while preparing the country to engage on a new growth path. The new Constitution directly addresses issues related to climate, environment and natural resource management. In its preamble, it mentions “*the need to participate to a safety climate¹ and safeguarding a healthy environment, so as to ensure the sustainability of our natural resources and the continuation of a peaceful existence for future generations*”. Articles 12 and 45 respectively stress the necessity of « *a rational exploitation of national resources* » and the role of the State to guarantee « *the right to a healthy and balanced environment and the participation to a safe climate*” and “*to provide the resources necessary to eliminate environmental pollution*”. Finally, Article 129 highlights the fact that “*projects concerning commercial, social and environmental issues as well as development plans*” have to build on key principles related to “*sustainable development and the right of future generations*”.

3. **Fight against poverty.** Tunisia has made significant progress in the fight against poverty, which has decreased from 32.4% in 2000 to 23.3% in 2005 and 15.5% in 2010.² In addition to significant improvements in terms of monetary income, access to social services (health, education) has also undergone a remarkable evolution. However, these figures hide significant regional and social disparities (which contributed significantly to the 2011 Revolution).

¹ it is actually one of the few national Constitutions in the world addressing climate related issues

² <http://www.ins.nat.tn>

According to the quantitative assessment undertaken by INS, with support from the Bank, poverty rates surpass 30% in the most disadvantaged regions of Tunisia (notably the predominantly rural south and western part of the country which include the majority of Tunisian oases). Similarly important, preliminary analysis of the data suggests that the gains realized over the past decade remain fragile, as many households' post-consumption levels are slightly above the poverty threshold, making them vulnerable to exogenous shocks such as the loss of employment or hikes in the prices of essential goods.³ The population and the economy are mainly concentrated in the Northeast (governorate of Tunis) and Central East (Governorate of Sfax), while 75% of non-agricultural jobs are in the coastal region. Areas of the interior, including the Midwest, are poorer in terms of public services provision (health, education, and infrastructure). Approximately 70% of poor households are located in rural areas, where agriculture is in deep structural crisis leading to the relative impoverishment of rural people in general and farmers and farm workers in particular. This crisis affects predominantly agricultural regions, with rising rates of poverty and high unemployment (in Southern Tunisia unemployment rate is 19.5%).⁴ Overall, youth unemployment represents the major social challenge, with 72% of the unemployed under the age of 30 in 2012.

4. **Environmental degradation.** The annual cost of environmental degradation of water, air, land, coastal zone and waste has been estimated at 2.1% of GDP in 2008, with agriculture as the most impacted sector, arising from salinity, water quality and water logging. Overall, groundwater overexploitation is resulting in an annual lowering of groundwater tables by of 0.38 meters and by 0.74 meters for the deeper aquifers⁵.

5. **Decentralization and déconcentration.** . In Tunisia, the Government has sought to support the emergence of local government, through the geographic relocation of technical services and the transfer of technical responsibilities from the center (termed “*déconcentration*”) rather than full decentralization. Local administrative authorities will remain legally and financially very dependent on the central Government. The number of municipalities (*Communes*) has increased from 212 in 1988 to 264 in 2008 and the administrative sectors (*imadas*) from 1,749 to 2,074. The population of the municipal areas jumped from 4,477,000 in 1988 to 6,746,000 in 2008, i.e., two-thirds of the population of the entire country. Of these, in there are 21 oasis municipalities located mostly in urban areas of Southern Tunisia. The emergence of local government in Southern Tunisia has contributed to reducing the inequalities between the coast and inland areas, and enabled a focus on local economic development based on agricultural production, Saharan tourism, and mining products.

6. In addition, since 1999, Tunisia has embarked on the promotion of participatory approaches in particular in the rural sector and on restructuring the rural institutions.⁶ In response, the Agricultural Development Groups (*Groupements de développement agricole*, GDAs) are deeply engaged in the protection and the conservation of natural resources and the use of irrigation equipment. As Tunisia is in the process of supporting the emergence of local

³ Institut National de la Statistique, *Mesure de la pauvreté, des inégalités et de la polarisation en Tunisie, 2000-2010*, Octobre 2012.

⁴ Ministère du Développement et de la Coopération Internationale (2012) ‘*Le chômage des jeunes : Déterminants et caractéristiques*’ (MSCI, Institut Tunisien de la Compétitivité et des Etudes Quantitatives).

⁵ Banque mondiale (2007) ‘*République de Tunisie. Evaluation du coût de la dégradation de l’eau*’ MENA, Département Développement Durable; M. Sarraf (2004) ‘*Assessing the Costs of Environmental Degradation in the Middle East and North Africa Region*’ Environment Strategy Notes No. 9. The World Bank, Washington, DC

⁶ Bill n° 99-43 of 10 May 1999 on agricultural and fishery development groups.

government, GDAs can play a key role to ensure linkages of local communities with national and international agricultural organizations, and to provide extension services and support to the oasis populations.⁷ However, the GDAs are not intended to replace the needed decentralized, legitimate and democratic institutions. Many GDAs are being restructured or phased out, in response to emerging priorities and financial sustainability concerns. . The Ministry of Agriculture is currently conducting an extensive reflection on the restructuring of GDAs.⁸ In the oases, GDAs are expected to play a key role in the management of their agro-systems (according to their mandate), but in reality their role is limited to the sale of water and their participation in the maintenance of water networks.

7. **Gender.** Various policies in the 1950s and 1960s have made a significant contribution to the human development of women (especially in terms of education and health) and political participation⁹, and Tunisia country is among the most developed countries in Africa in terms of gender equality. The role of women has been at the center of the political debate, notably with the adoption of the new Constitution that guarantees gender equality. Tunisia has been able to provide effective protection of women's rights, and provide equal access to education and health.¹⁰ However, the presence of women in the workplace is still limited (26.7%) and Tunisia ranks in 132nd place out of 142 in the ranking of the *World Economic Forum*. Furthermore, there is a high rate of unemployment among women (18.9% for Tunisia in general, and 38.2% for Southern Tunisia).

B. Sectoral and Institutional Context

8. **Typology of Tunisian oases.** Tunisian oases have always been important agricultural production and trade centers that link remote regions together¹¹. They cover about 41,710 ha of the total country area, and are home to about 950,000 people (10% of the Tunisian population). These agro-systems range from the Mediterranean coast to the east, down to the dunes of the Grand Erg Oriental in the West and from the mountainous chain of Gafsa in the North to the Saharan dune fields in the South. They fall into the ‘date palm oasis of northern Sahara’ category and are mainly spread between the four governorates of Gabes, Gafsa, Tozeur and Kebili. Three types of oases can be distinguished in Tunisia: (i) *Coastal oasis* (17.3% of the total area of the oasis); (ii) *Mountain oasis* (5.8%); and (iii) *Saharan oases* (76.8%), which all contain both "traditional" and "modern" oases (or irrigated schemes/perimeters).

⁷ At the time of their creation, rural institutions were to ensure the interface between the population and the Regional Commission for Agricultural Development. In addition to the Ministry of Agriculture, two other ministries were included in this restructuring – the ministries of Finance and of Interior and Local Development. On key references on GDA see footnote below.

⁸ The bill (No. 2004-24) of 15 March 2004 broadly adapted the amended GDA’s statute to various types of formal, non-profit organizations of owners and operators in the agriculture and fishing sectors, who were expected to comply with the law before 15 March 2007. It also set the operating mode and the prerogatives of the GDA by removing any profitable activity. GDAs are responsible for the following tasks: protect natural resources and rationalize their use; equip perimeters where they intervene in infrastructure and agricultural and rural commodities; participate in the supervision of their members and the dissemination of agricultural technologies in order to increase productivity; assist participating agencies in assessing agricultural situations; establish relations of cooperation and exchange of experiences in the areas of agriculture and fisheries with other local and foreign agricultural organizations; and support collective interests and members.

⁹ M. Baliaoune (2011) *The Making of Gender Equality in Tunisia and Implications for Development* (Background paper, World Development Report 2012 (The World Bank, Washington)

¹⁰ F. M. Hassan (2005) *Tunisia : Understanding successful socioeconomic development* (World Bank Operations Evaluation Department & Islamic Development Bank Operations Evaluation Office)

¹¹ In geography, an ‘oasis’ (from an ancient Greek word) means an isolated area of vegetation in a barren desert. This occurs near a water source or where groundwater is near the surface or sometimes on the riverbeds whose water is lost in the desert.

9. **Oasis economy.** Tunisian oases are the main source of employment and income in Southern Tunisia. They are a very productive environment, offering high-value agricultural products, in particular dates. In the four southern governorates, there are 210 oases, representing 9% of the total irrigated land. The oasis area has increased by about 16,700 ha in 1974 to about 41,700 ha in 2010, due to water resource development programs supported by the Tunisian Government and private developers. The economy of the oasis households is strongly supported by foreign migrants' remittances, but these are now declining. Traditional oases (about 47% of the total area of the oasis) - which will be the focus of the proposed Project - are characterized by old plantations, , high density trees (400 trees / ha), highly fragmented individual plantations, and low yields. These oases are mainly irrigated from groundwater, but aquifers are being depleted. In recent decades, the oasis area has been expanded by the creation of new private irrigated schemes, almost exclusively dedicated to the culture of the *Deglet Nour* date palm. These "modern oasis", which represent about 50% of the total area of the oasis, are characterized by a much lower density planting (100 to 125 trees / ha), higher yields; and greater size individual plots Modern oases have developed very rapidly in the absence of a policy framework, and greatly compete with traditional oases for water.

10. **Biodiversity of oasis ecosystems.** Because of their edaphic environment, traditional oases, with three layers of vegetation, form an ecosystem suitable for the development of the biodiversity of flora and fauna, as well as for the preservation of endangered animal and plant species. Oases are the cradle of cultivars adapted to local conditions and constitute a natural heritage of plants for multiple uses (fodder, condiment, medicinal and aromatic plants, manure production, etc.). The date palm is a key element in the resilience of the oasis agro-ecosystem, contributing to the stabilization of soil, moisture, shade, providing shelter against strong winds, and helping to prevent desertification and to preserve the local flora and fauna.¹² Over the past century, the production of *Deglet Nour* has rapidly developed, from 3% to almost 70% of date production (this variety is well adapted to the soil conditions, it has good yields, and it is also widely and easily marketed). This trend towards the monoculture of *Deglet Nour* variety is, however, a threat to biodiversity (progressive loss of other varieties); it constitutes a risk to sustainability (*Bayoud* disease-related risk) and it uses more water than other cultivars.¹³ The loss of genetic diversity would have a local and global impact in three main areas: (i) loss of unique breeds or varieties and their associated diversity, particularly pollinators and soil organisms adapted to extreme climate of traditional oasis ecosystem; (ii) degradation of ecosystem services, including nutrient cycling, decomposition and soil respiration, water and soil conservation, together with the reduction of biomass for CO₂ sequestration and gas regulation; and (iii) collapse of a resilient food production base for local and global communities. The proposed Project will target its support to traditional oases because of their strong role in desert ecosystems resilience, and because of their social and cultural importance.

¹² In particular : olive trees, almond trees, fig trees, cherry trees, grapes, alfalfa , beans, gumbo, millet, sorghum, tender wheat, barley, henna and saffron. The *National Gene Bank*, created in 2007, has a total of 25.781 accessions, of which 1.945 from oasis areas (particularly cereals and fodder crops). However, almost all local varieties of soft wheat (*Triticum aestivum*) were lost and only a small proportion of the production of durum wheat (*Triticum durum*) in the region is still based on local varieties. Alfalfa is a major crop in the traditional oasis forage, but local cultivars of this ancient culture (introduced in the oases of North Africa before 100 A.D.) are threatened by desertification

¹³ R. Abdelmajid (2005) *Le Palmier Dattier en Tunisie, Volume 2: Le patrimoine génétique* (IPGRI)

11. **Threats to the sustainability of oasis ecosystems.** Environmental problems facing oasis communities result in an upward spiral of rural poverty and accelerated degradation of natural resources, such as oasis and pastoral genetic resources and local vegetation, with the migration of the poor to urban areas and to foreign countries. The replacement of customary institutions (including indigenous knowledge systems) with state institutions leads to the gradual abandonment of traditional farming systems, and creates discrepancies in the transmission of traditional practices and techniques to younger generations. The following factors are of particular importance:

- **Over-exploitation of ground-waters.** Increased over-exploitation of groundwater represents serious problems for the sustainability of oasis systems. The overuse of water is related to the illicit exploitation of collective lands systems, where water is technically accessible at low cost and potential economic benefits are high.¹⁴ As a result, 88% of aquifers have a salinity ratio in excess of 3 grams/liter on average, which represents an alarming deterioration of water quality and soil. As early as the late 1970s, the Ministry of Agriculture has been very concerned about the overexploitation of aquifers in the oases and consequences of 'illegal drilling'. Between 1981 and 1995, several laws focused on 'exclusion zones' and 'protection areas' for fresh water in Gabes, Tozeur and Kebili¹⁵. A number of investments have taken place to improve water availability, including large scale tertiary irrigation and improved drainage, different measures for sustainable management of droughts, and community-driven initiatives for sustainable management of water resources.
- **Climate change:** As per recent projections, climate change is expected to result in modifications in weather and rainfall patterns, with an impact on agricultural production of the oases in the region, resulting from the flow of *wadis*. Oasis areas should experience a warming of 1.1° C in 2030 and 2.1° C by 2050 (relative to 1961-1990) and of 1.1°C and 2.9°C by 2100.¹⁶ In the oases, climate change is likely to result in : changing rainfall patterns; higher temperature; more frequent and intense heat waves; succession of very dry years; disruption of the autumn rain patterns; changes of the vegetative cycle of crop varieties and their productivity; degradation of the quality of dates because of periods of extreme heat or early rain showers; and flooding (especially in mountain oases located on normally dry streams); loss of crops; and abandonment of certain crops.¹⁷ **Encroachment of urban areas.** Tunisian oases are particularly vulnerable to several forms of degradation that are mainly caused by urban encroachment.¹⁸ However, urbanization is also behind significant improvements in the living conditions of the urban population.
- All the above factors are exacerbated by **a lack of an integrated vision of sustainable development for Tunisian oases**: emphasis is almost exclusively put on water use, while key risks concerning the degradation of soils, or environmental resources and biodiversity are not

¹⁴ In the governorate of Kebili, groundwater is exploited to 205% and 228% of its capacity. In the governorate of Tozeur, irrigation is mainly based on the pumping of water from non-renewable fossil aquifers, with decreasing quality and quantity of water resources.

¹⁵ N. Oumrani – D. Burger (2010) 'Date Palm oases: Context and perspectives, Case Study, Kebili, Southern Tunisia' in: R. Meyer and D. Burger (Eds, 2010) *Low-Input Intensification of Developing countries. Agriculture – Opportunities and Barriers*' Proceedings of the KIT-Workshop 8th December 2010, Karlsruhe (Germany).

¹⁶ According to the IPCC 4 B1. See : MARH/GTZ (2007) *Stratégie nationale d'adaptation de l'agriculture tunisienne et des écosystèmes aux changements climatiques* (Ministère de l'Agriculture et des ressources hydrauliques); OTDD/GTZ op.cit.

¹⁷ D. Verner (2013) *Tunisia in a Changing Climate. Assessment and Actions for Increased Resilience and Development* (Washington, World Bank).

¹⁸ Under urban pressure, some traditional oases simply disappeared (such as Jerba and El Farsh).

taken into consideration. Furthermore, the involvement and participation of civil society are also generally neglected.

12. To help overcome the obstacles outlined above, the proposed Project will implement a comprehensive and participatory approach focusing on a balance between conservation, adaptation and socio-economic development. The project has strong government ownership and will serve to inform a significant government program that will scale up investments and engagement with host communities in oases areas. The project preparation was supported by a US\$380,000 Grant from the Program on Forest (PROFOR) managed by the Bank that helped the Government to:

- Set an **overall strategic vision** for the sustainable management of oasis ecosystems both to protect and restore traditional oases and regulate the development of irrigated areas, as adopted in February 2014 and outlined in annex 2, Box 1.
- Elaborate and implement **an integrated approach** to develop oasis participatory development plans (PDPOs), which, will sustain community initiatives (or micro-projects) in the following areas: (i) protection of biodiversity, (ii) sustainable management of land and water; and (iii) diversification of local livelihoods. National guidelines for the elaboration of local development plans have been adopted and are outlined in annex 2, box 2.
- **Formulate Oasis Participatory Development Plans (PDPOs)** of targeted oases. Based on the integrated participatory approach developed through the national guideline, the PDPOs of the six selected oases have been prepared in collaboration with local stakeholders.

C. Higher Level Objectives to which the Project Contributes

13. The proposed Project will contribute to implementing the World Bank Group twin goals, the MENA regional strategy and the Tunisia ISN through (i) support to oasis areas which are part of lagging regions with high poverty rates; (b) increase the likelihood of greater agricultural productivity, and (c) promotion of governance, inclusion, voice, jobs creation, and sustainable growth through the PDPO and the bottom up approach of the GDA . The project is fully consistent with the Bank's support to Tunisia as outlined in the Interim Strategy Note (ISN, FY13-14) aimed at reinforcing governance and inclusion and fostering economic growth based on the creation of sustainable jobs in the medium-term. The three priority areas for the ISN are the following: (i) Laying the foundations for renewed sustainable growth and job creation; (ii) Promoting social and economic inclusion; and (iii) Strengthening governance: Voice, Transparency and Accountability.

14. The project will contribute to achieving national goals in terms of social and economic development, in compliance with the main strategies and programs for oasis areas, in particular: the *Master Plan for Waters of the South* (which aims at the mobilization and the recovery of groundwater); the *Strategy for the Mobilization of Water resources* (1990-2011), and the *Improvement of Irrigation in Southern Oases* (APIOS) Program, which emphasizes tertiary irrigation and drainage systems.

15. The project, which is anchored in the *Biodiversity and Land Degradation Strategy* of the GEF, will mainly, contribute to the following GEF-5 Objectives: BD-2: *Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, Seascapes and Sectors*; and

GEF-LD-1 *Agriculture and Rangeland Systems* (see also Annex 6). It will particularly support policies and strategies of the MENARID Program (GEF *Integrated Natural Resources Management in the Middle East and North Africa Region Program*), whose objective is to promote the integrated management of natural resources and to increase the economic and social well-being of targeted communities through the restoration and maintenance of ecosystems.

16. The proposed Project has also linkages to the *Middle East and North Africa Desert Ecosystems and Livelihoods Program* (MENA-DELP), a World Bank- GEF partnership,¹⁹ which seeks to improve the flow of desert ecosystem services for sustainable development, through a positive feedback loop.²⁰ The proposed Project will contribute to another MENA-DELP's goal of sharing knowledge and experiences on the creation of job opportunities in desert areas among the four participating pilot countries and, potentially, in other countries. Furthermore, the project will benefit from lessons learned from the FAO-supported project on *Land Degradation Assessment in Drylands* (LADA), covering Tunisia together with other five countries, and will share these lessons with them through the regional MENA-DELP network.

17. The proposed Project will build on best practices and lessons learned from other projects operating in similar ecosystems (in the MENA region in general, and Tunisia, in particular). It will particularly establish synergy and collaboration with:

- *Irrigation Improvement Project in Southern Oases* (APIOS). This project demonstrated the importance of intensifying existing drainage in the oasis by introducing subsurface drainage systems but has not introduced or developed water saving techniques (according to the specific needs of the crops) and mostly failed in involving local users in the maintenance of the systems²¹.
- *National Program for Re-forestation and Plantation* in Tozeur and Kebili, which aims to protect the oases and infrastructure of these governorates through mechanical and biological activities to control silting and land degradation.
- *Water sector Investment Project* (PISEAU II), supervised by the World Bank and jointly co-financed by AFD (50%), AfDB (25%) and WB (25%), with a total budget of about 100 million € (December 2009-December 2015), addresses construction and rehabilitation of irrigation and rural water supply infrastructure, underground water management (wells drilling), as well as technical assistance to foster more efficient management of water resources, in 24 governorates.
- *Integrated Agriculture Development Project on Siliana* (phase II) (with funds from IFAD and GEF of about US\$ 38.9 million (January 2007-January 2012), for capacity building, community development, management of natural resources (including biodiversity conservation).
- *Ecotourism and Conservation of Desert Biodiversity in Tunisia* (US\$ 4,27 million from GEF, between 2013 and 2018), in the areas of capacity building (social development and

¹⁹ The MENA-DELP, approved by the GEF in November 2011, includes four national country pilot projects (Algeria, Egypt, Jordan, and Morocco), plus a regional knowledge sharing project.

²⁰ The approach will enhance desert livelihood opportunities and increase the resilience and adaptation responses of desert communities and ecosystems to projected pressures, in particular climate change impacts. Integrating the health and diversity of the desert biome with the potential for innovative livelihood opportunities, while sustaining valuable repository of knowledge linked to adaptive practices

²¹ 'République Tunisienne, Ministère de l'Agriculture (2012) *Projet d'Amélioration des périmètres irrigués dans les Oasis du Sud* (APIOS). *Evaluation*.

community development), development of ecotourism, management of natural resources, and conservation of biodiversity.

- *Natural Resource Management Project* (phase II) (PGRN2) and 4th Northwest Mountainous & Forested Areas Development Project (PNO4) on capacity building and natural resource management (including forest/brush areas, and grazing areas).²²

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO ²³

18. The Project Development Objective is to **improve sustainable natural resources management and promote livelihoods diversification in six selected traditional oases in Tunisia.**

B. Project Beneficiaries

19. Six oases have been selected following an inclusive selection process, involving officials of ministerial departments that are implementation partners of the Project, representatives of line departments (Agriculture, Tourism, Arts and Crafts, Equipment, Environment, etc.), representatives of civil society and resource persons, on the basis of a range of criteria focused essentially on: (i) their representativeness of Tunisian oases; (ii) their heritage value; (iii) the existence of GDA and active associations; (iv) the capacity of local people and stakeholders to adopt the participatory approach of the project; and (vi) the for the available opportunities for oasis rehabilitation and preservation. The selected oases are the following:

- *Coastal area Oases*, Governorate of Gabes: Zarat, comprising a total areas of 85 ha and 400 farming households
- *Continental oases*, Governorate of Kebili: Noueil, comprising a total areas of 97 ha and 500 farming households
- *Mountain oases*, Governorate of Gafsa: El Guettar comprising a total areas of 500 ha and 2,700 farming households
- *Mountain oases*, Governorate of Tozeur: Cluster of three oases (Tamezgha, Chebika, Mides), comprising a total areas of 134 ha and 500 farming households, of which: Tamzegha (80 ha and 300 households), Chebika (25 ha and 116 households), and Mides (29 ha and 80 households).

20. Overall, the potential beneficiaries in these six oases are characterized not by chronic poverty, but by a constant and persistent spiral of impoverishment, due to numerous factors, such as: growing production costs, decreasing size of family land (because of local inheritance systems), reduced quotas of water for irrigation, worsening terms of trade for agricultural products, and downward trends of prices of agricultural products (inflation).²⁴

²² See also the following projects: *Integrated Agriculture Development Project in Sidi Bouzid*, *Integrated Agriculture Development Project in Ghazala-Joumine*; *Water catchment Management Program (FCGBV)*, *National Forest Program*, *Strengthening the National System for Environmental Monitoring (DNSE)*, and *Land Degradation Assessment Project (LADA)*.

²³ As for all stand-alone GEF operations, the PDO and Global Environmental Objective (GEO) are the same.

²⁴ Indirectly, poverty levels of these households are shown by the average size of their agricultural exploitations - only 0.2-0.3 ha, with the exception of Zarat (0.8 ha) - relatively high production costs (water, land fertility management, labor, etc.), and high

21. *At the local level*, oasis communities, including grass-roots institutions and organizations such as the GDAs, other associations of civil society or cooperatives, women's groups and youth organizations and environment-related NGOs, will directly benefit from Project activities. This will be made possible by their participation in the preparation and the implementation of the PDPOs, in the initiatives aimed at strengthening their technical capacities to support their livelihoods, and to protect the biodiversity. According to the baseline survey carried out in the six selected oases during the preparation of the PDPOs, the total number of these beneficiaries may be estimated at about **4,100 households**, that is a total population of about 18,000 people²⁵ (of which 9,500 women).²⁶ These households cultivate about **820 ha of land**.²⁷ At the local level, other beneficiaries, including representatives of local administration and deconcentrated technical services, is estimated at about **150 people**.

22. However, it should be pointed out that a far larger population, living at the edges of the six targeted oases, will benefit indirectly from broader social, economic and environmental spillovers, related to Project initiatives. Again, according to the findings of the surveys conducted during the preparation of the PDPOS, this population is estimated at about **25,000 people**.

23. *At the national level*, the following institutions may also be considered as direct beneficiaries of the proposed Project: Central departments and regional delegations of the Ministry of Equipment, Territorial Management, and Sustainable Development (MEATDD); Regional Agricultural Development Commission (CRDA) of the Ministry of Agriculture, in the targeted Governorates; and the deconcentrated services of the Ministry of Tourism (MT). These institutions will mainly benefit through technical assistance and capacity building activities.

C. PDO Level Results Indicators

24. The following key indicators will monitor progress towards achieving the objectives and their outcomes:

- Direct project beneficiaries (of which female (percentage)
- Land area where sustainable land management practices were adopted (as a result of project initiatives) (ha)
- Land users adopting sustainable land and water management (SLWM) practices as a result of the project (number)
- Number of local species that have been reintroduced in selected oasis
- Households adopting diversified activities as a result of the project (percentage)

volatility of annual agricultural revenues (constant deterioration of terms of trade for agricultural products compared to agricultural inputs and services). Furthermore, communities are also characterized by high levels of internal economic stratification in terms of productive assets (in El Guettar, for instance, individual family plots vary between 0,01 ha and 7.4 ha), income, and labor force (i.e., proportion of economically active members able to undertake agricultural and extra-agricultural activities).

²⁵ In 2009, the average size of households was 4.2 people (it was 5 people in the mid-1990s) (INS).

²⁶ Sources : Ministère du Développement Rural et de Planification (MDRP), Institut Tunisien de la Compétitivité et des Etudes Quantitatives (2011a) *Le Profil démographique de la Tunisie*; Ministère du Développement Rural et de Panification (MDRP), Office de Développement du Sud (2011b) *Le Sud Tunisien en chiffres:2011*.

²⁷ See the profile of the six oases in the Appendix of Annex 2.

III. PROJECT DESCRIPTION

A. Project Components

25. In order to achieve its objectives, the project will focus on three main fields of intervention: (i) help create an enabling environment to better manage oases at national level (ii) support the implementation of the strategy on a small scale (six selected oasis which are representative of the variety of Tunisian traditional oases);, and (iii) provide support the implementation of the activities and their monitoring and evaluation. Therefore, in line with this approach, the following components, sub-components and activities of the Project have been identified.

Component 1: Strengthening capacities for sustainable management of oasis ecosystems **(GEF US\$ 1,031,830)**

26. This component will promote the development of an action plan; document lessons learned in all the 210 traditional oases and generate knowledge on better adapted management practices. This will contribute to strengthen the capacities of national and local stakeholders in order to create an enabling environment for the scaling up of sustainable management practices in the oases. Activities of this component are organized according to the following three sub-components:

27. ***Sub-component 1.1: Action Plan for the national strategy for sustainable development of Tunisian oases.*** The main activities will include: (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 complete monographic profiles for each of the 210 Tunisian traditional oases, including status of wildlife and biodiversity, together with a Web-based Geographic Information System (GIS). These activities will be implemented through the organization of consultative workshops, provision of consultants' services, goods, and training. GEF will support activities (i) and (iii).

28. ***Sub-component 1.2: Strengthening the capacities of stakeholders.*** Capacity building activities will comprise 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, SLWM techniques, and initiatives aimed at diversifying local livelihoods and preparing community-driven micro-projects; and (ii) specific support to oasis biodiversity-related activities carried out by the following national specialized institutions: the *National Bank of Genes (BNG)*, the *Regional Research Center for Oasis Agriculture (CRRAO)* in Deguache and Tozeur, and the *Institute of Arid Regions (IRA)* of Medenine. These activities will be implemented through the provision of consultants' services, goods and training.

29. ***Sub-component 1.3: Monitoring and evaluation of Project activities.*** The key activity will focus on the establishment of an M&E system, which will be fully in harmony with those of other projects currently operating in the areas of land management, biodiversity valorization and

conservation and ecosystem management. These activities will be implemented through the provision of consultants' services, goods and training.

Component 2: Supporting the implementation of the PDPOs (GEF US\$ 4,434,000)

30. In line with the key element of the strategy, this component aims at restoring and better managing the productive assets of the targeted oasis ecosystems and their resources through the establishment of a dynamic partnership between the various stakeholders. Lessons drawn from these oases will eventually be applied to other oases on a larger scale. Indeed, given the increasing pressure on oasis agro-systems, capacity building programs should allow local populations to see their oases as opportunities that can be better explored, and that they should contribute in protecting them. This will also allow them to better comply with SLWM norms, to protect biodiversity and promote activities aimed at reducing pressure on the environment. As holders of PDPOs, the GDAs of the targeted oases, through a participatory and consultative process with all stakeholders, and on the basis of eligibility criteria, will coordinate the preparation and implementation of community micro-projects. The PDPOs of the six selected oases, which have been developed during the project's preparatory phase, present the strategic vision for the development of each oasis and identify the characteristics of community-driven micro-projects and other initiatives to be implemented. These micro-projects, which are in line with the objectives of the proposed Project, are grouped in two categories, each category could include small-scale physical investments (including habitat, roads, and gravel roads):

31. ***Sub-component 2.1: Community micro-projects in the area of sustainable management of land and water (SLWM) and biodiversity.*** The main objective of this sub-component is to strengthen the management of oasis natural resources by scaling up SLWM and biodiversity conservation techniques. The ownership of these techniques by the communities will ensure their scaling up. More particularly, this sub-component will financially support micro-projects aimed at: (i) Protecting oases against flooding, sand invasion, and wild boars; (ii) Improving the productivity of agricultural activities and the oasis eco-systemic services by scaling up SLWM practices; and (iii) Restoring and protecting oasis biodiversity²⁸. These activities will be implemented through the provision consultants' services, good and training and community procurements procedures.

32. ***Sub-component 2.2: Community micro-projects in the area of the diversification of local livelihoods.*** The diversification of local livelihoods comprises community micro-projects aimed 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. Moreover, community-based micro-projects will, on one hand, enhance local craftsmanship know-how and support ovine fattening activities and beekeeping, and, on the other hand, preserve and protect and develop oases' cultural heritage and promote ecotourism. These activities will be implemented through the provision consultants' services, good and training and community procurements procedures.

Component 3: Project coordination and management (GEF US\$ 294,900)

²⁸ These activities will be connected to sub-component 1.2 and aim to protect and restore local endangered crop genetic resources (e.g. Apricot, peach, plum, pear, pistachio, table grapes, loquat, Boufaggous), as well as wildlife species that are native to the oases ecosystem.

33. This component will support the establishment and management of a fully-functioning Project Management Unit within the *General Directorate for Environment and Quality of Life* (DGEQV), of the *Ministry of Equipment, Territorial Management, and Sustainable Development* (MEATDD), through the provision of goods, consultants' services and training, it will cover (i) the equipment cost for the Unit; (ii) audits for the Project; and; (iii) the incremental operating costs for the Project.

Cross-cutting issues

34. **Global environmental benefits** (GEBs). By investing in techniques that improve soil fertility and agricultural productivity, and giving special attention to the conservation and promotion of food products from oasis agricultural biodiversity, the Project will improve the sustainability of selected oasis and the livelihoods of local populations and provide the following GEBs: (i) *Land degradation*: improved provision of agro-ecosystem goods and services, and reduced vulnerability of agro-ecosystems to climate change and other human-induced impacts, and conservation and sustainable use of biodiversity in production landscape; (ii) *Biodiversity*: Conservation of globally significant biodiversity, and sustainable use of the components of globally significant biodiversity. More particularly, the Project will provide the following local environmental benefits: (i) in-situ conservation of crops/selected plants, including staples such as local hard wheat, rye, local vegetable crops, alfalfa and corn which are important for nutrition and food security; (ii) improvement of soil fertility and its resilience in order to increase organic matter; (iii) reduction of soil erosion; (iv) integration of conservation and sustainable use of biodiversity in public policies, programs and regulatory frameworks through the strategy; and (v) integration of biodiversity considerations into market mechanisms and increased SLWM investment. These benefits will be audited by tracking: (a) the number of local varieties preserved and cultivated and the number of applications for the use of local seeds; (b) agricultural land (at least 700 ha) under improved agricultural practices, (c) areas protected against flooding; and (d) reduction of degraded oasis areas.

1. **Adaptation**. A key innovative aspect of the project is the concept of adaptation of local agricultural practices, traditional know-how and community needs for the integration of agricultural biodiversity in the local economy, as a driver for local development. The result is the ownership of the key objectives by local stakeholders through the participatory approach. Local institutions are aware and strongly support this proposal, thus ensuring ownership and their participation in the implementation of micro-projects.

35. **Innovative approach**. The innovative and sustainable approach of the Project is based, on one hand, on ensuring ownership and commitment of local communities, and, on the other hand, on integrating biodiversity conservation and SLWM practices into national policies and programs. With this approach, the Project aims at creating a participatory management model, which would involve all the stakeholders, and which would eventually be scaled up to all Tunisian oases. The potential to extend the project approach will be fostered through dissemination of lessons learned and experiences to raise awareness and ensure that local communities and stakeholders understand and adopt, with government support, the dynamic development model (eventually to be promoted in the neighboring regions).

36. **Gender**. Finally, the proposed Project will focus on another key cross-cutting issue, namely a *gender-based approach* that outlines the specific roles and needs of men and women

(including young boys and girls), and will conduct regular assessments of the impact of Project initiatives to reduce gender disparities.

B. Project Financing

37. The project total cost is US\$ 5,760,730. It is a standalone project financed through a GEF grant (including US\$ 4,611,872 from the “land degradation” window, and US\$ 1,148,858 from the "biodiversity" window). The total amount of co-financing is US\$ 2,548,000 and is available from the following sources: (i) Government cash contribution estimated at US\$ 320,000; (ii) Government in-kind contribution estimated at US\$ 1,970,000; (iii) beneficiaries’ in-kind contribution estimated at US\$258,000. The project will be supported by a parallel financing through APIOS2 project (US\$ 52 million); and the National Planting and Reforestation Program in Tozeur and Kebeli (US\$ 4.5 million). The supervisory function of the Bank is related to GEF funding and not to the parallel financing.

Project Cost and Financing

38. Table 1 below present the project cost and financing (US\$)

Table 1: project cost and financing (US\$)

CP	GEF Grant			Co-financing			Parallel Financing		Total
	GEF LD	GEF B	Total GEF	Benef.	Gov. in kind	Gov. cash	APIOS	Prog. Plant	
Cp1	604,522	427,308	1,031,830	18,000	469,000	257,000	0	0	1,775,830
SC 11	370,822	60,608	431,430	0	93,400	257,000	0	0	781,830
SC 12	230,700	339,700	570,400	18,000	375,600	0	0	0	964,000
SC 13	3,000	27,000	30,000	0	0	0	0	0	30,000
Cp 2	3,712,450	721,550	4,434,000	240,000	995,000	0	52,000,000	4,500,000	62,169,000
CP21	1,978,000	473,000	2,451,000	0	656,000	0	52,000,000	4,500,000	59,607,000
CP22	1,734,450	248,550	1,983,000	240,000	339,000	0	0	0	2,562,000
Cp 3	294,900	0	294,900	0	506,000	63,000	0	0	863,900
Total	4,611,872	1,148,858	5,760,730	258,000	1,970,000	320,000	52,000,000	4,500,000	64,808,730

C. Lessons Learned and Reflected in the Project Design

39. The proposed Project will draw important lessons from the strengths and weaknesses of other similar programs/projects operating in Tunisia as elsewhere in MENA, in the areas of community development, capacity building and sustainable management of natural resources. These experiments highlight the importance of *increasing awareness and participation* of local communities to promote a real sustainable development of oasis.

40. These on-going and past lessons also highlight the fact that any form of sustainable management of natural resources, in general, and of oasis ecosystems, in particular, must be the result of an *integrated strategy of land, water and biological resources management*, which considers local people (producers and users) as an essential component of these ecosystems. One of the main weaknesses of some past projects covering oasis areas was the lack of such an integrated ecosystem-based approach to development: the focus of these projects was almost exclusively on water mobilization, and risks related to land degradation, depleting environmental resources and biodiversity loss have not been sufficiently taken into account.

41. The design of the proposed Project benefitted mainly from lessons learned from the *Ecotourism and Conservation of Desert Biodiversity in Tunisia* project, the *Natural Resource Management Project* (phase II), and the *Water sector Investment Project* (PISEAU II). Key lessons learned are the following:

- Developing local development plans before starting the project: based on the *Ecotourism project* experience, and contrary to the PGRN2, the preparation of PDPOs was completed with wide consultation and participation of the people even before the beginning of the project, and this has ensured the success of the project and the collective implementation of its activities from its inception.
- Linking oasis management activities with local partnerships and outreach programs have a very positive impact on improving communities' perceptions.
- Encouraging local partnerships for the production of knowledge on oasis biodiversity may increase protection and promotion opportunities.
- Updating PDPOs through annual investment plans is an essential means to establish and maintain strong institutional and participatory foundations.
- Using tools to prioritize local needs may be useful to promote efficiency in a resource-constrained environment.
- In order to ensure the sustainability of oasis management, the revision of the current mandate of GDAs can provide them with greater institutional and financial autonomy.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

42. A more detailed description of the institutional and implementation arrangements of the proposed Project is presented in Annex 3 (and in the Project Implementation Manual). The implementing agency is the *General Directorate for Environment and Quality of Life* (DGEQV), Ministry of Equipment, Territorial Management, and Sustainable Development (MEATDD). The DGEQV will ensure fiduciary management and procurement for overall project activities. The DGEQV will implement the Project by putting in place and supporting a Management Project Unit (*Unité de Gestion du Projet*, UGP), which will work in close collaboration with the different participating stakeholders. To supervise the implementation of the Project at the local level, the DGEQV will also work with the deconcentrated services of the MEATDD, the Ministry of Agriculture, the Ministry of Tourism, and the Ministry of Commerce, Arts and Crafts. The Project activities will be implemented as follows:

- *The DGEQV* will coordinate activities related to: (i) The elaboration of the Action Plan of the national strategy for the sustainable development of oases; (ii) The preparation and implementation of the communication strategy to be financed by the Government; (iii) The preparation of the complete monographic profiles of the 210 Tunisian traditional oases, including status of wildlife and biodiversity, together with a Web-based GIS; (iv) The organization of training sessions at national level; (v) The preparation and maintenance of the Project M&E system; and (vi) The general coordination and management of the project.

- The *National Bank of Genes* (BNG) will: (i) conduct the inventory and identify the genetic material (seeds or any other material from which plants multiply) of targeted oases; and (ii) identify threatened species²⁹, collect and preserve their seeds in its cold rooms.
- The *Regional Research Center for Oasis Agriculture* (CRRAO) will enrich its existing collection in Deguache and develop some rare varieties in the targeted oases.
- The *Institute of Arid Regions* (IRA) will: (i) conduct the inventory of and collect fruit and vegetable varieties in the selected oases; (ii) label and evaluate the accessions that have been collected; and (iii) multiply fruit and vegetable species.
- GDAs will ensure coordination and technical monitoring of community-driven micro-projects. In so far as some members of the local population are not formally members of the GDAs, and in order to ensure and affirm good representation, the different GDA boards shall involve the entire population of their respective oases around an inclusive community vision. Therefore, the GDAs will: (i) hold regular consultations with all local associations and socio-professional organizations, as well as with the deconcentrated technical services, and encourage a range of initiatives aimed at consolidating and strengthening local associations, particularly among the youth and women, around local priority interests (including diversified livelihoods and protection of the cultural heritage of the oases); and (ii) hold biannual meetings open to the general public to examine and evaluate the implementation of PDPOs and micro-projects and report all its activities (through written reports and other appropriate supports). GDAs will implement these activities according to the community procurement principles of the Project Implementation Manual (PIM), which describes in detail the proposed procedures for each of the project components to be implemented with the participation of the community.

43. Single Source Selection may be used to contract BNG, CRRAO and IRA. According to paragraphs 1.13 (b) and (c) of the Consultants Guidelines. In terms of justification of the SSS, paragraph 3.9 (d) of the Guidelines apply as these agencies are the only source that can provide the required services and have skills and experience of exceptional worth in the field of the assignment.

44. The terms of collaboration between the DGEQV and the main stakeholders will be presented in the Conventions to be signed between the DGEQV and each partner before the implementation of agreed activities.

a) At the national level

Steering Committee (COPIL)

45. The Steering Committee (COPIL), chaired by the Minister of MEATDD, is made up of different stakeholders: Ministry of Agriculture, Ministry of Economy and Finance, Ministry of Tourism, Governorates of Kebili, Tozeur, Gabes and Gafsa, *Institute of Arid Regions* (IRA), *National Bank of Genes* (BNG), *Regional Research Center for Oasis Agriculture* (CRRAO), as well as the presidents of the GDAs of the targeted oases. The COPIL is the body supervising and validating project activities. It provides validation of the Project Implementation Manual (PIM), annual work plans and budgets, and progress reports, and ensures the consistency of the project with sectoral policies and Government programs. It will meet at least twice a year and whenever

²⁹ Apricot, peach, plum, pear, pistachio, table grapes, loquat, and several date palm varieties such Mattata, Boufaggous, Angou, Arechti, Khalt Bajjou, Cheddakh, Deglet Hosin, Gasbi, Hamraya, Kenta, ...

deemed necessary by the President. Costs of meetings of the committee will be supported by the project (see activities under Component 3). This Committee was created by ministerial decision on April 22, 2014.

Project Management Unit (UGP)

- The UGP will Coordinate all the activities of the project, organize COPIL activities and meetings, and ensures M&E activities. It will also coordinate all fiduciary management and procurement of the Project, contracts, and quality-control, and establish conventions with all the institutions involved in the implementation of the components and sub-components of the Project.
- 2. The UGP will be made up of staff located at central, regional and local levels:
 - *Staff seconded to the DGEQV at national level*: (i) Project national coordinator; and (ii) Procurement and financial management specialists;
 - *Staff from regional directions of the MEATDD*: (i) Two experts from the Tozeur regional Direction (the first expert will covers the El Guettar and Nouiel oases, the second one the Tamezgha, Chebika and Mides oases); and (ii) One expert from the Sfax Regional direction will cover the oasis of Zarat.
 - *Staff recruited by the Project*: (i) at central level: Project administrative Assistant; environmental, social and M&E specialist; and local development expert; (ii) at local level: at least three fiduciary experts and three Community Development/Participation Experts to support GDAs and civil society organizations (CSO³⁰s).

46. UGP staff belonging to the administration will be nominated by the Ministry of MEATDD before negotiations. The remaining UGP staff will be recruited no later than six months after the beginning of the Project.

b) At the local level

Agricultural Development Groups (GDA)

47. One of the selection criteria of the targeted project oasis was the existence of a GDA created in compliance with 15 March, 2004 law (n° 2004-24)³¹. a GDA is the preferred institution to advocate a vision of local sustainable development reflected in the PDPO, and ensure the planning and implementation of its community micro-projects. To facilitate interactions between the GDAs and the associations of civil society, on one hand, and monitor micro-projects, on the other hand, the Project will provide support to the GDAs through technical assistance in fiduciary management and Community Development/Participation approach. Experts will be recruited by the UGP no later than six months after the beginning of the project. A particularly important role will be played by male/female animators or facilitators not only to educate the entire village population on issues related of the development of the oases, but also to support CSOs to plan, implement and monitor community micro-projects. In addition, the GDAs of the selected oases will benefit from appropriate capacity building activities (see

³⁰ (village organization, an association of civil society, or a group of resident producers or users with a legal status)

³¹ which has defined, among other things, its responsibilities in the fields of the protection of natural resources, supervision of its members, dissemination of agricultural technologies to increase productivity, establishment of cooperation and exchange of experiences with other local and foreign agricultural organizations, and support collective interests and members.

Component 1.2), allowing them to confirm their legitimacy and to fully assume their role and leadership in accordance with the basic principles of good governance (particularly in terms of participation, transparency, accountability and efficiency).

B. Results Monitoring and Evaluation

48. The M&E system will be grounded on a result-based framework, and will be conceived as a management tool that will emphasize the project impacts and outcomes, and ensure the regular monitoring of inputs and outputs of the project. The project monitoring and evaluation system will also include GEF *Tracking Tools*. At the national level, the UGP will lead all aspects of monitoring and evaluation and provide operational tools and instruments for data collection at local levels. Furthermore, assistance will be provided to GDAs in monitoring and implementing their respective PDPOs. The project Manuel of Monitoring & Evaluation has been elaborated and it is part of the approved project Implementation Manuel.

C. Sustainability

49. The Government of Tunisia is committed to scaling up its engagement in the oases areas, and has committed parallel financing in the order of \$52 million through APIOS2 project and the National Planting and Reforestation Program in Tozeur and Kebeli. The project's sustainability will be measured in the dissemination of lessons on the improvement of sustainable natural resources management and promotion of livelihoods diversification in the six selected oases, and how this informs the Government of Tunisia program.

50. With regard to intuitions, the project will build sustainable models of participatory approaches, and will demonstrate:

- The use of existing institutions and actors, at the central and the local levels, and in the program implementation to help ensure post-project continuity
- The empowerment of all local-level stakeholders in decision making as well as training and capacity building activities well-tailored to their specific needs, to build ownership and promote post-project continuity of interventions, and
- An efficient knowledge management and sharing system to capitalize lessons learned and mainstream them into national policies, and extend to other oases.

51. To boost **economic and financial sustainability**, the proposed Project will support the dissemination of practices, technologies and techniques which are expected to improve the productivity of oasis agro-systems and household resilience. Adequate communication and knowledge-sharing initiatives will be key in ensuring sustainability. Partnerships will be established with some projects, including the ones for dissemination of technologies. Through adequate measures, marginalized categories of the populations will progressively be reintegrated into the dynamic of economic growth.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

Table 2: Risk rating summary table

Risk Category	Rating
Stakeholder Risk	Substantial
Implementing Agency Risk	
- Capacity	Substantial
- Governance	Moderate
Project Risk	
- Design	Moderate
- Social and Environmental	Moderate
- Program and Donor	Low
- Delivery Monitoring and Sustainability	Substantial
Overall Implementation Risk	Substantial

B. Overall Risk Rating Explanation

52. The proposed Project faces a range of *substantial to moderate risks* (summarized in the ORAF, Annex 4), although, overall, it does not carry a significant risk to the Bank, as it is essentially a quality of life improvement project for poor and marginalized groups dependent on the ecosystem services of traditional oases.

53. The risk related to the project design is *moderate due to fact that* participatory approach adopted by the Project should consistently reduce risks to achieve expected outcomes in remote and disadvantaged geographic zones.

54. A main risk is related to the political situation of the country, mainly because of policies not fully satisfied or contradictory aspirations. The adoption of the Constitution has consolidated a renewed consensus. But political tensions can be revived in view of the upcoming elections.

55. In terms of planning, implementation and monitoring, lengthy approval process by ministerial committees and controllers as well as availability of DGEQV and UGP procurement staff may hinder project preparation and implementation.

56. Another risk is represented by the status of the GDAs. Despite being the result of a political will to restructure rural areas, a GDA is in fact the intersection of association, local entrepreneur and administration (in this regard, legal texts are blurred). On a technical, financial and political level, GDAs are highly dependent on the State as mentor; their functions are still poorly understood by users; and their managers can contribute to strengthen State control and involvement in territorial management.

57. To mitigate all these risks, the project will implement adequate corrective measures. Emphasis will be placed on outreach and community awareness (including in relation to land issues and the rights of users of natural resources) and identify and implement transparent, participatory and inclusive local development planning and implementation processes. Pending the establishment of decentralized institutions (Communes) at the rural level, the proposed Project will support the GDAs and their institutional development, and will build the capacities of their leaders, as well as strengthen local associations.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

58. A detailed economic analysis of the project is made difficult by insufficient data for some local benefits and difficulties involved in measuring global environmental benefits:

- *For Component 1*, studies, assessments, and capacity strengthening initiatives have intangible benefits and catalytic influences, which cannot be meaningfully quantified and related to a dollar amount;
- *For Component 2*, *ex-ante* cost-benefit analysis for demand-driven investments is difficult to be conducted at entry, and assigning a monetary value to ecosystems resilience and environmental benefits is complex. The team has nevertheless attempted to undertake a **cost benefit analysis** based on the findings for the PDPO for the selected oases.

59. **Project Costs**, TOELP's investments will mainly focus on soft measures through community-driven micro-projects (and not on hard measures centered on large physical infrastructures). Small-scale physical investments (e.g., small works to protect lands, villages and houses against flooding and sand invasion) will certainly allow straightforward benefits on the basis of a direct relationship between inputs and production outputs. TOELP is financed through a GEF grant (US\$5,760,730) - including US\$4,611,872 from the "land degradation" window, and US\$1,148,858 from the "biodiversity" window. The project also benefits from Government cash contribution and in-kind contribution as well as beneficiaries' in-kind contribution. The project will also be supported by a parallel financing through APIOS2 project and the National Planting and Reforestation Program in Tozeur and Kebeli.

60. **Project benefits.** One way to look at project benefits is to ask the question what is the cost of inaction? In the absence of the project, what are the environmental degradation costs that will accrue over time? While quantifying the avoided costs is complex, a qualitative description is provided below:

- *At local level*, in the absence of the project, land degradation and biodiversity loss in the targeted oases would have a significant and growing economic impact on local livelihoods. The expected damage - or gross benefit - of inaction would therefore be the difference between damages induced by land degradation and loss of biodiversity, as well as climate change, *with and without Project*, that is through a comparison between the high economic risks of the present situation (without the benefits of significant adoption of best SLWM practices) and the economic benefits related to the Project;
- *At national level*, without the project, the absence of a proper plan of action of sustainable strategy for oasis management, of in-depths assessments, and of capacity strengthening initiatives for all stakeholders would have a significant and irreversible impact on oasis ecosystems;
- *At all levels*, the general economic efficiency of the project is linked to the land degradation and biodiversity losses that will be avoided thanks to the knowledge base generated and managed by the project, as well as by participatory approaches supported at the level of 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.

61. In addition to the avoided damage described above, other benefits include:

- Value of increased production from better soils/water more diversified products not income
- 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)
- Economic benefits from more effective citizen consultations and improved social and economic planning
- Economic gains from a clear strategy, where constraints and potential of oasis ecosystems are clearly spelled out and defined
- Economic gains from greater effectiveness in public administration through capacity-building, community participation and accountability.

62. **Results of the CBA.** The team undertook a CBA analysis based on the PDPO information. Key underlying assumptions include: (i) about 5% of the households covered by the project will benefit from project activities in Year 1, with a consistent growth rate in the following years; (ii) revenues from agriculture and livestock and other diversified activities are expected to constantly increase over a period of 10 years; (iii) the project’s results can be affected by various risks that are inherent to its implementation. A summary of the project costs and benefits is provided below:

- **Cost:** Total PDPO costs related to SLWM have been incorporated on an annual basis for each oasis (costs related to heritage and tourism activities have not been taken into consideration). Additional costs of maintenance of initial SLWM, equivalent to 3% of total investments, have been included in the computation of total costs.
- **Benefits:** SLWM benefits have been assimilated to an increase of value added per hectare due to: (i) costs savings (in particular irrigation costs savings); (ii) yield improvement (new plantations and training); and (iii) price increases (due to quality improvements). A ‘lag’ of 5 years has been considered between the initial investments and the full achievement of the benefits of the project.
- **CBA:** Considering the results of the empirical survey and technical analysis, a 10% increase in value added seems feasible, this results in an **IRR of 14.7%** and hence an economically viable project. In addition, the benefits included in the CBA do not represent the entire benefits that are linked to this project, therefore the result of the CBA should be considered conservative. The team also did a sensitivity analysis for different in value added and the results are shown below:

Value added per hectare increase after 5 years	12%	10%	8%	6%
IRR	18,1	14,7	11,1	7,1

63. In **conclusion**, the TOELP economic analysis indicates that:

- Costs involved in achieving project objectives are reasonable in comparison with both benefits and recognized norms (*value for money*). These costs are also comparable to the *Improved Desert Ecosystems and Climate Resilient Oases Project* (P128082) in Algeria.

- Practices, technologies and techniques promoted by the Project, expected to protect biodiversity and improve SLWM, are cost-effective.
- Cost-effective policy principles and strategic directions introduced by the project are likely to be further integrated into key national strategies.

B. Technical

64. The project's design is based on successful approaches and methodologies already developed under other projects, as well as on lessons learned by past and/or ongoing projects for sustainable land management, community development, participation, and technology dissemination.

C. Financial Management

65. The DGEQV will be the Project's implementing Agency and as such it will be responsible of the overall project's oversight and financial management arrangements. A full assessment of the financial management capacities of the DGEQV was conducted in accordance with OP/BP 10.00 and the Financial Management Manual for World Bank-Financed Investment Operations, in order to determine the adequacy of the capacity of the implementing agency to properly manage and account for the grant proceeds and to produce timely, accurate and reliable financial statements for general and Bank special purposes. The assessment concluded that, while the DGEQV had the overall capacity to manage the funds and produce timely, accurate and reliable financial statements for general and special Bank purposes, a number of adequate measures should be taken in order to strengthen the agency.

66. A *Project Coordination Unit* (UGP) will be established within the DGEQV to oversight the technical and administrative implementation of the project, including procurement and financial management. The UGP will include, among others, a full time dedicated Procurement and Fiduciary Management Specialists, who will be in charge of overall fiduciary management project coordination including processing of all payments, budget and accounting control and records. In addition, at least three fiduciary specialists, in charge of providing support to GDAs and CSOs in both, financial management and procurement, will be hired by the DGEQV and will be based at the local level.

67. The Project's overall financial management (FM) risk is considered as *substantial*,³² because of Component 2, which is the largest one, entails the financing of a number of community-driven micro-projects to be technically implemented through six GDAs and several CSOs. The maximum amount of the contribution provided by the Project to any individual micro-project has been capped to a maximum of US\$ 50,000 in order to have a smaller range of micro-projects and thus facilitate their management.

68. In addition to the measures already put in place by the implementing agency and in order to mitigate specific FM-related risks, the following measures have been agreed with the DGEQV:

³² Overall financial management risk analysis is in Annex III Implementation Arrangements

- Present in details, the project financial management and disbursement procedures in the Project Implementation Manual (PIM). In this regard, it should be pointed out that the PIM defines various internal control measures for the administration of micro-projects, including the following: (i) arrangements and mechanisms to adequately support the preparation and monitoring of budgets for each micro-project; (ii) micro-project eligibility criteria; and (iii) technical and fiduciary support provided by the project to strengthen GDAs and CSOs.
- The audit scope, auditor, and terms of reference required for the external audit will be agreed with the World Bank in order to ensure their compliance with World Bank's policies.
- Several trainings on Financial Management and Disbursement matters will be organized for the UGP as well as for GDA and CSOs.

69. Based on the assessment carried out, DGEQV's financial management performance for past and current projects under its supervision, the existing FM arrangements – strengthened as agreed - can be considered acceptable to the Bank³³.

70. The World Bank's supervision strategy for this project will include the following: (i) at least two full FM supervision missions per year, which will look into the operation of the control systems and arrangements as described in Annex 5; and (ii) desk reviews of semiannual internal financial and annual audit reports.

D. Procurement

71. ***DGEQV's Capacity Assessment:*** The DGEQV has only few staff with good experience in procurement management under multilateral and bilateral projects. This staff is responsible for all the procurement processing from the preparation of the bidding documents stage up to the notification of the consultant/supplier/contractor and for record keeping. To ensure smooth implementation of the Project (i) DGEQV assigned dedicated staff and the PIM clearly define coordination and reporting responsibilities in general, and those of its procurement staff, in particular; and (ii) training, brief and update of the staff on Bank procedures, namely those regarding consultancy services will be ensured through the project implementation.

72. ***GDAs/CSOs' Capacity Assessment:*** Given the small size of the community-driven micro-projects, the assessment of the capacities of the GDAs and CSOs was conducted according to the *Guidance note for management of procurement responsibilities in community-driven development projects*. For this purpose, an Integrated Assessment Framework (IAF) has been shared, through DGEQV, with a sample of GDAs and CSOs. On the basis of the answers to the IAF questionnaire, beneficiary GDAs and CSOs are likely to face difficulties in procurement implementation given the fact that community involvement in procurement is relatively new in Tunisia and that GDAs and CSOs are understaffed. Key risks for procurement are the following: (i) lack of experience in procurement; (ii) inadequate capacity of GDAs to handle the volume of procurement for community activities under the project; and (iii), poor quality of contract management and community projects' implementation.

73. ***Proposed mitigating measures:*** DGEQV, GDAs and CSOs will carry out and manage project procurement provided they mobilize adequate capacity and undertake the following

³³ Detailed description of FM implementation arrangements can be found in Annex III Implementation Arrangements

recommended actions: (i) assign full time and experienced procurement specialist for the UGP, to ensure that procurement procedures are consistent with the provisions of the grant agreement for the whole project and provide the required technical assistance to GDAs and CSOs, if needed; (ii) design and implement a comprehensive procurement training and capacity building program for DGEQV and GDAs and CSOs; and (iii) provide technical assistance to GDAs and CSOs (for more details, see Annex 3).

74. **Procurement planning:** The DGEQV prepared an acceptable procurement plan covering the first 18 months of the project implementation including for micro-projects under Component 2.

E. Social (including Safeguards)

75. Social impacts of the proposed TOELP Project activities are expected to be positive. Small-scale producers, the primary target of project investments, will directly benefit from a variety of investments, and special attention will be given to women and youth. Producers groups, community organizations and associations of civil society will actively participate in the design and in the implementation of all the activities.

76. In accordance with Tunisian legislation and in compliance with the Operational Policy of the World Bank on involuntary resettlement (OP 4.12), a *Resettlement Policy Framework* (RPF) has been prepared by the DGEQV. While the project may finance small-scale physical investments (including habitat, roads, and gravel roads), no adverse impacts such as relocation of households, adverse impacts on incomes/livelihoods/businesses, or any restriction of access to natural resources are anticipated under this project. The RPF has been approved during a national workshop held on 17 and 18 February 2014, and disclosed in the Ministry's Website on March 06, 2014, and at the Bank's Infoshop on March 07, 2014.

77. A participatory and iterative process of consultations, conducted with all stakeholders and potential affected people defined substantial mitigation measures (nature and amount of compensations). Within each community oasis, the DGEQV, will be in charge for the establishment and the operations of a *Complaints Commission in each selected oasis*, made of the representatives of the GDA, associations of producers and users, women and youth groups, and also CDRAs and other decentralized technical services. The DGEQV has prepared a template to help people / households potentially affected by sub-projects to properly present their complaints, if needed, and amounts of compensations (by type) have been defined in a participatory manner.

78. The client is familiar with the provisions of the Bank's social safeguards policies given their experience with other GEF/WB projects. As a result, several staff was trained on social safeguard to support the project. In addition, a social and environment consultant will be hired to focus on social and environment safeguards as well as monitoring and evaluation.

F. Environment (including Safeguards)

79. The project will have significant positive effects on the environment. In line with this OP4.01, and given the fact that the effects of some proposed micro-projects will be limited, the TOELP project is classified as environmental category B.

80. The DGEQV has elaborated an Environmental and Social Management Framework (ESMF) which was approved during a national workshop held on February 17 and 18, 2014, and has been posted in the Ministry's Web site on March 06, 2014, and at the Bank's Infoshop on March 07, 2014.

81. Activities to be financed by the project will follow the steps of environmental screening through a form of *Fact Sheet Environmental and Social Information* (FIES), to be annexed to the ESMF. This screening will determine the magnitude of negative impacts on human bio-physical environment and socio-economic activity that is likely to generate.

G. Other Safeguards Policies Triggered

82. In addition to OP 4.01 (Environmental Assessment) and OP 4.12 (Involuntary resettlement), the following safeguards policies were triggered: (i) OP 4.04 on Natural habitats; (ii) OP 4.11 Physical Cultural resources; and OP 4.36 Forests.

83. The overall environmental and social impact of the project is considered positive and safeguard tools provide enough information for decision-making on environmental and social aspects during the phase of implementation.

Table 3: Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Natural Habitats (OP/BP 4.04)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pest management (OP 4.09)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Physical Cultural Resources (OP/BP 4.11)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Involuntary Resettlement (OP/BP 4.12)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Indigenous People (OP/BP. 4.10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Forests (OP/BP. 4.36)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Safety of dams (OP/BP 4.37)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects in Disputed Areas (OP/BP. 7.60)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Projects in International Waterways (OP/BP 7.50)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Annex 1: Results Framework and Monitoring

Country: Tunisia

Project Name: TN-Oases Ecosystems and Livelihoods Project (P132157)

Results Framework

Global Environmental Objectives

PDO Statement

The Project Development Objective/Global Environmental Objective is to improve sustainable natural resources management and promote livelihoods diversification in targeted traditional oases in Tunisia.

These results are at | Project Level

Global Environmental Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	Cumulative Target Values					Frequency	Data Source/ Methodology	Responsibility for Data Collection
				YR1	YR2	YR3	YR4	End Target			
Direct project beneficiaries	<input checked="" type="checkbox"/>	Number	0.00	100.00	1000.00	5000.00	8000.00	10000.00	Annual	Project M&E	UGO
Land area where sustainable land mgt. practices were adopted as a result of proj	<input checked="" type="checkbox"/>	Hectare(Ha)	0.00	0.00	250.00	500.00	600.00	700.00	Annual	Project M&E	UGO, External evaluators
Land users adopting sustainable land mgt. practices as a result of the project	<input checked="" type="checkbox"/>	Number	0.00	100.00	500.00	1000.00	2000.00	3000.00	Annual	Project M&E, surveys	UGO, External evaluators

Number of local species that have been reintroduced in selected oasis	<input type="checkbox"/>	Number	0.00	0.00	5.00	10.00	15.00	20.00	Annual	Project M&E	UGO, External Evaluators
Households adopting diversified activities as a result of the project	<input type="checkbox"/>	Percentage	0.00	5.00	10.00	20.00	25.00	30.00	Annual	Project M&E, Surveys	UGO, External evaluators
Female beneficiaries	<input checked="" type="checkbox"/>	Percentage Sub-Type Supplemental	0.00	51.00	51.00	51.00	51.00	51.00	Annual	Project M&E, Surveys	UGO, External evaluators

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	Cumulative Target Values					Frequency	Data Source/ Methodology	Responsibility for Data Collection
				YR1	YR2	YR3	YR4	End Target			
Validation of the national strategy for sustainable development of Tunisian Oases by the Project Steering Committee	<input type="checkbox"/>	Yes/No	No	Yes	Yes	Yes	Yes	Yes	Once	Minutes of Steering Committee Meeting	UGO, GDA
Participants in consultation activities during project	<input checked="" type="checkbox"/>	Number	0.00	50.00	500.00	1000.00	2000.00	3000.00	Annual	Project M&E, Surveys	UGO, External evaluators

implementation (number)											
Participants in consultation activities during project implementation - female	<input checked="" type="checkbox"/>	Number Sub-Type Breakdown	0.00	20.00	20.00	20.00	20.00	20.00	Annual	Project M&E, Surveys	UGO, External evaluators
Tunisian Oases with monographic profiles prepared	<input type="checkbox"/>	Percentage	0.00	0.00	20.00	50.00	75.00	100.00	Bi-annual	M&E	UGO, GDA
Technologies demonstrated in the project areas (number)	<input checked="" type="checkbox"/>	Number	0.00	5.00	10.00	15.00	20.00	20.00	Annual	Project M&E, Surveys	UGO, External evaluators
Clients who have adopted an improved agr. technology promoted by the project	<input checked="" type="checkbox"/>	Number	0.00	0.00	50.00	100.00	150.00	200.00	Annual	Project M&E, Surveys	UGO, External evaluators
Clients who adopted an improved agr. technology promoted by project – female	<input checked="" type="checkbox"/>	Number Sub-Type Breakdown	0.00	50.00	50.00	50.00	50.00	100.00	Annual	Project M&E, Surveys	UGO, External evaluators
Biodiversity tracking tool completed	<input type="checkbox"/>	Number	6.00	6.00	6.00	12.00	18.00	18.00	Annual	Project M&E, Surveys	UGO, External evaluators

Land degradation tracking tool completed	<input type="checkbox"/>	Number	6.00	6.00	6.00	12.00	18.00	18.00	Annual	Project M&E, Surveys	UGO, External evaluators
Cultivars that are produced, multiplied and distributed	<input type="checkbox"/>	Number	0.00	0.00	2.00	4.00	8.00	10.00	Bi-annual	M&E	UGO

Annex 2: Detailed Project Description

TUNISIA OASES ECOSYSTEMS AND LIVELIHOODS PROJECT (TOELP)

01. *The Project Development Objective/Global Environmental Objectives* is to improve sustainable natural resources management and promote livelihoods diversification in six selected traditional oases in Tunisia.
02. By targeting traditional ecosystems, and fragile oases and small-scale producers, major outcomes of the proposed Project will be the following: (a) conservation and promotion of biodiversity; (b) reduction of the severity of land degradation through piloting participatory approach for sustainable oasis management at the local level; (c) increased efficiency of water management for agriculture; (d) promotion of genetic diversity of dates; (e) support to activities aimed at managing soil moisture efficiently, improving soil fertility and reducing erosion; (f) improvement of the livelihoods of local people, especially women and youth, by diversifying their economic activities; and (g) establishment of an effective strategy for sustainable development of the country's traditional oases. However, while targeting a small number of oases, at a larger scale, the proposed Project will contribute to: (i) defining mechanisms and initiatives supporting / advocating for wider policy reforms; and (ii) identifying monitoring tools and incentive instruments to keep the development of irrigated date palm areas under control to combat illegal oasis expansion.
03. The project preparation was supported by a US\$380,000 Grant from the Program on Food Security (PROFOR) managed by the Bank that helped the Government to:
 - Set an **overall strategic vision** for the sustainable management of oasis ecosystems both to protect and restore traditional oases and regulate the development of irrigated areas adopted in February 2014 and outlined in Box 1.
 - Elaborate and implement **an integrated approach** to develop oasis participatory development plans (PDPOs), which, will sustain community initiatives (or micro-projects) in the following areas: (i) protection of biodiversity, (ii) sustainable management of land and water; and (iii) diversification of local livelihoods. National guidelines for the elaboration of local development plans have been adopted and are outlined in box 2.
 - **Formulate Oasis Participatory Development Plans (PDPOs)** of targeted oases. Based on the integrated participatory approach developed through the national guideline, the PDPOs of the six selected oases have been prepared in collaboration with local stakeholders.

Box 1: National Strategy for the Sustainable Development of Oases

Overall vision and directions:

- Protect a durable production system by rehabilitating oasis ecosystems
- Promote an area-based approach
- Support oasis-related policy reforms

Strategic priorities

- a) Rehabilitation and preservation of the ecological and environmental functions of oasis ecosystems: Management and preservation of water resources (joint management of water resources at all levels, integrated management of water resources, replenishment of groundwater); protection of oasis environment (against pollution, floods, sand invasion); restoration and protection of biodiversity.
- b) Restoration and consolidation of the economic and socio-economic functions of oases: development of integrated management production systems; research / development and support/advice).

- | |
|---|
| <ul style="list-style-type: none"> c) Rehabilitation and development of oasis socio-cultural and tourist functions d) Improvement of the quality of oasis livelihoods and living conditions e) Accompanying legal and institutional measures |
|---|

Box2: Participatory Approach to Elaboration of Oasis Development Plans

Preparatory Phase	Pre-diagnostic Phase	Planning Phase
<p>Step 1: Information & awareness raising of national stakeholders</p> <p>Step 2: Information & sensitization of local stakeholders</p> <p>Step 3: Information & sensitization of the population</p>	<p>→</p>	<p>Step 4: Collection of basic data and technical pre-diagnostic study</p> <p>Step 5: Collection of additional data and community-based pre-diagnostic study</p> <p>→</p> <p>Step 6: Participatory diagnostic study and the preparation of a strategic vision for the development of the oasis</p> <p>Step 7: Thematic diagnostic study and identification of key activities</p> <p>Step 8: More in-depth thematic diagnostic assessments with focus groups</p> <p>Step 9: Assessment of the pre-feasibility of activities and establishment of priorities</p> <p>Step 10: Identification of key M&E indicators and establishment of baseline</p> <p>Step 11: Validation of PDPO content</p> <p>Step 12: Drafting the PDPO document</p>

Project Beneficiaries

04. Six oases have been selected following an inclusive selection process, involving officials of ministerial departments that are implementation partners of the Project, representatives of line departments (Agriculture, Tourism, Arts and Crafts, Equipment, Environment, etc.), representatives of civil society and resource persons, on the basis of a range of criteria focused essentially on: (i) their representativeness of Tunisian oases; (ii) their heritage value; (iii) the existence of GDA and active associations; (iv) the capacity of local people and stakeholders to adopt the participatory approach of the project; and (vi) the for the available opportunities for oasis rehabilitation and preservation. The selected oases are the following:

- *Coastal area Oases*, Governorate of Gabes: Zarat, comprising a total areas of 85 ha and 400 farming households
- *Continental oases*, Governorate of Kebili : Noueil, comprising a total areas of 97 ha and 500 farming households
- *Mountain oases*, Governorate of Gafsa : El Guettar comprising a total areas of 500 ha and 2,700 farming households
- *Mountain oases*, Governorate of Tozeur : Cluster of three oases (Tamezgha, Chebika, Mides), comprising a total areas of 134 ha and 500 farming households, of which: Tamzegha (80 ha and 300 households), Chebika (25 ha and 116 households), and Midès (29 ha and 80 households).

05. Overall, these potential beneficiaries are characterized not by chronic poverty, but by a constant and persistent spiral of impoverishment, linked to numerous factors, such as: growing production costs, decreasing size of family land (because of local inheritance systems), reduced quotas of

water for irrigation, worsening terms of trade for agricultural products, and downward trends of prices of agricultural products (inflation).³⁴

06. *At the local level*, oasis communities, including grass-roots institutions and organizations such as the GDAs, other associations of civil society or cooperatives, women's groups and youth organizations and environment-related NGOs, will directly benefit from Project activities. This will be made possible by their participation to the preparation and implementation of their PDPOs, to the initiatives aimed at strengthening their technical capacities, supporting their livelihoods, and protecting the biodiversity. According to the baseline survey carried out in the six selected oases during the preparation of the PDPOs, the total number of these beneficiaries may be estimated at **about 4,100 households**, that is a total population of about 18,000 people³⁵ (of which 9,500 women).³⁶ These households cultivate about **820 ha of land**.³⁷ At local level, other beneficiaries, including representatives of local administration and deconcentrated technical services, is estimated at about 150 people.
07. The larger population, living at the edges of the six targeted oases, will benefit indirectly from broader social, economic and environmental spillovers, related to Project initiatives. Again, according to the findings of the surveys conducted during the preparation of the PDPOs, this population is estimated at **about 25,000 people**.
08. *At the national level*, the following institutions may also be considered as direct beneficiaries of the propose Project, namely through technical assistance and capacity building initiatives: central departments and regional delegations of the Ministry of Equipment, Territorial Management, and Sustainable Development (MEATDD); Regional Agricultural Development Commission (CRDA) of the Ministry of Agriculture, in the targeted Governorates; and the deconcentrated services of the Ministry of Tourism (MT). These institutions will mainly benefit through technical assistance and capacity building activities

PDO Level Results Indicators

09. The following key indicators will monitor progress towards achieving the objectives and their outcomes:
 10. Direct project beneficiaries (of which female (percentage)
 11. Land area where sustainable land management practices were adopted (as a result of project initiatives) (ha)
 12. Land users adopting sustainable land and water management (SLWM) practices as a result of the project (number)
 13. Number of local species that have been reintroduced in selected oasis

³⁴ Indirectly, poverty levels of these households are shown by the average size of their agricultural exploitations - only 0.2-0.3 ha, with the exception of Zarat (0.8 ha) - relatively high production costs (water, land fertility management, labor, etc.), and high volatility of annual agricultural revenues (constant deterioration of terms of trade for agricultural products compared to agricultural inputs and services). Furthermore, communities are also characterized by high levels of internal economic stratification in terms of productive assets (in El Guettar, for instance, individual family plots vary between 0,01 ha and 7.4 ha), income, and labor force (i.e., proportion of economically active members able to undertake agricultural and extra-agricultural activities).

³⁵ In 2009, the average size of households was 4.2 people (it was 5 people in the mid-1990s) (INS).

³⁶ Sources : Ministère du Développement Rural et de Planification (MDRP), Institut Tunisien de la Compétitivité et des Etudes Quantitatives (2011a) *Le Profil démographique de la Tunisie*; Ministère du Développement Rural et de Panification (MDRP), Office de Développement du Sud (2011b) *Le Sud Tunisien en chiffres:2011*.

³⁷ See the profile of the six oases in the Appendix of Annex 2.

14. Households adopting diversified activities as a result of the project (percentage)

PROJECT DESCRIPTION

15. The financing provided by the project is governed by basic principles for its implementation, namely the following: (i) demand-driven approach; (ii) participation of vulnerable groups; (iii) empowerment of actors; (iv) transparency; (iv) equity among beneficiaries; (v) flexible approach; (vi) partnership; and (vii) preservation of the environment.
16. In order to achieve its objectives, the proposed Project approach aims at promoting interactions between sustainable management of natural resources and biodiversity conservation. Therefore, in order to fight against land degradation and biodiversity loss in the oases, by focusing on three main fields of intervention, the Project will: (i) help create an enabling environment to maintain the flow of goods and services provided by the oases by promoting the strategy for the sustainable development of the oases; (ii) help build the capacities of all the stakeholders involved in the preparation and in the implementation of the participatory development plans for an integrated management of natural resources; and (iii) provide support to put in place mechanisms aimed at improving the income of local communities and increasing investment and partnerships to develop the selected oases. Therefore and in line with this approach, the following components, sub-components and activities of the Project have been identified.

PROJECT COMPONENTS

Component 1: Strengthening capacities for sustainable management of oasis ecosystems **(Total cost: US\$1,775,830, of which US\$ 1,031,830 from GEF, US\$ 726,000 from Government, and US\$ 18,000 from beneficiaries)**

17. This component aims at strengthening the capacities of national and local stakeholders in order to create an enabling environment for the scaling up of sustainable management practices in the oases. Activities of this component are organized according to the following three sub-components:

Sub-component 1.1: National strategy for sustainable development of Tunisian oases **(Total cost: US\$ 781,830, of which US\$ 431,430 from GEF and US\$ 350,400 from Government)**

- (i) ***Preparation of an Action Plan for the national strategy for the sustainable development of the oases***: This Action Plan will identify a set of activities that will take into account key principles of sustainable development of oases, regulations and priority actions. The Plan, which will cover a period of five years (2015-2020), will present the means necessary for the implementation of the National Strategy for sustainable development of oasis. To this end, it will define priority actions, with specific targets and indicators to measure progress. This activity will be funded by the GEF.
- (ii) ***Formulation and implementation of a communication strategy (to be funded by the Government)***: The development and implementation of an efficient communication strategy is key to raise awareness on ecosystem-related issues of Tunisian oases. The goal is to highlight the potential of oasis agriculture, but also the role of responsible tourism, local crafts, local products, economic and cultural activities and cultural heritage, fostering the

adoption of new behaviors by all stakeholders. This activity will be funded by the Government.

- (iii) **Preparation of complete monographic profiles for each of the 210 Tunisian traditional oases, including status of wildlife and biodiversity, together with a Web-based Geographic information system (GIS).** These tools will: (i) highlight the potential of traditional Tunisian oasis; (ii) make available their representation and spatial environment; (iii) interconnect users; and (iv) assist decision-making.

18. These activities will be implemented through the organization of consultative workshops, provision of services by consultants, and a training program.

19. **Sub-component 1.2: Strengthening the capacities of stakeholders (Total cost: US\$964,000 US\$, of which US\$570,000 from GEF, US\$375,000 from Government and US\$ 18,000 from beneficiaries):** Capacity building aims to develop organizational and management skills, coordination and promotion of effective participation of people, particularly women and youth, in community development process. The PDPOs of targeted oases have been developed during the preparatory phase and more than 1,000 people of various backgrounds were consulted and contributed to define the vision and priorities for the selected oasis. During the project, the capacity building process will include two components:

- (i) **Training and technical assistance to stakeholders** (see Box 3):
- **The Project Management Unit** (UGP) in the fields of M&E, environmental and social safeguard as well as fiduciary management.
 - **Deconcentrated technical services** will be supported through training sessions on key aspects of community development and participatory approach, biodiversity and its relevance, SLWM techniques, etc.
 - **The GDAs** of the oases targeted by the Project, but also those of neighboring oases, will be provided with training and technical assistance in the fields of legal and institutional development frameworks, administrative and financial management practices, participatory approach, and sensitization of local development associations, planning and M&E, preparation of community micro-projects as well as biodiversity and its relevance, and SLWM techniques (see Box 3).
 - **Associations of civil society and socio-professional organizations** will be provided with training on diagnostic assessments, planning, and decision-making as well as preparation of community micro-projects, biodiversity, SLWM and livelihood diversification.
- (ii) **Specific support to :**
- **National Bank of Genes (BNG):** The preservation of Tunisian national genetic heritage and the development of resources for its development are the focus of the National Bank of Genes in Tunisia, with the aim of preserving the national genetic resources, including endangered resources but also vegetal and animal genes well acclimated to local biodiversity. This specialized institution will receive direct support from the project to carry out the following activities:

- a. Conduct inventory of and identify genetic material (seeds or any other material from which plants multiply) of targeted oases;
 - b. Identify threatened species, collect and preserve their seeds in cold rooms.
- **Regional Research Center for Oasis Agriculture (CRRAO):** This center conducts agricultural research (fertilization, pollination, irrigation) and develops biological control methods against pests of date palms. It is particularly concerned with the erosion of the diversity of date palms and has developed techniques of in vitro propagation of rare varieties for ex-situ storage. The center will receive direct support from the project in order to:
 - a. Maintain and enrich its existing collection in Deguache;
 - b. Rehabilitate some rare varieties in the targeted oases (*Deglet el Bey* in Saharan oases and *Mattata* (in coastal oases).
 - **Institute of Arid Regions (IRA) of Medenine.** Through its laboratory on arid land and oasis crops, the IRA has carried out several activities related to the labeling and evaluating genetic heritage in oases and other production locations in southern Tunisia. It owns three varietal collections: one containing various fruit trees in the area of Tozeur, a second one dedicated to date palm varieties in the oasis of Nefzaoua, and a third one on varietal collection of palms and fruit trees in Chenchou. IRA collaborates with the regional CRDAs and the Training Centers for Agricultural Recycling techniques (CFRAs) to manage and conserve another varietal collection of grenadier in Zerkine. The IRA will receive direct support of the project to:
 - a. Conduct the inventory of and collect fruit and vegetable varieties in the selected oases;
 - b. Label and evaluate the accessions that have been collected; and
 - c. Multiply fruit and vegetable species.

Box 3: Key topics for the training of stakeholders

- **Organization and functioning of a local association :** legal and institutional framework, financial and administrative management, project management – procedures and regulations, tools, monitoring and evaluation of operations, sensitization of beneficiaries and organization of their participation, reception of works and payments, etc.
- **Communication and management of partnerships and conflicts:** communication and coordination of the relations between stakeholders, knowledge of the socio-professional environment, establishment and management of partnership relations with development practitioners.
- **Preparation and management of projects:** planning, programming, monitoring and evaluation of project activities, elaboration of an action plan (or road map) and monitoring and evaluation of its implementation, knowledge of support opportunities and ways of getting them, advocacy.
- **Sustainable development and management of natural resources:** key concepts (Rio conventions) and use of these concepts in a participatory development process, SLWM techniques, biodiversity, climate change, advocacy for a sustainable development and management of natural resources.
- **Participatory and integrated approach to development:** foundations, principles and

20. ***Sub-component 1.3: Monitoring and evaluation of Project activities (total cost: US\$30,000 from GEF)***. The key activity will focus on the establishment of the Project M&E system through provision of goods, services provided by consultants and training. The system will take into account M&E systems of other projects currently operating in the areas of land management, more particularly the *Ecotourism and Conservation of Desert Biodiversity* Project (P120561).

Component 2: Supporting the implementation of the PDPOs

(Total cost: US\$62,169,000, of which US\$ 4,434,000 from GEF, US\$ 57,495,000 from Government, and US\$ 240,000 from beneficiaries)

21. This component aims at restoring and better managing the productive assets of the targeted oasis ecosystems and their resources through the establishment of a dynamic partnership between the various stakeholders. Indeed, given the increasing pressure on oasis agro-systems, capacity building programs (Component 1) combined with the implementation of community micro-projects proposed in component 2, should allow local populations to see their oases as opportunities that can be better explored, and that they should contribute in protecting them. This will also allow them to better comply with SLWM norms, to protect biodiversity and promote activities aimed at reducing pressure on the environment. As holders of PDPOs, the GDAs of the targeted oases, through a participatory and consultative process with all stakeholders, and on the basis of eligibility criteria (see Box 4), will coordinate the preparation and implementation of community micro-projects which are grouped into the following two categories, each category may include small-scale physical investments (including habitat, roads, and gravel roads):

22. ***Sub-component 2.1: Community micro-projects in the area of sustainable management of land and water and biodiversity (total cost: US\$ 59,607,000, of which US\$2,451,000 from GEF, and US\$57,156,000 from Government)***. The main objective of this component is to strengthen the management of oasis natural resources by promoting SLWM practices and to enhance ownership and active participation of local communities. Key activities are the following:

- ***Protecting oases against flooding, silting and wild boars***: These are the three main scourges threatening the survival of the majority of selected oasis. Indeed, violent floods of *wadis* surrounding the targeted oases are often the cause of great damage and loss of production (such as the recent destruction in October 2013 of the dam protecting the oasis of Mides and backfilling of several cultivated parcels in the aftermaths of violent floods of *wadi Oudeï*). The Project will support studies for the rehabilitation of some hydraulic structures and support communities to carry out works that drift floodwaters towards the axis of the valleys and prevent their excesses in the oasis. The attacks by wild boars, whose population has risen sharply in the recent years, caused numerous damages to land and crops. Oases could urgently be protected through the promotion of boar wild trapping techniques allowing to manage and control boar population (including through regular culling's). The project will support the acquisition of boar wild trapping tools. Sand invasion is another important threat in some oases, mainly in Noueil. Key activity will be the removal of the sand that threatens lands and individual houses. Removed sand would eventually be used to fertilize the land of the lower part of the oasis. Main preventive measures would aim at stabilizing the eastern

dunes bordering the oasis and controlling wind deflation by achieving plantations in the surrounding steppe.

- **Improving productivity and eco-systemic services** by scaling up SLWM practices. These practices will help, on one hand, reverse current trends of declining agricultural productivity and degradation of the oasis environment and, on the other hand, mitigate the effects of climate change. In addition, oasis communities face many problems concerning water resources, including, among others, the considerable groundwater lowering (due to the creation of new irrigated perimeters), the drying of sources, the degradation of water quality and the use of non-renewable water resources. In this respect, main PDPO-related micro-projects supported by the Project will involve: (i) cleaning oasis for preventive control against diseases and parasites; (ii) establishing composting units for oasis organic waste; (iii) weeding agricultural parcels; (iv) rejuvenating palm trees by planting local species; (v) promoting organic agriculture; (vi) promoting small scale irrigation management techniques; (vii) promoting organic fertilization; (viii) salt leaching; (ix) securing water sources water; and (x) installing photovoltaic-powered pumping systems.
- **Restoring and protecting oasis biodiversity:** Micro-projects mentioned above, which will scale up SLWM practice, will also help biodiversity conservation. In addition, the Project will support community micro-projects aimed at: (i) reintroducing endangered tree species³⁸; (ii) reintroducing local forage crops³⁹; and (iii) safeguarding threatened or endangered species.

23. **Sub-component 2.2: Community micro-projects in the area of the diversification of local livelihoods (Total cost: US\$2,562,000, of which US\$1,983,000 from GEF, US\$339,000 from Government and US\$ 240,000 from beneficiaries).** The diversification of local livelihoods includes community micro-projects aimed at promoting alternative farming and non-farming activities, which will not only generate income and improve living conditions, but will also reduce pressure on natural resources and help improve the quality and the sustainability of these resources. Community micro-projects will include, among others, the following activities :

- **Supporting women income generating activities:** Activities will aim at restoring and making the best use of local women's craftsmanship skills and know-how and supporting fattening of sheep and beekeeping.
- **Supporting young people's alternative economic activities,** especially within the context of promoting eco-tourism, creating hiking path and supporting sustainable management of fisheries (clams in Zarat).
- **Supporting cultural activities** in order to preserve and develop local cultural heritage by: beautifying villages and tourist sites; improving living conditions; supporting visitor centers and eco-museum (Mides); rehabilitating spring (Noueil); supporting socio-cultural events; creating animal holding areas outside the village (Noueil); supporting local association to develop local products (Tamezgha, El Guettar and Zarat), and preservation of local horsebreeding know-how (Zarat).

Component 3: Project coordination and management

(Total cost: US\$863,900, of which US\$ 294,900 from GEF, US\$ 569,000 from Government)

³⁸ Apricot, peach, plum, pear, pistachio, table grapes, loquat, Boufaggous and several other species.

³⁹ Vetch, oats ...

24. This component will support the establishment and management of a fully-functioning Project Management Unit within the *General Directorate for Environment and Quality of Life* (DGEQV), of the *Ministry of Equipment, Territorial Management, and Sustainable Development (MEATDD)*. Through the provision of goods, consultants' services and training, it will cover (i) the equipment cost for the Unit; (ii) audits for the Project; and; (iii) the incremental operating costs for the Project.

a) General criteria

- A micro project shall be presented by an eligible promoter, namely a GDA, or CSO (village organization, an association of civil society, or a group of resident producers or users with a legal status)
- A micro-project shall be formulated according to the template defined in the Manuel of implementation and presented in an ad hoc 'micro-project document'

b) Nature and objectives of a micro-project

- In each 'micro-project document', the objective of the micro-project shall be presented in a clear and concise manner; it has to reflect the orientations of the PDPO of the oasis community to which the promoter belongs and has to contribute to achieving the objectives of the same PDPO
- The objective of the micro-project shall not be in conflict with those of the activities planned by other projects operating in the same region

c) Implementation modalities

- A micro-project shall be related to the geographic area covered by the TOELP Project
- A promoter shall provide an in-kind contribution to the micro-project, whose value shall correspond at least to 30% of the total cost of the micro-project
- The amount of the TOELP Project contribution to an individual micro-project shall not exceed about 80,000 TD (i.e. around US\$ 50,000)
- The implementation period of a micro-project shall not exceed 12 months

d) Technical validation and approval

- Firstly: In order to be financially supported by the TOELP Project, a micro-project shall be certified by the chairperson of the GDA of the promoter, who has to ensure that: (i) the micro-project is not on the list of ineligible micro-projects established by the TOELP Manuel of implementation; (ii) the land tenure status of the land under management initiatives of the micro-project is well known and accepted by the community.
- Secondly: In order to be financially supported by the TOELP Project, a micro-project shall be technically assessed by a Technical Validation Committee (made up of representatives of related line departments), which has to determine : (i) its compliance with national technical standards; (ii) its compliance with relevant legal, regulatory and technical sectoral policies and its consistency with their framework; and (iii) its compliance with the ESMF and RPF socio-economic safeguard measures

e) Arrangements

- A 'micro-project document' shall include a presentation of the internal institutional arrangements defined by its promoter concerning administrative, financial and technical responsibilities

- A ‘micro-project document’ shall also include realistic and sustainable provisions concerning the maintenance of facilities, including potential additional recurrent costs

Box 4: Eligibility criteria of community-driven micro-projects

Cross-cutting issues

25. **Global environmental benefits (GEBs).** By investing in techniques that improve soil fertility and agricultural productivity, and giving special attention to the conservation and promotion of food products from oasis agricultural biodiversity, the Project will improve the sustainability of selected oasis and the livelihoods of local populations and provide the following GEBs: (i) *Land degradation*: improved provision of agro-ecosystem goods and services, and reduced vulnerability of agro-ecosystems to climate change and other human-induced impacts, and conservation and sustainable use of biodiversity in production landscape; (ii) *Biodiversity*: Conservation of globally significant biodiversity, and sustainable use of the components of globally significant biodiversity. More particularly, the Project will provide the following local environmental benefits: in situ conservation of crops/selected plants, including staples such as local hard wheat, rye, local vegetable crops, alfalfa and corn which are important for nutrition and food security; (i) improvement of soil fertility and its resilience in order to increase organic matter; (iii) reduction of soil erosion; (iv) integration of conservation and sustainable use of biodiversity in public policies, programs and regulatory frameworks through the strategy; (v) integration of biodiversity considerations into market mechanisms and increased SLWM investment. These benefits will be audited by tracking: (a) the number of local varieties preserved and cultivated and the number of applications for the use of local seeds; (b) agricultural land (at least 700 ha) under improved agricultural practices, (c) areas protected against flooding; (d) reduction of degraded oasis areas.
26. **Adaptation.** A key innovative aspect of the project is the concept of adaptation of local agricultural practices, traditional know-how and community needs for the integration of agricultural biodiversity in the local economy, as a driver for local development. The result is the ownership of the key objectives by local stakeholders through the participatory approach. Local institutions are sensitized and strongly support this proposal, thus ensuring ownership and their participation in the implementation of micro-projects.
27. **Innovative approach.** The innovative and sustainable approach of the Project is based, on one hand, on ensuring ownership and commitment of local communities, and, on the other hand, on integrating biodiversity conservation and SLWM practices into national policies and programs. With this approach, the Project aims at creating participatory management model, which would involve all the stakeholders, and which would eventually be scaled up to all Tunisian oases. The potential to extend the project approach will be fostered through dissemination of lessons learned and experiences to raise awareness and ensure that local communities and stakeholders understand and adopt, with government support, the dynamic development model (eventually to be promoted in the neighboring regions).
28. **Gender.** Finally, the proposed Project will focus on another key cross-cutting issue, namely a *gendered approach* that outlines the specific roles and needs of men and women (including

young boys and girls, and will conduct regular assessments of the impact of Project initiatives to reduce gender gaps.

APPENDIX:

EXECUTIVE SUMMARIES OF THE PDPOs OF THE SIX TARGETED OASES

EXECUTIVE SUMMARY : PDPO Oasis of Chebika				
Governorate : TOZEUR		District : Tameghza		Type of oasis : Mountain
Total number of households : 116		Total population: 1,142 hab. (2004)		Area cultivated : 25 ha
COMPONENT	POTENTIALS / CONSTRAINTS	ACTIONS TO UNDERTAKE	EXPECTED RESULT	COST (1\$=1.6 TD)
1. CAPACITY BUILDING	<ul style="list-style-type: none"> • <i>Participation of the Rural Council in community issues</i> • <i>Good level of education among the youth</i> • <i>High participation of women in community development</i> • Fragile social structures • GDA : Lack of activities (for the last 3 years) • Weak associations of civil society 	<ul style="list-style-type: none"> • Rehabilitate and reorganize the GDA • Strengthen the capacities of the newly formed GDA • Redynamize local associations of civil society • Sensitize, inform and train local associations 	<ul style="list-style-type: none"> • Technical assistance to GDA members on water management • Training modules to GDA members on planning, implementing and monitoring local development • Recruitment of technical assistance to support GDA • Equipment of GDA • Sensitization, information and training of local associations on key issue of oases ecosystems and planning • Technical support to farmer associations (water distribution and saving system) 	232.000 DT (=145.000 \$)
2. ENVIRONMENT 2.1. Land protection and management	<ul style="list-style-type: none"> • <i>Healthy soil</i> • <i>Runoff water (recharging groundwater)</i> • Frequent flooding and strong water erosion • Destruction of crops by wild boars 	<ul style="list-style-type: none"> • Protect oasis against flooding • Protect oasis against wild boars 	<ul style="list-style-type: none"> • Watershed works (upstream) • trapping techniques against wild boars • Organization of collective cullings to manage wild boar population 	50.000 DT (= 31.000 \$) 40.000 DT (=25.000 \$)

2.2. Water resource management	<ul style="list-style-type: none"> • <i>Important groundwater</i> • <i>Spring</i> • Decreasing spring flow • Long term insecure supply of water for irrigation • Irrigation system which does not take into account seasonal variations • Because of inactive GDA, poor maintenance of water network 	<ul style="list-style-type: none"> • Improve and manage water resources • Improve the operating system of water resources • Ensure a coordinated and integrated management of water resources 	<ul style="list-style-type: none"> • New borehole created (photovoltaic energy) • Maintenance system for water infrastructure in place • Network of cemented seguias (canals) repaired and maintained • Creation of water storage (daily) • Source catchment developed • Spring protected 	<p>Budget CRDA</p> <p>140.000 DT (= 87.000 \$)</p> <p>40.000 DT (=25.000 \$)</p>
3. AGRICULTURE / LIVESTOCK	<ul style="list-style-type: none"> • <i>Local agricultural know-how</i> • <i>Economic importance of agro-pastoral activities (sheep, goats, and dromedaries)</i> • Declining productivity and degradation of the oasis production system • Fragmentation of cultivated plots of land • Plots of land left uncultivated • Aging of the palm grove • Parasites • Reduction of working time spent on agricultural activities • Livestock heavily dependent on climate hazards • Loss of traditional agricultural know-how • Young people no longer interested in agricultural activities 	<ul style="list-style-type: none"> • Improve production • Develop agricultural production systems • Rehabilitate vegetal and animal component of the oasis ecosystem and diversify agro-pastoral activities 	<ul style="list-style-type: none"> • Cleaned oasis (prevention against diseases and parasites) • Better use of crop waste to improve soils (composting unit) • Weeding • Rejuvenation of old palms • Reintroduction of endangered fruit trees • Technological package to intensify good agricultural activities 	<p>120.000 DT (=75.000 \$)</p> <p>18.000 DT (=11.250 \$)</p> <p>96.000 DT (=60.000 \$)</p>
4. BIODIVERSITY	<ul style="list-style-type: none"> • <i>Topography : humid valley favoring adaptation of numerous cultivated species</i> • <i>Well vegetated floodplains</i> • Degradation of biodiversity because of the aging palms • Abandonment of the three layer-system • Disappearance of some of local species and varieties 	<ul style="list-style-type: none"> • Restore and protect biodiversity 	<ul style="list-style-type: none"> • Complete inventory of still cultivated or endangered vegetal species • Farmers are provided with plants, cuttings, slips, and seeds • Farmers cultivate economically attractive species and varieties 	<p>5.000 DT (=3.100 \$)</p> <p>5.000 DT (=3.100 \$)</p>

	<ul style="list-style-type: none"> Threats against some local varieties 		<ul style="list-style-type: none"> Safeguard in public or private gardens of endangered fruit trees 	6.000 DT (=3.700 \$)
5. CULTURAL HERITAGE AND TOURISM	<ul style="list-style-type: none"> <i>Strong bonds to sociocultural heritage</i> <i>Beautiful location / landscape</i> <i>Potential for tourism</i> <i>Craft skills</i> <i>Road network</i> <i>Lesson learned from PAOTIC project (2003-2008)</i> Threats against the equilibrium between traditional systems and socio-cultural values Degradation of local living conditions Limited economic benefits from tourism-related activities Loss of crafts-related know-how (palm by products and wool) 	<ul style="list-style-type: none"> Support sociocultural activities Restore and develop craftsmanship Develop tourism potential Improve local living conditions 	<ul style="list-style-type: none"> Organization of a festival (3-5 days) Restoration of streets, facades, squares and exhibition venue centers Support provided to artisans (including to prepare micro-projects) Preservation of local crafts-related skills Equipment Support to local associations Activities planned by the PAOTIC project are revisited (studies, inventory, mapping) Beautify the village Quality of drinking water improved 	40.000 DT (=25.000 \$) 110.000 DT (=68.600\$) 144.000 DT (=90.000 \$) 200.000 DT (=125.000 \$) 130.000 DT (=81.000 \$)
			TOTAL	1.411.250 DT (=883.000 \$)
			First year	627.950 DT (44,5%)
			3 following years	783.000 DT (=490.000 \$)

EXECUTIVE SUMMARY : PDPO Oasis of Mides

Governorate : TOZEUR

District : Tameghza

Type of oasis : Mountain

Total number of households : 160

Total population : 631 hab. (2004)

Area cultivated : 29 ha

COMPONENT	POTENTIALS / CONSTRAINTS	ACTIONS TO UNDERTAKE	EXPECTED RESULT	COST (1\$=1.6 TD)
1. BUILDING LOCAL CAPACITIES	<ul style="list-style-type: none"> Participation of the Rural Council in community issues High participation of women in community development GDA : Lack of means and capacities GDa : Role only in the management and distribution of water Fragile social structures Lack of organization among women (craftsmanship) 	<ul style="list-style-type: none"> Strengthen managerial and planning capacities of GDA Redynamize local associations of civil society Sensitize, inform and train local associations 	<ul style="list-style-type: none"> Technical assistance to GDA members on water management Training modules to GDA members on planning, implementing and monitoring local development Recruitment of technical assistance to support GDA Equipment of GDA Sensitization, information and training of local associations on key issue of oases ecosystems and planning Organized socio-professional groups 	232.250 DT (=145.200 \$)
2. ENVIRONMENT 2.1. Land protection and management	<ul style="list-style-type: none"> Deep soil (traditional agricultural system provide humus) Frequent storms (violent localized rains) Episodic flooding of the wadi (destruction of land, houses and infrastructures) Lack of an adequate drainage system Salinization of soils Destruction of crops by wild boars General problems related to a landlocked oasis General conditions creating vulnerability to climate change 	<ul style="list-style-type: none"> Protect oasis against flooding Protect oasis against damages caused by wild boars 	<ul style="list-style-type: none"> Works to derive flood waters trapping techniques to protect cultivated land against wild boars Organization of collective cullings to manage wild boar population 	52.500 DT (=32.900 \$)

2.2. Water resource management	<ul style="list-style-type: none"> • <i>Water resources: wadi, groundwater, and spring</i> • Decreasing spring flow • Growing deficit of water for irrigation • Salinization of soils • Degradation of traditional gravity irrigation system • Degradation of hydraulic infrastructures (because of flooding) • Low level of maintenance of hydraulic works • Poor state of the cemented seguias (canals) network 	<ul style="list-style-type: none"> • Improve and manage water resources • Improve the operating system of water resources • Ensure a coordinated and integrated management of water resources 	<ul style="list-style-type: none"> • New borehole created (photovoltaic energy) • Study carried out and a water supply infrastructure built • Network linked to the new borehole rehabilitated and strengthened • Technical support provided to farmers (ways of distributing and saving water) • Technical assistance to GDA for the management of hydraulic works • Water charge defined 	<p>A (borehole & equipment) 35.000 DT (=21.900 \$)</p> <p>110.000 DT (=68.800 \$)</p> <p>40.000 DT (=25.000 \$)</p>
3. AGRICULTURE / LIVESTOCK	<ul style="list-style-type: none"> • <i>Local agricultural know-how (three vegetative layers)</i> • <i>Family-based animal husbandry (well adapted to local needs)</i> • Aging of the palm grove • Extreme fragmentation of plots of lands and degradation of the traditional oasis system • Abandonment of food and fodder crops (lack of profitability) • Progressive replacement of family-based animal husbandry with extensive livestock activities • Difficult access to market (remoteness) • Declining income from agricultural activities • Young people no longer interested in agricultural activities • Loss of traditional agricultural know-how 	<ul style="list-style-type: none"> • Improve production • Develop agricultural production systems • Rehabilitate vegetal and animal component of the oasis ecosystem and diversify agro-pastoral activities • Develop alternative income generating activities () 	<ul style="list-style-type: none"> • Cleaned oasis (prevention against diseases and parasites) • Better use of crop waste to improve soils (composting unit) • Weeding • Rejuvenation of old palms • Reintroduction of endangered fodder crops Technological package to intensify good agricultural activities • Ovine fattening scheme • Beekeeping 	<p>120.000 DT (=75.000 \$)</p> <p>124.000 DT (=77.500 \$)</p> <p>284.000 DT (=177.500 \$)</p>

4. BIODIVERSITY	<ul style="list-style-type: none"> • <i>Topography : humid valley favoring adaptation of numerous cultivated species</i> • <i>Well vegetated floodplains</i> • <i>Rich cultural biodiversity (three layers of the oasis ecosystem)</i> • Degradation of biodiversity because of the aging palms • Abandonment of the three layer-system • Disappearance of some of local species and varieties 	<ul style="list-style-type: none"> • Restore and protect oasis vegetal species 	<ul style="list-style-type: none"> • Complete inventory of still cultivated or endangered vegetal species • Farmers are provided with plants, cuttings, slips, and seeds • Farmers cultivate economically attractive species and varieties • Safeguard in public or private gardens of endangered fruit trees 	<p>5.000 DT (=3.200 \$)</p> <p>11.000 DT (=6.900 \$)</p> <p>4.000 DT (=2.500 \$)</p>
5. CULTURAL HERITAGE AND TOURISM	<ul style="list-style-type: none"> • <i>Strong bonds to sociocultural heritage</i> • <i>Beautiful location / landscape</i> • <i>Potential for tourism</i> • <i>Craft skills (weaving, basketry)</i> • <i>Geologic and mining assets</i> • <i>Historic heritage</i> • Remoteness • Landlocked area (far away from tourist tours) • Low development of local know-how • Declining tourism –related activities • 	<ul style="list-style-type: none"> • Support sociocultural activities • Restore and develop craftsmanship • Develop tourism and its potential • Improve local living conditions 	<ul style="list-style-type: none"> • Geologic museum • Visitor center • Guest house and training center for students and interns • Annual organization of cultural event • Support provided to women for craftsmanship-related micro-projects and sale of the products • Essential equipment to craftswomen • Support provided to young people for tourism-related activities • Beautify and manage places for tourists • Quality of drinking water improved 	<p>130.000 DT (=81.300 \$)</p> <p>85.000 DT (=53.200 \$)</p> <p>20.000 DT (=12.500 \$)</p> <p>45.000 DT (=28.200 \$)</p>
			TOTAL	1.297.750 DT (=811.100 \$)
			First year	634.450 DT (49%) (=396.600 \$)
			3 following years	633.300 DT (=395.900 \$)

RESUME EXECUTIF : PDPO de l'Oasis de Tameghza

Governorate : TOZEUR

District : Tameghza

Type of oasis : Mountain

Total number of households : 300 Population (2004): 2,169 hab (Commun), 6,362 (district)

Cultivated area : 80 ha

COMPONENT	POTENTIALS / CONSTRAINTS	ACTIONS TO UNDERTAKE	EXPECTED RESULT	COST (1\$=1.6 TD)
1. BUILDING LOCAL CAPACITIES	<ul style="list-style-type: none"> Participation of the GDA and Municipality in community issues Good level of education among the youth Active association for tourism GDA : Involved only in the management and distribution of water GDA : Lack of dynamism in the maintenance of water networks Fragile social structures (around the use of water) Shy participation of women in the preparation of the PDPO 	<ul style="list-style-type: none"> Strengthen managerial and planning capacities of GDA Redynamize local associations of civil society Sensitize, inform and train local associations Strengthen the participation of women in local development 	<ul style="list-style-type: none"> Technical assistance to GDA members on water management Training modules to GDA members on planning, implementing and monitoring local development Recruitment of technical assistance to support GDA Equipment of GDA Sensitization, information and training of local associations on key issue of oases ecosystems and planning 	232.250 DT (=145.200 \$)
2. ENVIRONMENT 2.1. Land protection and management	<ul style="list-style-type: none"> Good permeable soil (in spite of rising groundwater) Favorable microclimate in deep valleys (favoring different drought-tolerant vegetal species) In floodplains, soil's water balance less negative than elsewhere and natural vegetation characteristics of arid zones (grazing areas for livestock) Low infiltration of runoff water Negative impacts of the dam built in Al Khangua (rise of the piezometry of groundwater) Heavy downpurs causing flooding of residential areas, roads and infrastructures Destruction of parcels of lands by wild boars 	<ul style="list-style-type: none"> Protect oasis against flooding Protect oasis against damages caused by wild boars 	<ul style="list-style-type: none"> Works to derive flood waters trapping techniques to protect cultivated land against wild boars Organization of collective cullings to manage wild boar population 	120.000 DT (=75.000 \$) (=75.000 \$)
2.2. Water resource management	<ul style="list-style-type: none"> Good quality water from six sources (stable flow, meeting local needs) Improved gravity irrigation system High volume of water for irrigation 			

	<ul style="list-style-type: none"> Increased exploitation of groundwater (260 shallow wells) Loss of water (in canals inside the parcels of land) Degradation of the traditional irrigation system Bad maintenance of water network and weak efficiency of use of water (du to absent GDA structure) 	<ul style="list-style-type: none"> Improve and manage water resources Improve the operating system of water resources Ensure a coordinated and integrated management of water resources 	<ul style="list-style-type: none"> Assessment of water resources of the Tamezgha and its uses carried out Study carried out and works completed for the protection of groundwater against pollution and degradation of water quality Study and works to protect oasis against strong flood waters Technical support provided to farmers (ways of distributing and saving water) Technical assistance to GDA for the management of hydraulic works Water charge defined 	430.000 DT (=268.750 \$)
3. AGRICULTURE / LIVESTOCK	<ul style="list-style-type: none"> <i>Local agricultural know-how (three layers of oasis ecosystem)</i> Aging of the palm grove Extreme fragmentation of plots of lands (average size 0,20 ha) Absenteeism ; plots of land left uncultivated Declining productivity and degradation of the oasis production system Growing marginalization of animal husbandry (low production of manure) Development of livestock activities in neighboring steppe (towards overexploitations of resources) Absence of vegetable and fodder crops Decreasing income from farming activities Low participation of women in local agricultural activities Young people no longer interested in agricultural activities Loss of traditional agricultural know-how 	<ul style="list-style-type: none"> Improve production of agricultural activities and productivity Develop agricultural production systems Rehabilitate vegetal and animal component of the oasis ecosystem Diversify agro-pastoral activities 	<ul style="list-style-type: none"> Cleaned oasis (prevention against diseases and parasites) Better use of crop waste to improve soils (composting unit) Weeding Rejuvenation of old palms Reintroduction of endangered fruit trees Reintroduction of endangered fodder crops Technological package to intensify good agricultural activities 	<p>254.000 DT (=158.800\$)</p> <p>35.000 DT (=21.875 \$)</p> <p>6.000 DT (=3.750 \$)</p> <p>117.000 DT (=73.125 \$)</p>
4. BIODIVERSITY	<ul style="list-style-type: none"> <i>Topography : In deep, incised valley, microclimate favoring natural vegetation (including grazing areas)</i> <i>Existence of high floodplains with high vegetation density (of pasture type)</i> Degradation of biodiversity because of the aging palms Abandonment of the three layer-system 	<ul style="list-style-type: none"> Restore disappeared species and protect endangered ones 	<ul style="list-style-type: none"> Complete inventory of still cultivated or endangered vegetal species Farmers are provided with plants, cuttings, slips, and seeds 	5.000 DT (=3.200 \$)

			<ul style="list-style-type: none"> • Farmers cultivate economically attractive species and varieties • Safeguard in public or private gardens of endangered fruit trees 	10.000 DT (=6.300 \$) 4.000 DT (=2.500 \$)
5. CULTURAL HERITAGE AND TOURISM	<ul style="list-style-type: none"> • <i>Strong bonds to sociocultural heritage</i> • <i>Craft skills (women and young people) (weaving, basketry)</i> • <i>Beautiful location / landscape / waterfall</i> • <i>Potential for tourism (historical ruins from roman and byzantine periods)</i> • <i>Good quality hotel</i> <ul style="list-style-type: none"> • Remoteness, difficult access(only one road) • Difficult access to social and administrative services • Traditional systems threatened • Low development of traditional knowledge • Poor tourism-related infrastructures 	<ul style="list-style-type: none"> • Support sociocultural activities • Restore and develop craftsmanship • Develop tourism potential • Improve local living conditions 	<ul style="list-style-type: none"> • Organization of a festival • Vocational training for young people (agricultural know-how) • Equipment (to help the youth to organize cultural and sport events) • Support provided to local associations • Technical support provided to artisans (women) (including for sale of products) • Equipment provided to artisans (women) • Support to develop tourism-related activities provided • Beautify the village • Quality of drinking water improved 	220.000 DT (=137.500 \$) 272.500 DT (=170.300 \$) 350.000 DT (=218.750 \$) 180.000 DT (=112.500 \$)
			TOTAL	2.235.750 DT (=1.397.350 \$)
			First year	994.450 DT (44,5%)(=621.530 \$)
			3 following years	1.241.300 DT (=775.810 \$)

EXECUTIVE SUMMARY : PDPO Oasis of El Guettar

Governorate : GAFSA

District : El Guettar

Type d'oasis : Montagne

Total number of households : 2.700

Population (2004) Commune: 13.600; District : 19.900 hab Area cultivated : 530 ha

COMPONENT	POTENTIALS / CONSTRAINTS	ACTIONS TO UNDERTAKE	EXPECTED RESULT	COST (1\$=1.6 TD)
1. CAPACITY BUILDING	<ul style="list-style-type: none"> Participation of the Municipality in community issues GDA : Member actively involved in the preparation of the PDPO Active involvement of women in community affairs (preparation of the PDPO) Dynamic associations of civil society (four associations participating in the preparation of the PDPO) Willingness to develop craftsmanship (among women) Good level of education among the youth Low level of education among adult people GDA: lack of means and equipment Inefficiency of community services 	<ul style="list-style-type: none"> Strengthen managerial and planning capacities of GDA Redynamize local associations of civil society Support craftsmanship association 	<ul style="list-style-type: none"> Technical assistance to GDA members on water management Training modules to GDA members on planning, implementing and monitoring local development Recruitment of technical assistance to support GDA Equipment of GDA Sensitization, information and training of local associations on key issue of oases ecosystems and planning Support provided to local craft activities) (see Comp. 6) 	232.250 DT (=145.200 \$)
2. ENVIRONMENT 2.1. Land protection and management	<ul style="list-style-type: none"> Springs Water and soil conservation works mitigate the impact of flooding Very high rates of evapotranspiration Lack of sewage treatment plant for domestic wastewater Proximity of the oasis to the dump (causing nuisance to residents and 	<ul style="list-style-type: none"> Protect oasis against flooding 	<ul style="list-style-type: none"> Assessment of solutions to mitigate the impact of runoff water Study and construction of a dam to protect the lower part of the oasis against flooding 	Budget CRDA Study : 10.000 DT Construct. : 70.000 DT Total : 80.000 DT (=50.00000 \$)

	<ul style="list-style-type: none"> continuous risk of groundwater pollution) • Episodic runoff damaging hydro-agricultural infrastructures 			
2.2. Water resource management	<ul style="list-style-type: none"> • <i>Soil relatively not affected by salinity and relatively fertile (ancient oasis)</i> • <i>Spring</i> • <i>Presence of a traditional gravity irrigation system (foggara)</i> • Growing deficit of water for irrigation • Decreasing quality of groundwater • Water flow not meeting local needs (crops) • Water diverted by extension of olive-growing • Proliferation of shallow wells • Poor state of the cemented seguias (canals) network 	<ul style="list-style-type: none"> • Improve and manage water resources • Improve the operating system of water resources 	<ul style="list-style-type: none"> • Assessment of water resources of the Gafsa Sud - El Guettar groundwater (about uses and users) • Improved farm irrigation • Better use of wastewater • Study on water network and the current exploitation system • Technical support provided to farmers (ways of distributing and saving water) • Water charge defined 	<p>50.000 DT (=31.300 \$) avec implication du CRDA</p> <p>150.000 DT (=93.800 \$)</p>
3. AGRICULTURE / LIVESTOCK	<ul style="list-style-type: none"> • <i>Technical know-how (traditional system with three layers of vegetation)</i> • <i>Family-based animal husbandry</i> • Aging of the palm grove • Fragmentation of cultivated plots of land • Plots of land left uncultivated • Declining productivity of agricultural activities • Olive tress replacing the lower layer in oasis ecosystems • Young people no longer interested in agricultural activities • Loss of traditional agricultural know-how Hired laborers rare and expensive 	<ul style="list-style-type: none"> • Develop agricultural production systems 	<ul style="list-style-type: none"> • Cleaned oasis (prevention against diseases and parasites) • Better use of crop waste to improve soils (composting unit) • Weeding • Rejuvenation of old palms • Reintroduction of endangered fruit trees • Reintroduction of endangered fodder crops • Technological package to intensify good agricultural activities 	<p>315.000 DT (=196.900 \$)</p>
4. BIODIVERSITY	<ul style="list-style-type: none"> • <i>Three morphological section (favoring significant vegetal biodiversity)</i> • <i>Three layer-system favoring rich biodiversity</i> • <i>Migratory birds and wild life</i> • Genetic erosion of the biological diversity of the oasis 	<ul style="list-style-type: none"> • Restore and protect oasis vegetal species 	<ul style="list-style-type: none"> • Complete inventory of still cultivated or endangered vegetal species 	

	<ul style="list-style-type: none"> Progressive disappearance of herbaceous and fruit crops 		<ul style="list-style-type: none"> Farmers are provided with plants, cuttings, slips, and seeds Farmers cultivate economically attractive species and varieties Safeguard in public or private gardens of endangered fruit trees 	52.000 DT (=32.500 \$)
5. CULTURAL HERITAGE AND TOURISM	<ul style="list-style-type: none"> <i>Strong bonds to sociocultural heritage (particularly among the youth)</i> <i>Historic heritage (important monuments and ruins),</i> <i>Numerous tourist assets</i> <i>Crafts skills</i> <i>Ecotourism-related activities and infrastructures</i> Only one road (difficult access during rainy season) Limited economic benefits from crafts activities 	<ul style="list-style-type: none"> Support sociocultural activities Restore and develop craftsmanship Develop tourism potential Improve local living conditions 	<ul style="list-style-type: none"> Museum on traditional irrigation water system (ancient <i>foggara</i> rehabilitated) Restoration of some ancient monuments Activities of local crafts associations developed (including equipment, see Comp. 1) Sociocultural activities strengthened (El Galaa festival, sport and gastronomic activities) Support to local women's associations (crafts and sale of products) as well as equipment Ecotourist hiking trail within the oasis Cleaning of the oasis (solid waste) Activities to beautify the village (public sites) 	180.000 DT (=112.500 \$) 256.750 DT (=160.500 \$) 230.000 DT (=143.800 \$) 110.000 DT (= 68.800 \$)
			TOTAL	1.756.000 DT (=1.097.500 \$)
			First year	811.700DT (46%)(=507.312 \$)
			3 following years	944.300 DT (=590.187 \$)

EXECUTIVE SUMMARY : PDPO Oasis of Noueil

Governorate : KEBILI

District : Douz-Sud

Type of oasis : Saharan continental

Total number of households : 467

Total population: 3.000 hab.

Area cultivated : 97ha (three sub-areas)

COMPONENT	POTENTIALS / CONSTRAINTS	ACTIONS TO UNDERTAKE	EXPECTED RESULT	COST (1\$=1.6 TD)
1. BUILDING LOCAL CAPACITIES	<ul style="list-style-type: none"> Participation of the Rural Council in community issues GDA : Good involvement in local community affairs High level of women participation in community life (including in the preparation of the PDPO) Two active associations of civil society An active and dynamic producer organization (organic culture of palm dates). GDA : Role limited to management and distribution of water CRDA replaced GDA to ensure water-related tasks Low involvement of GDA's members in GDA activities Lack of means and equipment of socio-professional organizations 	<ul style="list-style-type: none"> Strengthen managerial and planning capacities of GDA Redynamize local associations of civil society Sensitize, inform and train local associations 	<ul style="list-style-type: none"> Technical assistance to GDA members on water management Training modules to GDA members on planning, implementing and monitoring local development Recruitment of technical assistance to support GDA Equipment of GDA Sensitization, information and training of local associations on key issue of oases ecosystems and planning Technical assistance to GDA members on hydraulic works 	<p>232.250 DT (=145.200 \$)</p> <p>60.000 DT (=37.500 \$)</p>
2. ENVIRONMENT 2.1. Land protection and management	<ul style="list-style-type: none"> General good soil quality Village management plan available Sand invasion Hydromorphy and salinization of portions of land Uncontrolled dumps of solid waste in surrounding areas Numerous animal holding pens in the village Disappearance of natural vegetation within a radius of about 10 km around the oasis (overgrazing) Depletion of forests areas 	<ul style="list-style-type: none"> Manage and protect agricultural lands Protect the oasis against hydromorphy and sand invasion 	<ul style="list-style-type: none"> Measures against sand invasion Works to prevent sand invasions Use of removed sand to fertilize hydromorphy-affected lands 	<p>40.000 DT (=25.000 \$)</p> <p>60.000 DT (=37.500 \$)</p>

<p>2.2. Water resource management</p>	<ul style="list-style-type: none"> • <i>Irrigated perimeter with a network of cemented canals (improved gravity irrigation)</i> • <i>Efficiency of the irrigation network (as a result of APIOS project activities)</i> • <i>Many irrigated parcels benefit from adequate quantity of water</i> • <i>Large use of the Terminal Complex groundwater</i> • Gradual drying up of groundwater • Bad chemical quality of groundwater • Limited quantity of water to irrigate parcels of land within the oasis • Widespread hydromorphy and salinization of soils • Proliferation of non-authorized individual boreholes • Poor maintenance of collective hydraulic works • Poor state of the cemented seguias (canals) network 	<ul style="list-style-type: none"> • Improve and manage water resources • Improve the operating system of water resources 	<ul style="list-style-type: none"> • New borehole created • Maintenance of the drainage system (APIOS project) • Creation of a pilot parcel of land under localized irrigation • Monitoring system operational • Works to ensure maintenance of the drainage system completed • Technical assistance to GDA for the management of hydraulic works 	<p>CRDA de Kébili</p> <p>20.000 DT (=12.500 \$)</p> <p>See Budget Comp. 1</p>
--	--	---	---	---

5. CULTURAL HERITAGE AND TOURISM	<ul style="list-style-type: none"> • <i>Strong bonds to sociocultural heritage</i> • <i>Historic heritage (important monuments and ruins)</i> • <i>Beautiful location / landscape</i> • <i>Potential for tourism (two travel agencies in the village)</i> • <i>Craft skills (weaving, basketry)</i> • <i>Women willing to develop their crafts skills</i> • <i>Ecologic village create by a local association</i> <ul style="list-style-type: none"> • Local traditional systems threatened • Declining craftsmanship-related activities • 	<ul style="list-style-type: none"> • Support sociocultural activities <ul style="list-style-type: none"> • Restore and develop craftsmanship <ul style="list-style-type: none"> • Develop tourism and its potential • Improve local living conditions 	<ul style="list-style-type: none"> • Restoration of the Zaouia mausoleum • Rehabilitation of the site of he ancient spring • Support to cultural activities organized by young people • Technical support to an association (organic farm) • Technical support to artisans (women), including equipment and sale of their products • Hiking trail around historic sites • Support provided to young people for tourism-related activities • Beautify the village • Quality of drinking water improved • Lacc for animals outside the village 	<p>540.000 DT (=337.500 \$)</p> <p>230.000 DT (= 143.750 \$)</p> <p>300.000 DT (=187.500 \$)</p> <p>255.000 DT (=159.400 \$)</p>
			TOTAL First year 3 following years	2.330.250 DT (=1.456406 \$) 975.450DT (42%) (=609.656 \$) 1.254.800 DT (=784.250 \$)

EXECUTIVE SUMMARY : PDPO Oasis of Zarat

Governorate : GABES

District : Mareth

Type of oasis : Coastal

Total number of households : 375 Members of GDA : 78 Total population: 5.205 hab. (2004) Area cultivated : 120 ha

COMPONENT	POTENTIALS / CONSTRAINTS	ACTIONS TO UNDERTAKE	EXPECTED RESULT	COST (1\$=1.6 TD)
1. BUILDING LOCAL CAPACITIES	<ul style="list-style-type: none"> Participation of the Municipality in community issues High level of legitimacy of local GDA Dynamic associations of civil society and socioprofessional groups Very active associations to protect Ziarat Relatively high level of education of the entire population Dynamic group of graduate girls, supporting GDA activities Traditional water distribution system still operational GDA : Lack of means and capacities Lack of capacities of GDA members Lack of an action plan for the management of local natural resources and social development 	<ul style="list-style-type: none"> Strengthen managerial and planning capacities of GDA Redynamize local associations of civil society Sensitize, inform and train local associations 	<ul style="list-style-type: none"> Technical assistance to GDA members on water management Training modules to GDA members on planning, implementing and monitoring local development Recruitment of technical assistance to support GDA Equipment of GDA Sensitization, information and training of local associations on key issue of oases ecosystems and planning Organized socio-professional groups 	<p>232.250 DT (=145.200 \$)</p> <p>60.000 DT (=37.500 \$)</p> <p>Voir Comp. 4</p> <p>Voir Comp. 4</p>
2. ENVIRONMENT 2.1. Land protection and management	<ul style="list-style-type: none"> Diversified ecosystem allowing a range of agro-pastoral and fisheries activities Geomorphological units (compartments) receiving runoff water (for olive trees) Drainage works (within the context of the APIOS Project activities) Strong evaporation Sand invasion Pollution by solid and liquid waste Overexploitation of surrounding steppe areas 	<ul style="list-style-type: none"> Manage and protect lands and natural environment 	<ul style="list-style-type: none"> Oasis protected against sand invasion (vegetal fence) Study on and construction of a sewage system for untreated wastewater Stagnant water evacuated in the drainage Cleaned oasis (prevention against diseases and parasites) 	<p>45.000 DT (=28.200 \$)</p>
2.2. Water resource management	<ul style="list-style-type: none"> Water network for irrigation of most of plots of lands (cemented open canals) 			

	<ul style="list-style-type: none"> • <i>Drainage system</i> • <i>Thermal spring</i> • <i>Borehole</i> • Oasis wedged between two non-cultivable soil units • Increasing aridity and unpredictable rainfall • Constant depletion of water source • Shallow salted groundwater • Long term insecure irrigation water system • Breakdown of the traditional water use system • Malfunction of the irrigation and drainage system 	<ul style="list-style-type: none"> • Improve and manage water resources • Improve the operating system of water resources 	<ul style="list-style-type: none"> • Study on the improvement of the Zarat source • Study about feasibility of water networks • Study and works on irrigated perimeter • Irrigation systems and techniques improved (pilot parcel) • Protection and artificial recharge of groundwater • Support provided to farmers (new ways of distributing and saving water) • GDA assisted for hydraulic works • Water charges defined 	<p>235.500 DT (=147.200 \$)</p> <p>20.000 DT (=12.500 \$)</p> <p>20.000 DT (=12.500 \$)</p> <p>See Comp. 1</p>
3. AGRICULTURE / LIVESTOCK	<ul style="list-style-type: none"> • <i>Technical know-how (traditional system with three layers of vegetation)</i> • <i>Rain and irrigated systems potential</i> • <i>Agricultural income complemented by income for fishing (clams)</i> • <i>Good experience in managing fishery resources and creation of reefs (result of a Japan-financed project)</i> • <i>Olive trees and cereal in flood water spreading areas</i> • <i>Traditional technical knowledge of horse breeding</i> • Aging of the palm grove • Fragmentation of cultivated plots of land • Plots of land left uncultivated • Declining agricultural activities • Declining productivities of agricultural activities • Animal husbandry in neighboring steppes • Decreasing income from agriculture • Loss of agricultural know-how 	<ul style="list-style-type: none"> • Develop agricultural production systems • Promote income generating activities • Develop fisheries activities (clams) to economically support farming activities 	<ul style="list-style-type: none"> • Weeding • Rejuvenation of old palms • Reintroduction of endangered fodder crops • Technological package to intensify good agricultural activities • Cleaned oasis (prevention against diseases and parasites) • Better use of crop waste to improve soils (composting unit) • Sheep fattening scheme • Beekeeping • Organized socio-professional groups • Training and equipment of producers groups 	<p>57.600 DT (=36.000 \$)</p> <p>290.000 DT (=181.300 \$)</p> <p>373.500 DT (=233.500 \$) (including training)</p> <p>217.000 DT (=135.700 \$)</p>

4. BIODIVERSITY	<ul style="list-style-type: none"> Rich biodiversity because of the three layer system Rainfall allowing different crops (olive, cereal) Wildlife in wet areas Significant biodiversity in surrounding grazing areas Genetic erosion of biodiversity Progressive disappearance of some crops (grass and fruit trees) 	<ul style="list-style-type: none"> Restore and protect biodiversity 	<ul style="list-style-type: none"> Complete inventory of still cultivated or endangered vegetal species Farmers are provided with plants, cuttings, slips, and seeds Farmers cultivate economically attractive species and varieties 	5.000 DT (=3.200 \$) 11.000 DT (=6.900 \$) 4.000 DT (=2.500 \$)
5. CULTURAL HERITAGE AND TOURISM	<ul style="list-style-type: none"> Strong bonds to sociocultural heritage Beautiful location / landscape / sea Potential for tourism (archeological ruins, marine resources) Strategic location (on main national road) Traditional knowledge on horse breeding and horse riding Threats against traditional systems Low development of local know-how Limited use of local products 	<ul style="list-style-type: none"> Support sociocultural activities Restore and develop craftsmanship Develop Zarat landscape potential Improve local living conditions 	<ul style="list-style-type: none"> Rehabilitate local mausoleums and affiliated cultural events Support young people's activities (training participation in sociocultural activities) Support local association (horse breeding and riding) Support to activities aimed at beautify local landscape Hiking trail Support provided to women for craftsmanship-related activities (including sale of their products) and equipment Study on how to protect and develop local thermal source Rehabilitate the three layer system in the oasis Beautify the village Quality of drinking water improved 	325.000 DT (=203.200 \$) 190.000 DT (=118750 \$) 85.000 DT (=50.000 \$) 180.000 DT (= 112.500 \$)
			TOTAL	2.330.850 .8 DT (=1.456.781 \$)
			First year	897.950 DT (38%) (=561.218 \$)
			3 following years	1.432.900 DT (= 895.562 \$)

SUMMARY TABLE

GOVERNORATE	OASIS	POPULATION (2004)	BENEFICIARIES (hhds)	AREAS (ha)	COST (total)	COST (1st year)	Total budget allocations by component (%)					
							Capac.	Environ.	Water	Agr./Liv.	Biodiv.	Herit.
TOZEUR	Chébika	1.142	116	25	1.411.250 DT (=883.000 \$)	627.950 DT (=393.000 \$)	16,4%	6,3	12,6 +CRDA	16,5	1,1	44,1
	Midès	631	160	29	1.297.750 DT (= 811.000 \$)	634.450 DT (=396.000 \$)	17,8	4	14,2 +CRDA	40,5	1,6	21,5
	Tameghza	2.169	300	80	2.235.750 DT (=1.397.350 \$)	994.450 DT (=621.530 \$)	10,3	5,3	19	18,4	0,8	45,7
GAFSA	El Guettar	13.600	2.700	530	1.756.000 . DT (=1.097.500 \$)	811.700 DT (= 507.321 \$)	14,1	4,2 +CRDA	12,1 +CRDA	19,1	3,1	47,2
KEBILI	Noueil	3.000	467	97	2.330.250 DT (= 1.456.406 \$)	975.450 DT (=609.656 \$)	12,4	4,2	0,8 + CRDA	20,9	0,9	57
GABES	Zarat	5.205	375	120	2.330.850 DT (= 1.456781 \$)	897.9550 DT (= 561.218 \$)	14,3	1,8	11,6	39,5	0,8	34,4
TOTAL		25.747	4.118	881	11.361.850 DT (=7.101.156 \$)	4.989.700 DT (=3.118.560 \$)	13,7	4,1	11,3	26,7	1,2	42,9

Annex 3: Implementation Arrangements

TUNISIA OASES ECOSYSTEMS AND LIVELIHOODS PROJECT (TOELP)

Project Institutional and Implementation Arrangements

1. The implementing agency is the General Directorate for Environment and Quality of Life (DGEQV), of the *Ministry of Equipment, Territorial Management, and Sustainable Development (MEATDD)*. The DGEQV will ensure fiduciary management and procurement for overall project activities and will coordinate technically activities of Components 1 and 3 and of some activities of Component 2. Other activities of Component 2 will be implemented by the GDAs and local associations of the targeted oases through community participation in procurement activities. This method is intended to increase the opportunities to achieve the Project sustainability and some of its social objectives. The DGEQV will implement the Project by putting in place a Management Project Unit (*Unité de Gestion du Projet*, UGP), which will work in close collaboration with the different stakeholders. To supervise the implementation of the Project at the local level, the DGEQV will also work with the deconcentrated services of MEATDD, of the Ministry of Agriculture, of the Ministry of Tourism and the Ministry of Commerce, Arts and Crafts. The Project activities will be implemented as follows:

- The DGEQV will coordinate activities related to: (i) the elaboration of the national strategy for the sustainable development of oases; (ii) the preparation and the implementation of the communication strategy; (iii) the preparation of the complete monographic profiles of the 210 Tunisian traditional oases, including status of wildlife and biodiversity, together with a Web-based GIS; (iv) the organization of training session at the national level; (v) the preparation and the maintenance of M&E system; and (vi) the general coordination and management of the project.
- The *National Bank of Genes (BNG)* will: (i) conduct the inventory and the identification of genetic material (seeds or any other material from which plants multiply) of targeted oases; and (ii) identify threatened species, collect and preserve their seeds in cold rooms.
- The *Regional Research Center for Oasis Agriculture (CRRAO)* will enrich its existing collection in Deguache and rehabilitate some rare varieties in the targeted oases.
- The *Institute of Arid Regions (IRA)* will: (i) conduct the inventory and the collection of fruit and vegetable varieties in the selected oases; (ii) label and evaluate the accessions that have been collected; and (iii) multiply fruit and vegetable species.
- GDAs will ensure coordination and technical monitoring of community micro-projects. Because some members of local population are not formally members of the GDA, the GDA office shall involve the entire population oasis around an inclusive community vision in order to ensure and affirm good representation. Therefore, the GDA will: (i) hold regular consultations with all local associations of civil society and socio-professional organizations, as well as with the deconcentrated technical services, and encourage any initiative to consolidate and strengthen local associations, particularly among youth and women, around local priority interests (especially in terms of diversifying livelihoods and protecting the cultural heritage of the oases); and (ii) hold biannual meetings open to the general public to examine and evaluate the implementation of PDPOs and micro-projects and report all its activities (through written reports and other appropriate supports). GDAs will implement these activities according to the community procurement principles of the Project

Implementation Manual, which describe in detail the proposed procedures for the project components to be implemented with the participation of the community.

2. The terms of collaboration between the DGEQV and the main stakeholders will be presented in the Conventions to be signed between the DGEQV and each partner no later than six months after the beginning of the Project.

3. The DGEQV will delegate technical implementation of activities to GDAs, BNG, IRA, and CRRAO, according to the terms of the conventions to be signed between DGEQV and these institutions that reflect the cooperation models. These conventions will be established no later than six months after the beginning of the Project.

4. Partners involved in the implementation of the Project have been selected on the basis of their respective functional mandates, their technical expertise, their knowledge of oasis ecosystems and biodiversity protection, and their current cooperation in these fields, as well as their managerial capacities. Here below a summary of the mandates and capacities of these partners:

- The mandate of the DGEQV is to: (i) assess the general quality of the environment; (ii) make propositions of key strategic directions of national policy in the areas of environmental protection, and improvement of the quality of life, and (iii) develop action plans to protect natural resources and reduce pollution. To implement the proposed Project, the DGEQV will work with three regional branches. The DGEQV has already an experience in implementing other GEF projects managed by the World Bank, particularly the Natural Resource Management Project (PGRN2), the Gulf of Gabes Marine and Coastal Resources Project, and the Ecotourism and Conservation of Desert Biodiversity Project. It has also implemented projects financed by other partners, such as the French Development Agency (AFD), the French Fund for Global Environment, and the German international cooperation agency. The technical and fiduciary capacities of the DGEQV and of the UGP in particular, will be strengthened through the recruitment of: (i) a project administrative assistant; (ii) an environment specialist; and (iii) an M&E specialist.
- National Bank of Genes (BNG): Created in 2003, under the Decree n. 17489, the BNG is a public establishment of an administrative character (EPA), with civil personality and financial autonomy. Its budget is directly related to the national budget. A second decree (n. 185, January 2007) has established its scientific organization and its functioning mechanism. Its mission is the conservation of vegetal, animal and micro-organic genetic resources and the coordination and promotion of activities related to the conservation and sustainable development of genetic resources. Within the context of the proposed Project, the BNG will (i) conduct the inventory and the identification of genetic material (seeds or any other material from which plants multiply) of targeted oases; and (ii) identify threatened species, collect and preserve their seeds in its cold rooms.
- Regional Research Center for Oasis Agriculture (CRRAO): Created in Tozeur under the Decree n° 2006-1431 of 22 May 2006. It is a public establishment of an administrative character with civil personality and financial autonomy, under the Ministry of Agriculture. By covering all oasis areas, its main mandates are the following: (i) conduct research and experiments related to agricultural production systems in oasis areas; (ii) collect and study

genetic resources whose utilization and culture are particularly important for oasis areas; (iii) create vegetal varieties and improve animal breeds that are well adapted to oasis conditions; (iv) improve production systems by establishing appropriate techniques and practices; (iv) study the conservation, processing techniques and development of oasis agricultural products and; (v) carry out a range of technical, economic and sociologic research of oasis eco-systems. Within the context of the proposed Project, the CRRAO will: (i) maintain and enrich its existing collection in Deguache; and (ii) rehabilitate some rare varieties in the targeted oases.

- Institute of Arid Regions (IRA): Created under the law n°76/6 of 7 January 1976, the IRA of Medenine (Ministry of Agriculture) has the mandate of conducting research needed to develop the agricultural sector, the protection and conservation of natural resources, and to fight against desertification in arid and desert regions. In this respect, and within the context of the Project, it will (i) conduct the inventory and the collection of fruit and vegetable varieties in the selected oases; (ii) label and evaluate the accessions that have been collected; and (iii) multiply fruit and vegetable species.
- Agricultural Development Groups (GDA): They are joint-interest organizations, whose functioning mechanism and prerogatives are governed by the law n°99-44 of 10 May 1999, amended by n° 2004-24 of 15 March 2004. Their mission include the following: (i) the protection of natural resources, and the promotion of rational use and safeguard of these resources; (ii) the equipment of irrigated perimeters with essential agricultural and rural infrastructures; (iii) the participation in sensitizing their members on the most reliable agricultural and fisheries techniques to increase the productivity of their farming, fishing and aquaculture activities and for the development of grazing areas; (iv) support to agencies related to the clearance of land situations; (v) establishment of synergy and cooperation with other local and foreigner agricultural agencies in the fields of agriculture and fisheries; and (vi) implementation of all the tasks that support collective interests of their members. The proposed Project will strengthen the capacities of the GDAs of the targeted oases.

a) At national level

Steering Committee (COPIL).

5. The Steering Committee (COPIL), chaired by the Minister of MEATDD, is made up of different stakeholders: Ministry of Agriculture, Ministry of Economy and Finance, Ministry of Tourism, Governorates of Kebili, Tozeur, Gabes and Gafsa, *Institute of Arid Regions (IRA)*, *National Bank of Genes (BNG)*, *Regional Research Center for Oasis Agriculture (CRRAO)*, as well as the presidents of the GDAs of the targeted oases. The COPIL is the body supervising and validating project activities. It provides validation of the Project Implementation Manual (PIM) of the project, annual work plans and budgets, and progress reports, and ensures the consistency of the project with sectoral policies and Government programs. It will meet twice a year at least and whenever deemed necessary by the President. Costs of meetings of the committee will be supported by the project (see activities under Component 3). This Committee will be put in place before negotiations.

Project Management Unit (UGP)

6. The responsibilities of the UGP will be the following:

- Coordinate all the activities of the Project, the organization of the activities of the Steering Committee, the M&E activities, the best use of the results of the project, and the implementation of the communication strategy.
- Provide fiduciary management and procurement: it will ensure the general coordination of all fiduciary and procurement activities, contracts, M&E, and quality-control, and it will establish conventions with all the institutions involved in the implementation of the components and sub-components of the Project.
- Consolidate the annual work plans of the three Project components.
- Consolidate technical and financial reports (on a quarterly, bi-annual and annual basis) and submit them to the COPIL and to the Bank.
- Prepare supervisory technical evaluation missions.
- Organize joint annual reviews of the Project by the COPIL and the Bank and prepare reports minutes of the joint meetings.
- Organize periodic control missions and audits.
- Prepare all the documentation needed for the COPIL meetings.
- Provide monitoring and control of the implementation of the activities of the Project at the level of contractors and beneficiaries.
- Ensure institutional communication and visibility to all the components of the Project.

7. The UGP will be made up of:

- *Staff seconded to the DGEQV at national level* : 1: (i) Project national coordinators; and (ii) Procurement and financial management specialist;
- *Staff from regional directions of the MEATDD*: (i) Two experts from the Tozeur regional Direction (the first expert will covers the El Guettar and Nouiel oases, the second one the Tamezgha, Chebika and Mides oases); and (ii) One expert from the Sfax Regional direction will cover the oasis of Zarat;
- *Staff recruited by the Project*: (i) at central level: project administrative assistant; environmental, social and M&E specialist; and local development expert; (ii) at local level: at least three fiduciary experts and three Community Development/Participation Experts to support GDA and CSO.

8. UGP administrative staff will be nominated by the Ministry of MEATDD before negotiations. The remaining UGP staff will be recruited no later than six months after the beginning of the Project.

b) At local level

Agriculture Development Groups (GDA)

9. One of the selection criteria of the selected project oasis was the existence of a GDA, created in compliance with the 15 March, 2004 law (n° 2004-24), which has defined, among other things, the GDA responsibilities in the fields of the protection of natural resources, supervision of its members, dissemination of agricultural technologies in order to increase productivity, establishment of cooperation and exchange of experiences in the areas of agriculture and fisheries with other local and foreign agricultural organizations, and support to collective interests and members. Therefore, in each of the targeted oases, insofar as it brings together the majority of the active members of the community, a GDA is the preferred institution to advocate

a vision of local sustainable development reflected in the PDPO, and ensure the planning and implementation of its community micro-projects.

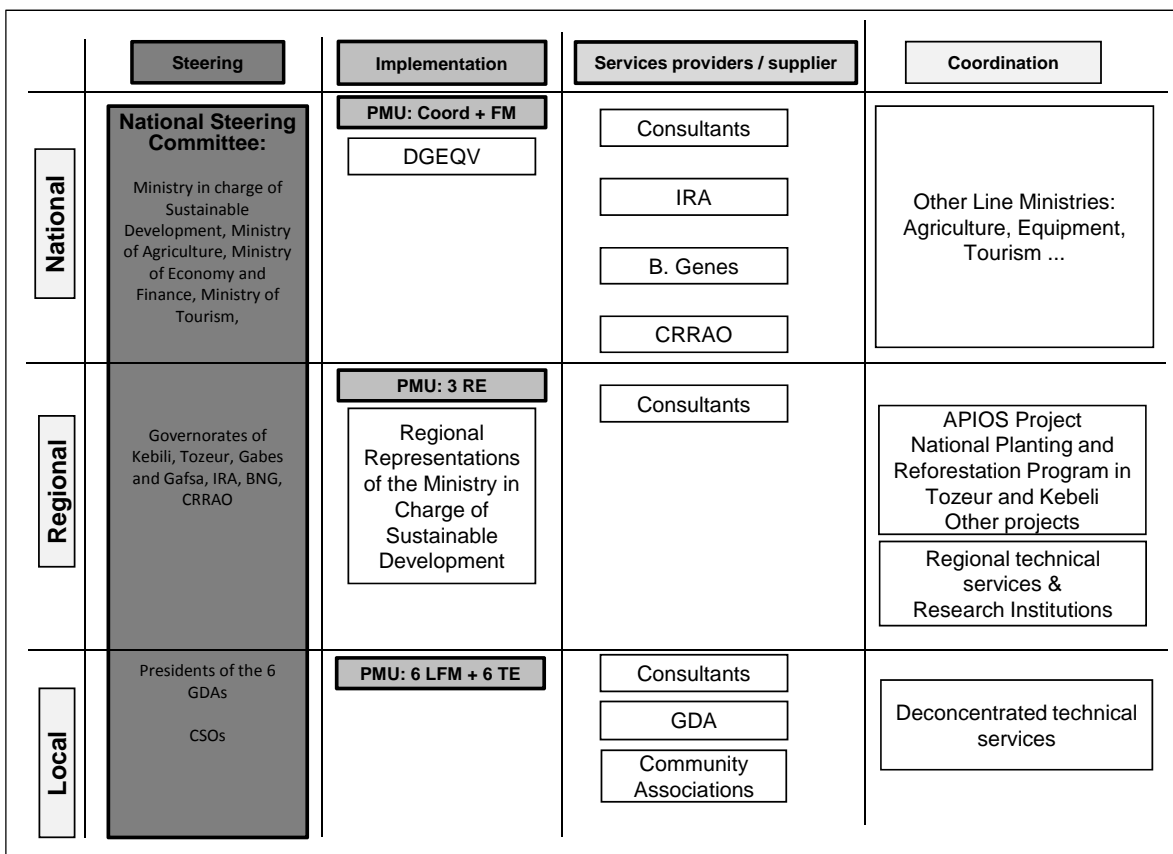


Diagram 1: National, regional and local arrangements (steering, implementing and coordinating project activities)

10. To facilitate interactions between the GDA and the associations of civil society, on one hand, and monitor micro-projects, on the other hand, the Project will provide support to the GDAs through technical assistance in fiduciary management and general Community Development/Participation approach issues. Experts will be recruited by the UGP no later than six months after the beginning of the project. A particularly important role will be played by male/female animators or facilitators: not only to educate the entire village population on issues related to the development of the oases, but also to support civil society associations to plan, implement and monitor community micro-projects. In addition, the GDAs of the selected oases will benefit from appropriate capacity building initiatives (see Component 1.2), allowing them to confirm their legitimacy and fully assume their role and leadership in accordance with the basic principles of good governance (particularly in terms of participation, transparency, accountability and efficiency).

Financial Management, Disbursements and Procurement

Financial Management

11. As a part of the preparation process of the Tunisia Oases Ecosystems and Livelihoods Project (TOELP), a financial management assessment of the DGQEV was performed to determine the adequacy of the financial management arrangements to: i) provide reasonable assurance that the grant proceeds will be used for the intended purposes and meet bank's minimum requirements; and ii) support project implementation. The assessment was carried out Bank staff during the pre-evaluation mission from 17 February to 24 February 2014, in accordance with OP/BP 10 and the Financial Management Manual for World Bank-Financed Investment Operations.

12. Executive Summary: The Bank concluded that while the proposed financial management arrangements meet Bank's requirements to manage the funds and to produce timely, accurate, and reliable financial statements for general and special Bank purposes, a number of weaknesses and risks, identified during the assessment, have to be addressed through a number of mitigating measures at the level of the DGEQV. These mitigating measures will include among others the following: (i) training on Bank's financial management and disbursements matters; (ii) training on accounting, disbursement and financial reporting processes, procedures and templates for the project as described in detail in the project's implementation manual; (iii) creation by the DGEQV of a segregated designated account within the Central Bank in order to manage grant's proceeds; (iv) creation by GDAs and CVOs of segregated sub-accounts in TD at the *Poste Tunisienne* to manage micro-projects funds; and (v) submission of project's interim unaudited financial reports and audited financial statements to the Bank on semiannual and annual basis respectively.

13. Risk Assessment & Mitigating Measures. On the basis of the Bank's Project FM assessment, the overall FM residual risk is considered Substantial, as explained in the following table 4 below:

Table 4: Risk Assessment & Mitigating Measures

Risk Type⁴⁰	Risk Rating	Comments/Risk Mitigation Measures incorporated into project design	Residual Risk Rating
Inherent Risk	M		M
Country level	M	The Bank's experience in Tunisia and the main conclusions of the 2010 Public Expenditure and Financial Accountability (PEFA) concluded that the legal and administrative framework for public financial management is sound and offers a solid level of assurance regarding the reliability of information and a strong control environment; however the report also identified transparency and accountability failures.	M
Entity Level	M	The project will be implemented by the DGEQV that has experience handling Bank-financed projects. Most recently projects are i) P069460 Gulf of Gabes Marine and Coastal Resources Protection Project closed on 2012 and financed by GEF funds, and ii) P120561 Ecotourism and Conservation of Desert Biodiversity Project currently under implementation phase. FM performances for both projects have been found moderately satisfactory and satisfactory respectively.	M

Project level	S	<p>Institutional and organizational aspects, due to the high volume of accounting transactions and a number of entities in the regional level, may result in coordination problems, flow of information bottlenecks and reporting delays. To mitigate these risks, the DGEQV prepared a Project Implementation Manual that clearly describes among others, institutional and organizational aspects, interrelationships and the responsibilities of each party, flow of information and procedures for the submission of financial reports, flow of funds and disbursements procedures.</p> <p>Additionally, as most of the grant funds will be allocated to community micro-projects throughout GDAs and Local Associations, the UGP/DGEQV will reinforce their capacities through trainings and with technical assistance in financial management and procurement issues and will, at the same time, maintain a sound control environment in the disbursement process, which will be clearly stated in the agreements to be signed between the GDAs/Local Associations and the DGEQV. Notwithstanding, this mitigating measure would take place during the project implementation phase, therefore, the residual Project risk is still considered substantial and will be revised during project implementation</p>	S
Control Risk	S		S
Budgeting	M	<p>The project's budget will be embedded in the standard budgetary procedures of MEATDD, furthermore project's budget will be registered under the country's budgetary system ADEB which offers an acceptable framework for budget control and follow-up purposes. In addition to that, manual budgets will be prepared, at the local level, for all significant activities in sufficient detail to provide meaningful tool to monitor and control budget execution and deviation. It is also important to mention that that annual project' budget will be prepared on the basis of the procurement plan which will have Bank's no objection.</p>	M
Accounting	S	<p>Project's accounting function will be done manually since the entity will not provide with a computerized accounting system. The project will use spreadsheets to record accounting and financial transactions. To mitigate the risks associated with the use of spreadsheets in registering financial information, the project designed a set of special controls summarized which are included into the Project's Implementation Manual. The document contains a detailed description of the processes and controls that need to be followed by the staff in capturing and processing the financial information.</p> <p>Additionally, the accounting and financial reporting of expenditures related to the project will be complex because of the diversity of expenditures and co-executing entities under the Component 2 of the project. As mitigating control, there will be a full dedicated FM Specialist under the project implementing unit who will give support in the accounting tasks derived from project implementation; however, since this measure may not be fully observed by the DGEQV, the accounting residual risk is still considered Substantial.</p>	S

⁴⁰ The **inherent FM** risk is that which arises from the environment in which the project is situated. The **FM control risk** is the risk that the project's FM system is inadequate to ensure that project funds are used economically and efficiently and for the intended purpose. The **overall FM risk** is the combination of the inherent and control risks as mitigated by the client control frameworks. The **residual FM risk** is the overall FM risk as mitigated by the Bank supervision effort

Financial Reporting	S	Due to the large number of micro-projects and given that projects FM reports are to be prepared manually, some delays to produce and transmit IFR and financial statements might occur. To mitigate this risk, the project established in the PIM, financial management reporting responsibilities specifying what reports are to be prepared, by whom, their due date and content.	M
Flow of funds & disb. arrangements	S	Flow of funds arrangements entails disbursements from the DGEQV to the service/good providers, including the GDAs and CSOs, under the three components of the project. For those payments related to micro-projects to be paid on a “lump sum basis”, a dedicated bank account will be opened at GDA/CSOs level in order to properly allow tracking of project’s disbursements and use of funds.	S
Internal controls	L	DGEQV doesn’t have an internal audit department; however, it has a wide range of adequate internal control practices that are defined in the institution’s policies and procedures which are well known by its staff. Additionally there is a clear segregation of duties for: i) authorization to execute project’s transactions, ii) recording of project’s transaction, iii) paying for goods and services and iv) reception of project’s goods/services.	L
Auditing	S	As in most WB-financed projects in Tunisia, it is highly probable that project’s external verification be entrusted to the “Contrôle General des Finances (CGF)”. The CGF has been delivering audit reports with considerable delay mostly due to work overload. Additionally the decentralized nature of the project execution in six oases in four governorates (Midès, Chébika, Tamaghza in Tozeur, Zarat in Gabes, El Guettar in Gafsa, Nouiel in Kebili), could delay even more the audit work progress and the transmission of the audit report. The project will assure a timely fiscal year end accounting closure and a timely preparation of project’s final financial statements so that they can address its request for audit to the CGF within the two months after the fiscal year closure. This will allow the CGF to plan its work ahead on time in order to have a final audit report before June 30. The bank and project implementing unit at the central level should monitor closely the audit report submission process to ensure its timeliness.	M
Overall FM Risk	S		S
H: High; S: Substantial; M: Moderate; L: Low			

14. Implementation Entity: The project will be implemented by the General Directorate for Environment and Quality of Life (DGEQV) within MEATDD, which will be responsible for overall fiduciary oversight and project’s financial management arrangements. To that end, a Management Project Unit (UGP) will be put in place before negotiations and will have, among others, a full time dedicated Procurement & Financial Management Specialist. Additionally at least three fiduciary staff, which will support the participating GDAs/CSOs on financial management and procurement matters, will be hired by the DGEQV and will be based at a local level. The DGEQV has prior experience working with Bank’s financed projects and is currently implementing the *Ecotourism and Conservation of Desert Biodiversity Project* for which the performance has been found satisfactory. DGEQV’s staff is familiar with financial management and disbursement policies, practices and procedures and Bank’s fiduciary requirements.

15. Budgeting system: Projects' budget activities (i.e., commitments, payments, accruals, budget monitoring, etc.) to be financed under the grant will be performed through the use of the national system Aid to Budgetary Decision (ADEB) which offers a sound control environment and an adequate segregation of duties. In addition to that, the budget procedures established within the DGEQV to monitor and follow up budget changes are based on policies and procedures governed by the legal framework of the public sector and governmental institutions. Government cash contributions (US\$ 0.32) will be also assured under the line ministry's annual budget. Budgetary control will be also implemented through the ADEB software). This automated information is the pillar for the preparation of consolidated budget information.

16. Accounting system: The Project will use a set of manual accounting methods, procedures and controls to gather, record, classify, analyze, summarize, interpret and present project's financial transactions and information. The project will make wide use of Excel spreadsheets to appropriately record every transaction on a periodic basis (daily or weekly) and subsidiary ledgers, with more detailed information, will be used to follow up on project's commitments accounts. All these records will be the base to produce project's IUFs, which needs a cumulative statement since the beginning of the implementation.

17. To enhance manual project accounting and reduce the risk of using spreadsheets, the Project will design a set of special controls aiming to describe procedures to be followed by the staff in capturing and processing the financial information. Periodically reconciliations between Excel sheet accounting, ADEB budgetary system and SIAD treasury system will be performed.

18. In parallel, DGEQV should explore options to avoid the use of spread sheets, in particular, they should assess the feasibility of using the information system currently in place to manage PGRN 2 funds.

19. Internal Control: The internal control system in place within the DGEQV conforms to the Government system and has been deemed satisfactory by the World Bank.

20. Funds flow: The disbursements of the grant proceeds will be made through the advance to the designated account disbursement method mainly. A segregated designated account denominated in USD will be opened at the Central Bank of Tunisia on behalf of the project implementing unit at the central level that will authorize the payments on the designated account following the procedures and guidelines already in place and used for most of the Tunisian portfolio. The project implementation unit will be responsible for providing the supporting documents for eligible expenditures to the Central Bank of Tunisia that will be preparing the Withdrawal Application for Designated account replenishment that should signed by authorized signatories from the Central Bank.

21. Flow of funds arrangements entails the following:

- a) Disbursements from the DGEQV to service/good providers under components 1 and 3 of the project; and b) disbursements for expenditures related to micro-projects under component 2 that will be paid on the basis of "actual expenditures". A high volume of transactions are expected to occur under this method since all disbursement transactions will be centralized at the DGEQV level and thus there might be delays for project payments. To mitigate this risk

the DGEQV will identify/nominate a full time dedicated FM staff that will ensure timely processing of project’s payment requests.

- b) Disbursement from the DGEQV to the GDAs/CSOs for micro-projects under component 2 that will be paid on a lump sum basis. Payments to GDAs/CSOs will be made in tranches on a lump sum basis, as defined in a subproject agreement to be entered into between DGEQV and each GDA/CSO. Each micro-project contains assessed cost estimates per tranche, and a defined set of outcomes or delivery of end products. Disbursement will be made in two or more tranches and they are expected to be processed as transfers from the project’s designated account. Detailed funds flow arrangements for micro-projects, as well as requirements for GDAs/CSOs to open dedicated bank accounts are reflected in the PIM.

22. Overall funds flow of the project is diagram 2 below:

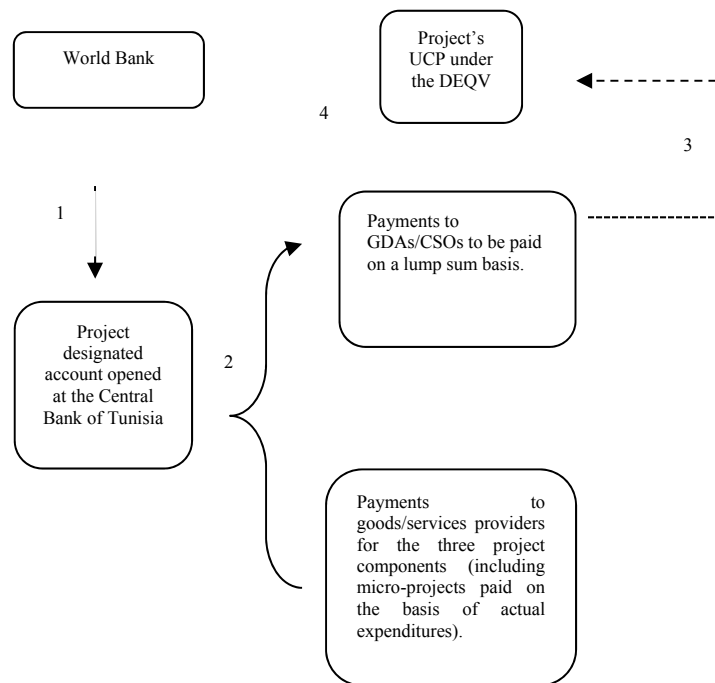


Diagram 2: Overall funds flow

- Advances from the World Bank will be deposited in the project’s designated account opened at the Central Bank of Tunisia (CBT), under the instruction of the DGEQV.
- Whenever there is a need to pay to suppliers of goods and services under the three components of the project, the DGEQV will instruct the CBT to transfer funds from the project’s designated account to the goods/service providers’ bank accounts. Additionally, whenever there is a need to transfers funds to the DGAs/CSOs for micro-projects to be paid on a lump sum basis, the DGEQV will instruct the CBT to transfer funds from the project’s designated account to the GDAs/CSOs dedicated bank account.
- Further disbursements to the GDAs/CSOs for micro-projects to be paid on a lump sum basis will be done upon submission to the DGEQV of a technical and financial progress report.

- Total project's eligible expenditure will be summarized in the Statement of Expenditures (SOE) prepared by the UGP that will be submitted to the Bank by DGEQV.

Financial Reporting:

23. *Interim Unaudited Financial Report (IUFR)*: The interim unaudited financial report should be prepared by the Project Implementing Unit every six months and submitted to the bank within 45 days from the last day of the previous period. The IUFR should include: (i) a statement on sources and uses of funds for the reporting period with cumulative figures including a statement on project balances of accounts, (ii) a statement on use of funds by component and expenditure category, (iii) the designated account reconciliation statement and iv) a Subproject Statement which shows amount disbursed and outstanding balances classified by age, to follow for timely monitoring. These reports will be produced based on the reports of the Project Implementation Unit budgetary system and a parallel follow up system based on Excel sheet. The reports should include grant proceeds, government funds as well as in-kind contributions. The template of the IUFR is included in the project operation manual annex. The IUFR template will be agreed on with the Bank prior to the effectiveness.

24. *The project's financial Statements (PFS)*: The project financial statements will be annually produced by the project implementation unit. The PFS should include (i) cash flow statement (ii) closing financial position (iii) status of commitments, and (iv) analysis of payments and withdrawals of grant funds.

25. Auditing: The project's financial statements including the designated account reconciliation will be audited annually by an external independent auditor, acceptable to the bank, in accordance with internationally accepted auditing standards. The audit's TORs will be prepared by the DGEQV and should be acceptable to the Bank. The TORs should cover both the audit of the financial transactions and an assessment of the internal control. The audit will cover all project aspects, all operations implemented under the project, sources and uses of funds. It will also relate to financial transactions recording, internal control and financial management information system. The auditor will produce (a) an annual audit report including his opinion on the project annual financial statements and (b) a management letter on internal controls. The project implementing unit should submit the audit report to the Bank within six months after the end of the fiscal year audited.

26. The line ministry of the DGEQV is subject to the control of the *Contrôle Général des Finances* (CGF) under the Ministry of Finance. The CGF performs compliance missions, monitoring mission and regularity missions of public administration and public entities. CGF also performs audit of the accounts of projects funded by external resources and assignments on behalf of major donors including: IBRD, AFDB, JICA, EU, IFAD, OPEC Fund, etc., therefore it is high probable that the project's audit would be performed by the "*Contrôle Général des Finances*" (CGF).

Disbursement Arrangements

27. The disbursements of the grant proceeds will be made through the advance to the designated account disbursement method mainly. A segregated designated account denominated in USD will be opened at the Central Bank of Tunisia on behalf of the project implementing unit at the central level that will authorize the payments on the designated account following the procedures and guidelines already in place and used for most of the Tunisian portfolio. The authorized ceiling of the Designated Account would be US\$ 600,000 to be deposited at the Central Bank of Tunisia.

28. The project implementation unit will be responsible for providing the supporting documents for eligible expenditures to the Central Bank of Tunisia that will be preparing the Withdrawal Application for Designated account replenishment that should signed by authorized signatories from the Central Bank.

29. The frequency of reporting on withdrawals from the DA account will be monthly. The transaction-based disbursement approach will be used and the supporting documentation that the Bank requires from the borrower to demonstrate that loan proceeds are being used for the purposes intended will be the statement of expenditures along with the supporting documents of expenditures spent on contracts that exceeds the statements of expenditures thresholds set out in the disbursement letter, the designated account reconciliation statement and bank statement.

30. The Withdrawal Application for Designated account advance and replenishments will be submitted by the Central Bank of Tunisia authorized signatories through the client connection using the eDisbursement features that allows for electronic delivery, signature and timely processing of the withdrawal requests.

31. The project implementing unit can also use the direct payment disbursement method to pay third parties for eligible expenditures that are incurred by the project which amount is above the minimum application size that will be specified in the Disbursement letter.

32. The Withdrawal Schedule defining the eligible expenditures to be financed out of the grant proceeds will be determined at a later stage of the preparation (table 5 below).

Table 5: FM Action Plan

No	Actions	Responsible	Due date	Status
1	Validation of the project Implementation manual	DGEQV / WB	24 March 2014	In progress
2	The identification / nomination of financial management within the DGEQV	UGP	Before negotiations	Planned
	Identification of the FM specialists within the GDA and local associations.	UGP	Before negotiations	Planned
3	Capacity building and targeted training activities for the concerned staff at the national, regional and local	World Bank FM Team	3 months from the recruitment of the staff.	Planned

level.			
--------	--	--	--

Procurement

33. **Applicable guidelines:** Procurement for the proposed project will be carried out in accordance with the World Bank "Guidelines: Procurement of goods, and non-consulting services under IBRD loans and IDA credits & grants by World Bank borrowers" dated January 2011 ("Procurement Guidelines"), and "Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers" dated January 2011("Consultant Guidelines") ("Consultant Guidelines"), and the provisions stipulated in the Grant Agreement. National Competitive Bidding (NCB) will be carried out with procedures acceptable to IBRD. Financing under the project would cover activities under the three components and include (i) Works (physical investments in targeted oases), (ii) Goods (equipment of added physical investments and UGP) and (iii) NCS, Non-Consulting Services (dissemination and information campaign, support to communities, costs associated with training and study tours, etc.), and (iv) CS, Consulting services (monographic profiles, design and bidding documents for the physical investments, design of promotion and communication strategy, and specialists in various domains including wildlife and biodiversity experts, as needed by the UGP). Some activities at grassroots level may need Community Participation procurement, including with NGOs participation. A detailed list of expenditures by category and the purpose is given in the table 6 below:

Table 6: Project expenditures by category

Category	Purpose of the Expenditures
Works	<ul style="list-style-type: none"> • Physical investments within targeted oasis. • Soil and water conservation measures, within and around the oasis.
Goods	<ul style="list-style-type: none"> • Equip the UGP, the GDA, BNG, IRA CRRAO and some CSO.
NCS	<ul style="list-style-type: none"> • Dissemination activities concerning the national strategy of oasis development, and information campaign for the communication strategy. • UGP (training, study tours). • Study tours and exchange visits aimed at assimilating best practices. • Training stakeholders at all levels.
CS	<ul style="list-style-type: none"> • Design and bidding documents for the physical investments. • Design and bidding documents for the oasis monographic profiles and GIS • Consultants' services associated with UGP and GDA for project management and implementation, including procurement, financial management, social and environmental safeguards, M&E and audits and technical supports. • Design of tailor-made promotion and communication strategy • Training of GDA and CSOs within the local population, sensitization for local communities, • Training for ministerial and regional staff to increase their understanding of importance of oasis and their biodiversity, community engagement, and the contribution they can make to sustainable oases management
Single Source Selection	<ul style="list-style-type: none"> • The BNG will: (i) conduct the inventory and identify the genetic material (seeds or any other material from which plants multiply) of targeted oases; and (ii) identify threatened species, collect and preserve their seeds in its cold rooms.

	<ul style="list-style-type: none"> • The <i>CRRAO</i> will enrich its existing collection in Deguache and develop some rare varieties in the targeted oases. • The IRA will: (i) conduct the inventory of and collect fruit and vegetable varieties in the selected oases; (ii) label and evaluate the accessions that have been collected; and (iii) multiply fruit and vegetable species.
--	---

34. **Results of the procurement risk assessment:** A procurement capacity assessment of DGEQV and a selected sample of GDAs/CSOs that will be involved in the implementation of the Project was carried out.

35. *DGEQV's Capacity Assessment:* The DGEQV has only few staff with good experience in procurement management under multilateral and bilateral projects (4 Bank projects, 6 UN programs (UNEP, UNCCC, UNDP) projects and several other projects funded by the GIZ and the AfDB). This staff is responsible for all the procurement processing from the preparation of the bidding documents stage till the notification of the consultant/supplier/contractor and for record keeping. To ensure smooth implementation of the project, it is recommended (i) to assign/hire a dedicated staff for this project and clearly define all the coordination and reporting responsibilities, generally, and those of the procurement staff particularly in DGEQV, in the PIM; and (ii) to train/brief /update the staff on the Bank procedures namely those regarding consultancy services.

36. *GDAs/CSOs' Capacity Assessment:* Given the small size of the community projects, the GDAs/CSOs' capacity assessment was conducted according to the “*Guidance note for management of procurement responsibilities in community-driven development projects*”. For this purpose, an Integrated Assessment Framework (IAF) has been shared, through DGEQV, with a sample of GDAs/CSOs. Based on the GDAs/CSOs answers to the IAF questionnaire, it is expected that beneficiary GDAs/CSOs would face difficulties in procurement implementation given that community involvement in procurement is relatively new in Tunisia and that GDAs/CSOs are understaffed. The key risks for procurement are: (a) lack of experience in procurement (b) inadequate capacity of GDAs to handle the volume of procurement for the community activities under the project; and (c), poor quality of contract management and community projects' implementation.

37. Overall, if the proposed mitigation measures as indicated in the action plan (see table 7 below) are applied, DGEQV and GDAs/CSOs will be able to implement procurement procedures within the framework of the project. The DGEQV prepared an acceptable procurement plan covering the first 18 months of the project implementation including micro-projects under component 2. This Procurement Plan will be updated during project implementation at least each year or less, as needed. The overall procurement risk has been rated **Substantial**.

38. The detailed capacity assessment report will be uploaded to P-RAMS. The summary assessment and recommendations are shown in the table 7 below.

Table 7: Procurement analysis and mitigation measures

Analysis of Procurement Capacity	Issues/Risks	Mitigation Measures
----------------------------------	--------------	---------------------

<p>1. Accountability for Procurement Decision in the Implementing Agencies</p>	<p>While the procurement decisions, within DGEQV, are clearly defined in the Tunisian public procurement decree, it was not possible to ascertain that GDAs have clear procurement responsibilities.</p>	<p>It is recommended to have the Project Implementation Manual (PIM). The PIM will clearly define the role of each Implementing Agency; including procurement within CDD projects to be implemented by GDAs/Associations. To be ready by project effectiveness</p>
<p>2. Internal manuals and clarity of the Procurement Process</p>	<p>There are concerns about GDAs' capacity in terms of procurement organization</p>	<p>It is recommended to: (i) design and implement an simplified but comprehensive procurement training for all involved GDAs, and (ii) update the DGEQV PIU on new procurement and consultants guidelines (Edition January 2011) (within 3 months from Project's effectiveness)</p>
<p>3. Record Keeping and Document Management System. Procurement records will be kept under the custody of the units responsible within DGEQV and GDAs.</p>	<p>GDAs do not have enough space to keep and file the documentation in an adequate manner to allow verification of the compliance with agreed procedures.</p>	<p>Ensure that: (i) instructions to GDAs are included in the PIM (by project effectiveness)and (ii) training are given to GDAs and DGEQV to ensure that project specific files are kept for all procurement and related transactions and recorded contract by contract. (within 3 months from Project's effectiveness)</p>
<p>4. Staffing. GDAs are suffering from operational and technical vacancies resulting in weak procurement planning and management</p>	<p>GDAs will not be able to implement their CDD projects according to the agreed project planning.</p>	<p>It is recommended to make sure that the project will allocate sufficient budget to provide required technical and fiduciary assistance to GDAs management. (to be completed during project preparation)</p>
<p>5. Procurement Planning</p>	<p>Given the demand-driven nature of Community Driven Development (CDD) projects under sub-component 2 of the project, DGEQV may not be able to prepare procurement plan of this subcomponent by the time of negotiations</p>	<p>The Task Team will provide the required technical assistance to the DGEQV to prepare a simplified procurement plan for subcomponent 2 based on an indicative list of eligible activities to be implemented by the community. (to be completed during project</p>

		preparation)
6. Bidding Document, Short-listing and Evaluation criteria	There is a concern about GDAs' familiarity with the use of standard documents	Simplified procurement documents will be provided to GDAs in the MIP. (by project effectiveness)
7. Advertisement, Pre-bid/proposal conference and Bid/Proposal submission. The experience has shown that some public purchasers are advertising procurement opportunities in unknown newspapers and do not systematically use the public procurement portal (www.marchespublics.gov.tn)	There is a risk of lack of transparency in the advertisement process	Make sure, before project effectiveness , that DGEQV have access to the public procurement portal and to afferent Technical Assistance provided by the Observatoire National des Marchés Publics.
8. Evaluation and award Contract.	The assessment could not ascertain whether GDAs are able to award the contract, within the period of the validity of bids, to relevant bidder	Make sure that: (i) all GDAs are trained and (ii) the recruitment of adequate and specialized technician(s) is who will provide required technical assistance to GDAs is budgeted under the project (to be completed during project preparation)
9. Review of procurement Decision.	Review of procurement decision by local, Regional or Ministerial committees could be too slow, cumbersome and bureaucratic resulting in bottlenecks.	Sensitize the DGEQV Controller and involved procurement committees on procurement rules that apply to the project and make sure that (Throughout project implementation)
10.Contract management and administration. While DGEQV is quite experienced in this field. the assessed GDAs do not have experience contract management.	Bottlenecks project in contract management and poor quality of deliverables.	Make sure that required assistance is timely provided to GDAs (Throughout project implementation)
11.Procurement oversight	Excessive prior control by	Sensitize the DGEQV

For DGEQV, procurement oversight is the responsibility of the Ministerial committee and eventually the High Tender board. The process used to be too slow, cumbersome and bureaucratic resulting in bottlenecks.	competent procurement committees will slow down the project implementation	Controller and involved procurement committees on the need for simplification of prior review control (Throughout project implementation)
--	--	--

39. No NCS/*Goods/works* contracts is expected to be procured through ICB in this project

40. The following consultants' contracts may involve short lists composed of international consultants: Oasis monographic profiles including the GIS

41. *Prior review and procurement methods thresholds*. For activities to be implemented by the DGEQV, the following thresholds as presented in table 8 below, will apply.

Table 8: Prior Review Thresholds (in USD)

Prior Review Thresholds (in USD)						
Procurement Type			Substantial Risk Implementing Agency			
Works, Turnkey and S&I of Plant and Equipment			10 million			
Goods			1 million			
IT Systems and Non-consulting Services			1 million			
Consulting Firms			0.5 million			
Individual Consultants			0.2 million			
Procurement Method Thresholds (in USD)						
	Goods			Works		
	<i>ICB *</i>	<i>NCB</i>	<i>Shopping</i>	<i>ICB *</i>	<i>NCB</i>	<i>Shopping</i>
Tunisia	> 1 million	≤ 1 million	≤ 100,000	> 10 million	≤ 10 million	≤ 200,000

42. As to the micro-projects to be implemented by GDAs/Associations, prior-review thresholds would be set at levels commensurate with the assessed risk and expected contract amounts or lump-sum financing agreement, and will be further detailed in procurement plan and the financing agreement between DGEQV and GDAs/CSOs.

Environmental and Social (including safeguards)

Social

43. Social impacts of the proposed TOELP Project activities are expected to be positive. They will improve local development, strengthen natural resource management, and ensure greater engagement of beneficiaries in local decision-making processes. Throughout the entire project preparation phase, consultations were conducted with key stakeholders within the public sector,

the private sector, and civil society. Key actors were involved in the definition of the scope of activities and they will remain engaged during the implementation, the supervision and the evaluation stages of the Project. Youth and women, in particular, are expected to benefit from this project because they will be heavily involved in most of the activities and processes. The project will strive to respect and build on agricultural and environmental practices and techniques devised by local communities, in order to deal with a variety of environmental and climate issues.

44. Small-scale producers, the primary target of project investments, will directly benefit from a variety of investments, and special attention will be given to women and youth. Producers groups, community organizations and civil society associations will actively participate in the design and in the implementation of all the activities.

45. In accordance with Tunisian legislation which is based on the three key principles of polluters' payments, prevention and incentive funds, and comprises important Codes – such as water, forest, heritage – and several precise regulations, and in compliance with the Operational Policy of the World Bank on Involuntary Resettlement (OP 4.12), a Resettlement Policy Framework (RPF) has been prepared. While the project may finance small-scale physical investments (including habitat, roads, and gravel roads), no adverse impacts such as relocation of households; adverse impacts on incomes/livelihoods/businesses; or any restriction of access to natural resources are anticipated under this project. No permanent or temporary land acquisition using the principle of eminent domain is expected under this project. Land requirements, if any, are expected to be small scale in nature and subproject investments will be carried out only on publically owned land (or other government owned land). The RPF has been prepared not in anticipation of land acquisition, but as a precautionary measure in the unlikely situation that access to assets will be restricted. In such an event, Resettlement Action Plans will be prepared to address any adverse impacts that may arise as per OP 4.12.

46. A participatory and iterative process of consultation conducted with stakeholders and potential affected people defined substantial mitigation measures (nature and amount of compensations). Within each community oasis, the Directorate General of the Environment and Quality of Life (DGEQV), which has overall responsibility for the implementation of the project, will be responsible for the establishment and functioning of a *Complaints Commission in each selected oasis*, made by the representatives of the GDA, associations of producers and users, women's and youth groups, and also CDRA's and other decentralized technical services. The DGEQV has prepared a template to help people / households potentially affected by sub-projects to properly present their complaints, if needed, and amounts of compensations (by type) have been defined in a participatory manner.

47. The TOELP project Resettlement Policy Framework (RPF) has been prepared as guideline in case of projects activities led to restrictions to access to sources of livelihood within target oases. This RPF has been elaborated in accordance with Tunisian legal Framework, and with the World Bank Operational Policy (PO 4.12). The primary focus is on compensation or assistance measures.

48. As detailed above, an RPF has been prepared not in anticipation of land acquisition, but as a precautionary measure in the unlikely situation that access to assets will be restricted. If this

occurs, the Tunisian legal provisions and those of the World Bank (OP 4.12) should apply to prevent any negative socio-economic consequences

49. The project approach focused on the participation of potential eligible and affected people not only to the design of the project activities, but also their adequate compensation for supposed losses (access to assets), in kind (preferably) or in cash.

50. Principles concerning indemnity or compensation are the following: (i) Compensation will be paid before the implementation of the subproject (ii) Compensation will be paid of the full replacement value.

51. An appropriate documentation will be prepared either in the form of a resettlement action plan (RAP) for the subproject with major impacts or an Abbreviated Rap (A-RAP) for the subproject with minor impacts in accordance with OP 4.12. A RAP (or the A-RAP) must include detailed elements concerning, in particular: the nature of the subproject, identify potential impacts on persons/ households, the legal framework of land acquisition and compensations, the framework of compensations, the costs, and provisions concerning the resolution of complaints.

52. Various public consultations were held between September and December 2013 during the preparation of this RPF in parallel with the preparation of the selected oasis PDPO. These consultations took into consideration feedback and concerns of all stakeholders. All PDPO activities have been prepared in close participation with communities and express their views and vision for the development of their oases. The RPF has been approved during a national workshop held on 17 and 18 February 2014, and disclosed in the Ministry's Web site on March 06, 2014, and at the Bank's Infoshop on March 07, 2014

53. The number of eligible persons that the project activities might negatively impact cannot be determined. Consequently, it is not possible to provide an estimate global cost of the potential compensation and resettlement. But the costs related to capacity building and monitoring by the GDA in charge of the implementation of the PDPO is estimated at US\$ 30,000; this cost will be covered by the project.

54. The monitoring of the RFP will be carried out by the DGEQV as follow:

- An expert (the Environment, social and M&E specialist) will be appointed in the project management unit who will be in charge of coordinating the overall process;
- A social consultant will be hired for part-time work, he will be in charge of the monitoring and the implementation of the RFP;
- The UGP will produce a specific section to the annual report of project activities, related to the implementation of the RFP activities.

55. Moreover, DGEQV will especially ensure the following responsibilities:

- Ensure that the screening mechanism for subprojects have been carried out and that mitigation measures and in place;
- Within each oasis community, set up a committee, in charge of managing any conflicts (this responsibility could be also ensured by an existing local committee). The complaints

handling mechanism should include the following key elements: a contact to receive complaints; a means of widely advertising of the mechanism to ensure that communities are aware of it; a timely written response to complaints; a log of all complaints including the type of complaint, date received, response, and date responded.

- Ensure the preparation of a 'file' allowing each potentially affected stakeholder to properly present their complaints.
- Make all efforts so that complaints are resolved locally, prior to going to Tunisian courts whose judgments would be made on the basis of Tunisian legislation in force.

Environment

56. The Project will have significant positive effects on the environment. By adopting an integrated approach to the management of natural resources, the project will scale up initiatives that will help improve the sustainability of the oasis ecosystem. However, a special attention was paid to potential risks. By affecting the environment, the Project will trigger the Environmental Assessment of the World Bank operational, policy (OP) 4.01. In line with this OP, and given the fact that the effects of some proposed micro-projects will be limited, the TOELP project is classified as environmental category B.

57. The DGEQV had the task of drafting an Environmental and Social Management Framework (ESMF) during the preparatory phase. The ESMF has been approved during a national workshop held on February 17 - 18 2014, and has been posted in the Ministry's Web site on March 06, 2014, and at the Bank's Infoshop on March 07, 2014.

58. Activities to be financed by the Project will follow the steps of environmental screening through a form of *Fact Sheet Environmental and Social Information (FIES)*, to be annexed to the ESMF. This screening will determine the magnitude of negative impacts on human bio-physical environment and socio-economic activity that is likely to generate. Based on the information included in the FEDS and based on field assessment, it is possible to determine if a simplified environmental and social impact assessment is required. This collection of information will be carried out through field observations, the use of professional expertise and / or interviews with the people concerned. Management measures of impacts identified in the FIES will be included in the specifications for operators activities. FIES Preparation will be done in consultation with the people and the beneficiary associations. These FIES will be published and posted on the Website of the State Secretariat for Sustainable Development. In this case, no additional safeguard will be required for activities generating only minimal impacts.

59. The project must comply with Tunisian legislation and regulations, including the Water Code, the Code of Planning and Urban Development, the forest code, the heritage code, the regulations relating to the fighting against pollution, solid waste management, national emission standards for air and water pollutants, etc.). Decree No. 2005 - 1991 sets out the procedures for the preparation and approval of the environmental impact studies. According to the project activities and to the list of activities attached to the Decree, all project activities are not subject to the environmental assessment.

60. The impacts of this project funded activities are reversible and can be mitigated by simple set up measures. environmental and social safeguards Policies applicable to the project are: (i) OP

4.01: Environmental Assessment, including Public Participation; (ii) OP 4.04: Natural Habitats (although oasis environments are by definition "artificial " created by man, some project activities could indirectly impact the natural habitats in the vicinity of the oasis ...); (iii) OP 4.11 Cultural Heritage (if some activities may directly or indirectly impact important cultural sites, archaeological , religious or aesthetic); (iv) OP 4.36 : Forestry (activities affecting palm groves); (v) OP 4.12 : Involuntary resettlement displacement of populations (it is not intended to fund activities that cause displacement "physical" involuntary of people and acquisition of private land); and (vii) PB 17.5 : Dissemination of information.

61. The project positive impacts are as follow:

- Building local communities' capacities to sustainably manage their oasis ecosystems, particularly through training, communication and environmental monitoring, evaluation and adoption of participatory implementation approach;
- Scaling up sustainable land and water management practices through the rehabilitation of degraded areas particularly in reversing the process of soil degradation and bringing fertility, slowing the process of salinization and restoring vegetation cover;
- Implementing innovative practices for sustainable water management which will allow farmers to use optimally water for agricultural and livestock production and thereby minimizes the pressures on natural sources.
- Improving services oasis agro-ecosystem will develop organic farming by creating a new niche high value to local agricultural products.
- Promoting technical and local knowledge would reduce the pressure on oasis
- Promoting small-scale farming would produce natural fertilizer for the soil while providing various sources of revenue to farmers;
- Protecting biodiversity through the creation and the strengthening of biodiversity gardens to save local cultivars;
- Creating and strengthening of local nurseries cultivars to make them available to farmers and thus encourage them to use and produce plants and local seeds;
- Diversifying local livelihoods in favor of income-generating activities (recycling, ecotourism, green technologies) , the development of activities for the woman and young in particular related to the high quality craftsmanship;
- Strengthening activity aimed at creating support research in the areas of biodiversity conservation, tourism, crafts and other services.

62. The Project potential negative impacts include:

- Overexploitation of available water resources, increased use of fertilizer and treatment products, disturbance of natural ecosystems, enhancement of erosion through the application of technical and non- appropriate cultural practices, Intensification of livestock can cause a risk of an excessive concentration of livestock , hence the risk of destruction of vegetation and soil degradation due to the intensification of livestock pressure on the physical environment and organic pollution of soil and water reserves.
- The protection of biodiversity with the risk of introduction of imported cultivars,
- Indirect impacts on natural resources and other natural habitats due to the influx of people attracted by the new revenue opportunities (additional requirements for drinking water and

irrigation) and natural habitats outside the oasis (inadvertent dumping of waste , discharge of contaminated water or heavily salted in the *wadi* beds , rapid urbanization areas adjacent to the oasis ...).

63. Proposed mitigation measures are:

- Implementation of the participatory approach from the preparation of PDPO to selection of activities with focus on environmental and social issues of selected activities.
- Implementation of the environmental and monitoring system that will help to address the problems and serve as a key tool for environmental awareness.
- Implementation of support activities involving regional and national research and development including support and training of young people for careers related to palm (pollinators, ...).

64. The project unit will ensure regular monitoring of compliance with the ESMF in collaboration with all stakeholders (CRDA, GDA , NGOs) to ensure the implementation of environmental and social mitigation measures. In this regard, the project unit will recruit an environmentalist expert to support these activities and conduct an annual review of environmental requirements and monitoring reports from a sample of subprojects in each of the selected oasis. The environmental monitoring reports will be included in the annual project progress reports and submitted to the World Bank.

65. The UGP will ensure regular monitoring of compliance with the ESMF in collaboration with all stakeholders (GDA, NGOs) to ensure the implementation of environmental and social mitigation measures. In this regard, the project unit will recruit an environmentalist expert to support these activities and conduct an annual review of environmental requirements and monitoring reports from a sample of subprojects in each of the selected oasis. The environmental monitoring reports will be included in the annual project progress reports and submitted to the World Bank.

66. The DGEQV is the Executing Agency of the project and will be responsible for compliance with environmental and social safeguards policies as described in the ESMF. It is the executing agency for other GEF/WB projects like the Gulf of Gabes project ended in December 2012, Ecotourism project and the environmental components of PGRN2 and PISEAU II projects. DGEQV is competent and familiar enough with the process of environmental assessment frameworks. Several of its staffs were trained on EIA and World Bank safeguard policies. They will be called for to support the project including validation of procedures of environmental assessments and the implementation of measures for monitoring and evaluation.

67. The Project will finance the annual training and capacity building of different target groups (GDA, NGOs,) in the field of management of the environmental assessment and the implementation and monitoring of the project activities. Awareness of the local population on the environmental impacts will be through meetings during the preparation, revision and and implementation of the PDPOs and during sensitization sessions which will be led by local NGOs involved in the Project. About 20 training workshops (i.e., five per region) will be held for regional and local structures and around 80 awareness sessions to raise and to improve skills of local people (20 per region).

68. Given the extent and nature of the subprojects funded through this project we can estimate the costs of implementing environmental policies to approximately U.S. \$ 70,000, including training, capacity building and public awareness.

69. A public consultation process was carried out on September 2-6 2013 on various project sites. This campaign included the organization of two workshops to present the project components and activities and to discuss the potential impact and the mitigation measures with the stakeholders. These meetings were held in several sites (GDA offices, professional organizations, NGOs, cafes, shops, agricultural sites). It is clear from these series of consultations that the stakeholders have high expectations of this Project and that the involvement of all is crucial. The implementation of this Project will be well received by local actors thanks to the developed participatory approach. This ESMF has been approved during the national validation workshop held on February 17 - 18 2014, , and has been posted in the Ministry's Web site on March 06, 2014, and at the Bank's Infoshop on March 07, 2014.

Monitoring & Evaluation

70. The objective of the Monitoring and Evaluation (M&E) system is to provide information on the TOELP activities and results on a regular basis. The M&E is considered as an operational management instrument, which the implementing entities should use when evaluating and improving their performances throughout the Project implementation, in order to achieve the PDO. It will provide a basis for regular interaction with local populations, to get a good understanding of the pros and cons of the land and biodiversity conservation measures, as well as of the possible benefits and constraints in the scaling up of those measures.

71. The Results Framework and Monitoring is presented in Annex 1. The choice of the indicators is discussed below, and has been done by taking into account the relevant core indicators of the World Bank and the GEF Tracking Tools for land degradation and biodiversity conservation, as well as the gender dimension of the project. The Results Framework and Monitoring combine a balance between quantitative and qualitative indicators to reflect the pilot nature of the project that goes beyond the simple assessment of the physical implementation or the number of trainings provided.

72. The Project Development Objective (PDO) is to improve sustainable natural resources management and promote livelihoods diversification in six selected traditional oases in Tunisia. The PDO results indicators are:

- Direct project beneficiaries;
- Land area where sustainable land management practices were adopted (as a result of project initiatives);
- Land users adopting sustainable land and water management (SLWM) practices as a result of the project;
- Number of local species that have been reintroduced in selected oasis;
- Households adopting diversified activities as a result of the project (percentage).

73. These PDO results indicators are supported by intermediate results indicators which will track project outputs. The intermediate results indicators for Component 1 (Strengthening capacities for sustainable management of oasis ecosystems) are the following:

- Validation of the national strategy for sustainable development of Tunisian Oases by the Project Steering Committee
- Participants in consultation activities during project implementation (number)
- Tunisian Oases with monographic profiles prepared
- Client days of training provided (number)
- Technologies demonstrated in the project areas (number)

74. Intermediate results indicators for Component 2 (Transfer of land and biodiversity conservation measures among small farmers) are the following:

- Clients who have adopted an improved agricultural technology promoted by the project;
- Biodiversity tracking tool completed;

- Land degradation tracking tool completed;
- Cultivars that are produced, multiplied and distributed.

75. The Results Framework has been designed taking into account the GEF Tracking Tool, and will particularly include the following:

- Land Degradation, Objective 1 “Maintain or improve a sustainable flow of agro-ecosystem services to sustaining the livelihoods of local communities”: The indicator on Community vulnerability has been selected to assess the beneficiaries’ perception of the vulnerability of their livelihood. This indicator will be included in the study on methodology and baseline survey will be conducted in the first year of the project.
- Biodiversity, Objective 2 “Mainstreaming biodiversity conservation and sustainable use into production landscapes/seascapes and sectors”: The indicator on the landscape where the project will directly or indirectly contribute to biodiversity conservation has been selected, in line with the biodiversity World Bank core indicator.

76. The Results Framework has been designed taking into account the gender dimension of the Project. The following indicators are disaggregated by gender:

- Percentage of female project beneficiaries
- Participants in consultation activities during project implementation - female
- Client days of training provided - Female (number)
- Clients who adopted an improved agricultural. technology promoted by project – female

77. Reporting on the status of physical implementation and on the result indicators of the Project will be done through Project Reports. The UGP will have the overall responsibility for the preparation of the Project Reports each semester. The UGP will collect and organize the necessary information for Component 1 and 2. Each GDA will collect the necessary information for the Sub-projects, and will transmit it to the UGP in agreed upon format as described in the Project Implementation Manual (PIM). The UGP will consolidate the information for the relevant sub-projects and will have the responsibility to consolidate the information for the two components into one Project Report, which will be transmitted to the World Bank for review.

Annex 4: Operational Risk Assessment Framework (ORAF)
Tunisia: Tunisia oases ecosystems and livelihoods project
Stage: Negotiations

Risks

Project Stakeholder Risks

Stakeholder Risk	Rating	Substantial				
<p>Risk Description:</p> <p>Limited participation of some social categories of targeted communities, particularly the most marginal ones (with no productive assets), to participate in planning and implementing oases activities.</p> <p>Negative impact of private entrepreneurs exploiting modern oases in a unsustainable manner</p>	Risk Management:					
	<p>During the Project preparation phase, the project sites were identified based on a set of criteria including the willingness of local population to implement the project. The Project will also include effective community outreach, social mobilization, and communication activities (including awareness raising, sensitization and capacity building activities adapted to oasis context and to the fragility of their ecosystem). Adequate mechanisms will be implemented to involve all social categories, including the most marginal ones.</p>					
	Resp: Client	Status: Not Yet Due	Stage: Implementation	Recurrent:	Due 30-Sep-Date: 2018	Frequency:

Implementing Agency (IA) Risks (including Fiduciary Risks)

Capacity	Rating	Substantial				
<p>Risk Description:</p> <p>Procurement risk: Lengthy approval process by ministerial committees and controllers as well as availability of DGEQV and PCU procurement staff may hinder project preparation and implementation.</p> <p>FM: Lack of skilled staff in some GDA</p>	Risk Management:					
	<p>Capacity: The General Directorate for Environment and Quality of Life (DGEQV) is a strong partner in the implementation of Bank and especially GEF-funded projects, as the GEF-funded Gulf of Gabes Project (P069460) and the Ecotourism and Conservation of Biodiversity Project (P120561). The Project Coordination Unit (PCU) will draw on the existing capacity within the DGEQV. GDA capacities will be strengthened by Fiduciary assistance to be provided by the project</p>					
	Resp: Client	Status: Not Yet Due	Stage: Implementation	Recurrent:	Due 30-Sep-Date: 2018	Frequency:
	Risk Management:					
	Procurement: Proper coordination and consultation with the executing agency on these issues will be					

	<p>ensured during the project implementation. Furthermore the recent revision of procurement thresholds, undertaken by the Government in partnership with the Bank, would also contribute to facilitating this process. Implementation arrangements including coordination and reporting responsibilities of the PCU members and the GDA are clearly stated in the PIM. Procurement processes will be at the DGEQV and GDA levels. A specific procurement manual for GDA has been elaborated and will be annexed to conventions to be signed between the DGEQV and each GDA.</p>					
	Resp: Client	Status: Not Yet Due	Stage: Implementation	Recurrent:	Due 30-Sep-Date: 2018	Frequency:
Project Risks						
Design	Rating	Moderate				
Risk Description:	Risk Management:					
Previous experience indicate that expected outcomes of similar projects covering remote and disadvantaged geographic zones are difficult to achieve.	The design of the various project activities was pragmatic, realistic and flexible. Investment will be preceded and accompanied by adequate capacity building initiatives. Implementation support missions and mid-term evaluation will assess the necessity of amendments and revisions of project objectives, outcomes and indicators.					
	Resp: Client	Status: Not Yet Due	Stage: Implementation	Recurrent:	Due 30-Sep-Date: 2018	Frequency:
Social and Environmental	Rating	Moderate				
Risk Description:	Risk Management:					
The impact of project investments, on the environment and communities are expected to be manageable.	The project design took into account potential effect on the environment and local communities. Project activities are expected to contribute to enhancing sustainability in oases both in social and environmental aspects. Moreover, any activity would be developed while paying close attention to the sustainable use of scarce resources (especially water usage), and other such considerations, lending these investments an intrinsic adaptive capacity to potential climate change impacts. An ESMF and RPF were developed and approved by the Bank and the Government; they will be used and monitored during the time of the Project implementation.					
There is a risk that the effective management of social related risks are overlooked due to lack of staffing or other necessary arrangements and skills.	The counterpart is familiar with the provisions of the Bank's social safeguards policies given their experience with other GEF WB projects. As a result, several staff were trained on social safeguard,					

	<p>who will support the project. In addition, a social and environment consultant will be hired to focus on social and environment safeguards as well as monitoring and evaluation.</p> <p>While the project may finance small-scale physical investments (including habitat, roads, and gravel roads), no adverse impacts such as relocation of households; adverse impacts on incomes/livelihoods/businesses; or any restriction of access to natural resources are anticipated under this project. No permanent or temporary land acquisition using the principle of eminent domain is expected under this project. Land requirements, if any, are expected to be small scale in nature and subproject investments will be carried out only on publically owned land (or other government owned land). An RPF has been prepared not in anticipation of land acquisition, but as a precautionary measure in the unlikely situation that access to assets will be restricted. In such an event, Resettlement Action Plans will be prepared to address any adverse impacts that may arise as per OP 4.12</p>					
	Resp: Both	Status: Not Yet Due	Stage: Implementation	Recurrent:	Due Date: 30-Sep-2018	Frequency:
Program and Donor	Rating	Low				
<p>Risk Description:</p> <p>Several donors are supporting the oasis development. Potential conflict could arise in absence of coordination</p>	<p>Risk Management:</p> <p>During the project preparation several meetings were held between World Bank and the GIZ, AFD, and JICA to discuss potential collaboration and joint support to oases development. Probably, within the development partners environment group, a Oasis donor working group could be established to coordinate and harmonize Development partners activities in oases. Also, the project supported the elaboration of the oasis sustainable development strategy that was validated by key stakeholders, including development partners, this is a key tool to facilitate coordination and harmonization of partners activities.</p>					
	Resp: Both	Status: Not Yet Due	Stage: Implementation	Recurrent:	Due Date: 30-Sep-2018	Frequency:
Delivery Monitoring and Sustainability	Rating	Substantial				
<p>Risk Description:</p> <p>Ownership of project investments by</p>	<p>Risk Management:</p> <p>The project include capacity building for local stakeholders (with a focus on gender equity) through</p>					

local communities and the private sector and availability of resources after project closure	crosscutting, multi-disciplinary training sessions in the areas of ‘green techniques and practices’ adapted to oasis context, including initiatives aimed at reducing carbon emissions, and implement sustainable initiatives.					
	Resp: Both	Status: Not Yet Due	Stage: Implementation	Recurrent:	Due Date: 30-Sep-2018	Frequency:

Annex 5: Implementation Support Plan

Tunisia: Tunisia oases ecosystems and livelihoods project

Strategy and Approach for Implementation Support Plan (ISP)

1. The strategy to support the implementation of TOELP project has been developed in the light of the nature of the project and its risk profile. It aims to offer more flexible and efficient implementation support to the executing entities, and focuses on implementing the risk mitigation measures defined in the ORAF (Annex 4) with the objective to support the achievement of the PDO.

2. The following main aspects have been taken into consideration for the preparation of the implementation support strategy of the Project: (i) role of local partners (GDAs, Ministries, deconcentrated services, CSOs), with different experiences in World Bank-financed projects; (ii) high number of small contracts; and (iii) support to the overall concerns of the Tunisian oasis ecosystems through the approach and the national oasis strategy. With reference to the first two points, the strategy will support the coordinating role of the GDAs, by enhancing their leadership and responsibility for the implementation of their respective micro-projects, through efficient use of the support provided to them by deconcentrated services. Through the DGEQV, the UGP will provide complementary support to the GDAs, in addition to the support provided by the World Bank Team, to fill the potential gaps. This is particularly important in the areas of procurement procedures, which could slow down the physical implementation of the Project given the high number of contracts the UGP and the GDAs are supposed to execute over the lifetime of the Project. With reference to the third point, the implementation support strategy has been conceived to maximize the positive Project's externalities in the context of the broader agenda, by liaising with other institutions and development partners.

3. The risks mitigation measures identified in the ORAF and the range of required technical advice for the implementation of the project will be addressed by an Implementation Support Plan (ISP) that describes the role of the Government and that of the Bank. The ISP takes into account the nature of the project approach and will be characterized by a strategy approach based on efficient management and implementation mechanisms, compliance with the Tunisian policies and institutions, flexibility, and regular supervision, as well as an efficient synergy and collaboration with other partners.

Implementation Support Strategy

4. Overall, the Bank will continue to support improved collaboration between the key stakeholders involved in the implementation of this project and to work with the government to assure strong coherence of interventions. However, the implementation of the project relies heavily on the establishment of an efficient implementation strategy that will facilitate the achievement of the projects expected outcomes.

Specific elements of the implementation support strategy are:

- To ensure field-based supervision, the TTL, fiduciary, procurement, and environmental specialists are based in the field.

- Fiduciary and procurement risks are limited since the project uses established implementation mechanisms (whose efficiency has been proven by other current projects in Tunisia).
- The Bank's fiduciary responsibility in relation to the use of funds will be assured through the implementation support twice a year, including procurement and financial specialists to support the full implementation and respect of the Project Implementation Manual (PIM), and to verify that continued relevant support measures are in place (training of staff, technical assistance, etc.). The procurement specialist will also play a central role to detect any bad practices and define adequate corrective measures.
- The additional staff proposed to support the UGP (a Project administrative Assistant, an environment specialist, and a M&E specialist) will play an important role in assuring the performance quality of Project activities.
- The UGP will need to play a key role in supporting the establishment of working relationships between GDAs, which are PDPOs' promoters and deconcentrated technical services and will support GDAs in fully assuming their responsibilities.
- The Project is aligned with the existing country M&E arrangements, in general, and those of the MEATDD, in particular. However, a support to the M&E capacities of the GDAs is particularly important.
- Besides the DGEQV of the MEATDD, a number of specialized national agencies are involved in the implementation of the Project: (i) The *National Bank of Genes* (BNG) to conduct the inventory and the identification of genetic material (seeds or any other material from which plants multiply) of targeted oases; and identify threatened species, collect and preserve their seeds in cold rooms; (ii) the *Regional Research Center for Oasis Agriculture* (CRRAO) to enrich its existing collection in Deguache and develop some rare varieties in the targeted oases; (iii) the *Institute of Arid Regions* (IRA) will: (i) conduct the inventory and the collection of fruit and vegetable varieties in the selected oases; (ii) label and evaluate the accessions that have been collected; and (iii) multiply fruit and vegetable species.
- The implementation procedures (including procurement, type of contracts, scale, and scope) are described in 'Project Implementation Manual (PIM)
- The identification of the Project target area beneficiaries has been made on the basis of several technical parameters. Particularly important is the establishment of synergy and collaboration with other on-going projects, such as the APIOS2 Project and the National Planting and Reforestation Program (in Tozeur and Kebeli), as well as the GIZ-supported initiatives.
- The Project is designed to ensure that a high degree of flexibility is maintained during key stages of implementation.

5. Community-driven micro-projects, derived from the PDPOs, are the main investments of Component 2 (for SWLM, protection of biodiversity and diversification of local livelihoods). These micro-projects are prepared in consultation with all local stakeholders, including representatives of community organizations, local NGOs, deconcentrated services, and other groups. A flexible M&E system (described in the PIM) will allow the timely identification of constraints and other blocking factors and the definition of adequate responses. The organization of supervision missions and Mid-term

Reviews (MTR) will also contribute to review the main assumptions, measures, and indicators, if necessary.

Implementation Support Plan

6. **Technical inputs.** The World Bank Team will be responsible for providing technical inputs throughout the project implementation. The TTL is based in Tunis and this will guarantee a close collaboration and supervision of the project activities. When the required skills are not available within the Team, the Task Team Leader will be responsible for identifying adequate help from outside the Team. The World Bank Team will also play a role in terms of the revision of technical documents produced under the project. In addition, and considering the ambition to support the overall oasis ecosystems, the World Bank Team will liaise with other institutions and development partners to identify synergies that might enhance the technical level of the project and the overall achievement of the higher level objectives of the project.

7. **Procurement.** The World Bank's procurement & financial management specialist assigned to the project is based in the Tunis office which will guarantee a close supervision of procurement activities. Additional procurement support might be needed considering the high number of small contracts and the possibility that there will be the need to revise more than the prior review contracts due to the limited expertise of the GDA in the World Bank procurement procedures. If additional procurement support is needed, a consultant will be hired to join the World Bank Team and ensure timely support for adequate project implementation. As concluded by the procurement assessment, training will be essential in order to guarantee that World Bank procurement procedures are properly followed, in particular at the GDA level where capacity is very limited. Training will be organized during the first weeks of the Project for relevant staff of the DGEQV and the GDA. Efficient use of World Bank staff resources will result from conducting procurement trainings simultaneously for multiple World Bank GEF projects including Ecotourism, POPs, PGRN2, and PNO4. Additional trainings will be provided when necessary throughout project implementation. The project implementation manual includes a procurement section; annexes will present standard bidding documents for easy reference. Procurement aspects will be revised through project implementation and specifically during supervision missions (to be carried out at least twice a year).

8. **Financial management (FM).** The World Bank's procurement & financial management specialist assigned to the Project is based in the Tunis office, which will guarantee a close supervision of FM aspects (including but not limited to, accounting, reporting, and internal controls). Supervision will include the revision of TOELP sub-projects on a random basis. The World Bank team will also work with the project coordination and management unit to assist in improving coordination among different directions and units for financial management and reporting. It is expected that FM support will be particularly needed six months after the beginning of the project for the preparation of the first unaudited financial report, and then one year after the beginning of the Project for the first audit report.

9. Project FM supervision will include desk review of IFRs and annual audited financial statements; and on-site visits to be performed on a semi-annual basis during the first year

of the project, in order to ensure the continued acceptability of project's financial management and disbursements arrangements. After the first year the frequency and scope of the supervision strategy will be reviewed and adapted to project's needs. The FM supervision will also include visits to the GDA and Local Associations.

10. Additionally, as mentioned earlier, the World Bank will provide training to Project Implementation Unit staff at the different levels on World Bank Financial Management, disbursements guidelines and procedures at the launch project.

11. **Environmental and Social Safeguards.** The World Bank Team will supervise the implementation of the ESMF and RFP and provide guidance to the project coordination and management unit to address any issues. In addition, the World Bank Team will include environmental and social supervision updates in regular project progress reports. Inputs from an environment specialist and a social specialist are required. Training is required on environment and social monitoring and reporting. The need for environmental support is expected to increase as the project progresses with the implementation of the micro-projects.

12. **Coordination.** The Task Team Leader is based in Tunisia; he will provide day-to-day supervision of all operational aspects, as well as coordination with the client and among World Bank team members.

Table 9: Implementation support plan

<i>Time</i>	<i>Focus</i>	<i>Skills Needed</i>	<i>Resource Estimate</i>	<i>Partner Role</i>
<i>First twelve months</i>	<i>Local participation</i> <i>Micro-projects preparation</i> <i>FM and Procurement</i>	Local development expert Project Preparation expert FM and procurement experts	20 SWs 20 SWs 10 SW Specialist M&E 4 SWs FM and procurement (10 SWs) TTL: 15 SW Env and social: 6 SW	Recruitment of experts to support the UGP and the GDA Arranging and conducting training Initiating CP1 activities Support the preparation of micro-projects
<i>12-48 months</i>		Local development expert Project Preparation expert FM and procurement experts	20 SWs 20 SWs 10 SW Specialist M&E 4 SWs FM and procurement (10 SWs)	Recruitment of experts to support the UGP and the GDA Arranging and conducting training Initiating CP1 activities Support the preparation of micro-projects

			TTL: 15 SW Env and social: 6 SW	
<i>Other</i>		Local development expert	20 SWs	Recruitment of experts to support the UGP and the GDA Arranging and conducting training Initiating CP1 activities Support the preparation of micro-projects
		Project Preparation expert	20 SWs	
		FM and procurement experts	10 SW	
			Specialist M&E 4 SWs FM and procurement (10 SWs) TTL: 15 SW Env and social: 6 SW	

Skills Mix Required

Table 10: Staff and skills needed

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
TTL	12 SW annually	3 first year and 2/year for the remaining years	Based in Tunisia
Operation analyst	4 SW annually	When needed	Based in Tunisia
Procurement specialist	3 SW annually	When needed	Based in Tunisia
Financial managt specialist	3 SW annually	When needed	Based in Tunisia
Social safeguard specialists	3 SW annually (from second year)	When needed	Based in the region
Environmental safeguard specialists	3 SW annually (from second year)	When needed	Based in Tunisia
Communication specialist	2 SW annually (from second year)	When needed	Based in Tunisia
M&E specialist	4 SW annually	When needed	Consultant

Partners

Table 11: Partners

<i>Name</i>	<i>Institution/Country</i>	<i>Role</i>
Direction Générale pour l'Environnement et la Qualité de la vie (DGEQV) Ministère de l'Équipement, de l'Aménagement du Territoire et du Développement Durable (MEATDD)	Unité de Gestion du Projet	Project implementation & coordination
Banque national des Gènes	Tunisia	Institution involved in activities of sub-component 1.2
<i>Centre Régional de Recherche en Agriculture Oasienne</i> (CRRAO)	Tunisia	Institution involved in activities of sub-component 1.2
l'Institut des Régions Arides	Tunisia	Institution involved in activities of sub-

(IRA) de Médenine		component 1.2
-------------------	--	---------------

Annex 6: GEF Focal areas and strategies, and incremental costs

Tunisia: Tunisia oases ecosystems and livelihoods project

1. The proposed Project is fully financed by GEF resources. The project is developed as a multi-focal operation combining the goals of two GEF focal areas, namely:

- **Biodiversity:** Its goal is the conservation and sustainable use of biodiversity and the maintenance of ecosystem goods and services. To achieve this goal, the strategy encompasses five objectives; and the following are particularly pertinent to the project: (i) Improve the sustainability of protected area systems; and (ii) Mainstream biodiversity conservation and sustainable use into production landscapes and sectors.
- **Land degradation:** The goal of this focal area is to contribute to arresting and reversing current global trends in land degradation, specifically addressing, in the context of the TOELP project, desertification and degradation of oasis ecosystems. This will be accomplished by promoting and supporting effective policies, legal and regulatory frameworks, capable institutions, knowledge sharing and monitoring mechanisms, together with good practices conducive to sustainable land and water management (SLWM) that are able to generate global environmental benefits, while supporting local and national, social and economic development. Among the four objectives, which will contribute to the focal area goal and drive the development of the GEF-5 portfolio, particularly important are the following: (i) Maintain or improve flows of agro-ecosystem services to sustain the livelihoods of local communities; and (i) Reduce pressures on natural resources from competing land users in the wider landscape

2. GEF incremental support from land degradation and biodiversity will be combined to generate a range of global public environmental benefits in the zones targeted by the project, including (i) land under sustainable land management practices that have the potential to mitigate risk of climate change; (ii) biodiversity and ecosystem conservation, and (iii) accumulated terrestrial carbon from expanded or protected vegetation. GEF support will allow the Project to focus on natural resource management and on biodiversity protection, while emphasizing the role of community-based initiatives. The table below lists the GEF objectives, outcomes and core outputs to which this project contributes.

Table 12: Selected GEF-5 Focal areas: Objectives, Outcomes, and Core Outputs

Focal areas and Focal Areas Objectives	Expected Outcomes	Core Outputs
Biodiversity- BD2: Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes, and Sectors	Outcome 2.1: Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation.	Output 2.1. Policies and regulatory frameworks (number) for production sectors. Output 2.2. National and sub-national land-use plans (number) that incorporate biodiversity and ecosystem services valuation
Land Degradation-LD1: Agriculture and Rangeland Systems: Maintain or improve	Outcome 1.2: Improved agricultural management	Output 1.2: Types of Innovative SL/WM practices introduced at field level

flow of agro-ecosystem services sustaining the livelihoods of local communities	Outcome 1.4 : Increased investments in SLM	Output 1.4 Appropriate actions to diversify the financial resource base
---	---	--

Table 13: Comparing project’s expected outcomes and outcomes of the MENA-DELP program

EXPECTED KEY OUTCOMES OF THE MENA-DELP	PROJECT EXPECTED KEY OUTCOMES	PROJECT KEY INDICATORS
Increase in sustainably managed landscapes and seascapes that integrate biodiversity conservation	Mainstream Biodiversity Conservation: Measures to conserve and sustainably use biodiversity and improve land and water management Land degradation: Increased investments in SLM	Biodiversity conservation mainstreamed in national strategy on oasis management. Number of oasis participatory plans that incorporate biodiversity conservation and improved land and water management objectives Number of SLM sub-projects implemented Area (hectares) of oasis under SLM
Reduced vulnerability to climate change in development sectors		
Desert agro-biodiversity is better managed and contributes to improving the livelihoods of local communities	Improved and diversified livelihoods of populations living in traditional oases	Number of households of traditional oases having directly benefited from income generating activities (supported by the project)

3. In terms of incremental costs, GEF financial resources will be combined with the following resources: (i) Government cash contribution estimated at US\$ 320,000; (ii) Government in-kind contribution estimated at US\$ 1,832,000; (iii) beneficiaries’ in-kind contribution estimated at US\$138,000; (iv) parallel financing through APIOS2 project (US\$ 52 million); (v) a parallel financing from the National Planting and Reforestation Program in Tozeur and Kebeli (US\$ 4.5 million).

4. For each of the three components of the Project, see the following incremental cost matrix.

Table 14: GEF Incremental cost matrix

Component	Category	Estimated expenditure (million \$)	National and Local Benefit	Global Environmental Benefit
Component 1: Capacity building	Baseline	APIOS:0,040 Plant. Project: 0 Gov.: 0,803 Benefic: 0,018	The capacities of the main institutional stakeholders are strengthened in the field of planning physical infrastructures.	No significant global environment benefit
	With GEF alternative	APIOS:0,040 Plant. Project: 0 Gov.: 0,803 Benefic: 0,018 GEF: 0,981	Greater participation of local stakeholders in understanding key oasis ecosystems issues The strategy for sustainable oasis management has been defined and put in place through an Action Plan The capacities of local stakeholders in the fields of management of oasis ecosystems are strengthened	Improved national and local capacities to mainstream SLWM into planning of local development A complete framework of oasis development plan is established (including environmental issues) in a participatory manner The capacities of GDAs and of deconcentrated technical services (including agriculture and environment) are strengthened to support the planning and implementation of community-driven micro-projects in the fields of SLWM and the protection of biodiversity.
	Incremental	0,981		
Component 2: Support the implementation of PDPOs	Baseline	APIOS: 51,900 Plant. Project: 4,500 Gov. 0,865 Benef.: 0,120	The implementation of community-driven micro-projects is supported (more particularly in the area of the maintenance of physical infrastructures)	No significant global environment benefit
	With GEF alternative	APIOS: 51,900 Plant. Project: 4,500 Gov. 0,865 Benef.: 0,120 GEF: 4,566	Investment related to SLWM (including agro-ecosystem services) and biodiversity protection are supported.	Increased areas under SLWM. Degraded land and water sources are rehabilitated. Vegetal and animal genetic resources (including endangered ones) are protected and reintroduced. Long-term benefits, because of the link between increased carbon sequestration and SLWM practices).

Component	Category	Estimated expenditure (million \$)	National and Local Benefit	Global Environmental Benefit
	Incremental	4,566		
Component 3: Project Coordination	Baseline	APIOS; 0 Plant. Project: 0 Gov.: 0,542	Improved management and M&E of project activities	No significant global environment benefit
	With GEF alternative	APIOS;0 Plant. Project: 0 Gov.: 0,542 GEF:0,212	Project coordination activities focus on environmental sustainability. M&E system includes environmental indicators (in addition to Land degradation and Biodiversity tracking tools).	Improved knowledge base on SLWM practices and the conditions of their implementation. Evaluation tools track environmental impacts and changes.
	Incremental	0,212		
TOTAL	Baseline	APIOS: 52,000 Plant. Project: 4,500 Gov.2,152		
	With GEF alternative	APIOS: 52,000 Plant. Project: 4,500 Gov.2,152 GEF: 5,76		
	Incremental	5,76		

Annex 7: Economic Analyses

Tunisia oases ecosystems and livelihoods project

1. By investing in techniques that improve soil fertility and agricultural productivity, and giving special attention to the conservation and promotion of oasis biodiversity products, the Project through the GEF grant will improve the sustainability of selected oasis and the livelihoods of local populations. More particularly, the Project will provide the following GEBs: (i) in-situ conservation of crops/selected plants, including staples such as local hard wheat, rye, local vegetable crops, alfalfa and corn which are important for nutrition and food security; (ii) improvement of soil fertility and its resilience in order to increase organic matter; (iii) reduction of soil erosion; (iv) integration of conservation and sustainable use of biodiversity in public policies, programs and regulatory frameworks through the strategy; and (v) integration of biodiversity considerations into market mechanisms and increased SLWM investment. These benefits will be audited by tracking: (a) the number of local varieties preserved and cultivated and the number of applications for the use of local seeds; (b) agricultural land (at least 700 ha) under improved agricultural practices, (c) areas protected against flooding; and (d) reduction of degraded oasis areas.

2. A detailed economic analysis of the project is made difficult by insufficient data for some local benefits and difficulties involved in measuring global environmental benefits:

- **For Component 1**, studies, assessments, and capacity strengthening initiatives have intangible benefits and catalytic influences, which cannot be meaningfully quantified and related to a dollar amount;
- **For Component 2**, *ex-ante* cost-benefit analysis for demand-driven investments is difficult to be conducted at entry, and assigning a monetary value to ecosystems resilience and environmental benefits is complex. The team has nevertheless attempted to undertake a **cost benefit analysis** based on the findings for the PDPO for the selected oases.

1. **Project Costs.** TOELP's investments will mainly focus on soft measures through community-driven micro-projects (and not on hard measures centered on large physical infrastructures). Small-scale physical investments (e.g., small works to protect lands, villages and houses against flooding and sand invasion) will certainly allow straightforward benefits on the basis of a direct relationship between inputs and production outputs. TOELP is financed through a GEF grant (US\$5,760,730) - including US\$4,611,872 from the "land degradation" window, and US\$1,148,858 from the "biodiversity" window. The project also benefits from Government cash contribution and in-kind contribution as well as beneficiaries' in-kind contribution. The project will also be supported by a parallel financing through APIOS2 project and the National Planting and Reforestation Program in Tozeur and Kebeli.

3. **Key investments.** Oases targeted by the Project are characterized by unsustainable and inefficient agricultural practices and environmental techniques. High production costs (water, land fertility management, labor, etc.), overexploitation of water resources, illicit exploitation of collective lands, high volatility of annual agricultural revenues, and breakdown of community-based water and land management systems are the main economic features. The Project will support environmental and biodiversity activities in specific geographic areas, aiming at:

- Consistently decreasing pressures being placed upon oasis ecosystems by human activity and increasing the benefits people obtain from these ecosystems (including to produce human well-being), and therefore providing several global environmental benefits;
- Promoting the restoration of the three-layer vegetative system (soil / vegetation / fruit trees and palms); scaling up agricultural techniques aimed at improving soil fertility and agricultural productivity; reducing pressure on groundwater and over-exploitation; and decreasing direct and indirect biodiversity threats; and introducing new palm varieties, which, contrary to the *Deglet nour*, use smaller volumes of groundwater resources;
- Supporting community-driven initiatives for sustainable management of water resources that have direct and indirect positive impact on biodiversity, promoting water saving techniques (by repairing, for instance, networks of cemented canals), and reducing overuse of water related to illicit exploitation of collective lands systems and promoting techniques that improve efficient use of limited water supply;
- Investing in social capital and local solidarities; reinvigorating traditional farming systems and community-based systems of collective utilization of water (which have increasingly been replaced by individual wells and motor pumps and by the tapping of deeper aquifers traditional systems of water management); and reducing discrepancies in the transmission of traditional practices and techniques to younger generations;
- Diversifying local livelihoods and economic activities, by creating agricultural and extra-agricultural jobs (including for women and the youth), reducing local pressure on natural resources, providing local benefits from income generating activities (ecotourism, handicrafts, beekeeping, etc.), and decreasing the migration of the poor to urban areas and to foreign countries.

4. **Project Benefits:** One way to look at project benefits is to ask the question what is the cost of inaction? In the absence of the project, what are the environmental degradation costs that will accrue over time? While quantifying the avoided costs is complex, a qualitative description is provided below:

- *At local level*, in the absence of the project, land degradation and biodiversity loss in the targeted oases would have a significant and growing economic impact on local livelihoods. The expected damage - or gross benefit - of inaction would therefore be the difference between damages induced by land degradation and loss of biodiversity, as well as climate change, *with and without Project*, that is through a comparison between the high economic risks of the present situation (without the benefits of significant adoption of best SLWM practices) and the economic benefits related to the Project;
- *At national level*, without the project, the absence of a proper plan of action of sustainable strategy for oasis management, of in-depths assessments, and of capacity strengthening initiatives for all stakeholders would have a significant and irreversible impact on oasis ecosystems;
- *At all levels*, the general economic efficiency of the project is linked to the land degradation and biodiversity losses that will be avoided thanks to the knowledge base generated and managed by the project, as well as by participatory approaches supported at the level of 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

5. In addition to the avoided damage described above, **other benefits** include:

- Value of increased production from better soils/water more diversified products not income
- 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)
- Economic benefits from more effective citizen consultations and improved social and economic planning
- Economic gains from a clear strategy, where constraints and potential of oasis ecosystems are clearly spelled out and defined
- Economic gains from greater effectiveness in public administration through capacity-building, community participation and accountability.

6. Other indirect and non-quantified benefits include:

- Economic outcomes of sensitization of local user groups (for a more sustainable use of ecosystems)
- Economic externalities linked to improved efficiency and effectiveness of public services (participating departments and agencies) through capacity building activities.
- Positive social externalities, such as: participation of grassroots organizations (eventually leading to the improvement of their agricultural practices); and (ii) capacity building of ministerial departments' officials. Positive environmental externalities, such as inventories of species, status of wildlife and biodiversity, inventories of monographic profiles, and the like.

7. **Results of the CBA.** The team undertook a CBA analysis based on the PDPO information. Key underlying assumptions include: (i) about 5% of the households covered by the project will benefit from project activities in Year 1, with a consistent growth rate in the following years; (ii) revenues from agriculture and livestock and other diversified activities are expected to constantly increase over a period of 10 years; (iii) the project's results can be affected by various risks that are inherent to its implementation. A summary of the project costs and benefits is provided below:

- **Cost:** Total PDPO costs related to SLWM have been incorporated on an annual basis for each oasis (costs related to heritage and tourism activities have not been taken into consideration). Additional costs of maintenance of initial SLWM, equivalent to 3% of total investments, have been included in the computation of total costs.
- **Benefits:** SLWM benefits have been assimilated to an increase of value added per hectare due to: (i) costs savings (in particular irrigation costs savings); (ii) yield improvement (new plantations and training); and (iii) price increases (due to quality improvements). A 'lag' of 5 years has been considered between the initial investments and the full achievement of the benefits of the project.
- **CBA:** Considering the results of the empirical survey and technical analysis, a 10% increase in value added seems feasible, this results in an **IRR of 14.7%** and hence an economically viable project. In addition, the benefits included in the CBA do not represent the entire benefits that are linked to this project, therefore the result of the CBA should be considered conservative. The team also did a sensitivity analysis for different in value added and the results are shown below:

Value added per hectare increase after 5 years	12%	10%	8%	6%
IRR	18,1	14,7	11,1	7,1

8. In **conclusion**, the TOELP economic analysis indicates that:

- Costs involved in achieving project objectives are reasonable in comparison with both benefits and recognized norms (*value for money*). These costs are also comparable to the *Improved Desert Ecosystems and Climate Resilient Oases Project* (P128082) in **Algeria**.
- Practices, technologies and techniques promoted by the Project, expected to protect biodiversity and improve SLWM, are cost-effective.
- Cost-effective policy principles and strategic directions introduced by the project are likely to be further integrated into key national strategies.

Annex 8

MAP of Tunisia (Source: IBRD, 33500)

