



PROJECT IDENTIFICATION FORM (PIF)
PROJECT TYPE: FULL-SIZED PROJECT
TYPE OF TRUST FUND: GEF TRUST FUND

PART I: PROJECT IDENTIFICATION

Project Title:	Sustainable land management and conservation of oases ecosystems in Libya		
Country(ies):	Libya	GEF Project ID:	5522
GEF Agency(ies):	FAO	GEF Agency Project ID:	625514
Other Executing Partner(s):	Environment General Authority (EGA), Ministry of Agriculture, Livestock and Marine Resources (MALMR) Agriculture Research Centre (ARC), The Grain Production Authority (GRA)	Submission Date:	August 30, 2013
GEF Focal Area (s):	Land Degradation	Project Duration (months):	60 Months
Name of parent program (if applicable): <ul style="list-style-type: none"> • For SFM/REDD+ <input type="checkbox"/> • For SGP <input type="checkbox"/> • For PPP <input type="checkbox"/> 	N/A	Agency Fee (\$):	\$377,397

A. FOCAL AREA STRATEGY FRAMEWORK:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-Financing (\$)
LD-1: <i>Agriculture and Rangeland Systems</i> : Maintain or improve flow of agro-ecosystem services sustaining the livelihoods of local communities	GEFTF	2,257,534	6,572,500
LD-3: <i>Integrated Landscapes</i> : Reduce pressures on natural resources from competing land uses in the wider landscape	GEFTF	1,715,069	7,277,500
Total project costs		3,972,603	13,850,000

B. PROJECT FRAMEWORK

Project Objective: To sustainably manage and use globally significant ecosystems and to fight against land degradation and conserve oases ecosystems in Libya to improve ecosystem resilience, services and access within the context of climate change.						
Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$ million)	Indicative Co-financing (\$ million)
1. Strengthen the enabling environment (institutional, policy and regulatory frameworks) to support conservation agriculture and sustain the flow of agro-ecosystems services in oases ecosystems in Libya.	TA	Outcome 1.1 Enhanced policy, legal and institutional frameworks in conservation agriculture.	Output 1.1.1 A package of modifications in agriculture policy and legislations for conservation agriculture is developed. Output 1.1.2 A National conservation agriculture strategy and action plan is developed, endorsed by the Ministry of Agriculture, and operationalized. Output 1.1.3 Conservation Agriculture unit is created at national level with increased staff and capacity in pilot sites.	GEFTF	350,603	1,750,000
		Outcome 1.2 Measures to conserve	Output 1.2.1 National policy is analyzed and		LD1:150,926 LD3:199,677	

		<p>and sustainably manage oases systems are mainstreamed in institutions, policies and regulatory frameworks in Libya</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> - Number of policies and regulations governing sectoral activities that integrate sustainable land management practices (due to political situation, baseline and target will be developed during PPG). - No. of Oases developed and adopted SLM holistic landscape approaches (target: 10 oases). 	<p>package of modifications for oases ecosystem management is adapted.</p> <p>Output 1.2.2 A new national platform to support and monitor sustainable land management in Oases is developed and validated to respond to needs of EGA.</p> <p>Output 1.2.3 SLM holistic landscape approach is developed and adopted in 10 Oases selected in different geographical zones in consultation with stakeholders. (sites will be identified during the PPG).</p>			
<p>2. Strengthened institutional mechanisms and capacity of authorities and rural communities, by expanding the range of technical options to identify, assess, adapt, livestock and resource management practices, and cropping systems that are in accordance with the principles of conservation agriculture.</p>	TA	<p>Outcome 2.1 Conservation agriculture best practices promoted to increase vegetation cover and improve soil fertility and to reduce soil degradation.</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> - Number of smallholders/farmers and employees of key stakeholders (research & extension & farmers organisations) trained on CA practices (baseline and target to be established during PPG-phase). - 5 business plans developed 	<p>Output 2.1.1 At least 500 smallholders/farmers received managerial training and technical capacity building on conservation agriculture practices and project monitoring at pilot sites.</p> <p>Output 2.1.2 At least 5 regional agriculture/ farmer groups business plans are developed to strengthen marketing of conservation agriculture products.</p> <p>Output 2.1.3 400 employees of concerned stakeholders are trained on decision-making in integrated gender sensitive land and water resources management under conservation agriculture practices.</p> <p>Output 2.1.4 A land cover, land use, and land management practices, to measure the project's impact on SLM in the targeted areas, with the associated GIS system, established and information available to all stakeholders</p> <p>Output 2.1.5 Training and Awareness Raising toolkits on the roles of agriculture conservation and sustainable land</p>	GEFTF	<p>1,900,828</p> <p>LD1:1,236,161</p> <p>LD3:664,667</p>	4,050,000

		<p>Outcome 2.2 The area devoted to conservation agriculture in agricultural production systems (cereal) is improved and livelihood strategies and socio-economic growth among farming communities is strengthened, through increase use of diversity rich solutions and products</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> - Number of Ha under CA practice (target: 50,000 ha). - Number of piloted projects developed and implemented on sustainable water management practices (target: 10 sites which will be selected during the PPG) 	<p>management technologies (including training in GIS/data management) are prepared and disseminated.</p> <p>Output 2.2.1 Locally adapted conservation agricultural-based best practices for cropping and farming systems are defined for predetermined ecosystems (project sites).</p> <p>Output 2.2.2 800 demonstration projects (50 ha each) of conservation agriculture practices (reduced tillage, crop rotation, crop residue management and vegetation cover) are implemented on 40,000 ha of government irrigated cereal land.</p> <p>Output 2.2.3 10,000 ha of small farms (25 ha each) in drylands/degraded agricultural lands are rehabilitated using innovative conservation agriculture technologies/practices</p> <p>Output 2.2.4 Sustainable land and water resource management practices (drip/trickle irrigation, use of treated wastewater if possible) targeting the reversing of land degradation trends implemented in 10 selected pilot sites.</p>			
3. Conservation of oases ecosystem through the implementation of sustainable oases management system to fight against trend of oases degradation, and development and diversification of local oases communities' incomes generating activities and livelihoods.	TA	<p>Outcome 3.1 Sustainable management measures to conserve and rehabilitate Oases ecosystems are identified and adopted</p> <p><i>Indicators:</i></p> <ul style="list-style-type: none"> - Oases systems assessed, evaluated and 10 oases system supported through SLM - Number of national authorities staff, local communities and farmers trained on conservation agriculture principles (baseline and target 	<p>Output 3.1.1 Oases ecosystem services potential in Libya is assessed, valued and documented</p> <p>Output 3.1.2 A programme for conservation agriculture taking into account the protection of Oasis ecosystems is established with participation of women and men from local communities.</p> <p>Output 3.1.3 Oases system services are supported through integrated resources management practices for productivity enhancement (including organic farming,</p>	GEFTF	1,092,000	4,750,000
					LD1:479,931	LD3:612,069

		<p><i>to be established during PPG-phase)</i></p> <p>Outcome 3.2 Information of Oases benefit sharing mechanism(i.e. food products, nutrition, health benefits and other valuable uses) is identified, systematically collected, shared with policymakers and linked to local communities and markets.</p> <p><i>Indicators:</i> - <i>An integrated information system on biodiversity and traditional agriculture in oases areas developed</i></p> <p>Outcome 3.3 Assessment and promotion of alternative income generating mechanisms, for and with the participation of local communities living in the Oases landscapes.</p> <p><i>Indicators:</i> - <i>Number of feasibility study developed on marketable incomes activities for local communities surrounding oases areas (target: 5 feasibility studies)</i> - <i>Market plan developed (target: 1)</i> - <i>Number of smallholders/farmers trained on eco-tourism, eco-labeling and marketing (baseline and target</i></p>	<p>ecotourism and certification) in ten (10) pilot sites selected in consultation with national counterparts</p> <p>Output 3.1.4 Capacity of national/ local institutions (EGA, MALMR), NGOs and local communities on sustainable oases management and its importance to food security and nutrition is strengthened.</p> <p>Output 3.2.1 Assessment and new documentation system (GIS-based) of conservation and traditional agriculture biodiversity in Oases system and its characteristics are established in relation to: (i) climate resiliency; (ii) nutritional value and content; (iii) marketability; (iv) genetic erosion and threats.</p> <p>Output 3.3.1 Feasibility study conducted on the conversion of conservation activities into marketable incomes in the selected oases systems in collaboration with national authorities.</p> <p>Output 3.3.2 A national strategy for Oases sustainable eco-tourism promotion that is promoting environmental services schemes and integrated gender equity is developed.</p> <p>Output 3.3.3 One market plan to link traditional products from Oases systems to the national market and the private sector agreed with the national agencies and selected number of local communities.</p> <p>Output 3.3.4 Enhanced capacity of local communities and involved</p>			
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		<i>to be established during PPG-phase)</i>	local/national institutions on eco-tourism and local business development, product eco-labeling and marketing, and market access promotion.			
4. Knowledge management, dissemination of lessons learned and best practices, monitoring and evaluation	TA	<p>Outcome 4.1 Increased appreciation and awareness on the importance of the conservation agriculture for sustainable land management, climate change adaptation, food security and nutrition.</p> <p><i>Indicators:</i> - Public awareness and knowledge management systems established (<i>Targets:</i> 1 Project website developed, 1 Toolkit developed for Oases conservation and CA, videos), Curricula on conservation practices established at High Schools or Universities.</p> <p>Outcome 4.2 Project implementation based on results based management and application of project findings and lessons learned. <i>Indicator:</i> - Monitoring system established</p>	<p>Output 4.1.1 Promotional material of conservation agriculture and oases management, traditional knowledge, innovations and practices, product information and labeling, elaborated and disseminated.</p> <p>Output 4.1.2 Best practices and knowledge analyzed, documented, published and shared through the programme and national websites, multimedia dissemination and the participation in regional and international conferences and meetings.</p> <p>Output 4.2.1 Project M&E system established and providing timely information on progress in meeting project outcome and output targets</p> <p>Output 4.2.2 Project mid-term and final evaluations conducted</p>	GEFTF	440,000	1,550,000
					LD1:283,015 LD3:156,985	
				Sub-Total	3,783,413	12,100,000
				Project management Cost (PMC)	189,172	1,750,000
				Total project costs	3,972,603	13,850,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government Programme with the FAO (70 Million USD total value)	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Development of technologies for increasing crop productivity Project	Cash	1,500,000
	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Managing pesticides and pests Project	Cash	900,000
	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Improving livestock productivity and health Project	Cash	2,200,000
	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Protection and development of forests and natural rangelands Project	Cash	1,000,000
	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Integrated management of irrigation water in agriculture Project	Cash	500,000
	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Planning and sustainable management of agricultural land uses Project	Cash	1,000,000
	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Establishing an agriculture information and knowledge management system Project	Cash	200,000

	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Improvement of agricultural research, extension and training systems Project	Cash	750,000
	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Review and development of the agricultural sector policies, strategies and structures Project	Cash	1,500,000
	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Development of mechanisms for attracting private sector investment and participation in agriculture Project	Cash	400,000
	Ministry of Agriculture, Livestock and Marine Resources (MALMR)/ Development of agricultural marketing strategies and agricultural cooperatives Project	Cash	400,000
National Government	Environment General Authority	In-kind	1,000,000
National Government	The Agriculture Research Center	In-kind	500,000
National Government	The Grain Production Authority	In-kind	1,000,000
National Government	Ministry of Tourism	In-kind	1,000,000
Total Co-financing			13,850,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA(S) AND COUNTRY

GEF Agency	Type of Trust Funds	Focal Area	Country Name/ Global	Grant Amount (\$ (a))	Agency Fee (\$) (b)	Total (\$) c=a+b
FAO	GEFTF	Land Degradation	Libya	3,972,603	377,397	4,350,000
Total Grant Resources				3,972,603	377,397	4,350,000

E. PROJECT PREPARATION GRANT (PPG)

	<u>Amount Requested (\$)</u>	<u>Agency Fee for PPG (\$)</u>
• (Upto) \$150k for projects up to & including \$ 6 million	\$ 136,986	\$13,014

PPG AMOUNT REQUESTED BY AGENCY (IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF PROJECT ONLY

Type of Trust Funds	GEF Agency	Focal Area	Country Name/ Global	PPG (\$) (a)	Agency Fee (\$) (b)	Total (\$) c=a+b
GEFTF	FAO	LD	Libya	136,986	13,014	150,000
Total Grant Resources				136,986	13,014	150,000

PART II: PROJECT JUSTIFICATION

A. PROJECT OVERVIEW

A.1. Project description

1) The global environmental problems, root causes and barriers that need to be addressed

1. Libya, a North African country, bordering the southern coast of the Mediterranean Sea. The Libyan land covers approximately 1,665,000 km² of which around 90% is desert or semi desert¹. Libya has a relatively small population, approximately 6.4 million which is currently growing at a rate of 1.1% annually, down from 2.2% in 2007. Population density is about 3.5 people per sq. km in 2010³. More than 75% of the population is urban, and mostly concentrated along the coast, in the two largest cities, Tripoli and Benghazi.
2. The prevailing climatic conditions in Libya are typical of the Mediterranean region characterized by variability and unpredictability. Annual rainfall is extremely low in Libya, where 93% of the land surface receives less than 100 millimeters of rain per year. The rainfall is unpredictable in quantity, frequency and distribution and occurs primarily in the winter, although there is variation both annually and geographically. In the coastal region rainfall is very limited to winter months, while the Jabal Al Gharbi and Jabal Akhdar highlands receive enough rainfall to sustain rainfed agriculture. Geographically, rainfall diminishes progressively as one moves southward, eventually reaching zero.
3. Libya is experiencing serious land degradation and desertification as a result of a combination of factors, including the country's geographic position, high rates of urbanization, global climate change, and overexploitation of water resources and natural vegetation⁴. The coastal areas, the low mountains, and scattered oases in the desert are the area of Libya that is most densely populated with the highest land degradation and the least protection of its biologically diverse ecosystems and habitats. The sustainability of these regions' ecosystem services, its biodiversity, and its economic productivity requires an approach that provides the opportunities, the means, and the motivation to communities to develop, acquire, and/or exercise the financing, knowledge, and capacities needed to develop and manage their resources for global environmental and local development benefits.
4. As a result of the unfavorable climatic conditions, nearly all agriculture in the country relies on irrigation. Approximately 1% of Libya's land is arable, and only 8.8% of land in Libya is currently used for agricultural purposes. Less than 3% of Libya's labor force worked in agriculture in 2001, down from 8.85% in 2006⁵. The agriculture sector contributes less than 2% of the Libyan GDP, which was approximately US \$62.4 billion in 2009.
5. The majority of Libya's agricultural production (around 80%) consists of fruit and vegetables grown for domestic consumption; climatic conditions limit grain production to barley and wheat. Approximately 75% of Libya's food is imported, and agricultural activity is almost entirely for domestic consumption.
6. The agricultural production in Libya is dominated by crop production. Of the total Libyan land, only 1.03% is classified as arable land (2,170,000 ha), with 0.91% (355,000 ha) of permanent crops and 98.78% of others (2005 statistics). The agriculture production is depending mainly on the private sector. Plant production is considered as the most important and largest agricultural activity as it absorbs many workers, provides food for the people and forages for animals and supports most of the food processing plants which depends on it either directly or indirectly. The main agricultural productions of main crops in the Country are wheat, barley, pulses, vegetables, fruits, and olive.
7. The total Libyan agricultural population, those dependent on agriculture, fishing, hunting or forestry for their livelihoods, is estimated to be 193,000, which includes 50,000 women and 21,000 men considered to be economically active in agriculture⁶. The total number of smallholders in Libya is estimated to be 163,440, which includes 11,534 by women (7.1%) and 151,912 by men (92.9%). 33.3% of the holdings fall into the category of holdings sizing 30 hectares and more, 20% of holdings have a size between 5 ha and less than 10 ha, 12.6% of holdings have a size between 10 ha and less than 15 ha, while the remaining consists of holdings with less than 5 ha, representing 34.1%⁷.
8. Agriculture practices in Libya consist mainly of two types; i) larger state-owned commercial farming enterprises that are run by state employees, mainly the MALMR, and ii) the smallholder farms in the low mountains and scattered oases areas.
9. Water resources is extremely limited in Libya. The country is heavily dependent on fossil water extracted from the Nubian Sandstone Aquifer System, shared with other countries, and considered as the world's largest fossil water aquifer system. Since 1984, the Government has been working on the "Great Manmade River Project – GMMRP. The project is a series of pipelines moving water from the Nubian Aquifers in the southern parts of the country to the populated areas in the North. Currently, the project is supplying up to 70% of Libya's population with water.

¹Laytimi, 2006: Market and Trade Policies for Mediterranean Agriculture: The case of fruit/vegetable and olive oil-MEDFROL Project

²USAD, 2011: USAID Country Profile: Libya Land Tenure and property rights profile.

³The Encyclopedia of Earth: Libya: <http://www.eoearth.org/article/Libya?topic=49460>

⁴The NAP, 2005. The National Committee for Combating Desertification and Arresting the Spread of Desertification, MALMR

⁵National Statistics Department: The status of Libyan population in 2010

⁶USAD, 2011: USAID Country Profile: Libya Land Tenure and property rights profile

⁷Final Report for Agriculture Statistics in 2007. The General Statistics Authority – Libya.

10. Libya's total renewable groundwater resources are estimated at 500 million cubic meters per year. The total annual water extraction is estimated at 4200 mcm per year, an unsustainable level in one of the most water-stressed country in the Region. More than 85% of Libyan's total water withdrawal is used for agricultural purposes (Ministry of Agriculture).

11. Water resources in Libya are managed by the Water General Authority, established in 1972, and responsible for all water resources assessment, monitoring and supply in Libya. It also supervises irrigation and drainage projects, including conducting the needed studies aimed at improving irrigation. While the responsibility for the development of irrigation for agriculture, as well as implemented related water- agriculture project is the MALMR. The Authority has six general directorates and many field offices all over the country.

12. The Libyan Water Law, Law No. 3 of 1982, is Libya's main piece of legislation concerning water management and use. The law declares water a publically owned good which can only be exploited after procurement of a license, defining the amount and duration of use rights, from the Water Authority. The law sets the order of priority for water exploitation as: (1) human and animal use; (2) agricultural use, preferably cultivation of food crops; and (3) industrial and mining uses. The law also details several other aspects of water regulation in Libya, including ownership, management responsibilities, licensing, resource preservation through pollution control, and penalties for violation⁸.

13. Several other pieces of legislation complement the Water Law. These include: the Environmental Protection Law; the Water Well Drilling Law; the Economic Crimes Law; the Protection of Ranges and Forests Law; the Agricultural Inspection Law; and the Law of Tribal Lands and Wells⁹.

14. Over time there have also been several decrees issued by MALMR related to water. These include: a 1979 decision by the Secretary of Agriculture banning the drilling of water wells in the Gefara Plain; a 1981 declaration by the General People's Committee adopting measures for the planning and development of Libya's coastal belt; and a 1983 decision by the Secretary of Agriculture regulating irrigation¹⁰

15. On the basis of climate and soil conditions, four agricultural regions are recognized in Libya, running approximately north-to-south along a marked hydric gradient of wetter to drier; the coastal belt, low mountains, semi-desert areas, and the desert. Each zone is generally exemplified by different climatologically conditions and other factors resulting in commonly characteristic land use patterns involving crops, land tenure, climate and other factors.

16. The historical development of agriculture and accompanying settlements in the Country has resulted in landscapes that are characterized by remnant patches of native forest, limited areas of degraded lands, and farm fields of differing sizes. These landscapes reflect a combination of habitat conversion, progressive fragmentation and cumulative degradation, leading to the loss of important endangered and endemic species and habitats and the invasion of damaging alien species in coastal, freshwater and forest ecosystems. This dynamic has severely affected the volume and quality of the ecosystem services the four agriculture zones provide to Libya's economy and society (carbon, microclimate, water, etc.). At the same time, it has contributed to the global environmental crises of climate change, biodiversity loss and land degradation.

17. Agricultural land is a source of ecosystem services. The switch to Conservation Agriculture system in Libya could add to the amount of carbon sequestered. A hectare of agricultural land in semi-arid zones is estimated to gain between 0.1 to 0.2 tonnes of Carbon¹¹ (a mean 0.15 tonnes of Carbon is used for calculations); a limited level of variability can be found depending on the degradation stage of a given formation, with a lack of precise information at landscape level. Agriculture near Oases systems depend on ecosystem services providing plant genetic resources, soil fertility, and pollination. For irrigation purposes agricultural activities largely depend on ground water aquifers. Ministry staff have limited experience in the management of water aquifers –the 2 most important ones such as Complexe Terminal aquifer CT and Continental Intercalaire aquifer CI. suffer from overextraction and/or insufficient recharge.

18. There are currently no laws addressing ecosystems conservation or conservation of forests in Libya. The 2011 Constitutional Declaration does not cover these issues nor do any laws by the post-Qadhafi government. During the Qadhafi era, and in order to protect the land, and preserve the nature, forests and agriculture, the Government has established several laws since 1947. The most important ones are: The law 5 related to the protection of Agriculture Lands, Pastures, and Forest established in 1982 and amended in 1992, Law No. 46 of 1972, for the protection of shrub land; law No. 7 of 1982, for the protection of the environment established 1982; law No. 15 of 1989, for the protection of agricultural lands and animals established in 1989; law No. 17 of 1985, for the regulation of grazing activities; and law No. 3 of 1982, for the regulation the use of water resources¹².

19. Degradation of agroecosystems occurs with, to name a few, the loss of soil organic matter through wind and water erosion and as a byproduct of tillage (mineralization) or overgrazing; the reduction in species as a result of a production focus on monoculture with commercial varieties; salinization due to unsustainable irrigation practices. Though

⁸ Salem, Omar. 1998. Appendix 5: Country Case Study – National Water Policy Review, and Management of Water Scarcity in the Libyan Arab Jamahiriya. Proceedings of the second Expert Consultation on National Water Policy Reform in the Near East, Food and Agriculture Organization <http://www.fao.org/docrep/006/ad456e/ad456e0c.htm> (accessed 14 July 2013)

⁹ Same reference above (Salim, 1998)

¹⁰ FAO. 2006. AQUASTAT: Libya http://www.fao.org/nr/water/aquastat/countries_regions/libya/index.smt (accessed 10 July 2013).

¹¹ FAO: Climate change and agriculture: physical and human dimensions <http://www.fao.org/docrep/005/y4252e/y4252e15.htm>

¹² Encyclopedia of environmental legislation and other environment-related legislations, Environment General Authority, 2008

exact numbers are difficult to find, there is a general consensus among policy makers that unsustainable use of agroecosystems is the primary historically cause of land degradation found in Libya. This degradation is a major cause of carbon emissions and the loss or diminishment of critical ecosystem services related to water provision, the maintenance of crop genetic diversity, etc. These degraded areas nevertheless represent a major opportunity for the restoration of ecosystem functions through improved land use.

20. Over 100,000 people living in (oases areas) are disproportionately poorer or living in more marginal socioeconomic conditions¹³ than urban populations. On average, a typical rural inhabitant of the oases ecosystems receives 20-25% of his/her income from the unregulated market of non-agriculture products¹⁴. These activities include very limited production and trading of local handicrafts and ecotourism activities with low-value-added. The remaining 75-80% of a typical rural smallholder's income is produced by traditional agriculture mainly of Palm and Olive trees and extensive livestock rising - which leads to overgrazing - for local and sub-regional markets, in both cases low-value-added activities due to scale and absence of proper marketing. Despite this, their actual capacity to act effectively is limited by significant social, cultural, and economic constraints, as well as by organizational weaknesses and a generalized shortage of access to knowledge, technical assistance, and financial resources. Their marginal condition impedes their adequate access to financing and markets for specialized goods and technology critical to sustainable production and landscape management.

21. Farm animals have contributed to the degradation of the rangelands and this occurred as a result of the increased rangeland carrying capacity, early grazing, overgrazing, lack of programs for organizing grazing and lack of alternative feeds which can help in satisfying part of the animals' needs.

22. Population in rural areas and surrounding the oases are strongly dependent on agriculture as a primary source of income, according to the agriculture census in 2007, there were 20,011,195 fruit trees. Wheat production exceeded 319,391 quintals, barely production exceeded 1,657,833 quintals, both with down production of 41.7% and 31.7% respectively on 2001 agriculture census, these figures show decline in agricultural yield within 6 years. Rural and poorer households are strongly dependent on firewood for energy and thus are significant drivers of land degradation, however, no data is available on the annual land use changes, and thus it is difficult with the limited data available to estimate the CO₂e lost annually to land use change, forest degradation, and land degradation in Libya.

23. Animal production plays an important role in the agricultural development process in Libya as it accounts for 40-56% of the total agricultural domestic product, though it faces many challenges. As per the general census in 2007, the number of sheep was 3, 937, 650, with 81.7% female, while goats were numbered 1,080,420, with 79% females, then 102,506 cow and female ratio of 78% of the total. Finally camels, with a total number is 109,397 and the proportion of females of whom was 78.5%. by comparing these numbers with the previous census 2001 it is clear that there is a decline in sheep numbers by 29.3%, and goats by 5.8%, camels by 17.4% and cattle by 20.8% (2001 and 2007 Agriculture censuses final reports).

24. Desertification process has directly affected the rangeland productivity and led consequently to a marked decrease in the productivity of the farm animals. Statistics have indicated the presence of a big gap in the amounts of feed for livestock estimated at about 1,644.4 million feed units, equivalent of about 58% of the livestock's requirements.

25. While the trends and patterns in oases system degradation are serious, only refraining from practices that promote degradation would be insufficient to conserve biodiversity and optimize ecosystem services for sustainability, productivity, and climate resiliency across the production oases systems. *A pro-active effort to restore ecosystem functions at scale in degraded landscapes is critical to achieving these goals.* To date, no systematic programme is in place to study the biological value of the oases ecosystems in Libya. There is currently no data available on the total number of oases, its location (exact geographical distribution), type of ecosystems presented, kind of species, and its biological value and finally the exact number of people depending on such ecosystem.

26. Traditional oases in Libya has significant potential in terms of intensive development leading to job creation; support for biodiversity; diversification through innovative and green activities; and tourism based on exceptional natural beauty in the South, west and East. There are dozens of local varieties of dates cultivated in this region today; each variety has its specific features, and is very often unknown to the wider public.

27. The date palm in many Oases in Libya, especially Al Jafra oases, can be considered the linchpin species in desert and pre-desert agricultural systems. Its cultivation is the most effective manner of protecting areas that are environmentally at risk. The species is highly adaptable to difficult soil and climate conditions. Each of the Libyan date palm has been subjected to natural and anthropic selective pressure through the age-old history of cultivation in tiny distribution areas under extreme conditions. Libyan date palm is a highly interesting asset for both agriculture and the environment; it is an extremely useful source of genetic variability in cultivar improvement processes, aimed at overcoming some of the limits in production¹⁵. The varietal component further contributes in a decisive manner to the quality characteristics of dates produced, based on local varieties that are typical of the region and have a high nutritional value.

28. However, Libyan oases face a number of threats. Old plantations, three-layer vegetated surface (soil-vegetation-fruit-trees and palm-trees), high tree density, very fragmented and small average size of individual plantation, as well as

¹³(Ministry of Agriculture unpublished data)

¹⁴(MALMR, unpublished data)

¹⁵The Libyan Dates Project: <http://www.libvandates.com/english/cultivation-project-libyan-dates.html>

low yields, characterize traditional oases in Libya. They are mainly irrigated from declining water tables. In addition, poor marketing opportunities, limited credit, inheritance practices that continually subdivide land holdings and result in poor land management, and limited and inappropriate tourist development, have increased the overuse of natural resources, especially water. This, coupled with the breakdown of land management practices, has increased the level of salinization, loss of soil fertility, and encroachment of sand. Access to crop and livestock resources to cope with these conditions, and the increased pest and disease problems associated with loss of biodiversity, are affecting the survival of oasis farmers.

29. Another issue faces the oasis farmers is the development of agricultural production and access to markets, which will contribute to raising the standards of living of the smallholders. Smallholders lack the skills, capacities, and financial means to develop their production. This includes; the use the appropriate techniques; improving quality standards; ensuring better fruit and vegetable selection; using modern packaging; promoting entrepreneurial capacity building; and the technology and infrastructures improvement. Therefore, improving the sustainability of agricultural product is one of the key threats smallholders are facing. The economic aspects and the importance of individual farmers within the overall production chain are not clear and therefore not seen by smallholders and decision makers.

30. Oasis farmers' challenges include limited opportunities for capacity development, the absence of any appropriate policies and legislative instruments, the low involvement of local population and particularly women in decision processes, and the continuing loss of traditional knowledge. Improving their capacity and rights will support farmers with a greater contractual power in their dealing with intermediaries, vesting them with a greater political and legal power.

31. Clearly, climate change risks bring agriculture, water resources management, and rural development and poverty reduction objectives at high stake in Libya unless addressed urgently and systematically. At the same time, climate change adaptation in agriculture sector can revive local economies, bring new knowledge, skills, and technologies, and boost job creation. Despite the apparent opportunities to capture and risks to address, there is number of barriers for the project to lift toward sustainable land management in Libya.

32. On a general basis, the project will address the following key barriers to enhance sustainable land management, ecosystem services, and increase conservation agriculture practices:

Barrier 1: The regulatory and policy framework in Libya are largely archaic and inadequate and do not allow for coherent mainstreaming of sustainable land management in sectorial national policy planning.

33. Governance weakness in Libya is stated as the main barrier to actual implementation and policy enforcement. Often, fully transposed national laws and policies are missing operational hands through the sub-laws and subsidiary legislations which are to be elaborated by responsible Ministries. In some cases, the governance structures are not well established and undergo frequent transformations that also preclude progress in implementation in Libya. Water management is highly important area for sustainable land management. However, in Libya and according to the Libyan Water Law, that defines water resources management as the development, improvement and protection of water resources, the Libyan Water Authority along with other local utilities are mandated to achieve the best management of water resources. Nevertheless, due to several reasons, starting with recent unrest and limited government controls over the available resources, absence of laws and regulations enforcement, the internal conflict, and ending with the adverse impact of the last drought, it becomes very difficult for the National Water Authority to manage the already limited water resources. Therefore, smallholders and private farms have established their own farms and drilled over 2000 illegal wells that the Water Authority has no control over. As a result, the total amount of groundwater used for irrigation purposes by the smallholders and private farms is uncounted for by the national authorities. Unsustainable irrigation practices in Libya cause land resources, mainly water, to degrade, threaten agriculture and future food security as well as livelihoods of poor rural people.

34. Policy formulation is strongly compartmentalized across the sectors with sustainable land management policy treated as strictly agriculture sector agenda. Therefore, land management policy is divided in isolated efforts that do not create any sustainable capacity. The General Water Authority is currently designing a new water policy. It is difficult to estimate how effectively the new policy will eventually feed into the overall agriculture policy framework. This high degree of sectoralisation precludes coherent cross-sectoral planning that is essential for agriculture policy formulation and capturing the opportunities that the synergies between the water and agriculture sectors and options could offer. However, to ensure such cross-sectorial collaboration there is a need to overcome compartmentalization often driven by common perception that everything related to water is an exclusive responsibility of the General Water Authority.

35. A high degree of planning and governance within and between authorities based on an agreed strategic vision and supported by an appropriate policy and incentive framework is required to establish and maintain production landscapes that are productive, produce global environmental benefits and enhance climate resiliency. This requires enabling participation and regulatory compliance of community smallholders.

Barrier 2: Authorities lack the capacity to plan, manage, and/or coordinate farm production landscapes for conservation of biodiversity, optimization of ecosystem services and increasing long-term productivity.

36. The institutional capacity and governance structures in agriculture and environment sectors are weak or underdeveloped. EGA and MALMR suffer from limited technical and research capacity. EGA, the main responsible institution for developing and implementing policies and projects in the field of environmental and natural resources management, remains understaffed; moreover, the resources to implement national policies are inadequate. Inefficient and incomplete administrative procedures preclude more robust development of several projects.

37. Government must have the capacity to articulate this vision, set strategic objectives, define outcomes, identify trade-offs, formulate action plans and negotiate and agree individual contributions to fulfillment of these plans. While individual smallholders may adopt sustainable production practices and alternative income generating activities, the impact ecosystem services across the landscape depends on their coordinated response guided by a strategic vision integrating productivity, connectivity, conservation, and sustainable use goals.

38. Effective coordination between stakeholders can be used to leverage greater economic benefits associated with sustainable income generating activities. Marketing of oases products, certified agricultural products, or other sustainably produced goods will also benefit from stakeholders coordination. To achieve economies of scale in marketing and sales of sustainable products, authorities need the ability to lead the process to empower communities to collaborate with knowledgeable and trustworthy private sector groups, NGOs, and each other to ensure a steady stream of high quality products.

Barrier 3: Inadequate local community and farmer capacities for the identification and adoption of sustainable land-use practices and systems at scale in production landscape in areas of high biodiversity value or vital to the production of Oases ecosystem services

39. Smallholder communities have practiced traditional low-input agriculture for years based on a profound knowledge of species and agro-ecosystem function, with the overall strategy of reducing risk and increasing or maintaining labor efficiency. While this has generated a certain degree of food security and well-being, the unintended long-term environmental consequences of some of these practices in changing ecological and socio-economic circumstances require the development and incorporation of new practices and techniques to achieve sustainability while enhancing productivity to meet increasing development demands. Smallholders must develop the skills and knowledge to adapt conservation agriculture and agro-ecological principles to current farming systems with the aim of maintaining or increasing productivity while conserving habitats important for production of ecosystem services.

40. To achieve sustainability over the long term, communities practicing agriculture need to have substantial knowledge of conservation agriculture pillars, mechanisms, techniques, as well as planning and management skills. For certain lands and resources like Oases land used for agriculture, good governance of these commons is required to avoid diminishing the productivity and availability of the resource and generating conflicts. At the same time, new practices must be identified and developed and the appropriate skills acquired on a continuous basis given the nature of these living systems.

41. Conservation agriculture is one of the tools to enhance climate change mitigation by holding significant stocks of carbon sequestered in soil and biomass. To motivate communities to practice conservation agriculture, they must perceive real benefits to doing so from either direct increase of agricultural yield or avoided economic damages from climate and weather extremes. They need to know that deforestation and unsustainable agriculture practices may result in permanent loss of soil and land cover. In both scenarios, carbon in soil and biomass is lost, and the resiliency of the surrounding systems to the effects of climate change is weakened.

Barrier 4: Agriculture and Oases Ecosystem related data is not available and research and extension capacity is weak to support agriculture and conservation policy planning

42. The EGA and The MALMR suffer from cruel limited measurement and research capacity. The majority of Ministry and Authority's facilities and instruments had been destroyed during the revolution in 2011. In both organizations, there is no agriculture, environment related data management software, and therefore, the work of the two organizations is limited to data collection from different stations. As a result, there is a huge data gap in these two sectors in Libya. Historical data in these two sectors is also scattered and currently there is no attempt to collect it from different resources. The information related to the agriculture sector were scattered in different centers and facilities that were burned during the revolution.

43. After the revolution, some important initiatives/data neither are monitored nor captured (e.g. amount of water used for irrigation, amount of production of cereals per smallholders and private sectors, etc). This does not allow for any user-friendly availability of data for experts or decision-makers. Instrumentation for observation is very poor. Moreover, relevant and readily available databases and GIS layers (e.g. climate, soil, vegetation, hydrology, geology, ground waters, and aquifers as well as land use) do not exist in appropriate scale and become constraints to more advanced and detailed research, analyses, and robust decision making.

Barrier 5: Weak or missing support/systemic frameworks in data, local knowledge and skill-sets to identify and implement conservation agriculture practices and oases ecosystem conservation initiatives as part of sustainable land management

44. The current approach to sustainable land management needs to be revamped, moving from relying on isolated and uncoordinated activities to a more coherent approach that will provide a basis for the transfer and up scaling of best practices. Communities surrounding Oases in Libya will have to plan and manage land use to achieve productivity objectives as well as to adopt and implement conservation agriculture and compatible production practices and systems. This will in turn, over the long-term, protect and enhance the biodiversity, carbon stocks, and ecosystem services of the Libyan Oases ecosystems.

45. There is a general lack of hands-on experience, skills, and information to identify and implement conservation agriculture projects. Moreover, the basic awareness of conservation agriculture and oases ecosystem conservation is largely lacking. For example, introducing conservation agriculture practices in Libya project has so far been done in a

rather limited research manner in three places and mainly at the national level, without result dissemination or up-scaling and replication components. The research methodology and results will be reviewed during the PPG, the review results will determine if the research could be used as a baseline for this project.

46. For this change to occur across the country, a critical mass of communities must be motivated to adopt these practices and systems before a tipping point can be reached, and conservation agriculture practices are adopted as the norm. Consolidating this critical mass of communities would not advance solely or quickly enough through the day-by-day addition of communities and their initiatives but needs to be accelerated through a systematic program of knowledge dissemination and capacity building to reach both participating communities and communities that may be interested in participating in the future. Also required is a new approach by the public agencies in charge of introducing conservation agriculture initiatives, for example those under MALMR, NGA and ARC.

2) Baseline scenario and any associates baseline projects

47. The national government has confronted the problem of habitat destruction, deforestation, and unsustainable use of land in Libya by primarily; i) creating the Forestry Department in the Ministry of Agriculture in 1956, ii) establishing the Environment General Authority in 1999, iii) developing a small number of protected areas all over the Country, and iv) providing some technical assistance to individual farmers to manage land and other resources sustainably through designing and implementing special projects and programmes targeting specific locations. Nevertheless, Government supported protected areas have been focused on areas of high conservation value in landscapes not under serious threat of habitat conversion or alteration and species extinction, and have neglected the more populated and intensely utilized Oases ecosystems in the Desert. Notwithstanding its extraordinary global biodiversity value the Oases are heavily underrepresented in the National Protected Area System.

48. Government agricultural programmes during the last four decades have concentrated on boosting management-unit productivity without a correspondingly strong focus on ecological sustainability. There have been efforts to mainstream sustainability concerns within the agricultural extension system. A project was developed and implemented with the support of Australia in 1970 until 1986 focused on introducing the conservation agriculture practices in *Al Jabal Al Akhdar* irrigated lands, it covered 100,000 ha. No detailed data is currently available at MALMR on this project. Although these efforts were expected to lead to some level of increased sustainability at the level of individual farms, it is clear now that these impacts did not, in aggregate, achieve optimization of ecosystem services at the landscape level or enhance the resiliency of production landscapes overall in the Libyan agriculture system. In particular, government agricultural programmes have been carried out absent any considered analysis of positive or negative effects on the Libyan's land management.

49. Land use planning for global environmental benefits or climate resilience in the production landscape was not and is not currently practiced in Libya. Technical capacities and resources to carry out these responsibilities are also still lacking.

50. The long term solution to the degradation of the Libyan agricultural land and oases ecosystem – and realization of the significant global environmental benefits embodied there - resides in a two-pronged approach: one, achieving sustainability of the primary land and resource uses practiced by its inhabitants, principally conservation agriculture, but also including livestock management; and two, pro-active conservation across the landscape with the aim of deter further habitat degradation and the loss of oases ecosystem services through activities that enhance the sustainability of existing biodiversity and other resources (water, soil, etc.). The latter would focus strategically on the enhancement, integrity of, and connectivity among protected and other conserved areas, as well as sustainable use in the production landscape.

51. To be effective, sustainable land management needs to occur across the landscape with individual actions working in synergy with each other and with communal efforts to optimize ecosystem services, biodiversity, and economic productivity. For this, smallholders must have the capacities, knowledge, resources, and support from enabling policies to plan and manage land use for sustainability and resilience to climate change across their production landscapes.

52. Successes though relatively isolated experiences across Libya indicate that agriculture can become an engine for growth for rural communities. Reduced poverty stems from the fact that community-based initiatives can create jobs, diversify economic activities of communities, invest in infrastructure (roads, schools, clinics, etc.), organize to use a range of resources for production and market the products as a single enterprise and not as dispersed or isolated small entrepreneurs, add value to oases and other products and generate vertical integration in the chains of production, share profits among members of the community - keeping the vast majority of the economic value of the company's activities in the locality as social and monetary investment - and generate human capital by employing the people of the region, and training and involving them in technical, administrative and managerial activities.

53. Conservation agriculture in Libya is very new and limited to research on tillage implementation. The first initiative started in 2010 within the ARC/Libya-ICARDA program. The research aimed at introducing conservation agriculture in Libya and studying its impact on natural resources, yield productivity, and soil fertility for three years and in three different locations in the Country. The study areas; i) *Jendouba* (Al Jabal Al Gharbi, 110 Km to the west of Tripoli City with 300-350mm annual precipitation, ii) *Al Marj* located in East Libya with 300-350 mm annual precipitation, and iii) *Sabha*, located 15 km to the south of *Sabha* City, a very dry area, and depends on groundwater for irrigation from *Marzouq* aquifer. Therefore, introducing and facilitating access, through technical and financial support, to conservation agriculture practices by smallholder communities is a key.

54. A key driver of adoption by communities is the economic benefit derived from successful marking and sale of sustainably harvested product at scale. Communities must have the capacities to produce sufficient volumes of high quality conservation-compatible products, add value, and get them to market. This implies capacities to coordinate, plan and manage land use that is coherent with ecosystem service and climate resiliency objectives of key landscapes, as well as development of appropriate business management skills and abilities. Providing the needed skills for small holders for proper packaging, labeling, and marketing of products is a key.

55. One of the main premises of this project is that community-driven actions enable sustainable livelihoods that lead to decreased land degradation and habitat fragmentation, and the long-term sustainability of community lands as conservation-compatible, climate resilient, productive landscapes.

56. Women will be particularly favored by this project as women's groups will be explicitly targeted for support, given their role in agriculture as well as the production of non-agricultural products. This project will apply a multicultural and gender equality approach during the FSP design and implementation. The project will monitor its interventions using disaggregated indicators to assess project results and effects on men and women.

57. Finally, for communities to benefit economically as an incentive to conserve oases ecosystems, they must coordinate their production systems to avoid duplication and unconstructive competition and to achieve economies of scale across sustainable production operations throughout the country. The project will promote development and/or adoption by community groups (due to the absence of community based organizations in Libya) of a suite of low input sustainable income generating practices that taken together and carried out by hundreds of smallholders across the landscape will enhance climate resiliency, productivity, resource use efficiency and niche marketability. The project will facilitate access to certification of local agricultural products and contribute to oases ecosystems sustainability and resiliency. There are multiple certification systems active globally-- the project will work with selected systems to ensure adopting and integration of standards and criteria that reflect this project's objectives and outcomes as well as relevant landscape outcomes. Engagement and discussion with certifying entities will be carried out during the PPG phase of the project.

3) The proposed alternative scenario

58. The project aims at supporting authorities and local communities and small farmers to overcome existing barriers by adopting practices that enhance ecosystem services (including carbon storage) and conservation of biodiversity while simultaneously building climate resilience and increase sustainable production within the selected project areas. The project will contribute concrete outputs to the achievement of the following inter-related outcomes:

Component 1: Strengthen the enabling environment (institutional, policy and regulatory frameworks) to support conservation agriculture and sustain the flow of agro-ecosystems services in oases ecosystems in Libya.

59. This component will directly address barrier No. 1. It involves the review and development of the needed policy, legal and institutional frameworks in conservation agriculture and oases ecosystems conservation practices in Libya, it will also focus on enhancing the measures to conserve and sustainably manage biodiversity harbored in oases systems and mainstream it in institutions, policies, and regulatory frameworks in Libya.

60. The project aims at increasing the advantages farmers can get by conserving and using conservation agriculture techniques in their production systems. The project promotes a policy development approach based on using sound field data and a "field" testing of the mechanisms that considers the community's socio-economic, cultural, scientific, technical, and institutional situations and on the involvement of all stakeholders.

61. In addition, the project aims to develop a package of modifications in agriculture policy and legislations for conservation agriculture. An important and often forgotten benefit of conserving oases ecosystem is the additional delivery of current and future ecosystem services. Therefore, in addition to calculating future production values of improved varieties, calculations will be done to evaluate the value of improved delivery of ecosystem services by crop genetic diversity in agricultural ecosystems. For example, varieties that are drought-tolerant are not for increasing productivity in areas suffering drought, but for their role in preventing soil erosion and desertification, increase soil organic matter, and possibly stabilize slopes and maintaining watersheds. Capacity will be built for national partners in local and national government agencies in institutions and policy analysis within the agricultural and environmental sectors will be conducted to have the ability to form sound policies based on outputs from local communities and local and national research institutes. This component will also aim at developing a national conservation agriculture strategy and action plan, to be discussed widely at the national level and endorsed by the Ministry of agriculture. The project will also support its operationalization.

62. This component will support the national government by building the needed capacity to introduce conservation agriculture at the national level; this entails the creation of a conservation agriculture unit under the sustainable land management directorate at the Ministry of Agriculture. The activities will include supporting the authority in undertaken the needed assessment to design the Unit, its mandate, structure, governance structure and then building the capacity of the unit's staff.

63. National policy concerning the oases ecosystem management will also be analyzed and a package of modifications will be introduced after abroad consultations with stakeholders. It is also important that the project focus on establishing a new national platform to support and monitor integration of sustainable land management practices in oases

ecosystem management plans which will be developed and validated to respond to needs of the EGA. Finally, the project will develop SLM holistic landscape approach and adopt it in 10 oases to be selected in different geographical zones in consultation with stakeholders (sites will be identified during the PPG).

Component 2: Strengthened institutional mechanisms and capacity of authorities and rural communities, by expanding the range of technical options to identify, assess, adapt crop, livestock and resource management practices, and cropping systems that are in accordance with the principles of conservation agriculture.

64. The project will support the national authority and small holders to introduce conservation agriculture in certain pilot areas. National partners will focus part of their efforts on developing and testing several model agreements with smallholders that regulate the implementation of the conservation agriculture in their farms. A multidisciplinary team working on conservation agriculture at international and national level in Libya will use and adopt appropriate models recently developed for local communities in neighboring countries and explore ways to ensure that the benefits derived from the use of conservation agriculture are in line with the sustainable land management by local farmer communities. This component involves the development of a land cover, land use and land management practices database, with the associated GIS system, that will ensure the project's impact on SLM in the targeted areas.

65. Further, the component will support the authority in lifting up barriers No. 2 and 3. It includes building leadership capacity for authority, farmers, and their institutions to have a voice in decision-making processes by first reviewing and increasing provisions for participation and achievements and then supplying the facilities with appropriate training, and support to build leadership capacity that will enable farmers to participate in decision-making arenas. The component will focus on improving agricultural management and rehabilitation practices and techniques in (irrigated arable lands) by demonstrating and promoting conservation agriculture best practices that increase vegetation cover and improve soil fertility; productivity; water retention, and reduce soil degradation. This will include: building the managerial and technical capacity of at least 500 smallholder/farmer on conservation agriculture, sustainable irrigation, and project monitoring at pilot sites; developing in consultation with farms, at least 5 regional agriculture/ farmer groups business plans to strengthen marketing of conservation agriculture, creation and dissemination of a training and awareness toolkit on roles of agriculture conservation, sustainable land management, and sustainable irrigation technologies, and improving the capacities of at least 400 employees of concerned stakeholders on decision-making in integrated gender sensitive land and water resources management under various land use/management practices.

66. Agriculture is the predominant smallholder land use in Libya, however, current practices and systems are leading to accelerated land degradation. Sustainable land management will be a primary outcome in the project's landscape management plans. SLM practices, to be adopted and implemented, must increase and/or stabilize production while conserving or enhancing key ecosystem services such as soil fertility, water, pollination, and crop genetic diversity. This project will assist smallholders and authority in selected landscapes to introduce and adopt a suite of specific sustainable land management practices on 50,000 hectares of productive landscape (40,000 ha of the government irrigated land and 10,000 of the smallholders initiatives) that may include conservation agriculture measures.

67. The component will also improve the total area devoted to conservation agriculture in agricultural production systems (cereal) and strengthened livelihood strategies and socio-economic growth among farming communities, through increased use of diversity rich solutions and products. It aimed at identifying locally adapted conservation agricultural-based best practices in cropping and framing systems in defined ecosystems (project sites), and demonstrating that in 800 site (50 ha each), using different conservation agriculture practices (reduced tillage, crop rotation, crop residue management and vegetation cover), covering a total of 40,000 ha of the irrigated cereal land, in addition to 10,000 ha of 400 small farms (25 ha each) in dry-lands/degraded agricultural lands rehabilitated using innovative irrigation and agriculture conservation technologies/practices.

68. Technical assistance will be provided by the project to the government agencies and smallholders. Smallholders and farmers from different locations involved in the project will be linked in a project management committee to exchange experiences, lessons learned and best practices, as well as information on products and prices. Certification will be carried out; the appropriate certification partner will be identified and engaged during the PPG phase of this project.

Component 3: Conservation of oases ecosystem, through the implementation of sustainable oases management system to fight against trend of oases degradation, and development and diversification of local oases communities' incomes generating activities and livelihoods

69. Under this component, the project will focus on reducing the degradation of natural resources, through the implementation of locally adapted sustainable land and water management practices in five selected Oases landscapes. Some of the sustainable measures to be implemented by the project include the introduction of conservation agriculture, improvement of crop productivity, enhancement of local community products, construction of irrigation schemes, strengthening of the institutional framework for traditional water management, and biological stabilization, among others.

70. This component will promote the maintenance of the Oases ecosystems' services and enhance the community's institutional arrangement. In addition, an assessment of Oases biodiversity (including traditional agricultural products) and its contribution to the food security, nutrition, and livelihoods of local communities will be conducted. The project will target the creation of synergies for a smooth coordination between local and regional operators and beneficiaries, while promoting the establishment of farmer associations and cooperatives, emphasizing on women participation.

71. This component will help in identifying systematic information of Oases benefit sharing mechanism, i.e. food products, nutrition, health benefits, and other valuable uses and share it with policymakers, local communities, and markets. This will be done by assessing and documenting agro-biodiversity and Oases ecosystems and establishing a programme for SLM holistic landscape approach in oases systems with participation of women and men from local communities. The Oases systems will be supported through integrated water and land management practices for productivity enhancement (including organic farming, ecotourism, and certification). The project will also strengthen the capacity of national/ local institutions (EGA, MALMR), NGOs and local communities on sustainable oases management and its importance to food security and nutrition. It will also support the establishment of a new documentation system of conservation and traditional agriculture biodiversity in oases system, oases ecosystems, physical factors and human uses, and oases characteristics. This will permit the development of an oases spatial plan to be used for land use plan purposes, and provide long-term support for biodiversity-based activities in oases areas (preferably GIS-based system, this will be further developed during the PPG)

72. The project will focus on assessing and promoting of alternate income generating mechanisms, with the participation of local communities living in the oases landscapes, for local oases communities, and enhancing capacity of local communities and involved local/national institutions on eco-tourism and local business development, product eco-labeling and marketing, and market access promotion. It will undertake a feasibility study on the conversion of conservation activities into marketable incomes in the selected oases systems in collaboration with national authorities, and will develop a national strategy for oases sustainable eco-tourism promotion that is promoting environmental services schemes and integrated gender equity. To be able to enhance eco-tourism in selected site, at least one market plan will be developed to link traditional and sustainably produced products from oases systems to the national market and the private sector agreed with the national agencies and selected number of local communities. This component will help in lifting barriers 3 and 4.

Component 4: Knowledge management, dissemination of lessons learned and best practices, monitoring, and evaluation

73. This component involves the development of the already existing work undertaken by the Documentation and Archiving Centre at MALMR. This component will also review national progress in conservation agriculture, update the agriculture national report, produce a number of brochures, leaflets, posters, websites, and reports that cover oases management and agriculture conservation issues. A comprehensive monitoring plan will be developed, building on existing monitoring activities and strengthening activities that relate to conservation agriculture and oases biodiversity protection, for example monitoring the impact of ecotourism activity and other recreational impacts on the palm trees conservation in selected oases. A locally adopted methodology and indicators will be developed by the project. The project will build the capacity of local communities to use it to assess management effectiveness and the impact on oases biodiversity and agriculture activity productivity.

74. This will require building leadership capacity, and having in place information systems that are applicable for indigenous and local communities to access and share data on locally adapted materials. Thus, this component will help the authorities to tackle barriers No. 4 and 5. The capacity to support these systems by local and national institutions will be built and information on issues of conservation agriculture will be packaged and presented to national and international governmental forum in a simple language that local communities can benefit from.

75. The project will cover large agricultural area and will be implemented in different geographical zones. Therefore, the cost of project monitoring, events' management for public awareness, development and printing of the needed public awareness and knowledge management materials as well as the internal travel between locations will be relatively high.

4) Incremental cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing

76. EGA is in charge with the monitoring, restoring, conserving and preserving environmental and natural resources in Libya. However, significant weaknesses have been identified in the EGA's capacity and action plan for the fulfillment of its states aim to reform is foreseeable. EGA has developed and funded several environmental projects since 2006. Evaluations carried out in 2012 have shown that the main impacts have taken place at local level but it was very limited and primarily in terms of providing equipments, raising environmental awareness and commitment of leaders, but the delivery of measurable, globally-relevant environmental benefits is not properly tackle. This negative trend will continue in the absence of incremental action.

77. In the absence of GEF funding, negative land use trends present in the Libyan agricultural land and oases systems will remain essentially unchanged or experience an inadequate rate of change for the better. Despite important isolated initiatives to address these trends, under the business-as-usual scenario, biodiversity losses and ecosystem degradation can be expected to continue, along with increasing GHG emissions and vulnerability to climate change. Without incremental GEF funding, smallholders, farmers and local communities as well as certain governmental agricultural programmes in Libya especially in the oases areas will not possess the resources to develop their capacities to plan and manage their production landscapes for multiple, integrated production, sustainability and global environmental benefits.

78. In the absence of this project, there would be no specific dedicated effort to enable the concerned authorities in Libya with the sufficient opportunities, means and motivation to identify, develop and implement conservation

agriculture and sustainable livelihood practices and systems which, when appropriately coordinated within a landscape planning and management framework, will produce global environmental benefits and local and sub-regional climate resiliency. In the absence of this project, hundreds of farmers will remain unaware of the benefits of conservation agriculture, and the link between landscape management, farm management, and the sustainability of ecosystem services and the generation of global environmental benefits.

79. This project will provide capacity development and knowledge transfer to authority and community to carry out coordinated initiatives within a landscape management framework to maintain and/or enhance biodiversity, carbon storage and ecosystem services in the agricultural and oases areas of Libya. Smallholders, in order to meet short-term livelihood needs, may feel forced to resort to production practices that degrade biologically diverse habitat and ecosystem services. Smallholders need to develop or adopt livelihoods that increase productivity while enhancing the long-term sustainability and resiliency of production landscapes and their global environmental values.

80. This project will strengthen the capacities, increase the knowledge and enhance the motivation of authority, farmers, and communities to enhance and optimize ecosystem services and mitigate climate change using the following approaches: i) introducing and implementation of conservation agriculture practices that are compatible with ecosystem services optimization; ii) identification and implementation of income generating initiatives in the oases systems to enhance ecosystem services at a landscape level; iii) promotion of landscape governance, territorial planning, and preparation and implementation of management plans; and iv) dissemination and replication of successful experiences with conservation agriculture and sustainable livelihoods that ease pressure on the ecosystems and enhance crops productivities, and soil fertility.

81. The project strategy is based on a two-pronged approach to achieving global benefits in sustainable land management; conservation agriculture and oases ecosystem conservation, and climate change resiliency in the production landscapes of Libya. Given the levels and historic trends in natural and agro-ecosystem degradation in the country, the primary focus of the project will be on restoring and revitalizing ecosystem functions within targeted landscapes by improving the ecological sustainability of agriculture production systems along with its economic productivity, particularly in the oases areas.

82. With the selection of at least one pilot area within each agroclimatic zone, the project will carry out a participatory analysis with communities of landscape level global environmental issues, their manifestation locally and their link to local livelihoods. The conservation agriculture outcomes will be defined and the criteria for selection of small farms to implement pilot projects - will be developed and agreed. The outcomes at individual farm level will provide the basis for measuring impacts and drawing lessons learned from experience by the farmer themselves in a process of social learning. Men and Women in the targeted area will be involved in the process, they both lack professional qualifications, which make it difficult to find employment or sustain job. The project will help by developing communities' capacity and enable the population to participate and sustainability benefitting from ecosystem services, agricultural production systems, conservation tillage, marketing and commercialization, etc.

5) Global benefits (GEFTF, NPTF) and adaptation benefits (LDCF/SCCF)

83. The project will enhance food production and improve the livelihood of the farmers and local communities in rural areas and surrounding oases in Libya. The project will deliver the following global environmental benefits: i) improvement of soil health and fertility, enhancement of soil resilience, and increasing organic matter in 50,000 hectares; ii) reduction of soil erosion, salinity and drainage in targeted oases areas, iii) mainstreaming of conservation and sustainable use of biodiversity into public policies, programs, and regulatory frameworks, iv) mainstreaming of agro-biodiversity considerations into market mechanisms and increased investments in sustainable land management (eco-tourism and marketing strategies), v) monitoring of at least 50,000 hectares under agro-biodiversity-friendly and nutrition labeled production standards, and, vi) adoption of sustainable land management and sustainable production intensification practices by at least 500 rural farmers and 800 pilot sites for the government.

84. Without the components proposed in this project, Libya risks losing an opportunity for a globally relevant, systematic mainstreaming of sustainable land management. In the absence of this project, conservation agriculture and agro-biodiversity conservation will remain absent from development goals and receive less support from public policy and these ecosystems, particularly rich in unique diversity in oases system, will continue to face the threat of genetic erosion and the loss of valuable genetic resources. In addition to this global consequence, implementation of the project will also help to meet national priorities and will provide means for the country to benefit through shared best practices and experiences in the sustainable land management. Without this project, an opportunity to enhance the conservation and sustainable use of valuable resources to meet environmental and development goals will be lost in the agricultural land and oases systems of Libya.

6) Innovativeness, sustainability and potential for scaling up

85. The project's innovativeness lies in introducing locally adopted conservation agriculture practices for the integration of agro-biodiversity in the local economy development, based on the communities' traditional knowledge and experiences, in arid and semi-arid areas in Libya with focus on irrigated cereal lands and oases systems. The project will carry out activities that generate income or sustainable livelihoods while producing global environmental benefits; this include a wide variety of activities such as conservation agriculture, alternative eco-tourism, sustainable agriculture practices and sustainable irrigation (drip irrigation, use of treated wastewater). The project will also include recommendations made to introduce conservation agriculture at national and local community levels surrounding oases,

which ensure that access to local crop diversity is compatible with national laws promulgated to comply with international treaties. By valuing diversity rich solutions to unpredictability of temperatures and precipitation, providing mechanisms that give farmers access to locally adopted materials, recurrent costs will be virtually eliminated. This will promote adoption by farming communities outside the project area with farmers using their own resources to replicate practices and achieve scaling up well beyond what would be possible with GEF funds. This will reduce food insecurity and will enhance stability of oases ecosystems. The project through its dissemination of lessons learned and experiences component will raise awareness among farmers and government stakeholders and ensure that the local communities and small farmers as well as stakeholders understand and adopt the conservation agriculture practices in other areas.

86. The project aims at identifying potential opportunities for upscaling the results and experiences of the previously implemented “*Improvement and valorization of date palms in the Al Jufrah Oases in Libya Project*” at a broader landscape, and emphasizing on an integrated territorial landscape management to reduce land degradation and conserve the valuable biodiversity in oases systems. The sustainability strategy is based on a dual approach: ensuring ownership and commitment of local communities and the national government, and mainstreaming sustainable land management practices in national policies and programmes.

87. The sustainability of project outcomes will be fostered through a number of different means. Sustainability is premised on the adoption by government and farmers of land use practices and systems that produce global environmental benefits while increasing income or lead to livelihood stability. This adoption will require strengthened capacities of authorities and small farmers, as well as enabling factors involving markets, finance, and a supportive institutional and policy environment. Sustainability and retention of new skills will be achieved through a combination of methods and tools, which include, among others: taking into consideration ecosystem carrying capacity and species requirements; building economic incentives into conservation activities; diversifying products and markets; continuing as much as possible to monitor former farmers and trouble-shooting when required; and establishing mentoring and peer-to-peer support among communities enabling them to practice their skills and gain self-confidence.

A.2 Stakeholders and how they will be engaged in project preparation

88. Key stakeholders for this project include governmental organizations and farmers (smallholders), including local community surrounding oases, who will identify, design, implement, monitor, evaluate and coordinate their own interventions on farms and surrounding Oases systems to achieve sustainable land management in relation to global environmental benefits, economic productivity, and ecological sustainability.

89. Local communities and private sector farmers will be engaged in the project, as appropriate, especially concerning conservation agriculture, certification, marketing, eco-tourism activity management, and commercialization of underutilized crops, sustainably harvested cereal products and other goods produced by local communities with project support.

90. EGA will lead project implementation with the day-to-day management and monitoring undertaken by a dedicated management member staff. It will be chairing the Project Steering Committee, providing staff and resources, and engaging in strategic partnerships with other agencies and institutions from government and civil society, including the private sector, environment, and development NGOs, local community representatives, academic institutions, and professionals. EGA will be also responsible for the technical implementation of the oases conservation outputs in close cooperation with MALMR. MALMR will be implementing the conservation agriculture outputs of the project under the overall coordination of EGA and in close cooperation with other Centers and Directorate at the Ministry especially ARC and NGA.

91. A broad programme of stakeholder consulted was conducted in March 2013 in Tripoli City through a series of meetings, presentation, and interviews during the preparatory phase. A focus group discussion was conducted in Tripoli in 6 July 2013 and a series of meetings with concerned stakeholders was conducted in 7-11 July 2013. The stakeholders meetings included representatives from the Governmental organizations, academic sectors, non-governmental organization, and research institutes.

92. Since broad participation of governmental agencies, civil society (NGOs and Research Institutes), private sectors, and local communities’ representatives is crucial to the project success, dialogues among stakeholders will be included throughout the project cycle for the selection of pilot areas. Organizational and execution arrangement will also be further detailed and agreed upon during the PPG phase.

93. The following table provides a preliminary description of the key stakeholders and will be updated and improved during the project preparation phase.

Stakeholder	Relevant Roles
Environment General Authority	Responsible for the conservation, management, development, and proper use of the country’s environment and natural resources, including those protected areas, watershed areas and lands of the public domain, as well as the licensing and regulation of all natural resources utilization
Ministry of Agriculture, Livestock and Marine Resources (MALMR)	Responsible for revitalizing agriculture, animal and marine, and responsible for sector policies on agricultural biodiversity and natural resource management It will be the main responsible authority for the implementation of the Conservation Agriculture component.

Agriculture Research Centre (ARC)	It is responsible for coordination of programmes on agriculture and related environmental research.
The National Grain Authority (NGA)	It is responsible for overseeing and managing the grain sector in Libya and utilizes all available resources to contribute to national food security.
Small-scale farm households in pilot sites (To be identified)	Main beneficiaries and key partners to empower marginalized or disadvantaged individuals, groups, communities and help them improve their living conditions
private sector: tourism professionals, craftsmen, food transformation (to be identified)	Increasing food security through investments and enhancing commercial components of the proposed project

A.3 Risks and the proposed measures that address these risks

94. There are a number of risks associated with this project assessed during the PIF preparation phase and appropriate activities; however, measures were also identified to mitigate them:

Risk	Rating	Mitigation Measures
Weak institutional capacity in conservation agriculture and sustainable conservation of Oases ecosystem	H	<ul style="list-style-type: none"> • Gaps identified at project preparation phase • Capacity needs assessment conducted at outset of Project • Project outcome focused on developing the needed technical capability and sound institutional capacity
Political instability in addition to internal conflict	H	<p>The political instability may lead many difficulties in the project implementation, it can also limit the access to some areas and/or access to data as well as limit the potential for eco-tourism and/or trade of certified products</p> <ul style="list-style-type: none"> • Continuous consultation with the Governments to identify possible interventions to solve any new risk faces the project • Work closely with local community to provide them with the needed skills and tools to be used once the political situation enhanced
Technical measures not fully implemented or recognized because of economic pressure for development and insufficient capacity	M	<ul style="list-style-type: none"> • Media campaign to convey messages on agriculture sector and biodiversity values and co-opt sectors' support for conservation • Mechanisms established to ensure that EGA, MALMR and other relevant agencies work together • Capacity built for improved implementation
Vulnerability of community projects to severe weather events and other climate-related risks	M	<p>The Mediterranean region is arguably the most vulnerable region to climate change. Steps will be taken to build mitigation measures into project design to minimize the risk and/or adapt to new conditions when possible (e.g., using drought-resistant species, varieties of conservation agriculture practices, etc.).</p> <ul style="list-style-type: none"> • Identification and protection of resilient crops • Introduction of ecosystem-based management of Oases building on local knowledge • Introduction of performance monitoring and adaptive management
Inter and intra government cooperation	L	<ul style="list-style-type: none"> • Intra-governmental agency liaison by the Project Management Unit • Scrutiny of coordinated activities by the Project Board • Overview of coordinated activities by the Project Steering Committee • The project will ensure that there is close coordination between the relevant agencies within Libya.

A.4 Coordination with other relevant GEF financed and other initiatives

95. The project will coordinate with a range of ongoing initiatives in Libya related to agriculture and sustainable land management. Most initiatives focus on one or other and this proposed project will coordinate with all to ensure that best practices are incorporated into the project projected integrated approach.

1. **GEF –financed initiatives:** The project will build on the work and coordinate and establish linkages with the following projects and initiatives:

- Existing GEF initiative: *National Capacity Self-Assessment (NCSA) Project*: the project aims to determine the priority needs, and a plan of action for developing Libya's capacity to meet its commitments to global environmental management. The NCSA was developed in 2009 and has been revised by EGA in 2013 to be published before the end of the year. In this context, NCSA identifies the needed capacity building programmes for the Government and relevant stakeholders under the BD, CC, and LD areas, which will be considered in Component 2 and 3 of the proposed FAO_GEF project.
- Proposed GEF Regional Initiative: *Integrated of climate variability and change into national strategies to implement the ICZM Protocol in the Mediterranean*: a regional initiative (Bosnia, Herzegovina, Croatia, Egypt, Montenegro, Morocco, Tunisia, Syria, Palestinian Authority, and Libya), aims at integration of climatic variability and change into

national strategies to implement the integrated coastal zone management protocol. The proposed project will support – in directly- the Libyan climate change mitigation efforts by introducing the conservation agriculture practices. Partnership will be promoted with the GEF regional initiatives during the full project preparation to share lesson learnt and projects' findings.

- Proposed GEF Regional Initiative: *Enabling implementation of the Regional SAP for the sustainable management of the Nubian Sandstone Aquifer System (NSAS)*: The project aims at initiating regional SAP implementation through legal, policy and institutional reforms and addressing gaps identified in the SAP, supporting sustainable management, socio-economic development and the protection of the ecosystem and resources of the NSAS in the Nubian Countries; enhancing the role of JA of NSAS. Libyan component will focus on assessing the impacts of NSAS development on existing lakes in the Country. The project's assessments, studies, and lessons learnt from this endeavor will be considered for Component 3 of the proposed project. It is also recommended that a coordination mechanism is established between the two projects for data sharing.
2. **Non-GEF initiative:** the project will build on the work and collaborate with the following national initiatives:
- *FAO-MALMR Portfolio*: An agreement between FAO and the Government of Libya was signed in Rome, 20 November 2009. The agreement entailed that FAO will provide advice and technical support for the achievement of Libya's objectives in the development of the sectors of agriculture, research, animal and fish resources, forestry and irrigation, in the form of specific technical assistant projects. The Government of Libya has agreed to allocate US \$ 70 Million for the development and implementation of 17 projects under this agreement. The initial duration of the agreement was 2010-2014, but due to the political conflict, the agreement has been re-signed in May 2013 and parties started the activation of the portfolio development. The proposed project will coordinate with the FAO-MALMR portfolio in order to implement the sustainable land management and community-based biodiversity oases management in the selected areas not included in the FAO-MALMR projects. The proposed project will also adopt methodologies and include data produced by the FOA-MALMR Portfolio.
 - *Improve the productivity of grains by introducing conservation agriculture in Libya (2010-2011) Project*: the project is designed and implemented by the Agriculture Research Centre. It aimed at testing and introducing conservation agriculture in Libya with a focus on the following effects: tillage (conservative tillage with conventional tillage), and crop residue management, and studying the impact of conservation agriculture on the natural resources (soil and water), the productivity of the soil, water and soil fertility. The proposed project will review and build on the outcomes of the project, Lesson learnt from this project will also be considered for Component 2 of the project.
 - *Improvement and valorisation of date palms in Oases in Libya* Project. The project will build on the outcomes of Phase I "*Improvement and valorisation of date palms in the Al Jufrah Oases (Sokna, Hun, Waddan, Zella and Al Fughal)* in Libya", and coordinate with the second phase "*Improvement and valorisation of date palms in Jalo, Ujilo, Al Jaghboob and Ohjarah Oases in Libya*". The Oases Conservation team at the Ministry of Agriculture is preparing to launch this second phase of the project to be implemented September 2013 in four oases adopting the same methodology and approaches used in phase I of the project. Lesson learnt will be considered for Component 3 of the project mainly on the selection of the pilot sites. The outcomes of the Phase I of the project will be analyzed and used as a baseline in component 3 of the proposed project

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 National strategies and plans or reports and assessments under the relevant conventions

96. The proposed project is fully consistent with the relevant national development programmes and sector plans adopted by the Government of Libya, as well as with the various programmes and action plans formulated by the Libyan Government under the relevant international Environmental Conventions.

97. With respect to national strategy and development programmes, the proposed project is in direct conformity with the following national programmes and sector plans:

- *The National Strategy for Sustainable Development, 2008*. Developed by EGA in 2008 aimed analyzing the reality of the production and service sectors and its relationship to sustainable development, its scope of works, and indicators. It initially puts a perception of a comprehensive sustainable development strategy. The proposed project will contribute to component 2.3 of the strategy "Agriculture Development" to enhance grain production and improve and maintain farm income, and component 3.6 on "biodiversity protection" to protect biodiversity in oases ecosystems by establishing the needed protected areas and parks. More specifically, the project will contribute to the following objectives of the Strategy: a) conservatoin and sustainable use of biodiversity and natural resources and b) conservatoin and rehabilitation of rangelands, and improvement of anti-erosive soils.
- *The Agriculture Development Plan 2010*, developed by MALMR, and is being implemented by the Ministry and its affiliated Centers. The proposed project is consistent with the Strategy's priority of "developing rainfed agriculture in order to raise the efficiency of the available areas", and "the expansion of irrigated agriculture in the grain-growing areas".
- *The National Strategy for Food Security*, developed by the Ministry of Planning in cooperation with MALMR. The second and third components of the proposed project is coherent with the Strategy. The Libyan Government places significant importance towards integrated rural development, income generating activites from agro-ecosystem services and conservation of natural resources to achieve food security.
- *The National Plan for Combating Desertification in Libya (NAP), 2005*, developed by the National Committee for Combating Desertification and Arresting the Spread of Desertification, MALMR. The proposed project is perfectly

aligned with the NAP and support its implementation. Components 2 and 3 will contribute to the following proposed programs of the NAP; 5.4 development of the protected areas, 5.5 development of irrigated and rainfed agricultural lands, and 5.8 Oases development.

98. With respect to the environmental conventions (UNCBD, UNFCCC and UNCDD), the proposed project is fully consistent with and will contribute significantly to the implementation of the following strategies, programmes and action plans in Libya:

- Libya is a Party to the Convention on Biological Diversity (1994), the Convention to Combat Desertification (signed in December 1994 and ratified on July 1996), Endangered Species, Hazardous Wastes, Marine Dumping, Ozone Layer Protection, Ship Pollution, and Wetlands. There is pronounced awareness of climate change in Libya. Libya has signed the UN Framework Convention on Climate Change in July 1992 and ratified the convention in July 1999. It has also signed Kyoto Protocol in September 1999, and ratified it in August 2006. Libya has also signed, but not ratified the International Agreement Known as the Law of the Sea.
- During the past decade, Libya has progressed remarkably in meeting the major environmental challenges, some of the major achievements included: the drafting of the Biodiversity Strategy and Action Plan (NBSAP) on 2005, the development of the Libyan National Report on the Strategic Action Plan for the Conservation of Marine and Coastal Biological Diversity in the Mediterranean 2002, the adoption of the Environment Protection Law, the formulation of the National Strategy and Action Plan to Combat Desertification (September 2005), in addition to the drafting and adoption of several legislations and bylaws.
- Libya has established a national mechanism for following up the implementation of the UNCCD, namely the National Committee to Combat Desertification and Arrest the spread of desert encroachment. The Committee has signed a new agreement with ACSAD in July 2013 to update the National Action Plan to Combat Desertification in Libya. It is expected that the updated NAP is published early 2014. Recently, in 2012, Libya has established a National Climate Change Committee chaired by the EGA with the participation of the concerned entities, a total of 14 ministries, authorities and agencies.
- The National Action Plan to Combat Desertification Report (NAP) identified habitat fragmentation, degradation and conversion as primary drivers of desertification and biodiversity loss, with a special emphasis on the positive feedback loop existing between rural poverty and land degradation. The Report cites overexploitation and unsustainable use of natural resources as significant threats. The National Strategy identifies a number of strategies to be implemented which are addressed in this project (development of irrigated and rainfed agricultural land, Oases development, coordination between actors, development of protected areas, enhanced technical capacities¹⁶)
- In 2009, Libya developed its National Capacity Self Assessment Strategy and Action Plan, which is under further review and will be finalized and published in 2013. The NCSA draws attention to the opportunities existing to fight climate change and desertification while contributing to the solution of other national problems by the contribution of these actions to the sustainable land management, and transfer and appropriation of new knowledge and technologies. That approach is incorporated in the present proposal.
- The environmental commitments and performance of Libya have also been assessed in the UNDAF of the UN system in Libya (2006-2009). The UNDAF provides a number of Recommendations to be addressed to which the implementation of this Project will contribute. FAO has identified areas of intervention to tackle the country's constraints and limitations that are clearly in line with the proposed project. Libya is also working with the Food and Agriculture Organization to develop its agricultural sector and improve food security¹⁷.
- In its Resolution 2040 (12 March 2012), article 6, the Security Council tasked the UN Mission to Libya, in full accordance with the principles of national ownership, to assist the Libyan authorities to define national needs and priorities throughout Libya, and to match these with offers of strategic and technical advice where appropriate, and support Libyan efforts in five main areas. This project is in line with area number (5) coordinating international assistance and building government capacity across all relevant sectors¹⁸.

B.2 GEF focal area and/or fund(s) strategies, eligibility criteria and priorities

99. Libya will use the STAR flexibility mechanism by allocating available funds to single focal area, LD.

100. The project will support Objectives 1 and 3 of the LD FA of GEF-5. In particular, the project will work to maintain or improve the flow of agro-ecosystem services sustaining the livelihoods of local communities in drylands and oases ecosystems. By the end of the project supported farmers and smallholders will have contributed to the sustainable management of at least 50,000 hectares of agricultural and pastoral land as well as demonstrated integrated land and water management approaches and practices at smallholder, community and landscape levels for widespread dissemination to and adaptation by other groups and organizations. These integrated landscape management practices will focus on conservation agriculture, and conservation of traditional resources in the oases ecosystems.

101. The project will support the mainstreaming of sustainable use of resources into production landscapes and sectors. The project will also enhance the effectiveness of landscape level action by communities by removing barriers to

¹⁶ The National Action Plan for Combating Desertification in the Great Jamahiriya, 2005

¹⁷ <http://neareast.fao.org/Pages/NewsDetails.aspx?lang=EN&I=0&DId=0&CId=ly&CMSId=21&id=2403830>

¹⁸ UNSMIL webpage: <http://unsmil.unmissions.org/Default.aspx?tabid=3544&language=en-US>

the implementation of enabling sectoral frameworks. Although the latter currently promotes the sustainable use of natural resources and land management by local communities it is seen as largely ineffective due to capacity constraints, financing and other barriers. The proposed project will also contribute by developing policy and regulatory frameworks that allow for an enabling environment for local and national agencies to promote conservation and SLM in vulnerable ecosystems.

102. A *cross-cutting* objective of this project will be to enable the uptake and adaptation of community developed models, systems, and practices across Libya by strengthening systemic community-level capacity. This is consistent with the GEF's longstanding programmatic support for capacity development, as outlined in the GEF-5 programming document. The project will strengthen local capacities (farmers, local communities surrounding oases) to adapt exogenous technologies to local conditions, recover and adapt traditional technologies and expertise, and facilitate market access to communities. Furthermore, given the landscape-level inter-linkages between endangered biodiversity assets, GHG sources and sinks, climate change impacts, and the livelihood needs and aspirations of targeted communities in the broader landscapes, the Project will use community-driven knowledge management and innovation for improving or creating harmonized, landscape-wise decision-making regarding productive sectors and ecosystem services.

B.3 The GEF Agency's comparative advantage for implementing the project

103. FAO's comparative advantage derives from its leading role in gathering, analyzing, and disseminating data and information related to land degradation and sustainable land management, in house technical expertise, and long experience in providing technical support to countries that are implementing complex, multifocal area projects. FAO has considerable experience and expertise and a comparative advantage in the sustainable land management and introducing conservation agriculture practices. FAO supports countries on a wide range of complementary sustainable land management technologies and approaches such as conservation agriculture and integrated land and water management, through providing training, information, communications, tools and equipment, and advisory services for institutional strengthening, policy reform, and national programming.

104. FAO has extensive experience in North Africa and specifically more recently in Libya with MALMR. It is an active agent in support of Libya's efforts towards agriculture sector reform and enhancement. FAO is currently developing a set of programmes and projects financed by the Ministry of Agriculture in Libya, with a total value of US \$70 million. The programme consists of sustainable agriculture and natural resource management and covers plant, animal, fisheries, and forest resources, as well as provides support to and strengthening the enabling environment. Due to the outstanding long cooperation between FAO and the Libyan Government, the programme will be fully funded by the Government of Libya.

105. FAO has been instrumental in the implementation of important GEF projects in North Africa covering a wide range of relevant issues including oases management, conservation agriculture, and sustainable land management through land use change, and capacity building.

106. FAO's in-country presence through the FAO Libya programme provides technical support and assistance in areas such as capacity building, technology transfer, and institutional strengthening. This project will also be supported by the FAO newly established Programme in Libya, the FAO Sub-Regional Office in Tunisia, and the FAO Headquarters in Rome. A multidisciplinary Project Task Force will be constituted to support the project.

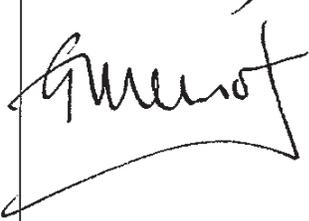
PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):

NAME	POSITION	MINISTRY	DATE
Mr. Mustafa Soliman	GEF Operational Focal Point, Administrative Committee Member	ENVIRONMENTAL GENERAL AUTHORITY (EGA)	08/04/2013

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.

Agency Coordinator	Signature	Date	Project Contact Person
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