



**GEF-6 PROJECT IDENTIFICATION FORM (PIF)**

**PROJECT TYPE: Full-sized Project**

**TYPE OF TRUST FUND: GEF Trust Fund**

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**PART I: PROJECT INFORMATION**

Project Title:	<b>Integrated Management of Oasis Ecosystems of Northern Niger (IMOE -NN)</b>		
Country(ies):	Niger	GEF Project ID: <sup>1</sup>	9405
GEF Agency(ies):	UNEP	GEF Agency Project ID:	01411
Other Executing Partner(s):	Division of Land Restoration and Tree Planting, Ministry of Environment, Urban Sanitation and Sustainable Development	Resubmission Date:	Aug 12, 2016
GEF Focal Area(s):	Multifocal	Project Duration (Months)	60 months
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		Corporate Program: SGP <input type="checkbox"/>
Name of parent program:	[if applicable]	Agency Fee (\$)	436,676

**A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>**

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
BD-4 Program 9	GEFTF	883,904	8,000,000
CCM-2 Program 4	GEFTF	1,104,053	5,300,000
LD-1 Program 1	GEFTF	368,017	4,000,000
LD-2 Program 3	GEFTF	368,018	4,000,000
LD-3 Program 4	GEFTF	368,018	3,000,000
SFM-2	GEFTF	752289	5,000,000
SFM 3	GEFTF	752289	5,000,000
<b>Total Project Cost</b>		<b>4,596,588</b>	<b>34,300,000</b>

**B. INDICATIVE PROJECT DESCRIPTION SUMMARY**

**Project Objective:** Integrated Natural Resource Management alleviates land degradation, addresses loss of biodiversity, reduces emission of GHGs, maintains forest and oasis ecosystem services and improves livelihoods in the Air Massif of Niger

Project Components	Financing Type <sup>3</sup>	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
Enhanced enabling environment for oasis and arid valley forests ecosystem conservation in Niger	TA	Regulatory and enforcement framework on oasis biodiversity, ecosystems conservation and which ensure good management of land use in place  Improved capacity of national and local institutions in charge of natural resources management for promoting sustainable	1.1. Legal framework clarifying oasis and arid valley forest ecosystems management re local governance and management is improved and endorsed  1.2. A National Observatory of the Oasis and Arid Valley Forests Ecosystems (ONEO) is created and functional  1.3. Capacitated national forum on oasis and arid valley forests ecosystem management established	GEFTF	1,000,000	7,000,000

<sup>1</sup> Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

<sup>2</sup> When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

<sup>3</sup> Financing type can be either investment or technical assistance.

		<p>development in the oasis and arid valley forest areas of Niger through INRM, evidenced in an increase in score of adapted Capacity Development Scorecard<sup>4</sup></p> <p>Increase in funding towards oasis and arid valley forests ecosystem conservation</p>	<p>(and operationally supporting by ONEO) to support the development and conservation of oasis and arid valley forests, and, together with relevant national stakeholders, assist in the development of commune integrated landscape management plans</p> <p>1.4. An integrated national strategy of the oasis systems and arid valley forests conservation and management in Niger is developed, validated, and approved by the Government</p> <p>1.5. A Support fund for Oasis and Arid Valley Forests (FAGEDO) is established and operationalized.</p>			
<p>Integrated Landscape Planning for Oasis and Arid Valley Forests and Capacity development for SFM within local communities</p>	TA	<p>Pressures from competing land uses on the oasis and arid valley forests of the Air Massif covering 40,000 ha are reduced through an integrated natural resource management (INRM) framework evidenced by: Regular application of the LD-PMAT (Land Degradation Focal Area – Portfolio Monitoring and Assessment)</p> <p>Institutional capacities emplaced for promoting sustainable forest and land management in the Air Massif through INRM across the landscape, evidenced in increase in score in Capacity Development Scorecard<sup>5</sup></p>	<p>2.1. Integrated Landscape Management Plans (ILMPs) developed for the all municipalities in which forest complexes are found ensuring optimal allocation of land to generate development benefits and critical environmental benefits in tandem</p> <ul style="list-style-type: none"> <li>○ A diagnosis report on ecological, socioeconomic (agriculture, pastoralism, etc.) dynamics of oasis and arid valley forests ecosystems of Air Massif.</li> <li>○ A common set of environmental and socioeconomic indicators for monitoring oasis and arid valley forests ecosystems of Air Massif integrated in all the ILMPs</li> <li>○ A common set of operational actions (SLM practices, Good Agricultural practices, Water Resources Management, SFM practices) to maintain and improve the oasis and arid valley forests ecosystem services developed and integrated into ILMPs</li> <li>○ Multi-sector planning platform comprising institutions with sectoral responsibilities for the development and conservation of the oasis and arid valley forests ecosystems of Air Massif., together with relevant CSOs and engaged private sector/local community partners, facilitate the</li> </ul>	GEFTF	1,000,000	7,000,000

<sup>4</sup> To be developed during PPG

		An increased technical products and capacity development events of the ecological dynamics of the oasis and arid valley forests ecosystems and the services they provide in Air Massif	development of ILMPs. 2.2. Institutions' and local administrations/communities' capacities to manage oasis and arid valley forests ecosystems of Air Massif and surrounding sustainably and implement the ILMPs is strengthened.			
Oasis and Arid Valley Forests Ecosystem Conservation Measures	TA/INV	<i>Landscape level uptake of SLM, SFM and BD measures delivering ecosystem and development benefits over 60,000 ha (40,000 ha oasis and arid valley forests conservation, 1,000 ha of forest restoration, 19,000 ha arable land) in the Air Massif.</i> The benefits include the following: <ul style="list-style-type: none"> <li>- Reduced water deficiency</li> <li>- Increased clean water supply for human, animal and plant consumption</li> <li>- Reduced soil erosion</li> <li>- Increased productivity (increased net primary production in of arable lands)</li> <li>- % family incomes from SLM practices</li> <li>- Increase in avoidance of GHG emissions and sequestration of carbon.</li> <li>- Stable or increase in score in adapted "Resilience in Socio-Ecological Production Landscapes" scorecard for Air Massif<sup>6</sup></li> </ul>	3.1. Ecological connectivity and integrity established between and within the different forest complexes, by implementing forest landscape management practices identified in the ILMPs. Physical measures include: (1) upgrading of conservation status through designation of classified forests and management of forests covering 40,000 hectares, reducing threats (deforestation, unsustainable wood harvesting); (2) the reforestation of 1,000 hectares of land.  3.2. For production cultivated land (19,000 ha targeted): technologies developed, tested and appropriate infrastructure established to operationalize SLM in line with developed ILMPs, namely <sup>7</sup> : (i) incorporation of nitrogen-fixing trees into annual monocropping; (ii) improvement of planting methods and use of high yielding varieties; (iii) improved water management; (iv) increase in use of organic fertilizer and (v) integrated pest management.	GEF TF	2,377,703	18,000,000

<sup>5</sup> A capacity development scorecard focused on institutional collaboration

<sup>6</sup> See Satoyama Initiative. Indicators for resilience of socio-ecological production landscapes. <http://resilience2014.sciencesconf.org/24991>. Scorecard will be adapted to the specific Air Massif situation during PPG.

		[Targets for each will be established during the PPG phase]			
Subtotal				4,377,703	32,000,000
Project Management Cost (PMC) <sup>8</sup>			GEFTF	218,885	2,300,000
<b>Total Project Cost</b>				<b>4,596,588</b>	<b>34,300,000</b>

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: (N/A)

#### C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government	Division of Land Restoration and Tree Planting	In-kind	500,000
National Government	Regional Department of Environment, Agadez	In-kind	500,000
Bilateral	Niger – Germany Support Programme PromAP	Cash	8,000,000
Bilateral	Niger – Germany Prodec Project	Cash	5,000,000
Multilateral	Mobilisation and Valorization of Water Resources Project	Cash	1,000,000
GEF Agency	UNEP Regional Office for Africa	Cash	500,000
Private Sector	AREVA – Niger Government Management and Valorization of Irrigated Areas	Cash	10,000,000
Multilateral	Niger Government – EU – KFW PICCT Project	Cash	2,000,000
NGO	CARI	In-Kind	100,000
Local Government	Municipality of Agadez	Cash	500,000
Local Government	Municipality of Tchirozérine	Cash	500,000
Local Government	Municipality of Dabaga	Cash	500,000
Local Government	Municipality of Tabelot	Cash	500,000
Local Government	Municipality of Aderbissanat	Cash	500,000
Local Government	Municipality of Ingall	Cash	500,000
Local Government	Municipality of Arlit	Cash	500,000
Local Government	Municipality of Danat	Cash	500,000
Local Government	Municipality of Gougaram	Cash	500,000
Local Government	Municipality of Iférouane	Cash	500,000
Local Government	Municipality of Timia	Cash	500,000
Local Government	Municipality of Bilma	Cash	500,000
Local Government	Municipality of Dirkou	Cash	500,000
NGO	ONAT	In-Kind	100,000
NGO	GAGE	In-Kind	100,000
<b>Total Co-financing</b>			<b>34,300,000</b>

#### D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS <sup>a)</sup>

GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) <sup>b)</sup>	Total (c)=a+b
UNEP	GEF TF	Niger	Land Degradation		1,104,053	104,885	1,208,938
UNEP	GEF TF	Niger	Climate Change Mitigation		1,104,053	104,885	1,208,938

<sup>7</sup> The list of examples of investment activities here is non-exhaustive, it may include other approaches as they would be defined in ILUMPs designed in Component 1.

<sup>8</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

UNEP	GEF TF	Niger	Biodiversity		883,904	83,971	967,875
UNEP	GEF TF	Niger		SFM	1,504,578	142,935	1,647,513
<b>Total GEF Resources</b>					4,596,588	436,676	5,033,264

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

#### E. PROJECT PREPARATION GRANT (PPG)<sup>9</sup>

Is Project Preparation Grant requested? Yes  No  If no, skip item E.

#### PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

<b>Project Preparation Grant amount requested: \$ 150,000</b>					<b>PPG Agency Fee: \$ 14,251</b>		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee <sup>10</sup> (b)	Total c = a + b
UNEP	GEFTF	Niger	Land Degradation		37,500	3,562	41,062
UNEP	GEFTF	Niger	Climate Change Mitigation		37,500	3,562	41,062
UNEP	GEFTF	Niger	Biodiversity		30,000	2,850	32,850
UNEP	GEFTF	Niger		SFM	45,000	4,275	49,275
<b>Total PPG Amount</b>					150,000	14,249	<b>164,249</b>

#### F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>11</sup>

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	40,000 Hectares
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	60,000 Hectares <sup>12</sup>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2e</sub> mitigated (include both direct and indirect)	Over a 10-year period, avoided GHG emissions of 1,112,754 tons of CO <sub>2e</sub> and the sequestration of 2,097,235 tons of CO <sub>2e</sub> <sup>13</sup>

## PART II: PROJECT JUSTIFICATION

**1. Project Description.** Briefly describe: 1) the global environmental problems and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area<sup>14</sup> strategies, with a brief description of expected outcomes and components of the project, 4)

<sup>9</sup> PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

<sup>10</sup> PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

<sup>11</sup> Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

<sup>12</sup> This includes the 40,000 ha of actively managed classified forests, 1,000 ha reforested land and 19,000 ha of arable land that improved SLM practices are introduced.

<sup>13</sup> See annex II

<sup>14</sup> For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

[incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

#### Global Environment Problems:

Niger is landlocked in the heart of West Africa. It is bordered by Algeria and Libya on the north, Mali on the west, Burkina Faso and Benin on the south and Chad on the east. It has a total area of 1,276,000 km<sup>2</sup>, but only half of this land is habitable due to adverse climatic or soil conditions. Niger is divided into one capital district and seven departments, which are subdivided into districts and communes. Niamey is the capital, and largest city; Zinder, Mandari, Tahoua and Agadez are the other principal towns. Economy: A particularly harsh climate, inhospitable geographical features and a completely land-locked situation, such as the underlying economic realities of the Republic of Niger. However, subsistence farming and stock-rearing contribute approximately 40 % of the GDP and approximately three-quarters of the labour force is employed in this sector. Based principally on agriculture and livestock breeding, the country's economy is still largely at the mercy of the vagaries of the climate. Burning wood and other traditional fuels account for 80 % of the country's consumption. Climate: Niger is situated in one of the sunniest regions of the world and has a mainly dry climate with considerable temperature variations. Potential evaporation varies from 276.3mm in May in Goure to 118.2 mm in December in Bilma, while rainfall exceeds hardly 800 mm and even falls to below 100 mm over almost half the country. Rainfall varies from one region to another and its distribution is very erratic with levels falling sharply as one moves northwards. Agriculture: Less than 4 % of the country is arable, 9 % are permanent pastures and only 2 % are forests and woodlands. Agriculture is limited in the north by the 350 mm isohyet beyond which the millet (*Pennisetum glaucum*) production practically ceases. The Nigerian Sahelo-Sudanian and Sudanian zones are considered as potentially sedentary areas (in contrast to the northern zones (where primarily nomad activities are found). Here, mainly millet (*Pennisetum glaucum*) and Sorghum (*Sorghum bicolor*) – traditional extensive crops and covering most of the cultivated soil – cowpea (*Vigna unguiculata*), groundnut (*Arachnis hypogaea*) are found. The depressions of recent and ancient rivers are for vegetable (tomatoes, onions, etc.) growing or some fruit trees. The yearly production is presently approximately 3,500,000 tons of cereals, supplemented by thousands of tons of international aid. The main yield is around 400 kg/ha for millet and around 190 kg/ha for sorghum, but there are big differences between the regions. The share of cultivated land is increasing and competes severely with livestock keeping. In fact, livestock keeping is now limited to the northern part of Niger: domestic animals are widespread, staying the whole year or moving one part of the year to the northern zones. In search of an increase of arable soil, woodland is cleared. Clearing and wood-exploitation reduces considerably the original vegetation: just for the capital city Niamey, more than 11,000 tons of firewood per year are needed. Additionally, land is lessened and rotation brought down to 2 – 3 years, further diminishing soil fertility. Vegetation: Niger covers two geobotanical zones: the Saharo-Sindian in the very north and the major part, the Sudano-Zambezian zone. Biogeographically, Niger covers three areas: the Saharan, the Sahelian and the Sudanese. The transition between them is not clear-cut. Niger has currently 1,266,000 ha of forests (of which 17% is primary forest) and 3,740,000 ha of other wooded land. It had a total forest change between 1990 – 2005 of 679,000 ha of forest loss or -34.91% (2.33% loss annually).<sup>15</sup> Wildlife: About 7.7 percent of the Niger's land is officially protected. Although Niger has banned hunting (except for scientific purposes) throughout the country rampant poaching seriously threatens wildlife populations. But other reasons also play an important role in the decline of the Nigerian wildlife population: the destruction of the habitat by agriculture, deforestation, fire, and the competition with domestic animals. Natural events such as the heavy droughts, have also reduced the pasture / grounds for wild animals. Poverty and Human Development Index (HDI)<sup>16</sup>: Niger's HDI value for 2014 is 0.348 – which put the country in the low human development category – positioning it at 188 out of 188 countries and territories. According to the estimates of the National Statistics Institute (INS), the population of Niger is roughly 15,203,822 in 2010, the growth rate is 3.3 percent – one of the highest in the sub-region – and a high total fertility index of 7.1 children per woman (2006 figures). At that rate, the population is expected to double every 23 years. Niger's population is extremely young (more than 45 percent are under the age of 20). Based on the monetary approach the INS prefers when mapping poverty, poverty was 59.5 percent in 2008. The two most recent profiles also indicated that poverty affects rural areas more than urban areas, and is more pronounced among the female population<sup>17</sup>.

#### The Oases of Northern Niger:

<sup>15</sup> <http://rainforests.mongabay.com/deforestation/archive/Niger.htm>

<sup>16</sup> The HDI is a summary measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. A long and healthy life is measured by life expectancy. Knowledge level is measured by mean years of education among the adult population, which is the average number of years of education received in a life-time by people aged 25 years and older; and access to learning and knowledge by expected years of schooling for children of school-entry age, which is the total number of years of schooling a child of school-entry age can expect to receive if prevailing patterns of the child's life. Standard of living is measured by Gross National Income (GNI) per capita expressed in constant 2011 international dollars converted using purchasing power parity (PPP) rates.

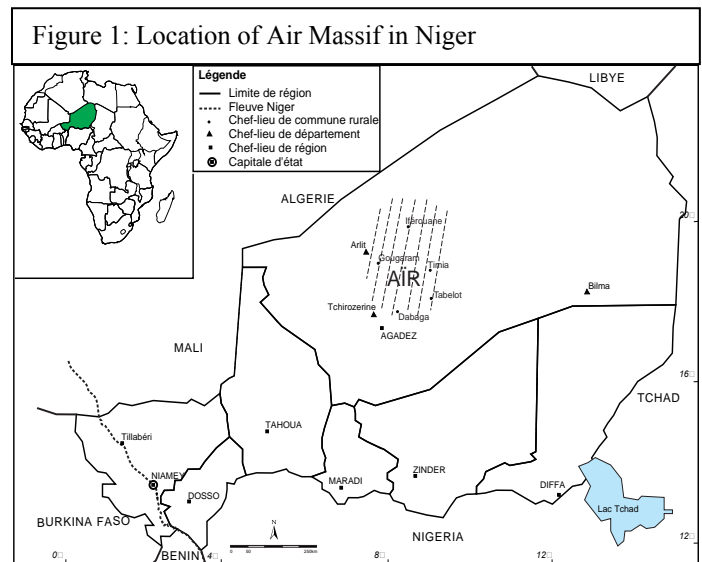
<sup>17</sup> Ministry of Planning, Land Management, and Community Development. 2012. Poverty Reduction Strategy Paper Economic and Social Development Plan (PDES) 2012 – 2015.



Situated at the edge of Sahara desert in the Kawar and Air mountains massif, the oasis ecosystems of the Agadez region of northern Niger constitute a geographic unit where the water table is not deep and sometime it is exposed at the surface in some areas. They are ecological entities conceived by man to ensure local socioeconomic stability. They are very much linked to anthropic activities and they are at the heart of the history of the population of that region. At the onset of Kawar massif, 15 oasis can be counted and the most important ones are Bilma, Fachi, Djado and l'Agram. They are located on the caravans' routes linking the Mediterranean Sea and Sudan. Some like Djado Oasis are very well protected with structures difficult to access. At Air Massif, some important Oasis include those situated near the Tamgak, Timia, Tin Telloust, Zomo, Tabelot, Afassas and Aouderas mountains. They are important centres of cultural, agricultural and pastoral activities.

### Air Massif:

The Air Mountains or Air Massif is a triangular massif located in northern Niger, within the Sahara Desert (see figure 1 for location within Niger). Part of the West Saharan montane xeric woodlands ecoregion, they rise to more than 1,800 m and extend over 89,000 km<sup>2</sup>. Lying in the midst of desert north of the 17<sup>th</sup> parallel, the Air plateau, with an average altitude between 500 and 900 m, forms an island of Sahel climate which supports a wide variety of life, many pastoral and farming communities, and dramatic geological and archaeological sites. The Air Massif themselves consist of nine almost circular massifs rising from a rocky plateau, bordered by the sand dunes and plains of the Tenere Desert to the east. Because of its altitude (on average between 500 and 900 m) and despite its low rainfall (50 to 160 mm/year on the lower plateau), the Air forms a green region in comparison with the surrounding deserts, especially after the August – September seasonal rains. The climate is classified as Sahel, like that of the regions well to the south. While the mountains are largely bare of vegetation, the dry wadi river valleys (known by the Hausa term “Kori”) channel and hold rainwater in gueltas (stone pools, such as that near the town of Timia) creating oases which provide forage for animals, and in some areas, farming. The high Bazzane plateau of the central Air in particular, provides adequate rainfall for intense agriculture. Other, vast, areas of the region are entirely devoid of plant life with their volcanic protrusions and rock fields present an otherworldly appearance.



The Air Massif falls within the Saharo-Sindian zone. The zone gets little and very irregular, or sometimes no rain. The dominant vegetation of the plains, if there is one, is a discontinuous grassland (often referred to as “steppe” in French publications) which is limited to depressions. It belongs to the *Acacia-Panicum* grouping, dominated by *Panicum turgidum*. Plants are adapted to the absence of water. On the dunes *Cyperus conglomeratus* is abundant in the herbaceous carpet associated with various *Poaceae*, like *Aristida mutabilis*, *Tragus racemosus*, *Conchus biflorus* or *Lasiurus scindicus*. On the plateaux, *Aristida hordacea*, *Aristida funiculate*, *Cechrys ciliaris*, *Eragrostis pilosa* and *Schoenefeldia gracilis* are common. In the dry valleys *Cymbopogon schoenanthus* is dominant in the grass carpet. The very scarce woody layer includes, especially, *Acacia raddiana* but also *Acacia ehrenbergiana*, *Cordia sinensis*, *Maerua crassifolia* and *Grewia tenax*. Variations in the vegetation are mostly due to small changes in the micro-climate, the soil or relief. Thus, the formations of the mountains of Air show substantial differences compared to those of the plains. The formations of the lower stages of the Air (between 500 and 900 m of altitude) have woody stands made up often of *Maerua crassifolia*, *Leptadenia pyrotechnica*, *Calatropsis procera*, and *Salvadora persica* that are associated with *Balantes aegyptiaca* and various *Acacia*. Among the grasses, *Stipagrostis* spp., *Aristida* spp., and *Eragrostis* spp. are common. On the higher levels of the Air (>900 m) formations of *Acacias* (*Acacia raddiana*, *Acacia ehrenbergiana*, *Acacia laeta*, *Faidherbia albida* ‘Goa’) with *Boscia senegalensis*, *Commiphora africana*, *Balanites aegyptiaca*, *Ficus cordata*, *Hyphaea thebaica*, *Ziziphys mauritania*, *Anogeissus leiocarpa*, *Bauhinia rufescens*, and *Salvadora persica* are found. The *Poaceae* are represented by *Aristida mutabilis*, *Cymbopogon schoenanthus*, *Tripogon multiflorus* and *Desmostachya bipinnata*. The Air harbors important populations of several Saharan ungulates. Dama gazelle *Gazella dama*, Dorcas gazelle *Gazella dorcas*, Barbary sheep (*Ammotragus leryia*), Addax (*Addax nasomaculatus*), Slender-horned gazelle (*Gazella leptoceros*). Most larger Sahelian carnivores like lion *Panthera leo* and African wild dog *Lycaon pictus* were exterminated earlier this century by hunting and poisoning, but about 15 – 20 cheetah *Acinonyx jubatus* (V) and a few striped hyena *Hyena hyena* persist, preying on feral donkeys. Smaller carnivore populations are healthy. They include Asiatic or golden jackal *Canis aureus*, fennec fox *Fennecus zerda*, Ruppells sand fox *Vulpes ruppelli*, caracal *Felis caracal* and sand cat *Felis margarita*. Other Sahelian mammal species include an isolated and presumably highly inbred population of around 707

olive baboons *Papio anubis* in the Tamgat massif and an estimated 500 Patas monkeys *Erythrocebus patas* in the central massifs and plateaux. The northwestern part of the Air Massif falls within the Air and Tenere National Nature Reserve (please see annex I for a short description). Local Population: Almost ten thousand Tuaregs live permanently within the area. Most of them are crop farmers and about one thousand are agropastoralists. The retention of water in the valleys makes it possible to create irrigated gardens and to cultivate corn, wheat and vegetables. This agricultural production is sold locally in the markets at Agadez and Arlit. This type of agriculture is practiced in most of the valleys. About 20,000 nomadic Tuaregs also use the complex. The nomadic system is opportunistic, with herding groups following seasonal dynamics of pasture and water availability.

Oasis and Arid Valley Forests Ecosystems: Despite the aridity of the area, the Air Massif contains very rich forest lands in the oasis and arid valley ecosystems in the form of gallery forests, bordering the wadi beds or beds located in the fertile waters areas. Sahelian species grow in the wetter parts of the mountains. The principal trees are *Balanites aegyptiaca*, *Salvadora persica*, *Ziziphus mauritiana*, *Boscia senegalensis*, *Acacia laeta*, and *A. albida*. Grasses identified are *Panicum laetum*, *Eragrostis pilosa*, *Cenchrus biflorus*, *Dactyloctenium aegyptium*, *Pennisetum violaceum*, *Cymbopogon schoenanthus*, and *Chrysopogon aucherii*. In the drier Sahel-Saharan transition zone, the tree species include *Maerua crassifolia* and *Leptadenia pyrotechnica* with the herbs *Panicum turgidum*, *Lasiurus hirsutus*, and *Aerva javanica*. The forests in the region amount to an estimated 40,000 ha concentrated in the area around the flood plains of Talak, of Tadress, of Irhazer, and in the oases. The forests form clusters, the main ones are: the doums of Tamazalak (1,306 ha) and Egandawel (206 ha), the Dabaga Forest (1,050 ha), the Kerbouibou Forest; the Afassas Forest, the Tidène Egandawel Forest, the Boughel Forest, and the Abardak Forest. The massive forests in the large valleys are: Tawat (1,950 ha), Ounankarad, Zomo, Etaghas, Gougaram, Tadeck, Zagado, Mari-Tchirolosquée, Tagmert-Ingal, etc. Oases and arid valleys are unique ecosystems, rich in biotic components (flora, fauna, and microorganisms) long favored by natural resources and landscape rigorous management, and supported by an ancestral, resourceful, and effective know-how. In some valleys, the vegetation constitutes thick gallery forest extended over many kilometers. The Air Massif fauna includes sahel species represented by reptiles (*Naja nigricollis*, *Bitis arietans*), birds (*Tockus erythrorhynchus*, *Struthio camelus*), Mammals (*Erythrocebus patas*, *Papio anubis*, *Procavia capensis*, *Ictonyx striatus*, *Caracal caracal*). The saharian species are represented by saharian *Ammotragus lervia*, *Addax nasomaculatus*, *Gazella dorcas*, *G. dama*, *G. leptoceros* which are included in IUCN red list and are really threatened for extinction. The Oases support many environmental functions and a multitude of social and economic goods and services. They have great potential which are the basis for the development of many socioeconomic activities such as agriculture, tourism, and handicraft. Ecosystem Services: Forests provide habitat for biodiversity including many threatened and endemic species. They also provide critical hydrological services, both in terms of water provisioning and quality regulation. The extensive root systems of the forest trees and underlying plants and shrubs (aided by a ground layer of composting vegetation) serve to capture rainfall by slowing down runoff. Water is extremely crucial natural resource for the socioeconomic sustainable development of arid and semiarid regions worldwide. Oases, being the center of human survival and biodiversity, are a distinctive landscape in arid areas. The existence and stabilization of oases depend on water availability. Air Massif is characterized by considerably fragile water resources and associated ecological and environmental challenges. The oases are essential for human settlement, preventing desertification, and supporting vegetable cultivation hence requiring a stable water supply. The oasis and arid valley forests (i) maintain the freshwater habitat for biodiversity conservation, sediment transport for riverbed desalting and salinity balance for salt equilibrium; (ii) guarantee the stability of the oasis-desert ecotone and combat desertification and soil erosion; and (iii) restore the groundwater of the oasis-desert ecotone to ensure desert vegetation growth.

Institutional Context: The nation of Niger is governed through a four layer, semi-decentralised series of Administrative divisions. Niger is divided into 8 regions, which are subdivided into 36 districts (departments) and 266 municipalities. The chief administrator (Governor) in each department is appointed by the government and functions primarily as the local representative of the central government. The Constitution provides for the popular election of municipal and local officials. Several Government Ministries and other government and private structures are closely monitoring the management of natural resources. These are: The High Commission of "3N" (Nigerien Nourissent les Nigeriens – Nigerien Feed Nigerien) under the Presidency and which represents the President's political national agenda for the development and includes all sectors particularly the environment restoration issues. the Ministry of Environment, Urban Sanitation and Sustainable Development, the Ministry of Animal Resources, the Ministry of Agriculture, the Ministry of Planning, Territorial Management and Community Development, the Ministry of Water Resources and Sanitation; and the National Council of the Environment for Sustainable Development (CNEDD), which is attached to the Prime Minister's office. The CNEDD is responsible for the strategic, political, normative, integration and coordination of environment and sustainable development national agenda. It hosts all the Rio Convention National Focal Points and coordinates the implementation of their respective action plans. The regulatory framework is also taken care of by the General Directorate of Wildlife, Fisheries and Aquaculture and the General Directorate of Environment (both at the Ministry of Environment, Urban Sanitation and Sustainable Development). These institutions are in charge of the implementation of the national environmental policy. Furthermore, the Permanent Secretariat of Rural Code is in charge of



capacity building for decentralized management and the establishment of the regulatory frameworks in terms of natural resources and conflicts management. Finally, the High Commission of Decentralization is in charge of the municipalities issues. At the local level, there are regional, sub-regional and municipal bodies of these respective agencies including the CNEDD. With respect to conflict management related to the use of natural resources, Niger has established – in 1993 under ordinance 93-015- a legal framework and an institution named “Rural Code” which is in charge of the establishment of regulatory frameworks and conflict management at the local level. The Rural Code has created a Land Commission (Commission Foncière – COFO) and Local Land Commission (Commission Foncière de base – COFOB). These COFOBs, where they have been created, have proven to be an important tool in the management of natural resources by the local community. They are playing an important role in forecasting and managing conflicts thereby avoiding situations that in the past have led to loss of life. The decentralized administration of the above mentioned national institutions are responsible for the management of Oasis and Air Massif, each in its respective domain. The Municipalities Councils each within its jurisdiction play an important role in the management of natural resources of Oasis. In most cases they take the lead in the implementation of development and restoration activities with the decentralized technical experts of different ministries providing technical guidance and capacity development.

*Threats:* The primary threats to biodiversity and direct causes of ecosystem service degradation of the oasis and arid valley forests of Air Massif are:

*Deforestation and fragmentation of forest complexes:* These forest formations are under pressure due to: (i) farming that is often accompanied by deforestation (clearing, dead fences, coffering of garden wells), (ii) illegal timber logging: for various uses: trading of firewood and charcoal, local crafts, drainage, house building, etc (iii) physical deterioration by erosion (gullying, degradation of the banks, and flooding valleys.) These different pressures and climatic adverse circumstances in recent decades have led to massive resources degradation. For example in the 80s, the Tifraghat Valley used to be an impenetrable forest, but over time, the tree density has now significantly reduced due to increasing human pressure and erosion. Similarly, the Dabaga classified forest area made of 1,050 ha of natural vegetation in 1954 reduced to 18.4 ha in 2000. The potential of doums like those of Tamazalak and Egandawel are also reduced due to the expansion of farming cultivation, the monetization of natural resources (dour palm by-products), and the lack of clear management rules and management plans.

*Land Degradation:* An oasis is a specific landscape that exists within deserts in arid zones. It is not only the most concentrated area of human activities and a habitat for wild animals, but also the largest area where artificial disturbances happen at the regional scale. Related research has shown that over the past 50 years, irrational human activities have caused desert expansion and soil degradation, resulting in salinization of soil in the oasis (Hamid et. Al., 2001, 2002), and the stability of oases ecosystems are affected by both desertification in the oasis-desert ecotone and salinization in the interior of the oases (Han 1999, Mamattursum et. Al. 2010). Land degradation is a major fact in most major valleys and flood plains of Air, where the main watersheds are located. This land degradation is manifested by a collection of flaws that generates regressive land erosion (from downstream to upstream.) The natural water cycle of floods has allowed the development of real alluvial forest ecosystems. This system has worked for centuries, but for several decades now, this system no longer works for lack of sufficient water volumes. The valleys and floodplains are rapidly deteriorating. This destruction begins when the wadi, following an initial degradation begins to sink: 1) the water remains in the minor riverbed, 2) the flow velocity increases and the wadi continues to widen. This lowering of the rivers bed flow results in (i) lowered levels in tributaries, (ii) the creations of new tributaries and erosion. This situation creates a faster discharge of water runoff by these new drainage systems, (iv) decreased vegetation due to lack of infiltration, (v) the development of shallow crust in the naked places, without vegetation, that may reduce the infiltration by 90% and (vi) drying up of the area by drainage collection. In addition to water erosion, the oasis ecosystems, which constitute the main livelihoods of the populations in the concerned zone, are subject to silting phenomenon linked to wind erosion. Sand dunes movements are therefore a serious threat to the various agro-forestry-pastoral activities carried out by the populations who depend on these ecosystems.

*Climate Change:* Niger has been significantly affected by climate change, particularly with regards to food security as demonstrated by the three major food shortages in the last 10 years. The biggest impact of climate change in Niger include an increase in the frequency of droughts, resulting in a decrease in agricultural production, an associated increase in grazing pressure on pastoral ecosystems, and consequently soil erosion on a mass scale. Reduced food supply and income from agriculture as a result of climate change will increase the incidence of malnutrition and famine across the country. Additional socio-economic impacts of reduced agricultural yields as a result of variable climatic factors include such effects as reduction in income, land conflicts and deepening of rural poverty.<sup>18</sup> An increase in the frequency of droughts as a consequence of climate change has already resulted in the dessication of numerous ponds, a process that is likely to intensify.<sup>19</sup> The socio-economic

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<sup>18</sup> National Climate Change Policy, Government of Niger, 2013

<sup>19</sup> Niger National Adaptation Programme of Action, August 2006

effects arising from the loss of these ponds are disastrous and their reduction has resulted in a vastly reduced quality of life for many people.

### Barriers

#### *Lack of an overriding framework for sustainable management and conservation of oasis and arid valley forests within development narrative in Niger*

In Niger, oasis and arid valley forests have played an important role in the development of the country and in particular to the livelihoods of the past and present nomadic people in the northwestern part of the country. The particular ecosystems have been conserved over the centuries and traditional management practices maintained to ensure its continued conservation and more importantly for the livelihoods, the maintenance of the important ecosystem services highlighted earlier. However, with the modernisation and with it the more settled lifestyles of the population in these ecosystems, coupled with the effects and impacts of climate change, the long-term sustainability of these ecosystem is now compromised, with dire effects on the local populations dependent on these ecosystems. With little traditional knowledge on how to manage these ecosystems with a growing settled population, there is a real need to increase national understanding of the mechanisms of these important ecosystems and how to manage such for both conservation and development benefits. In this context, there is a need to establish a national knowledge and monitoring institution that are responsible of leading the thinking, research and monitoring of these areas in order to provide the science policy interface mechanism. Further, if such policy and science do not make the linkage with practice, the effort will be lost. It is therefore of utmost importance that the a national forum be established so the policy-science-practice interaction is promoted. It is important that such a multi-sectoral group interacts and provide guidance to communes and districts where these important ecosystems are present and provide the technical expertise in the management of these areas. In addition, in regards the responsibility for the conservation and management of oases and arid valley forests, and the current open resource environment, there is a need for legislation to empower local authorities to enforce restrictions and sustainably manage the areas.

#### *Lack of management plans for integrating Oasis and Arid Valley Ecosystem Conservation into the overall sustainable development of the Air Massif*

Approaches in dealing with land degradation, biodiversity loss and deforestation and forest degradation have in the past been sectoral focused. The agricultural sector has tried to deal with soil erosion and loss of soil fertility through specific interventions, without considering the forest ecosystem services of water provision and retention. Reserves have been created to conserve biodiversity loss and forests have been protected without considering the livelihoods of the people and their food security needs. Further, the limited knowledge on the understanding of the dynamic of oasis ecosystems and its linkage to sustainable agriculture has added to the lack of integration. These lead to unsustainable oasis agriculture practices and overexploitation of groundwater causing the drying up of aquifers and the difficulty of maintaining the agricultural production which is experiencing a decrease in productivity. There is a need to harmonise and coordinate efforts across sectors and land and water managers and owners, and spearhead innovative ways and means of enhancing ecosystem functioning and resilience in an integrated and coordinated way that balances socio-economic and environmental objectives. Without a proper assessment, monitoring and planning regime for the maintenance of ecosystem services, managers and users will continue to have a difficult time effectively evaluating and integrating biodiversity conservation and land degradation risks within decision-making. The municipalities lack the capacity to generate, implement and enforce integrated landscape management plans.

#### *Inadequate demonstrated experiences in INRM and oasis and arid valley conservation approaches at the landscape level:*

Niger does not have operational, “on-the-ground” examples of integrated sustainable land management and biodiversity conservation in production landscapes. Without access to know-how, proven through demonstration, government decision-makers and resource users do not have the tools and knowledge necessary to decrease land degradation and biodiversity loss. Further, the dual benefits of SLM, namely increase productivity and the mitigation of emission of greenhouse gases have not been optimally explored and implemented in a drylands-type environment in Niger. There is a critical unmet need to infuse new management approaches into the management system—focusing on the sectors that are driving land degradation and forest degradation. Forest Management: Although the principles of forest management are well understood, know-how needed to maintain the functional integrity of forests is lacking. The long-term resilience of the forests and their ability to provide important ecosystem services will require that certain areas (forest complexes) are conserved rather than utilised for firewood and expansion of arable land and where possible connectivity is maintained between these forest complexes. Arable Land: There is a clear need to rather expand the land under cultivation (into forest land), to optimise the land that is already under cultivation for higher yields. Currently, the integration of carbon-fixing trees (e.g. *Acacia senegal* and *Acacia seyal*) in cultivated land has not been optimally utilised, nor has the modern techniques like the use of different planting methods, high yielding varieties, improved water management and integrated pest management be tested at a landscape level in parallel with making the case of the importance of forest protection. Agriculture benefits from organic fertilization that maintains soil fertility in the vicinity of settlements have also not been institutionalized in the farming community.

### The baseline scenario / associated baseline projects

The maintenance of the ecological, economic and social services of oasis and arid valley ecosystems is an important challenge in the critical area. The main targets should be the reduction of land and natural resources degradation to sustain global and social environment services including enhancing resilience of the system and local communities. To achieve this, the Government and its partners, together with local communities have embarked in sustainable resources management and addressing food security and poverty reduction. Worthy to be mentioned is the GEF/UNDP Co-management of Air – Tenere Reserves (COGERAT) project, worth \$4,000,000 of GEF grant, which enabled the engagement of local communities and municipalities in natural resources management. This enabled environment, created despite the difficult condition of the area characterized by an armed conflict at that time, has favored an environment of stewardship and ownership of conservation objectives by local communities and governments. Part of the project achievements include: i) management agreement (Co-management) between the Government and local municipalities on the Air-Tenere natural reserve; ii) local capacity building in the area of natural resources management and various management models; and iii) contribution to restoration of lands and other natural resources (32,470 ha restored).

In January 2016, the Government of Niger has taken a decree to transfert of competencies to the decentralized administration of the management of Water resources, Education, Health and Environment sectors. In line with this decree, the deadline is set up between the European Commission and the Ministry in charge of environment to ensure that this transfert of competencies is effective in environment sector by 2017.

UNEP is currently supporting the Government of Niger in the development of the Strategic Investment Framework on environment and sustainable development. This framework is being developed using a **multisectoral** approach involving both national and decentralized levels. This project will directly contribute to this process particularly with regard to the oasis ecosystem management and long term sustainable measures to monitor and support oasis ecosystem restauration

In addition to these intervention, the Government of Niger in collaboration with various bilateral and multilateral partners are currently implementing developmental project which are of relevance to the rehabilitation of oasis and valleys ecosystems of northern Niger. These projects include:

1. *Niger – Germany support program for productive agriculture (PromAP)*: The programme objective is to contribute to Niger sustainable agricultural growth and food security. The project covers Agadez, Tahoua and Tillabery regions of Niger. In Agadez it covers 11 municipalities (Agadez, Ingal, Aderbissanat, Dabaga, Tabelot, Timia, Tchirozérine, Iférouane, Gougaram, Arlit , and Danet) with a concentration of the activities in areas of oasis and valley gardening great productivity potential. The project is financially supported by GIZ ( technical German cooperation) and cofinancing from European Union through the Sahel component “Support to Agricultural Production”of its programme for the development of northern Niger Sahel Development. The first phase ended in 2015 and a new phase of \$12.8 million will start in 2016 for the period of 3 years.
2. *Niger-Germany program of support for decentralization of good governance ( Prodec)*. The programme objective is to support community participation in policy making and development as well as public services access and effective administration through improved territory communities in line with decentralization reform. With an investment of Euro 3,000,000, the programme will intervene in 11 towns of Agadez region (Agadez, Ingal, Aderbissanat, Dabaga, Tabelot, Timia, Tchirozérine, Iférouane, Gougaram, Arlit , Danet). The project keys partners include GIZ (German technical cooperation) and European Union (project of support for the development of northern Niger for Sahel Development Strategy (SDS) Sahel Niger component “support for decentralization”). Possible link with the current GEF project may include complementary and synergy in communities capacity building (local planning with integration of climate change), resilience , protection and management of the environment, capacity building of municipalities in relation to their new missions in the context of decentralization particularly the transfer of competencies in environment and hydraulics sectors as first of Government plan for transfer of responsibilities to decentralized administrations.
3. *The AfDB Mobilization and valorization of water resource project*: The objective is to improve the capacity of water resources management for different uses with a view to adapt to negative impacts of climate change through (i) the increasing availability of water flows by the construction of new small dams and dykes; (ii) the promotion of sustainable and effective use of water resources by the management of irrigated perimeters; (iii) the development of irrigation in particular the small irrigation with the development of resilient irrigation systems to flood and sand erosion; (iv) the determining of the impact of the dams and other water infrastructures on the water flow levels of mains watercourses. The project focuses on 2 towns in Agadez region (Agadez, Tabelot). The project amount is \$80,000. With this GEF project it will possible to establish complementary and synergy in areas of the development of new and

technical models of irrigation in the valleys and oasis and sustainable management of valleys for pastoralism development.

4. *Project of management and valorization of irrigated perimeters of Irhazer valley and Tamesna Plain of Agadez region.* This Niger Government - AREVA Mining Enterprise supported project objective is to contribute to food security by the development of irrigation. The current project phase amounts around \$20 million for the next 4 years. The proposed GEF project will establish complementary and synergy in areas of development of techniques and model of irrigation and management at valley level and setting up small irrigated perimeters integrating environmental conservation and protection, model of water irrigation management through the producers organizations.
5. *Program of investment and capacity development of local communities: PICCT (following FICOD).* The programme objective is the promotion of long-term socio-economic infrastructures in line with priorities of beneficiaries and by respecting good governance and improvement of wellbeing. The programme will intervene in 15 towns and Agadez regional council but also in Tahaoua and Tillabery regions. The programme is financed by German cooperation (KFW) and investment in Agez region is around \$2 million. There is great potential to establish complementary with this programme in the areas of synergy in communities' capacity building and investment in production sector related to SLM and water resources mobilization.
6. *Mining return investment at municipal level:* The mobilization of internal resources remains a challenge in this remote and hardship area. However, there are various Government resources and allowances which can support minimal investment and provide cofinancing opportunities for this GEF project. The share of mining tax conceded to the municipalities by the Government in 2015 mining for the region is estimated at \$2,5 million. This annual amount will be provided to the municipalities each year giving an estimated amount of \$12.5 million for the next 5 years of the proposed GEF project, which will be a substantial cofinancing capacity of the project area municipalities.

*The proposed alternative scenario, with a brief description of expected outcomes and components of the project, incremental cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing*

**Component 1: Enhanced enabling environment for oasis and arid valley forests ecosystem conservation in Niger:** In order to arrest the current open access regime that oases and especially arid valley forests fall within, the proposed project will assist the national government in the development of a national legal framework that will clearly articulate the responsibility of the management of these crucial landscape to the local commune authorities and empower such to enforce integrated landscape management plans. In order to learn more at a national scale on the extent and importance of this specific landscape type a National Observatory of the Oasis and Arid Valley Forests will be created in the Ministry of Environment, Urban Sanitation and Sustainable Development in order to support commune governance structure in the management and conservation of these forests. Further, a national forum made up of relevant national stakeholders will be constituted to provide a technical advisory service to communes and in particular assist in the development of integrated landscape management plans at a commune level where these forests are found. This forum will be capacited with cross-sectoral training and will be tasked to spearhead the development of a national strategy on oasis systems and arid valley forests. Such a strategy, once developed, will be presented to Government, validated and then approved, leading to a national effort to conserve the forests. The strategy will in particular highlight the economic importance of the maintenance of valuable ecosystem services these forests provide, leading the way to the establishment of a support fund for Oasis and Arid Valley Forests by Government for the long-term financing of the conservation of the forests.

**Component 2: Integrated Landscape Planning for Oasis and Arid Valley Forests and Capacity development for SFM within local communities:** Community-led Integrated Landscape Management Plans (ILMPs) will be developed for the Communes where oasis and arid valley forests occur in the Air Massif and surrounding zones ensuring the optimal allocation of land resources to generate development benefits and critical environmental benefits in tandem. In order to ensure these ILMPs are based on solid and up-to-date information, a diagnosis report on ecological, socioeconomic (agriculture, pastoralism, migration, tourism etc), legal and capacity needs will be undertaken. The diagnosis report will incorporate to previous work undertaken to identify these forests and the ecosystem services it provide and the needed enabling legal and capacity environment for local and decentralized administrations and will deliver solid recommendations for avoiding and mitigating the loss of biodiversity and land degradation impacts of the main economic sectors (mostly agriculture, mining) but also for empowering local governments and local communities in the management of forest resources. The support to integrated natural resource management will be strengthened by making key spatial data and information available to decision-makers through this diagnosis report<sup>20</sup>. On the basis of the report, a common set of environmental and socioeconomic indicators

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<sup>20</sup> The diagnosis will consider past important work on this ecosystems or related ecosystems including the work of eminent scientific scholars who learn a lot from this ecosystems. See Annex IV.

including on forest management will be developed which will be integrated into the individual ILMPs allowing the information to feed from commune level to the national Observatory for monitoring and evaluation of the management of the forests including carbon stock monitoring. Similarly, a common set of operational actions will be developed focusing on sustainable land management practices, Good Agricultural Practices, Water Resource Management and Sustainable Forest Management practices, making it easier for communes to select appropriate improved practices and integrate into the ILMPs to generate ecosystem service, where the situation allows. In this line, the project will take stock of the popularly known Niger success story in promoting farmers led natural regeneration in the eastern part of the country. Communes' key stakeholders (e.g. mayors, coucellors, opinion leaders, communal technical experts, CSO representatives, etc.) will be visiting the eastern Niger to assess and learn from their local counterparts how the farmers-led natural regeneration has been developed, adopted and promoted. Furthermore, as the ILMP will be developed, proper attention will be given to the objective of Bonn Challenge on forest landscape restoration and this will be an opportunity for the Niger Government to materialized on the ground the Bonn challenge aspiration. A coordination mechanism (multi-stakeholder planning platform) that brings together the different institutions with sectoral responsibilities, as well as the CSOs and private sector/local community partners will put in place for each municipality for the development of the ILMPs. This platform will also work closely with the national forum to utilize all capacity nationally to ensure best technical expertise assist in the development of these plans. Work of multi-stakeholder committee will ensure a unified approach in the development and implementation of ILMPs resulting in the optimum use of land in terms of biodiversity conservation, ecosystem services and socio-economic development, but also ensure approval of the plans by the local stakeholders thereby increasing the chances of successful implementation of the plans. Within the component, the project will also support Capacity development for SFM within local communities: In line with the devoluted responsibility decree of January 2016, institutions and local administration/communities' capacities will be built for integrated natural resource management, and in particular in the expertise of managing the oasis and arid valley forests to generate environment and socioeconomic benefits. Part of the capacity building program will also be awareness raising in the wider community in Air Massif and surrounding of the importance of the forests to the long-term development of the area.

**Component 3: Oasis and Arid Valley Forests Ecosystem Conservation Measures:** The component will target the conservation and rehabilitation of critical oasis and arid valley forests in the Air Massif. Ecological connectivity between existing forests complexes in the system, where possible will be enhanced and the ecological integrity of these complexes enhanced through active management by designating 40,000 hectares of forests as classified forests (reducing or preventing logging, firewood collection and deforestation through expansion of agricultural fields. In order to increase connectivity and/or ecological integrity of these forests, degraded areas will be actively reforested (1,000 ha) and through this reforestation efforts, the Bonn Challenge aspiration will be promoted through the application of appropriate Forest Landscape Restoration principles. The boundaries of the classified forests will be delineated and marked and the communes capacitated in the management of these forests. This will include the reduction of firewood harvesting volumes in forests important for the delivery of critical ecosystem services and implementing non-exhaustive forest use in cooperation with local communities. Further, to counter the negative influence of the agriculture sector on deforestation and forest degradation, demonstration of sustainable land management practices will be implemented on private and community farms. This is from the view that if the production of existing cultivated land is maximized, the need to expand to forest due to low fertility of soil will be minimized. The work on arable land covering 19,000 ha will include the incorporation of nitrogen-fixing trees into annual monocropping fields, the improvement of planting methods and use of high yielding varieties, the improvement of water management, integrated pest management and use of organic materials that are available (manure, composted plant residues, etc) to improve soil structure, water and nutrient holding capacity and soil fertility. The exact measures will be established during the PPG.

4) The incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing and the global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

As indicated in the baseline section, there are many initiatives ongoing in the project areas to support food security and water resources management. However, the knowledge of these critical ecosystems dynamic and the coordination of stakeholders and development of sustainable approach to integrated oasis and valley ecosystems management remains a challenge.

The GEF support/increment will enable:

- Improving the knowledge of the oasis and arid valley ecosystem dynamic
- National Integrated Strategy for the Management of Oasis and Arid Valley Forests Ecosystem
- Creation of Sustainable Management of Oasis and Arid Valley Forests Ecosystem Funds
- Creation of National Observatory of the Oasis and Arid Valley Forests Ecosystem
- Sustainable gallery Forest Management of Northern Niger
- Promotion of sustainable and more productive agricultural management near or in the Oasis and Arid Valley Forests ecosystems

- Coordination of Stakeholders intervention

The Global Environmental Benefits that will be generated from the project implementation include the oasis and arid ecosystems services conservation and improvement through better management of water and other natural resources. The biodiversity of the oasis and arid ecosystems will be restored and secure with support from the communities and through the development of monitoring skills including carbon stock monitoring. More specifically, the following GEB will be generated from the project implementation:

1. The conservation and improvement of oasis and arid valley ecosystems services, namely the water availability for socio-economic activities, the restoration and the improvement of 41,000 ha of natural gallery forest concentrated in Air depression and inundation plain and in Oasis;
2. Improved management of 41,000 ha of the oasis and arid valley forests ecosystems of the “Air Massif KBA”<sup>21</sup>
3. Reduction of threats to the following globally threatened species: Doras gazelle, Leptocere gazelle, Cheetah, Dama gazelle and Barbary sheep.
4. Over a 10-year period, potential avoided GHG emissions of 1,112,754 tons of CO<sub>2e</sub> and the sequestration of 2,097,235 tons of CO<sub>2e</sub><sup>22</sup>
5. Arresting land degradation through good SLM and SFM practices
6. The biodiversity, carbon stock and ecosystem services conservation and enhancement
7. Improving the resilience to climate changes of oasis ecosystems, namely of forests blocks and local communities
8. The establishment of a sustainable funding mechanism in favor of the oasis systems management which considers biodiversity and forestry conservation in the area;
9. Improving food production and socio-economic development of local communities;
10. Improving the knowledge on ecosystems;
11. The emergence of a national dynamic of capacity-building to preserve and valorize the oasis and arid ecosystems in Northern Niger;
12. The preservation and valorization of cultural, ecological, environmental, and landscape values of these ecosystems
13. The revenues of local communities will be improved through the improved productivity of agricultural fields where SLM practices and climate-smart practices are introduced.

6) innovation, sustainability and potential for scaling up.

Key innovative aspects of the project include:

- Development of Strategy for the Management of Oasis and Arid Valley Forests Ecosystem
- Establishment of Oasis and Arid Valley Forests Ecosystem Development Funds
- Coordination of stakeholders of the area and involved in oasis and arid valley production systems
- National observatory of the Oasis and Arid Valley Forests Ecosystem

The project sustainability will be achieved through the capacity building of municipalities, the development of oasis and dry valley forests development strategy and the establishment of funding mechanism which will ensure long term financial sustainability. The project achievements and other experience which will support development of the strategy, will lead to an action plan, which implementation will ensure scaling up of the approaches to all the oasis systems in the country and elsewhere. The combination of forest conservation and development investment to build communities and systems resilience and adaptation will create condition for sustainability and replicability of the approaches to be developed and promoted by the project. The development of a legal framework on oasis and arid valley forest ecosystems management will ensure the upscaling to other parts of Niger and the region.

2. **Stakeholders.** Will project design include the participation of relevant stakeholders from civil society organizations (yes  /no ) and indigenous peoples (yes  /no )? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.

<sup>21</sup> The project applied the KBA approach to identify important areas for Biodiversity Conservation. The criteria for identifying KBAs include (i) presence of threatened species and encompassing threatened ecosystems; (ii) holding geographically restricted biodiversity; (iii) contributing to ecological integrity; (iv) contributing to biological processes including ecological refugia; (v) and as deemed providing for biodiversity through quantitative analysis. The site is home to five IUCN Red Listed species (please see table below) and as such satisfy the condition to be defined as a KBA. Further, the north-eastern part of the site forms part of the National Nature Reserve of the Air and the Tenere, which is classified as an Important Bird and Biodiversity Area (IBA) by Birdlife International (see <http://www.birdlife.org/datazone/sitefactsheet.php?id=6733>)

<sup>22</sup> See annex II



The project will be developed and implemented with full consultation and participation of stakeholders at different levels. During the PIF development process, two major consultation meetings took place at national level and local level. At National level, as all the project included in the co-financing table namely the German Cooperation: PromAP and Prodec projects, ; the AREVA project, the EU-KFW PICCT project and water resources project are coordinated by different line Ministries as recommended by Paris Declaration of Aid effectiveness. The coordinators at national level, have been consulted individually and during a joint key line ministries meeting held on 16 March 2016 to discuss the project and its synergy with the respective initiatives (Annex V: Minutes of Interministerial meeting). The meeting on 16 March 2016, under the chairmanship of the General Secretariat of the Ministry of Environment, Urban Sanitation and Sustainable Development, brought together key Government Officials from the different sectors ministries in charge of institutional coordination of the projects in the region of Agadez. These include GIZ projects (ProMAP, PRODEC), AfDB projects (PROMOVARE and PISAN), PICCT project, and AREVA /CILSS projects. The meeting was an opportunity for the participants to update each other on projects development but also to highlight new initiatives which under development in the region. The different official have confirmed their commitments to work together and ensure synergy in projects execution. The officials expressed their commitment to support development and implementation of the Oasis rehabilitation project through inter alia provision of the cofinancing letters of their respective projects.

Various national departments, scientific and research institutions will support the project activities in the areas of natural resources management, population dynamic, GIS and design and implementation of Integrated Water and Natural Resources Management in the oasis and valleys ecosystems.

Key project stakeholders include:

#### 2.1. At local level

Stakeholders	Mandate	Possible role in the project
Municipalities of Agadez region	Planning and monitoring of the local activities	- Identification of project sites - Appropriation and sites management
Community property commission	The management of conflicts	- Securing land right of the sites properties and investments - Registration of sites in rural documents
Traditional leaders	Privileged negotiators of project and municipalities	- Conflict Management - Local communities mobilization
Local communities	Identification of priority actions	- Main beneficiaries of the project activities - Contribution to the durability of the project investments
Environment , agriculture and livestock Communal Offices	Monitoring of the activities and alignment with the national policies and strategies	- Municipal level technical partners in case of natural resources management , supervision and control of natural resources uses . - Participate in community based commission of property . - Monitoring and quality control of the activities.
NGOs (ONAT, GAGE, CARI-CADESS, etc. )	NGO issued from the communities of the focal areas in the local development and NRM	- Participation in social mobilization effort , stabilization - Local partners for project activities implementation

#### 2.2. Regional and Departmental/District levels

Actors	Mandate	Roles in the Project
The regionals and departmental Directions of Environment , agriculture , livestock and water resources of Agadez region	Monitoring of the conformity of the realization with national policies and strategies	- Key partners of the project management unit at regional and district levels\ - Participation in the development of national strategies and oasis management approaches

The Governor, District and Regional Council Offices	Heads of Territorial administrations	<ul style="list-style-type: none"> <li>- Participation in the project steering committee</li> <li>- control of the conformity of the project activities with governmental policies</li> <li>- Contribute in equitable sharing of resources and investments</li> </ul>
Projects and Programme at regional or District level	Implement their project activities in the region/district	<ul style="list-style-type: none"> <li>- Key project partners</li> <li>- Source of cofinancing</li> <li>- Participation as necessary to project steering committee</li> <li>- Participate in projects and programme coordination</li> <li>- Experience and lessons sharing</li> </ul>

### 2.3. At National Level

<b>Actors</b>	<b>Mandate</b>	<b>Roles in the Project</b>
Ministry of Environment, Urban Sanitation and Sustainable Development	<p>Definition of national policies and strategies on environment</p> <p>Monitoring of activities related to environment</p> <p>Stakeholders coordination on environmental issues</p>	<ul style="list-style-type: none"> <li>- Host the National Executing Agency</li> <li>- Ensure Government cofinancing</li> <li>- Facilitate project activities and collaboration with national and international partners</li> </ul>
Division of Land Restoration and Tree Planting, Ministry in Charge of Environment	Participation to piloting committee Supervision of regional , department Direction and community services of Environment	<ul style="list-style-type: none"> <li>- National Project Executing Agency</li> <li>- Co-Chair of the project Steering Committee</li> <li>- Host the project Management Unit</li> <li>- Facilitate stakeholders collaboration and consultation</li> <li>- Facilitate collaboration with the regional, departmental, Districts and communal administration</li> <li>- Project oversight at national level</li> <li>- Provide cofinancing</li> <li>- Second staff to the project</li> </ul>
National Department of Water Resources Management	Development of policies and guidelines on water resources management	<p>Support the understanding of water resources dynamic in the oasis and valleys.</p> <p>Advise on policies issues related to water resources management.</p>
Directorate of programming and study	In charge of resource planning within the Ministry of Environment, Urban Sanitation and Sustainable Development	<p>Contribution to elaboration of monitoring systems</p> <p>Participation for evaluation of the project</p>
Rural code permanent secretary	In charge of the training of municipalities and support the establishment of local conflicts resolution committees called Land Commissions	Support and advice for the priority actions of the Land Commissions
Faculty of Agronomy, University Abdou Moumouni Dioffo	<p>Academic training on all agronomic issues</p> <p>Research on agronomic areas</p>	<p>Scientific guidance and advice of oasis and valley agronomic issues</p> <p>Conduct focus research works on oasis agriculture, biodiversity and water resources management.</p>

Department of Geography, University Abdou Moumouni Dioffo of Niamey	Higher education on earth science and Human population Dynamic  Research on various thematic issues related to land tenure, population, migration, GIS, Landscape, water resources	Support assessment of Oasis ecosystem dynamic  Support socioeconomic assessment in the project area  Provide opportunities for investigation and knowledge generation related to oasis ecosystems  Support GIS work  Contribution in the design and monitoring of the impacts of SLM and SFM activities
National Institute of Agronomic Research	Research in Agronomic issues	Contribute in the understanding of irrigated agriculture  Support identification and promotion of adapted varieties Contribute in increasing fertility and productivity activities
National center of ecological and environmental supervision	Setting up and management of Ecological and Environmental supervision observatory Development of Environmental information system	Monitoring of the natural and anthropic effect on Environmental and natural resources such as desertification, biodiversity reduction and climate changes Monitoring the environmental quality indicators
Decentralization High Commission	Creating the favorable condition of effective setting up the municipalities	Support and advice on issues related to municipalities
3N High Commission	Coordination of rural development activity Ensure coherence between the projects and national programmes Resource mobilization	Ensure synergy of the project with 3 N initiative Participation in the project Steering Committee Mobilization of resources and partnership[ for the project

3. **Gender Equality and Women's Empowerment.** Are issues on gender equality and women's empowerment taken into account? (yes  /no ). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

In Niger the different institution are in charge of gender consideration in their activities. Gender promotion in operational level is achieved through programmes and projects. Also the CSO active in Gender e.g. CONGAFEN which coordinate 51 women NGO and Association, plays an important role in satisfaction of the strategic interest of women, amelioration of their living conditions and their working environment, the improvement of women status and promotion of women right. These organizations have a local presence throughout the country and represent all the population. They organize periodic forum of experience sharing, sensitization campaign, training sessions and advocacy. These organization face insufficient human, financial and material resources, but also lack of adequate knowledge and harmonization of their intervention on ground. They have limited access to communication facilities which limit their capacity of mobilization to adhoc intervention without clear anticipation. The project will work with this organization in its area to support gender mainstreaming and facilitate access to communication and build their capacity to ensure adequate gender consideration in the project intervention. The intervention will be in line of the national gender policy. The gender will be considered as the transversal issue to be integrated at all levels, for almost all the component of project, the men and women participation indicators will be outline . Also the specifics punctual activities of women will be supported to strengthen their resilience. These activities include: .

- management of agriculture space and provision of seeds
- technical support-advice for women producers of onion and garlic,
- technical, economical and organizational support-advice for gardening producers
- allowance of gardening seeds and small equipment for women organization

The project will conduct a study on the women implication in valorization of natural resources of oasis and valleys.

**4 Risks.** Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

<b>Risks</b>	<b>Mitigation measures</b>
Absence of will from stakeholders implicated ‘ financing of initiatives in the region to honour their commitment in time	Joint planning with other initiatives will be promoted to ensure complementarity
Inability of the municipalities to play their role in the co-management exercise	The state will provide necessary staff to municipalities in the framework of decentralization and accountability of the locals communities
Environment and climate change risks ( flood, drought , pest , wind erosion) can upset the project implementation process	Community resilience and capacity to adapt too strong shocks will be supported and disaster and crises management will be elements of project planning.
Residual insecurity linked the previous armed conflict in project area and flow of refugees from Lybia	Ownership and leadership of municipalities of project activities has proved to be very effective in good implementation of projects even in insecurity situation. The Agadez migration control structure will be involved as necessary.
Insufficient engagement of local communities to natural resources management	Consultation with communities representatives at all stages of project development. Livelihood options as incentives for local community commitment and engagement
Institutional instability due mainly to the changes of councils of municipalities as result of coming general elections.	The engagement of the municipal technical staff will ensure continuity.
Lack of implication of some users groups like herders may create conflict on resources use	The socioeconomic assessment which will be carried out will look at all possible stakeholders and their interest and the recommendation for their involvement will be implemented.
The anticipated cofinancing did not materialized for any other reason	The project ownership by the municipalities will be a guarantee to ensure long term investment of the municipal resources particularly those related to Mining returns. The joint implementation strategy which has shown to be efficient in pass can be explore by the project to support initiatives to execute their activities.

#### **5. Coordination. Outline the coordination with other relevant GEF-financed and other initiatives.**

This project has a lot of potential in supporting the Government policies toward food security. The Oasis and the valley are important areas of high agricultural production and more importantly it is the only one area in Niger where mediteranean agricultural products are cultivated due to its exceptional climate conditions. This potential will be complemented and synergy build with the GEF/IAP programme on Food Security “Fostering Sustainability and resilience for food security”and more specifically the IFAD/ Niger Child Project on “small Holders Agricultural Programme”. The project will also learn and coordinate with the following GEF projects:

- UNDP/GEF ID 3760: SPWA-BD: Integrating the Sustainable Management of Faunal Corridors into Niger's Protected Area System
- GEF ID 3796: SPWA-CC: Integration of Greenhouse Gas Emission Reductions in Niger's Rural Energy Service Access Program
- UNDP/GEF ID 3916: Implementing NAPA Priority Interventions to Build Resilience and Adaptive Capacity of the Agriculture Sector to Climate Change
- UNDP/GEF ID 4701: Scaling up Community-Based Adaptation (CBA) in Niger
- FAO/GEF ID 4702: Integrating Climate Resilience into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas through the Farmers Field School Approach
- WB/GEF ID 5252: GGW: Third Phase of the Community Action Program

The project will collaborate with government technical departments , NGO , projects and service providers which will assure the support as well as the technical training within the framework of the project. The 3N initiative has established a18

stakeholder's consultative framework call 'State and Partners Consultative Framework' in the region. The objective of this framework is to assess implementation of rural development activities in the region and consequently oriented future intervention according to the achievement in the region. The OCHA office of Agadez conduct annual mapping of stakeholders to ensure an equitable distribution of activities in the region. The project will rely on these existing frameworks to coordinate with various stakeholders. The project will support some advocacy and awareness raising activity of the framework. At local level, the project will support establishment and activities of, inter communal dialogue which will ensure local coordination and linkage with other initiatives. In order to assure a daily link with the municipalities and its population, the project will set up an antenna at all district level and one liaison office in each municipalities of the project area. The district and liaison offices will be coordinated respectively by the Officers in Charge of environment issues so as to ensure durability. The Ministry in charge of environment will establish a project Steering Committee which will include key regional, district and municipal levels key stakeholders, but also will include selected representative from national level representing key departments (Water resources, Agriculture, animal production/pastoralism, decentralization, environment, planning etc.). The Steering Committee will also include UNEP/DEPI/GEF Task Manager and other relevant bi and multilateral partners.

**6. Consistency with National Priorities.** Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes  /no ). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

The project fits in the emerging priorities of Niger's development policy, namely, through the framing note of the Sustainable Development Strategy and Inclusive Growth (SDDCI, 2012 to 2035), the Economic and Social Development Plan (SEOP, 2012 to 2015), and the 3N Initiative (Nigerians Feeding the Nigerians), strong political creeds and commitments which constitute the major orientations of the revival program.. Project implementation will contribute to achieving the objectives of Economic and Social Development Plan (PDES), namely those of **Axis 3: Food Security and Sustainable Agricultural Development**. In a more operational way, this project is in line with the Action Plan of the 3N Initiative strategy "Food Security and Sustainable Agricultural Development." This is directly linked with the following major axes of this strategy:

- **Axis 1:** Increasing and diversifying agro-forestry-pastoral and fishery production;
- **Axis 3:** Improving the Nigerians' resilience to food crises and to disasters.

Several national and sectors strategies and policies are elaborated and adopted by Niger in view to create sustainable socio economics development of the country. These include:

- Initiative 3N “the Nigeriens feed the Nigeriens** “ for food security, and sustainable agriculture and nutritional development. Approved by the government on 18 April of 2012, the strategy documented “i3n” convened a vision of the development of the authorities of 7<sup>th</sup> republic. The initiative of “3N “ is a strategy which is registered within the frame of sustainable agriculture development which entails the development of foot crops, livestock, forestry, wildlife and water availability. It is conceived at horizon of time of 2035 based on diagnostic of current problems, challenges, assets and opportunities. The strategy i3N –SAN/DA/D is the only framework of reference for intervention in case of food security and agriculture development of Niger. Its global objective is to contribute to fight hunger and malnutrition and the improvement of people wellbeing.
- National Forestry Plan:** The NFP vision 2021, is to reinforce the position of forestry in the rural development by effective implication of all the stakeholders in forest management and the respect of ecological, social and economic functions of forests. To achieve this, the NFP must improve the forest cover at least to 15% in order to satisfy the needs of population for wood energy and at the same time by conserving biodiversity and wildlife habitat particularly in sensitive areas.
- National Biodiversity Strategy and Action Plan (NBSAP):** Niger has elaborated and adopted respectively on 1998 and 2000 its strategy and action plan in framework of biological diversity (SNPA/DB) which is included in biological diversity program, one of the sixth (6) priority national environmental program for sustainable development which represented the 21 Agenda for Niger. It is also in line with article 6 of biodiversity agreement. NBSAP has been updated in 2014 and it represents a national consensus for biodiversity conservation of the country. The conservation of the northern Niger critical biodiversity is in the heart of the revised NBSAP.
- The Niger national strategy for wildlife conservation:** The strategy aim to develop the national network park and reserve in order to respond to the national biodiversity conservation objectives and sustainable development agenda. The strategy gives important place to biodiversity knowledge development, management, protection, valorization and sustainable development of wildlife and protected areas. It considers the economic importance of biodiversity. The Strategy is in line with the national sustainable development strategy and the Biodiversity 2011 – 2020 action plan.

**-The national strategy and action plan for climate change and variabilities (SNPA/CVC):** Elaborated in 2003, the SNPA/CVC has been developed within the framework of the United Nations Framework Convention to Combat Climate Change which the country has signed and ratified respectively on June 1992 and July 1995. Its elaboration resulted from a process coordinated by a technical committee on climate change and variability. The general objective of the strategy is to contribute to the stabilization of the GHG in the atmosphere at the rate which will avoid all anthropogenic disturbance.

**-Policy and Strategies for Water and Sanitation:** Developed in April 1999 and adopted by the Government of the Republic of Niger in October 2000, the policy document and strategies for water and sanitation. The implementation of the various actions listed in PHN -EDD obeys a participatory and iterative process and requires periodic updates to better meet the real concerns of development and the real demands of ecological preservation.

**-The Master Plan for Enhancement and Water Resources Management:** Adopted by the Government in February 1993, it is the repository for a renovation of the water policy in Niger. Indeed, it contains a significant work both inventory of existing and prospective examination of needs to satisfy. Today all data on the potential surface water and groundwater are taken from this document that needs to be updated to take into account the environmental, political, legal and conceptual changes intervened.

**Others relevant policies and frameworks relevant to the project include:**

- National Strategy for the Development of Irrigation and Collection of Running Water
- Niger Strategy on Small Irrigation
- Niger Strategy for Sustainable Development of Livestock production
- Framework Document of National Policy on Decentralization
- 10 Years Action Plan for the Implementation of Gender Policy
- National Strategy and Action Plan for Tourism Development

**- The UN integrated strategy on the Sahel (June 2013):** It was developed in response to the Security Council resolution 2056 (2012). The core objective of this strategy is to restore and promote *stability* in the Sahel region through *a coherent, comprehensive and coordinated approach encompassing governance, security, humanitarian, human rights and development aspects to address the root causes of challenges to peace and security*. The strategy is composed of 3 inter-related goals: Goal 1 on Governance with a strong focus on enhancing inclusive and effective governance throughout the region; Goal 2 on Security with a strong focus on strengthening the capacity of national and regional security mechanisms to address cross-border threats; and Goal 3 on Resilience with a strong focus on integrating development and humanitarian interventions to build resilience. By providing an opportunity to fully integrate the municipalities and local communities in the Oasis ecosystem management and by supporting sustainable management of the oasis ecosystem, the project will contribute to the goal 1 and 3 of the strategy. Already the project idea and expected results are communicated to the UN Special Envoy to the Sahel.

**-The UNDAF 2014 – 2018 for Niger** has identified 5 outcomes out of which the project is in line and will contribute to the achievement of the expected outputs. These outcomes include Outcome 1: By 2018, the vulnerable households and targeted communities increase their resilience on food security and nutrition, environment, disasters and social inclusion and Outcome 2: By 2018, the supported national, regional and local institutions utilized adapted mechanisms for the prevention/management of disasters and risk, sustainable environment management and food security.

The project will also support the Government of Niger to contribute in the achievement of many Aichi targets as presented in the table below:

Aichi Biodiversity Target	Headline indicators (in bold) and most relevant operational indicators	Project Contribution
<b>Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society</b>		



Aichi Biodiversity Target	Headline indicators (in bold) and most relevant operational indicators	Project Contribution
<p><b>Target 1</b> - By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.</p>	<p><b>Trends in awareness, attitudes and public engagement in support of biological diversity and ecosystem services</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Trends in awareness and attitudes to biodiversity (C)</i></li>   <li><input type="checkbox"/> <i>Trends in public engagement with biodiversity (C)</i></li> </ul>	<p><b>Number of National Forum on Oasis ecosystem conservation (Component 1)</b></p> <p><b>Number of Awareness raising events on the importance of Oasis forests and their conservation (Component 2)</b></p> <p><b>Number of tools established to conserve biodiversity (Creation of observatory for conservation of oasis ecosystem - Component 1; Integrated Land Use Plans component 2)</b></p>
<p><b>Target 2</b> - By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.</p>	<p><b>Trends in integration of biodiversity, ecosystem services and benefits sharing into planning, policy formulation and implementation and incentives</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Trends in number of countries that have assessed values of biodiversity, in accordance with the Convention (C)</i></li> <li><input type="checkbox"/> <i>Trends in integration of biodiversity and ecosystem service values into sectoral and development policies (C)</i></li> </ul>	<p>Number of Diagnosis report on ecological, socioeconomic (agriculture, pastoralism, migration, tourism etc) of Oasis and Arid Valley Forests - component 2)</p> <p>Number of sectoral policy developed which integrate biodiversity and ecosystem value (Creation of National Observatory of the Oasis and Arid Valley Forests -Component 1)</p>
<p><b>Target 4</b> - By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.</p>	<p><b>Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <i>Ecological limits assessed in terms of sustainable production and consumption (C)</i></li> </ul>	<p>Number of Diagnosis report produce on ecological, socioeconomic (agriculture, pastoralism, migration, tourism etc) situation of oasis ecosystems -Component 1)</p>
<p><b>Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use</b></p>		
<p><b>Target 5</b> - By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.</p>	<p><b>Trends in extent, condition and vulnerability of ecosystems, biomes and habitats</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Trends in extent of selected biomes, ecosystems and habitats (A) (decision VII/30 and VIII/15)</li> <li><input type="checkbox"/> Trends in proportion of degraded/threatened habitats (B)</li> <li><input type="checkbox"/> <i>Trends in condition and vulnerability of ecosystems (C)</i></li> <li><input type="checkbox"/> <i>Trends in the proportion of natural habitats converted (C)</i></li> </ul>	<p><b>Components 1, 2 and 3 of the project</b></p> <p><b>Number of ha of oasis and valleys restored and/or rehabilitated</b></p>

Aichi Biodiversity Target	Headline indicators (in bold) and most relevant operational indicators	Project Contribution
	<p><b>Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture</b></p> <ul style="list-style-type: none"> <li>□ <i>Trends in proportion of land affected by desertification (C) (also used by UNCCD)</i></li> </ul>	<p><b>Number of ha under SLM (Land Use planning - Component 2 and Oasis and Valey ecosystems conservation measures - Component 3)</b></p>
<p><b>Target 7</b> - By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.</p>	<p><b>Trends in pressures from unsustainable agriculture, forestry, fisheries and aquaculture</b></p> <ul style="list-style-type: none"> <li>□ Trends in population of forest and agriculture dependent species in production systems (B)</li> <li>□ <i>Trends in proportion of products derived from sustainable sources (C) (decision VII/30 and VIII/15)</i></li> </ul>	<p><b>Enabling environment for the conservation of oasis and valley ecosystems (component 1)</b></p> <p><b>Integrated Land Use Planning (Component 2)</b></p> <p><b>Conservation and restoration measures for oasis and valley ecosystems (Component 3)</b></p>
	<p><b>Trends in integration of biodiversity, ecosystem services and benefits sharing into planning, policy formulation and implementation and incentives</b></p> <ul style="list-style-type: none"> <li>□ Trends in area of forest, agricultural and aquaculture ecosystems under sustainable management (B) (decision VII/30 and VIII/15)</li> </ul>	<p><b>Integrated Land Use Planning (Component 2)</b></p>
<p><b>Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity</b></p>		
<p><b>Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services</b></p>		
<p><b>Target 14</b> - By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.</p>	<p><b>Trends in distribution, condition and sustainability of ecosystem services for equitable human well-being</b></p> <ul style="list-style-type: none"> <li>□ Trends in benefits that humans derive from selected ecosystem services (A)</li> <li>□ Trends in delivery of multiple ecosystem services (B)</li> <li>□ Trends in economic and non-economic values of selected ecosystem services (B)</li> </ul>	<p><b>Project components 1,2 and 3</b></p>
	<p><b>Trends in coverage, condition, representativeness and effectiveness of protected areas and other area-based approaches</b></p> <ul style="list-style-type: none"> <li>□ Trends in area of degraded ecosystems restored or being restored (B)</li> </ul>	<p><b>Oasis and valleys conservation and restoration measures (component 3)</b></p>

Aichi Biodiversity Target	Headline indicators (in bold) and most relevant operational indicators	Project Contribution
<p><b>Target 15</b> - By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.</p>	<p><b>Trends in distribution, condition and sustainability of ecosystem services for equitable human well-being</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Status and trends in extent and condition of habitats that provide carbon storage (A)</li> </ul>	<p><b>Restoration and Conservation measures of Oasis and valleys ecosystems (Component 3)</b></p>
<p><i>Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity-building</i></p>		
<p><b>Target 17</b> - By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.</p>	<p><b>Trends in integration of biodiversity, ecosystem services and benefit-sharing into planning, policy formulation and implementation and incentives</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Trends in implementation of national biodiversity strategies and action plans, including development, comprehensiveness, adoption and implementation (B)</li> </ul>	<p><b>Establishment of Oasis observatory (component 2)</b></p>
<p><b>Target 19</b> - By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>	<p><b>Trends in accessibility of scientific/technical/traditional knowledge and its application</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Trends in coverage of comprehensive policy-relevant sub-global assessments including related capacity-building and knowledge transfer, plus trends in uptake into policy (B)</li> </ul>	<p><b>Organization of national forum on restoration and conservation of oasis and valleys ecosystems and awareness raising activities (component 2)</b></p>
<p><b>Target 20</b> - By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.</p>	<p><b>Trends in mobilization of financial resources</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Indicators agreed in decision X/3 (B)</li> </ul>	<p>Establishment of a support fund for Oasis and Arid Valley Forests.</p>

**7. Knowledge Management.** Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The project will learn from the the experience of the UNDP/GEF Co-management of Air Tenere project implemented in the same region and the lesson learn from other project, the current project will support local development process through the strengthen of: i) the co-management agreement between the Government and municipalities for the oasis and valley ecosystems management, ii) the decentralization of natural resources management at the communal level through the local

co-management committee , iii) the mainstreaming of natural resources management in Communal Development Plans. At the institutional level, the project will continue partnership development including with local communities.

The lesson learn from the other UNDP/GEF project implemented in Eastern Niger include: establishment of the sand dune creation and land degradation observatory; seasonal dynamic of wind erosion; efficiency of the restoration approaches and amelioration of sand dune fixation technics. The project will capitalize on these achievements by exploiting the Terminal Evaluation report of that project and working with the project team which happen to be within the same ministry in charge of environment. The lessons learning will focus particularly for the development of oasis restauration strategy and development of good practices to rehabilitate, protect and conserve oasis and valley ecosystems. As Niger is participating in the Integrated Approach for Food Security in Sub-Saharan Africa, the project will develop synergy with this project and will contribute to the monitoring systems and development of key indicators for combating land degradation and ensuring food security.


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

**A. RECORD OF ENDORSEMENT<sup>23</sup> OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**  
(Please attach the Operational Focal Point endorsement letter(s) with this template. For SGP, use this SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
MR. Seydou Yaye	General Director of Planning GEF Operational Focal Point	MINISTRY OF ECONOMY AND FINANCE	4/12/2015

### **B. GEF AGENCY(IES) CERTIFICATION**

**This request has been prepared in accordance with GEF policies<sup>24</sup> and procedures and meets the GEF criteria for project identification and preparation under GEF-6.**

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Brennan Van Dyke Director, GEF Coordination Office, UNEP		August 12, 2016	Adamou Bouhari, UNEP Task Manager	+254719867657	Adamou.Bouhari@unep.org

### **C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)**

For newly accredited GEF Project Agencies, please download and fill up the required GEF Project Agency Certification of Ceiling Information Template to be attached as an annex to the PIF.

<sup>23</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

<sup>24</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

### Annex I: Description of the Air and Tenere National Nature Reserve:

The Air and Tenere National Nature Reserve is a national nature reserve in the West African nation of Niger. It includes several overlapping reserve designations and is designated as a UNESCO World Heritage Site. It covers both the eastern half of the Air Mountains and the western sections of the Tenere desert. It has been identified by Birdlife International as an Important Bird Area (IBA). The Air and Tenere UNESCO WHS was established in 1991, and marked as endangered in 1992. The entire reserve covers 77,360 km<sup>2</sup> which made it the second largest nature reserve in Africa, and the fourth largest in the world. The reserve includes two parts: (i) Air and Tenere National Nature Reserve, IUCN type IV. Established 1 January 1988 and covers an area of 64,560 km<sup>2</sup>. (ii) The Air and Tenere Addax Sanctuary. Strict Nature Reserve IUCN type 1 a and covers an area of 12,800 km<sup>2</sup>. The latter closed area protects the very rare Addax. The Reserve of Air and Tenere is the last bastion of Saharo-Sahlien wildlife in Niger. The isolation of the Air and the very minor human presence are the reasons for the survival in this region of numerous wildlife species that have been eliminated from other regions of the Sahara and the Sahel. The property contains a wide of habitats (living dunes, fixed dunes, stoney grave desert, cliff valleys, canyons, high plateaus, water holes, etc.) necessary for the conservation of the Saharo Sahelian biological diversity. These important natural habitats enable the survival of the three antelopes of the Sahara Desert on IUCN's Red List of threatened species" the Vulnerable (VU) Dorcus gazelle (*Gazella dorcas dorcas*), the Endangered (EN) Leptocere gazelle (*Gazella leptoceros*) and the Critical Endangered (CR) Addax (screw-horn gazelle) (*Addax nasomaculatus*).

### Annex II : Key scientific references of importance to the project

GIAZZI Franck, Consultant international, géographe, IGA, université Grenoble I and FARAN MAÏGA Oumarou, Consultant national, géographe, université de Niamey « Elaboration d'une stratégie de restauration/conservation des ressources naturelles et de gestion de l'écosystème saharien de la RNNAT et de ses zones connexes »

Pr AMBOUTA Karimou J.M, septembre 2006 : Rapport de caractérisation des sols des cuvettes et bas-fonds de la zone d'intervention du PLECO : possibilités d'exploitation agricole et de valorisation

Pr AMBOUTA Karimou J.M, octobre 2006 : Etude de faisabilité de création d'un observatoire national de suivi des phénomènes de l'ensablement au Niger

Consortium CADRES- CONSEILS & SERDD, 2006: Etude sur la capitalisation des expériences en matière de fixation des dunes

GIAZZI F. (1990) – Ressources en eau, milieux naturels et aménagement des vallées d'oued en zone endoréique sub-désertique (Niger), Thèse IGA/UJF Grenoble I, 450 p.

GIAZZI F. et al. (1996) – Etude initiale. La RNNAT (Niger). La connaissance des éléments du milieu naturel et humain dans le cadre d'orientations pour un aménagement et une conservation durables. Analyse descriptive. Eds MH/E, WWF, UICN, 678 p.

BOISSIEU de D. (2004) – Une aire protégée de la 3<sup>ème</sup> génération : la Réserve Naturelle Nationale de l'Aïr et du Ténére (Niger). Coom. Aux 1<sup>ère</sup> jour. de l'ATI de l'IRD « Des aires pro. aux terr. de conserv. » 14-15 déc. 2004, Orléans, 19 p.

ARMAND C. (1985) – *Exploitations des eaux souterraines et ressources disponibles. Evaluation de la situation actuelle dans six vallées de l'Aïr.* Note provisoire. BRGM/Niamey, 47 p.

BENDER H. et BERNADI W.G. (1989) – *Etude des sols et de l'eau souterraine dans la région d'Amaksoz (Tamazalak- Niger).* Rapport J.386.7, EPFZ, 6 p.

BERTON S. (1988) – La maîtrise des crues dans les bas-fonds. Petits et microbarrages en Afrique de l'Ouest, Eds GRET/AFVP/CF/ACCT, 474 p.

### Annex III: IUCN Red List species found in the Air Massif

Common Name	Scientific Name	IUCN Red List Category	Reference
Dorcus gazelle	<i>Gazella dorcas</i>	Vulnerable VU	<a href="http://www.iucnredlist.org/details/8969/0">http://www.iucnredlist.org/details/8969/0</a>
Leptocere gazelle	<i>Gazella leptoceros</i>	Endangered EN	<a href="http://www.iucnredlist.org/details/8972/0">http://www.iucnredlist.org/details/8972/0</a>

Cheetah	<i>Acinomyx jubatus</i>	Vulnerable VU	<a href="http://www.iucnredlist.org/details/219/0">http://www.iucnredlist.org/details/219/0</a>
Dama Gazelle	<i>Nanger dama</i>	Critically Endangered ER	<a href="http://www.iucnredlist.org/details/8968/0">http://www.iucnredlist.org/details/8968/0</a>
Barbary Sheep	<i>Ammotragus lervia</i>	Vulnerable VU	<a href="http://www.iucnredlist.org/details/1151/0">http://www.iucnredlist.org/details/1151/0</a>

Annex IV: Carbon Calculations:

*40,000 ha of Classified Forests identified and designate including provision of wildlife habitat and avoided GHG emissions of 1,112,754 tCO<sub>2</sub>-eq over a 10 year period*

Establishment of Classified Forests and active management will change regime from degradation and conversion to agricultural land to one of conservation and sustainable utilization of firewood and this will reduce halt the deforestation in these areas. Niger has annual deforestation rate of 2.33%. Assuming that by year 3 of the project the classified forests have been identified and deforestation being addressed, the project over a 10 year period (but calculated as 7 years due to start of addressing deforestation at year 3), 6,086 ha of deforestation will be prevented. For Harvested Wood Products (HWP), the above-ground biomass for Subtropical Mountain Forests is provided in Table 4.7 of IPCC 2006 Volume 4 ([http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4\\_Volume4/V4\\_04\\_Ch4\\_Forest\\_Land.pdf](http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/4_Volume4/V4_04_Ch4_Forest_Land.pdf)) as 50 tonnes dry matter/ha. The HWP was therefore estimated as 1.5 tonnes dry matter/ha based on the advice “The resulting HWP fractions (of total biomass) were 10% for the developed world and 3% for the developing world” in Searle, S and Malins, C. 2011. Estimates of carbon storage in wood products following land clearing. ICCT [http://www.theicct.org/sites/default/files/publications/ICCT\\_carbon\\_storage\\_in\\_wood\\_products\\_August\\_2011.pdf](http://www.theicct.org/sites/default/files/publications/ICCT_carbon_storage_in_wood_products_August_2011.pdf) (Niger falling within the developing world - 3%). The GHG emissions for preventing the clearing of forest are 1,112,754 tCO<sub>2</sub>eq over a 10 year period.

Under component 3 description it states “by updrading 40,000 hectares (1,000 ha of degraded land reforested, 19,000 ha of degraded annual crop area placed under improved SLM practices, and 20,000 ha of degraded classified forests placed under active management) of classified forests and land under SLM”, therefore:

*1,000 ha of degraded land reforested, ensuring sequestration of 185,011 tCO<sub>2</sub>eq over a 10 year period*

151,818 tCO<sub>2</sub>eq over a 10 year period.

*19,000 ha of degraded land reforannual crop placed under improved SLM practices, ensuring sequestration of 219,450 tCO<sub>2</sub>eq over a 10 year period*

*20,000 ha of degraded forests placed under active management, ensuring sequestration of 1,692,774 tCO<sub>2</sub>eq over a 10 year period*

An assumption is made that of the 40,000 ha of forest, 50% is moderately degraded. Under 10 years of active management the forests’ level of degradation will be improved to only low level of degradation. 1,692,774 tCO<sub>2</sub>eq over a 10 year period.

See FAO EX-ACT Calculations below.



E  
X  
A  
C  
T

## The EX-Ante Carbon-balance Tool (EX-ACT) - Standard Edition

Start

Description

Land Use  
Change

Crop  
production

Grassland  
Livestock

Land  
degradation

Inputs  
Investment

<b>Project Name</b>	<i>Integrated Management of Oasis Ecosystems of Northern Niger</i>						
<b>Continent</b>	Africa						
<b>Climate</b>	Warm Temperate Dry						
<b>Moisture regime</b>							
<b>Dominant Regional Soil Type</b>	Sandy Soils						
<b>Duration of the Project (Years)</b>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px 5px;">Implementation phase</td> <td style="text-align: right; padding: 2px 5px;">5</td> </tr> <tr> <td style="padding: 2px 5px;">Capitalisation phase</td> <td style="text-align: right; padding: 2px 5px;">5</td> </tr> <tr> <td style="padding: 2px 5px;">Duration of accounting</td> <td style="text-align: right; padding: 2px 5px;">10</td> </tr> </table>	Implementation phase	5	Capitalisation phase	5	Duration of accounting	10
Implementation phase	5						
Capitalisation phase	5						
Duration of accounting	10						

?

Climate ?

?

Soil ?

Niger Oasis and Valley Ecosystem

27

E  
X  
A  
C  
T

## The EX-Ante Carbon-balance Tool (EX-ACT) - Standard Edition

Detailed Results

Start

Description

Land Use Change

Crop production

Grassland Livestock

Land degradation

Inputs Investment

### 2.1. Deforestation

? AEZ map
Zone 1 = Subtropical humid forest
Zone 2 = Subtropical dry forest
Zone 3 = Subtropical steppe
Zone 4 = Subtropical mountains systems

Type of vegetation that will be deforested	HWP# (tDM/ha)	Fire Use? (y/n)	Final use after deforestation	Forested area (ha)				Deforested area (ha)		Total Emissions (tCO2-eq)		Balance	
				Start	Without *	With *	Without	With	Without	With			
Forest Zone 4	1.5	NO	Annual Crop	40000	33914	D	40000	D	6086	0	1,112,754	0	-1,112,754
Select the vegetation	0	NO	Select Use after deforestation	0	0	D	0	D	0	0	0	0	0
Select the vegetation	0	NO	Select Use after deforestation	0	0	D	0	D	0	0	0	0	0
Select the vegetation	0	NO	Select Use after deforestation	0	0	D	0	D	0	0	0	0	0
Select the vegetation	0	NO	Select Use after deforestation	0	0	D	0	D	0	0	0	0	0
Select the vegetation	0	NO	Select Use after deforestation	0	0	D	0	D	0	0	0	0	0
#Harvested Wood Products      * Note concerning dynamics of change : "D" corresponds to default/linear, "I" to immediate and "E" to exponential (Please refer to the guidelines)													
Total Deforestation										1,112,754	0	-1,112,754	

Tier 2

### 2.2. Afforestation and Reforestation

? AEZ map
Zone 1 = Subtropical humid forest
Zone 2 = Subtropical dry forest
Zone 3 = Subtropical steppe
Zone 4 = Subtropical mountains systems

Type of vegetation that will be planted	Fire Use? (y/n)	Previous land use	Area that will be afforested/reforested				Total Emissions (tCO2-eq)		Balance
			Without *	With *	Without	With			
Plantation Zone 4	NO	Degraded Land	0	D	1000	D	0	-185,011	-185,011
Select the vegetation	NO	Select previous use	0	D	0	D	0	0	0
Select the vegetation	NO	Select previous use	0	D	0	D	0	0	0
Select the vegetation	NO	Select previous use	0	D	0	D	0	0	0
Select the vegetation	NO	Select previous use	0	D	0	D	0	0	0
Select the vegetation	NO	Select previous use	0	D	0	D	0	0	0
* Note concerning dynamics of change : "D" corresponds to default/linear, "I" to immediate and "E" to exponential (Please refer to the guidelines)									
Total Af-/Reforestation							0	-185,011	-185,011

Tier 2

E  
X  
A  
C  
T

### The EX-Ante Carbon-balance Tool (EX-ACT) - Standard Edition

Detailed Results

Start

Description

Land Use Change

Crop production

Grassland Livestock

Land degradation

Inputs Investments

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**3.1. Annual systems (to be used also for pluri-annual systems such as cotton or sugarcane)**

**3.1.1. Annual systems from other LU or converted to other LU (please fill step 2.LUC previously)**

Description	Management options					Definitions?		Residue/ biomass burning	Yield (t/ha/yr)	Area (ha)			Total Emissions (tCO <sub>2</sub> -eq)		Balance
	Improved agronomic practices	Nutrient management	NoTill./residue s management	Water managemen t	Manure application	Yield?	Start			Without	With	Without	With		
														Start	
Annual after Deforestation	No	No	No	No	No	NO	250	0	6086	0	0	0	0	0	
Converted to A/R	?	?	?	?	?	NO		0	0	0	0	0	0	0	
Annual after non-forest LU	?	?	?	?	?	NO		0	0	0	0	0	0	0	
Converted to OLCU	?	?	?	?	?	NO		0	0	0	0	0	0	0	

**3.1.2. Annual systems remaining annual systems (total area must remain constant)**

Fill with your description	Management options					Definitions?		Residue/ biomass burning	Yield (t/ha/yr)	Area (ha)				Total Emissions (tCO <sub>2</sub> -eq)		Balance
	Improved agronomic practices	Nutrient management	NoTill./residue s management	Water managemen t	Manure application	Yield?	Start			Without	*	With	*	Without	With	
Millet	Yes	Yes	?	Yes	Yes	NO	400	0	0	D	10000	D	0	-115,500	-115,500	
Sorghum	Yes	Yes	?	Yes	Yes	NO	190	0	0	D	9000	D	0	-103,950	-103,950	
description 3	?	?	?	?	?	NO		0	0	D	0	D	0	0	0	
description 4	?	?	?	?	?	NO		0	0	D	0	D	0	0	0	
description 5	?	?	?	?	?	NO		0	0	D	0	D	0	0	0	
description 6	?	?	?	?	?	NO		0	0	D	0	D	0	0	0	
description 7	?	?	?	?	?	NO		0	0	D	0	D	0	0	0	
description 8	?	?	?	?	?	NO		0	0	D	0	D	0	0	0	
description 9	?	?	?	?	?	NO		0	0	D	0	D	0	0	0	
description 10	?	?	?	?	?	NO		0	0	D	0	D	0	0	0	
								<b>Total (ha)</b>	0	0		19000				

Tier 2

\* Note concerning dynamics of change : "D" corresponds to default/linear, "I" to immediate and "E" to exponential (Please refer to the guidelines)

**Check areas !**

**Total Annual Systems**      0      -219,450      -219,450



“Degradation” worksheet

The EX-Ante Carbon-balance Tool (EX-ACT) - Standard Edition

E X A C T

Start Description Land Use Change Crop production Grassland Livestock Land degradation Inputs Investment Detailed Results

5.1. Forest degradation and Management

? AEZ map Zone 1 = Subtropical humid forest Zone 2 = Subtropical dry forest Zone 3 = Subtropical steppe Zone 4 = Subtropical mountains systems

Type of vegetation that will be degraded	Degradation level of the vegetation			Fire occurrence and severity						Area (ha)			Total Emissions (tCO <sub>2</sub> -eq)		Balance			
	Initial State	At the end		Without			With			Start	Without	With	Without	With				
		Without project	With project		(y/n)	Periodicity (year)	Impact (% burnt)	(y/n)	Periodicity (year)							Impact (% burnt)		
Forest Zone 4	Moderate	Large	Low		YES	1	0%	NO			20,000	20,000	D	20,000	D	846,397	-846,377	-1,692,774
Select the vegetation	Select level	Select level	Select level		NO			NO			0	0	D	0	D	0	0	0
Select the vegetation	Select level	Select level	Select level		NO			NO			0	0	D	0	D	0	0	0
Select the vegetation	Select level	Select level	Select level		NO			NO			0	0	D	0	D	0	0	0
Select the vegetation	Select level	Select level	Select level		NO			NO			0	0	D	0	D	0	0	0
Select the vegetation	Select level	Select level	Select level		NO			NO			0	0	D	0	D	0	0	0
* Note concerning dynamics of change : "D" corresponds to default/linear, "I" to immediate and "E" to exponential (Please refer to the guidelines)																		
<b>Total Forest Degradation and Management</b>													846,397	-846,377	-1,692,774			

Tier 2

“Results” worksheet

The EX-Ante Carbon-balance Tool (EX-ACT) - Standard Edition

Start Description Land Use Change Crop production Grassland Livestock Land degradation Inputs Investments Detailed Results

Project Name		Integrated Management of t		Climate	Warm Temperate (Dry)		Duration of the Project (Years)		10			
Continent		Africa		Dominant Regional Soil Type	Sandy Soils		Total area (ha)		61000			
Components of the project		Gross fluxes			Share per GHG of the Balance					Result per year		
		Without	With	Balance	CO <sub>2</sub>			N <sub>2</sub> O	CH <sub>4</sub>	Without	With	Balance
		All GHG in tCO <sub>2</sub> eq			Biomass	Soil	Other					
		Positive = source / negative = sink										
Land use changes	Deforestation	1,112,754	0	-1,112,754	-1,080,955	-31,799	0	0	0	111,275	0	-111,275
	Afforestation	0	-185,011	-185,011	-167,507	-17,504	0	0	0	0	-18,501	-18,501
	Other LUC	0	0	0	0	0	0	0	0	0	0	0
Agriculture	Annual	0	-219,450	-219,450	0	-219,450	0	0	0	0	-21,945	-21,945
	Perennial	0	0	0	0	0	0	0	0	0	0	0
	Rice	0	0	0	0	0	0	0	0	0	0	0
Grassland & Livestocks	Grassland	0	0	0	0	0	0	0	0	0	0	0
	Livestocks	0	0	0	0	0	0	0	0	0	0	0
Degradation & Management		846,397	-846,377	-1,692,774	-1,588,253	-104,500		-9	-11	84,640	-84,638	-169,277
Inputs & Investments		0	0	0			0	0		0	0	0
<b>Total</b>		1,959,152	-1,250,838	<b>-3,209,989</b>	-2,836,715	-373,253	0	-9	-11	195,915	-125,084	-320,999
<b>Per hectare</b>		32	-21	<b>-53</b>	-46.5	-6.1	0.0	0.0	0.0			
<b>Per hectare per year</b>		3.2	-2.1	<b>-5.3</b>	-4.7	-0.6	0.0	0.0	0.0	3.2	-2.1	<b>-5.3</b>

REPUBLIQUE DU NIGER  
Fraternité-Travail-Progrès

MINISTÈRE DE L'ENVIRONNEMENT, DE LA  
SALUBRITÉ URBAINE ET DU DÉVELOPPEMENT  
DURABLE

SECRETARIAT GÉNÉRAL

**Compte rendu de la réunion d'échanges sur le cofinancement du Projet de Gestion Intégrée des Ecosystèmes Oasiens et Arides de l'Air pour Renforcer les Services des Ecosystèmes, augmenter la productivité et améliorer la Sécurité alimentaire**

Le 16 Mars 2016 s'est tenue au Ministère de l'Environnement, de la Salubrité Urbaine et du Développement Durable (MESU/DD), une réunion présidée par **Monsieur Bila Maïna**, Secrétaire Général (SG) dudit ministère. Etaient également présents à cette réunion les responsables des structures pilotant des projets et programmes intervenant dans la zone du projet en instruction ainsi que les cadres de la direction de tutelle du projet notamment la Direction Générale des Eaux et Forêts (DGEF) et la Direction des Aménagement Forestiers, du Reboisement et de la Restauration des Terres (DAF/R/RT). La liste des participants à la réunion est jointe en annexe.

L'ordre du jour de la réunion comportait deux points à savoir :

- L'état d'avancement de la préparation du Projet de Gestion Intégrée des Ecosystèmes Oasiens et Arides de l'Air pour Renforcer les Services des Ecosystèmes, augmenter la productivité et améliorer la Sécurité alimentaire;
- La revue des financements en cours et à venir dans la zone d'intervention du projet.

Dans son intervention introductive, le SG du MESU/DD a rappelé l'importance de ce projet pour le Niger et la nécessité d'une mobilisation de tous les acteurs pour son aboutissement. Il a également indiqué que dans le cadre de la préparation du projet, une mission de la DGEF a séjourné dans la région d'Agadez pour échanger avec les responsables techniques locaux des projets et programmes intervenant dans la région d'Agadez et les services techniques sur les financements disponibles. Cette mission a entre autres recommandé l'organisation d'une réunion de haut niveau pour mieux préciser les financements disponibles. La présente réunion est tenue dans le cadre de la mise en œuvre de cette recommandation.

**1. Etat d'avancement de la préparation du projet de Gestion Intégrée des Ecosystèmes Oasiens et Arides de l'Air pour renforcer les services des écosystèmes, augmenter la productivité et améliorer la sécurité alimentaire**

Dans le cadre du partage d'informations sur le niveau d'instruction du projet, il a été procédé à la présentation de la fiche d'identification du projet. Cette présentation a porté sur les points suivants :

- Description sommaire du projet ;
- Les composantes majeures du projet ;
- Les objectifs et résultats attendus du projet ;

- La zone d'intervention du projet ;
- La durée du projet ;
- Le budget prévisionnel et la nécessité des cofinancements attendus ;
- Les étapes à venir dans le cadre de la préparation du projet.

A l'issue des échanges qui ont suivi cette présentation, il a été recommandé à la Direction Générale des Eaux et Forêts (DGEF) et à l'agence d'exécution du projet à savoir le Programme des Nations Unies pour l'Environnement (PNUE) **d'accélérer l'élaboration, la validation et l'instruction du document du projet.**

## **2. Revue des financements en cours et à venir dans la zone dans la région d'Agadez**

Un tour de table des partenaires présents à la réunion a été fait pour la revue des financements disponibles et en négociation dans la zone d'intervention du Projet de Gestion Intégrée des Ecosystèmes Oasiens et Arides de l'Aïr pour Renforcer les Services des Ecosystèmes, augmenter la productivité et améliorer la Sécurité alimentaire. Dans ce cadre, le président de séance a demandé aux représentants des ministères et structure bénéficiaires des financements de dresser la liste des projets et programmes intervenant dans la zone du projet.

La liste des projets intervenant dans la zone d'intervention du projet en instruction est la suivante :

- Programme de promotion de l'Agriculture Productive (phase 1 et 2)
- Programme d'investissement et de capacitation des collectivités Territoriales (PICCT) ;
- Projet d'appui au développement agricole par l'Aménagement et la mise en valeur des périmètres irrigués dans la vallée de l'Irhazer, la plaine du Tamesna et l'Aïr ;
- Projet de mobilisation et de valorisation des ressources en eau (PROMOVARE) ;
- Programme Nigéro Allemand d'Appui à la Décentralisation et à la Bonne Gouvernance (Prodec) ;

En plus des projets ci-dessus dont le financement est déjà pris en compte dans la fiche d'identification du projet, les participants ont identifié les projets suivants :

- Projet Promotion de la Petite Irrigation pour la Sécurité Alimentaire (15,5 million d'Euros) ;
- Projet de renforcement de la résilience des communautés locales et lutte contre l'insécurité alimentaire au sahel (projet régional du Comité Inter état de Lutte contre la Sécheresse au Sahel).

A l'issue des présentations et des débats, les participants ont confirmé les cofinancements inscrits dans la fiche d'identification du projet et réaffirmé leur volonté de participer au cofinancement du Projet de Gestion Intégrée des Ecosystèmes Oasiens et Arides de l'Aïr pour Renforcer les Services des Ecosystèmes, augmenter la



productivité et améliorer la Sécurité alimentaire. Après avoir appelé à une synergie d'actions des projets et programmes, les participants ont convenu de signer, le moment venu, les lettres d'accord. Il a été recommandé à la Direction Générale des Eaux et Forêts (DGEF) et l'agence d'exécution du projet à savoir le Programme des nations Unies pour l'Environnement (PNUE) de **poursuivre l'évaluation des cofinancements disponibles des autres partenaires intervenant dans la région d'Agadez.**

Le président de séance

Bila Maïna

SG/MESU/DB



Le rapporteur

Yacouba Seybou

DAF/R/RT

