

## PROJECT IDENTIFICATION FORM (PIF)



**PROJECT TYPE:** FULL-SIZED PROJECT  
**TYPE OF TRUST FUND:** GEF TRUST FUND

### PART I: PROJECT INFORMATION

<b>Project Title:</b>	Rehabilitation and integrated sustainable development of Algerian cork oak forest production landscapes		
<b>Country(ies):</b>	Algeria	<b>GEF Project ID:</b>	
<b>GEF Agency(ies):</b>	FAO	<b>GEF Agency Project ID:</b>	642316
<b>Other Executing Partner(s):</b>	Directorate-General for Forests (DGF), Ministry of Agriculture, Rural Development and Fisheries (MADRP)	<b>Submission Date:</b>	1 March 2017
		<b>Resubmission Date:</b>	7 April 2017
		<b>Resubmission Date:</b>	25 October 2017
<b>GEF Focal Area (s):</b>	MFA	<b>Project Duration(Months)</b>	60
<b>Integrated Approach Pilot:</b> N/A			
<b>Name of parent program (if applicable):</b>	n/a	<b>Agency Fee (US\$):</b>	324,106

### A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAMME STRATEGIES

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Program)	Trust Fund	GEF Project Financing (\$)	Co-financing (\$)
BD: Objective 4: Mainstream biodiversity conservation and sustainable use into production landscapes and seascapes and sectors, Program 9: Managing the Human - Biodiversity Interface	GEF TF	2,548,402	15,825,211
LD: Objective 2: Forest Landscapes: Generate sustainable flows of forest ecosystem services, including sustaining livelihoods of forest dependent people, Program 3: Landscape Management and Restoration	GEF TF	863,242	7,912,600
<b>Total project costs</b>		3, 411,644	23,737,811

### B. INDICATIVE PROJECT DESCRIPTION SUMMARY

**Project Objective:** To sustainably manage, conserve and sustainably harvest Algeria's globally significant cork oak forest ecosystems

**Indicator:** # of ha of cork oak forest production landscapes that integrate conservation and sustainable use of biodiversity into management and use proven SLM practices. **Target:** 20,000 (direct) – 350,000 ha (indirect).

Project Component	Financing Type	Project outcomes	Project Outputs	Trust Fund	GEF Project Financing (\$)	Confirmed Co-financing (\$)
Component 1: Piloting of sustainable management, conservation and sustainable harvesting of Algeria's globally significant cork oak forest ecosystems – at diverse and representative sites.	Inv	Outcome 1.1: At three globally significant and diverse sites, sustainable forest management systems developed and implemented that conserve biodiversity and provide sustainable revenue for local populations  <b>Indicator:</b> # of sustainable forest management systems developed.	1.1.1: A sustainable forest management system developed and implemented that conserves biodiversity and provides sustainable revenue for the local population in a highly populated area in eastern Algeria (Taouririt Ighil Forest in Bejaia Wilaya).  1.1.2: A sustainable forest management system developed and implemented that conserves biodiversity and	GEF TF	1,500,000	3,000,000

		<p><u>Target:</u> 3 (for Taouririt Ighil Forest in Bejaia Wilaya<sup>1</sup>, Beni Idder forest in Jijel Wilaya, and Hafir forest in Tlemcen Wilaya).</p>	<p>provides sustainable revenue for the local population in a low populated area in eastern Algeria (Beni Idder forest in Jijel Wilaya)</p> <p>1.1.3: A sustainable forest management system developed and implemented that conserves biodiversity and provides sustainable revenue for the local population in a lowly populated, mixed oak forest area in western Algeria (Hafir forest in Tlemcen Wilaya).</p>			
Component 2: Sustainably creating value from cork oak ecosystem products, goods and services.	TA	<p>Outcome 2.1: Value chains strengthened for priority Non Timber Forest Products (NTFP) in cork oak forests.</p> <p><u>Indicator:</u> increased value of market for 2 selected NTFPs</p> <p><u>Target:</u> to be determined during PPG</p>	<p>2.1.1 Three site specific inventories and one national inventory of NTFPs in cork oak forests.</p> <p>2.1.2 Traceability system for at least two NTFPs, including cork.</p> <p>2.1.3 Economic value-adding tools (e.g. labels, certificates) for at least three NTFPs.</p>	GEF TF	300,000	2,087,381
	TA	<p>Outcome 2.2: A basis for the development and implementation of incentives for forest ecosystem services (IFES).</p> <p><u>Indicator:</u> increase of value of resources flowing to SFM from IFES</p> <p><u>Target:</u> TBD during PPG</p>	<p>2.2.1 An inventory of potential ecosystem services at the pilot sites.</p> <p>2.2.2: Stakeholder analysis – notably the beneficiaries of the ecosystem services and the custodians of the concerned forests.</p> <p>2.2.3 Report determining monetary values - for at least one ecosystem service at each pilot site.</p> <p>2.2.4: Raised awareness, locally and nationally, of the importance of forest ecosystem services and the potential usefulness of PFES for all stakeholders.</p> <p>2.2.5 Clear plan of action for developing PFES at three cork oak forests in Algeria.</p> <p>Output 2.2.6: The implementation of selected action plans at the regional level for a selection of NTFP through appropriate incentive mechanisms</p>	GEF TF	300,000	2,087,381

<sup>1</sup> Wilaya is the first administrative sub-division of the country. Each Wilaya is led by a Governor.

Component 3: Replication and upscaling of successful approaches	Inv	Outcome 3.1: Sustainable management and sustainable harvesting plans initiated at all cork oak forest ecosystem sites across Algeria.  <u>Indicator</u> : # of hectares of cork forest with integrated management plans.  <u>Target</u> : 350,000 hectares, of which 229,000 hectares is rich in biodiversity.	3.1.1 A national technical platform to support cork oak forest ecosystems.  3.1.2 Typology of cork oak forest ecosystems.  3.1.3 Database on Algeria cork oak forest ecosystems.  3.1.4 Guidelines on approaches to participatory, integrated management of cork oak forests that conserve biodiversity.  3.1.5 Trained forestry staff in all Forest Wards across Algeria with cork oak forests.  3.1.6 Management plans for all Wards in Algeria with cork oak forests.	GEF TF	900,000	13,699,042
	TA	Outcome 3.2: Project monitored and Project results captured and lessons learnt widely disseminated.  <u>Indicator</u> : An M&E plan and a communication strategy developed and implemented  <u>Target</u> : 1 M&E Plan, 1 Strategy.	3.2.2 Project Monitoring & Evaluation.  3.2.2 Project Mid-term and Final Evaluations.  3.2.3 A Communication Strategy developed and implemented.	GEF TF	249,644	1,737,007
<b>Subtotal</b>				GEF TF	3,249,644	22,610,811
<b>Project Management Costs (PMC)</b>				GEF TF	162,000	1,127,000
<b>Total Costs</b>				GEF TF	3,411,644	23,737,811

If multi-trust fund, breakdown of PMC across trust funds to be provided in small table here: N/A

Up to \$2 million, PMC cap is 10% of subtotal. Over \$ 2million, PMC cap is 5%. PMC should be charged proportionately to focal areas (see table D). PMC to be charged proportionately to focal areas.

#### 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	MADRP	Grant	7,177,811
		In-Kind	16,560,000
<b>Total Co-financing</b>			<b>23,737,811</b>

#### D. INDICATIVE TRUST FUND RESOURCES (\$) REQUESTED BY AGENCY, COUNTRY AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country Name/Global	Focal area	Programming of Funds	GEF Project Financing (\$ (a)	Agency Fee (\$ (b)	Total (\$) (a + b)
FAO	GEF TF	Algeria	BD	N/A	2,548,402	242,098	2,790,500
FAO	GEF TF	Algeria	LD	N/A	863,242	82,008	945,250
<b>Total Grant Resources</b>					<b>3,411,644</b>	<b>324,106</b>	<b>3,735,750</b>

## E. PROJECT PREPARATION GRANT (PPG)

PPG Grant is requested.

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

Project Preparation Grant Requested: \$ 150,000					Agency Fee:\$ 14,250		
GEF Agency	Trust Fund	Country Name/Global	Focal area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee (b)	Total c = a + b
FAO	GEF TF	Algeria	BD	N/A	100,000	9,500	109,500
FAO	GEF TF	Algeria	LD	N/A	50,000	4,750	54,750
<b>Total PPG Amount</b>					<b>150,000</b>	<b>14,250</b>	<b>164,250</b>

## F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS

Provide the expected 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	229,000* hectares
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management.	350,000** hectares
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	- Water-Food-Energy-Ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins; - 20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	N/A
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO2 equivalent mitigated (include both direct and indirect)	N/A
5. Increase in Phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern.	- Disposal of 80,000 tons of POPs (PCB, obsolete pesticides) - Reduction of 1000 tons of Mercury - Phase-out of 303.44 tons of ODP (HCFC)	N/A
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks.	- Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries - Functional environmental information systems are established to support decision-making in at least 10 countries	N/A

\*This target covers all the existing cork oak forest ecosystems in Algeria which are productive and can be considered biodiversity significant. It is an indirect target.

\*\* This includes the 229,000 hectares with significant biodiversity. In addition, it includes 121,000 hectares of land which either contains degraded cork forest ecosystem or is highly degraded but is appropriate for cork forest and will be restored. It is an indirect target.



6. Cork forest ecosystems are highly productive in ecological and economic terms – notably in terms of non-timber forest products (NTFP) and ecosystem services. Some of the many NTFPs are cork, honey, pine nuts, mushrooms, carob-tree fruits, mastic oil and myrtle, in addition to a large number of medicinal, aromatic and edible crops. Ecosystem services include hydrological regulation, carbon offsetting, habitat, hunting and eco-tourism. Cork is perhaps the most well-known NTFP product - and is typically the single most economically valuable product. A recent study in a similar context in Tunisia estimated the annual productive value of cork from cork oak forests to be over €80/hectare.<sup>6</sup> However, given the many other valuable goods and services, this is probably a small fraction of the overall value of the ecosystem,

### **Cork forests – biodiversity value**

7. Flora in Algeria is especially rich as it lies at the intersection of two phytochorions – the *holarctis* and the *paleotropis*. There are a known 15,021 species from all taxonomic groups in Algeria, of which 5,128 have been introduced. Today, 13,318 species have been inventoried at the national level<sup>7</sup>. Forest ecosystems (1.72%) cover an estimated surface of 4.1million ha. Though this is limited in comparison to other ecosystems, they play a vital role.
8. The intervention area for this Project includes all forest in which cork oak is either the dominant species or one of several species present and land that is suitable for cork oak forests. In all cases, the cork oak forests lie contiguous with other forests – typically forests dominated by the holm oak or the holly oak that occupy areas at different altitude or with different rainfall regimes. Together, these forests form an interesting and diverse mosaic of habitats which have provided economic and cultural functions throughout history and pre-history.
9. The cork forest ecosystems are naturally thick forests, typically lying on steep land across the lower mountainous regions of northern Algeria. In many cases the oak forests grow on low-fertile, stony ground. In terms of biodiversity, cork forests ecosystems tick all right boxes, notably:
  - The ecosystems are limited in geographical scope to parts of the western Mediterranean;
  - The ecosystems are of high economic and cultural value to local populations;
  - The ecosystems are species rich, with a very rich undergrowth. For example, typically, each 0.1 hectare plot of cork forest contains over 60 flowering species. This includes many endemic species;
  - The forest ecosystem provides a valuable habitat for a large number of endemic and endangered species – both fauna and flora;
  - They contain a large number of species utilized by man.
10. According to WWF<sup>8</sup>, cork oak forest is one of five forest types in the *Mediterranean Woodland and Forest Ecoregion*. The eco-region covers a variety of substrates and climates that lead to a diverse mix of vegetation including holm oak forests, cork oak forests, wild olive and carob woodlands, as well as extensive Berber thuya forest. The cork oak forests are considered particularly rich, with a very rich and diverse undergrowth that provides a productive habitat for fauna species. For example, reptile diversity is high and the region harbors charismatic large mammals, including the rare and endangered Barbary leopard. Further, rates of endemism in the flora are thought to be high, and this ecoregion is known to be rich in mammal species. It notably hosts an outstanding bird community - over 120 species present in the ecoregion.
11. Some cork oaks lie in the WWF *Mediterranean Conifer and Mixed Forests Ecoregion*<sup>9</sup>. This eco-region also has great floral endemism (with over 450 strictly endemic species) and high faunal diversity. Notably, this eco-region, in the Tellien mountains along the Algeria-Tunisia border, hosts the last existing populations of the only deer species endemic to Africa - *Cervus elaphus subsp. Barbarus*. These oak forests are also a last refuge for the serval (*Felis serval*) which has been almost extirpated in the Mediterranean region.
12. According to WWF, other notable mammal species found in these regions include: smaller mammals such as *Atelerix algirus*, *Elephantulus rozeti*, *Atlantoxerus getulus*, *Gerbillus campestris* and large mammals including the red fox (*Vulpes vulpes*), common jackal (*Canis aureus*), caracal (*Felis caracal*), *Genetta genetta*, *Herpestes ichneumon*, the wild

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<sup>6</sup> “Mediterranean Forests: Towards a better recognition of the economic and social value of goods and services through participative governance”, the Food and Agriculture Organization of the United Nations and Plan Bleu pour l’Environnement et le Développement en Méditerranée (2016)

<sup>7</sup> CBD 5th NBSAP of Algeria

<sup>8</sup> See <http://www.worldwildlife.org/ecoregions/pa1214>

<sup>9</sup> See <http://www.worldwildlife.org/ecoregions/pa0513>

boar (*Sus scrofa*) and the polecat ferret (*Mustela putorius*). This ecoregion may also harbor Barbary leopards (*Panthera pardus panthera* – a critically endangered species, although these rare cats are mostly confined to remote montane and rugged foothill areas), and possibly to barbary macaques (*Macaca sylvanus*, globally Endangered) and barbary sheep (*Ammotragus lervia* VU). Finally, the two eco-regions provide the only habitat for the globally endangered Algerian nuthatch (*Sitta ledanti*) - this small passerine bird is the only bird species endemic to Algeria.

13. The Algerian government has used the Important Plant Area (ZIP) as a means to determine and prioritise important biodiversity areas. A ZIP is defined as a "natural or semi-natural site with an exceptional botanical wealth and/or a remarkable plant composition. These plants are either rare, threatened and/or endemic and/or have a high botanical value". Algeria's latest report to the CBD identifies 18 ZIPs, of which five are entirely within the cork oak forest ecosystems (i.e.: El Kala 2, Edough Peninsula, Belezma, Babor Chain and Taza) and three others are partly cork forests (i.e. Akfadou, Chrea and Theniet El Had). This demonstrates the rich value of the biodiversity in the cork forest ecosystems.<sup>10</sup>

### **The loss and degradation of the Algerian cork forests**

14. The Algerian cork Forests have suffered greatly in recent decades due to anthropogenic pressure. This is indicated by the following facts, statistics and observations:
- Declining overall area: as of 2008, only 350,000ha of the original 440,000ha extent contained any cork oak forest. Of this, only 229,000ha were considered productive;
  - Declining quality of remaining cork forest ecosystem areas: although there are no up-to-date, official figures, existing reports and simple observations suggest that large areas of the existing cork forest contain few trees and are essentially scrubland;
  - Aging population: 70% of cork forests consist of old stands, from which the cork has already been harvested several times and productivity is decreased. Many areas of cork forests contain no young trees;
  - Declining cork production. Nationally, annual production has declined from 4,000,000 quintals to 90,000 quintals in recent decades;
  - The fragmentation of the remaining cork forests. Although this is initially a threat for large fauna utilizing the ecosystem habitat, excessive fragmentation is becoming a threat to the healthy floral population, including of the cork oaks themselves;
  - Soil erosion: the decreasing quality and quantity of land cover in many areas is leading to the increasing occurrence of landslides and increased wind/water erosion.

### **Threats and root causes of cork forest degradation**

15. The Algerian cork forest ecosystems face a range of direct threats which are leading to the above loss and degradation. In general, the mix and scale of the threats differs from site to site, and from Wilaya to Wilaya. However, in all cases, the threats combine to form a cocktail and have an impact far greater and more irreversible than could be created by any individual threat.
16. Fire is the single most prevalent and most damaging threat. Although cork oak is fire resistant, fire has the following impacts:
- fires destroy the undergrowth, removing many species apart from cork oak;
  - fires can destroy or undermine the growth of young cork oak;
  - repeated fires, a common occurrence, ultimately weaken even healthy cork oak individuals;
  - fires, by reducing vegetative coverage, facilitate soil erosion;
  - fires damage the soil layers, facilitating land degradation;
  - fires contribute to ecosystem fragmentation – undermining the habitat for faunal species;
  - fires facilitate the entry/emergence of many other threats such as disease, agricultural encroachment, unsustainable grazing, and invasive species.
17. Official figures suggest that each year 9,000 hectares of cork oak forests are destroyed by fire in Algeria. In almost all cases, the fires are caused by human activities, to some extent accidental, to some extent intentional.

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<sup>10</sup> Algeria's 5<sup>th</sup> Report on the Implementation of the CBD (Ministry of Land Management and Environment, 2014)

18. **Encroachment** Northern Algeria is densely populated. Since the late 1990's, the government has encouraged the population to return to rural areas. However, due to the mountainous nature, there is a scarcity of good land for agriculture or urban expansion. Hence, there is a pressure to convert forests to public buildings, or to domestic buildings, or to small-scale industrial buildings or to small-scale agriculture. This latter pressure, notably to convert to olive orchards, is particularly strong. Although no official figures are available, simple observations reveals the extent of this encroachment, and the impact it has on forest coverage and ecosystem fragmentation.
19. **Unsustainable harvesting** There are two notable aspects to this. *First* is the unsustainable harvesting of some NTFP, notably medicinal or aromatic plants, such as mushrooms, heather and mastic oil. This harvesting is done almost entirely by local people. Further, in some areas there is over-harvesting of cork oak acorns, which contributes to the failure of forests to rejuvenate. In addition, the act of over harvesting leads to damage to the surrounding habitat, and further facilitates the entry of other threats. *Second* is unsustainable grazing, notably by cattle. This is a relatively new phenomenon, and often occurs after fires. It leads to overgrazing of young cork oak and is therefore a direct cause of the death of young oak trees and the failure of forests to rejuvenate. It also leads to land degradation. Unsustainable harvesting is typically done entirely by local people. For example, as stated in Algeria's 5th Report to the CBD<sup>11</sup>: *"Forests are often required by pastoralists as a source of grazing for livestock. In Algeria, forest land contains 1,300,000 cattle, 600,000 goats and 400,000 sheep which is respectively 80, 30 and 25% of the total livestock. This is estimated to be twice the sustainable carrying capacity"*.
20. **Invasive species, disease and parasites** Current understanding and data is limited, but these threats are generally thought to be lower in scale than the above three threats at the national level, although at certain sites they are very significant. At all points, these provide an extra stress on an already stressed ecosystem, contributing to its degradation and helping to tip it into irreversible decline or loss altogether. Examples include:
- Invasion of acacia into cork forest ecosystems, which is less conducive to undergrowth and undermines biodiversity;
  - Invasion of Aleppo pine into cork forest ecosystems, which is less conducive to undergrowth and undermines biodiversity;
  - Damage to cork oak individuals by disease or parasite, such as the gypsy moth caterpillar.
21. **Climate Change** Climate change is known to be a threat to biodiversity and to forest ecosystems, although very little factual evidence and data is available for the cork oak forest ecosystems in Algeria. Climate change in northern Algeria will lead to: more intense hot periods, more intense and extensive dry periods, increased averages temperatures, and fewer cool days/nights. Each of these can affect the cork oak, its productivity, the health of its ecosystem, and many of the other species in the ecosystem. Further, climate change is understood to be a cross-cutting threat in that mostly exacerbates or facilitates other threats – such as fire, disease, alien invasion and fragmentation.
22. According to Algeria's National Biodiversity Strategic Action Plan (NBSAP, 2016)<sup>12</sup>, climate change will affect forest ecosystems through the following vectors: increasing fire, increasing desertification, drying of water courses, increased landslides, more intense storms and increased temperatures. Further, the NBSAP observes already the following: *"the main vulnerabilities concern the temperature and the droughts that threaten the floristic species; Combined with deforestation, they are the main threats to Algerian forests, particularly in terms of degradation and / or fragmentation of habitats. Similarly, increasing the imbalance of the pastoral burden coupled with worsening erosion reduces the resilience of the ecosystem"*. Finally, it is known that the distribution of many plant species will change – notably moving higher in altitude, and this may fundamentally threaten ecosystems and habitats.<sup>13</sup>
23. It is important to note the degradation of the cork oak forests is a complex cycle, with often the initial factor being fire, which weakens the ecosystem and facilitates the entry of the many other threats, starting a downward spiral of degradation, decline and ecosystem loss.

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<sup>11</sup> Ministry of Land Management and Environment, 2014

<sup>12</sup> Ministry of Water Resources and Environment, 2016

<sup>13</sup> Ministry of Land Management and Environment, 2014

## Land degradation

24. The cork oak forests of northern Algeria provide a range of environmental goods and services – both locally and globally significant. These include: habitat, water conservation, soil conservation and carbon retention. These also include the provision of cork, food, medicine, construction material, energy, recreation as well as certain cultural goods and the conservation of biodiversity. They also provide a mechanism for humans and other species to adapt to climate change. The degradation of the forest ecosystem is undermining this provision of goods and services, which has both local and global impacts. As noted in the National Action Programme to Combat Desertification (NAP, 2004)<sup>14</sup>, in Algeria “*the forests seem to be sliding rapidly on a path of progressive degradation of the main species and their replacement by the scrub and brush*”.
25. This degradation of forest land is one and the same as the degradation of the cork oak forest ecosystem. It is caused directly by the factors listed above: fire, encroachment, unsustainable harvesting, invasive species, disease and climate change.

## The Ideal Situation

26. Historical studies and studies in other parts of the world suggest that cork oak forest ecosystems are able to provide the basis for the sustainable economic development of local communities whilst, at the same time, preserving the biodiversity wealth in terms of genes, species diversity, endemism, important species and ecosystem. Further, historical studies and studies in other parts of the world suggest that, in many conditions, the sustainable utilization of cork forests in a biodiversity friendly manner, over the medium-long term, is *the most economically effective* utilization of the ecosystem – that is conservation makes more economic sense than conversion or degradation. These findings would be even more valid if the full range of goods and services provided by cork oak forest ecosystems are considered in the economic analyses.
27. Hence, the ideal situation is a sustainable management and utilization of the cork oak forest ecosystems in order to generate an integrated and diverse set of economic, environmental and social goods and services, whilst at the same time preserving the globally significant biodiversity.
28. Currently, a range of barriers exist to reaching this ideal situation. These barriers are introduced in the following section.

## Barriers to a sustainable, biodiversity-friendly, integrated approach to cork forest management in Algeria

### Socio-Economic Barriers

29. The local rural population is poor and faces short-medium term economic challenges. This situation has intensified in recent years as (i) the government has encouraged people to return to rural areas and (ii) national oil revenues have declined and, subsequently, so have the subsidies and programmes to support the poor. As a result, in the short term, many poor people see no alternative but to harvest the forest. As, in many cases, they are not foresters, they harvest the forest in the only way they know, which is often a none-sustainable way. This notably includes: (i) converting forest to agriculture; (ii) over-harvesting NTFPs; (iii) entering the forest with large numbers of cattle; and (iv) unsustainably collecting wood. Critically, local people with little knowledge of forest management techniques, and little stake in forest value, use fire as a way to clear forest before entering the forest.
30. The poverty and lack of clear economic opportunities leads local people, and therefore many local politicians, to perceive the forest as a barrier to economic development and to escaping poverty. Many local people resent the forest, and resent efforts to conserve forest, as they see this as directly limiting their economic opportunities.
31. An economic system that greatly undervalues the many ecosystem goods and services. As seen in the previous sections, cork oak forests produce a vast range of products and services on a sustainable basis such as cork, NTFP and environmental services. However, the current economic system does not convert these products and services into an economic value for local people or the national economy. The products are generally not integrated into local, regional or national markets – meaning their value on the market is greatly underestimated. In many cases they are simply not harvested, and when they are harvested there is little value-adding. Finally, the environmental services are generally not well understood and the mechanisms to convert them into an economic value are not developed in Algeria.

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<sup>14</sup> DGF, Ministry of Agriculture and Rural Development, 2014

32. The cork sector – harvesting, processing, distribution and sales - is particularly undervalued in Algeria. Studies suggest that the current revenue from cork could be greatly increased, with great increases in revenue to local people, and thereby providing strong incentives to local people to protect and sustainably manage the forests. Currently, harvesting of cork is limited and falling, and the demand for Algerian cork greatly outstrips supply. Unfortunately, over the past decades, the Algerian cork sector has not been able to add value to its products, and has not been able to exploit international markets. Technology and practices are outdated at each step in the process. Many barriers lie in the regulatory and support systems. Two recent studies supported by GiZ have determined the full potential of the sector, as well as identifying the barriers and the steps to be taken.<sup>15</sup>

#### Barriers to Effective Forest Management

33. The sustainable harvesting of cork oak forest ecosystem requires adequate forest management. This was common until the 1960's, even 1970's, when population pressure was low and the forest sector had high capacity. However, forest management in Algeria is currently constrained by several factors.
34. Outdated approaches and attitudes to forest use. During the 1990s, the population left forest areas and foresters were unable to work in forests. This led to a sustained break in forestry activities. The forestry sector never fully recovered and, in many ways, the approach to forestry has remained unchanged since. The approach to forestry still rests on the following principles: forestry is seen as an isolated sector that can be developed in isolation from other sectors and stakeholder groups; forests are seen as something to be protected – something to keep the local people out of, rather than as a resource for all people, and; forest management often focuses on a single product or species – e.g. cork from cork oak – and the vast diversity of products and potential economic value is not appreciated. Although these attitudes are starting to change, particularly at the national level, they still drive forest management at the local level.
35. Shortage of management skills The situation in the 1990's meant that foresters were unable to practice forestry for over a decade. Subsequently, it took some time to re-start forestry programmes, and so for almost two decades forestry practices stopped or were very limited. During this period: (i) many experienced foresters retired; (ii) very few new foresters were employed, and those that were employed could not obtain field experience and; (iii) even the experienced foresters that remained in employment did not obtain much field experience. As a result, by the 2000's, there was a great dearth in experienced foresters, and this situation has not been fully reversed. This applies to experience in basic forestry practices (e.g. planting, removing cork, or preventing fires) and to experience in integrated, participatory planning approaches.
36. Shortage of tools and information The socio-economic situation has changed considerably since the 1990's. Further, the extent of forest degradation has evolved considerably. Also, the threat to forests have evolved – fires, climate change and encroachment were not significant threats in the late 1990s'. Hence, up-to-date information and tools on the socio-economic situation, the forestry situation and the threats to forests have been largely absent since the early 2000's, although some efforts are being made to address this.
37. Inexistence of successful models and examples Local models and examples of how to approach sustainable, integrated forestry of cork oak forest ecosystems are an effective basis for developing capacity, changing attitudes and provide a basis for developing tools and collecting information. However, at present, in the Algerian cork oak forest ecosystems, there are no valid examples to serve that purpose. Some models of managing protected areas (national parks) are being developed with the support of international partners, but these do not apply to the large areas of unprotected forests which should be harvested sustainably. This lack of successful models is in part due to the fact that Algeria has benefited from limited international cooperation in the forestry sector in recent years.

### 1.3 Baseline scenario and any associated baseline projects

#### **Management of Forests in Algeria**

38. The vast majority of forests and forest land in Algeria is state owned. Forest management is therefore almost entirely through the public sector. Public Administration in Algeria is through several layers: National, Wilaya (or province), Daira (or district) and Baladiya (commune). However, forest management follows a different structure more appropriate to the physical geography of the forests. At the national level the General Department for Forests (Directorate-General

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<sup>15</sup> « Plan de développement d'un système de traçabilité pour le chêne-liège et autres produits forestiers non ligneux en Algérie » (GiZ/DGF, 2015) and « Analyse d'identification des chaînes de valeur - Produits forestiers non-ligneux (PFNL) » (GiZ/DGF, 2014)

of Forests, DGF) is responsible for forest policy and for national forest programmes, and for providing supervision and guidance to forest actions across the country. Next, at the Wilaya level, there is a Forest Conservation Officer (*Conservateur de Forêts*, CF). The CF is responsible for forest and forest programmes in the concerned Wilaya. Within the Wilaya, the forests are divided into Forest Wards (or *Circonscriptions*). Subsequently, Forest Wards are divided in Plots (*parcelle*) and sub-Plots (*sous-parcelle*). In general, the Forest Wards are well staffed in terms of forest engineers and have all basic forestry equipment.

39. Historically, based on national policy and under the guidance of the CF, five year management plans are prepared for each Plot and/or sub-Plot. However, due to the insecurity in the 1990's, this planning and management system broke down and it has not been fully re-established. Recently, DGF has sought to strengthen this system by supporting the preparation of Basic Forest Management Plans (or *plan de gestion simple*). These basic forest management plans are characterized as follows: (i) they are prepared by the forest sector engineers, perhaps with support from consultants, but with little consultation or participation; (ii) they focus on cutting, planting and fire protection; and (iii) they focus on one or a small number of tree species, rather than on the ecosystem.
40. One exception to the above approach is the case of forest National Parks with international cooperation. For example, Taza National Park, in collaboration with WWF Italy, has prepared an integrated park management plan through a consultative process.

### **Forestry Policy and Programmes Pertinent to Cork Oak Forest Ecosystems**

41. Since the mid-2000's, the economic renewal of agriculture and rural areas has been a national priority policy initiative for the Algerian Government. The Ministry of Agriculture and Rural Development has been the main force behind implementation of this policy. One key aspect of this has been the 'Rural Renewal'. This includes four programmes: (i) combatting desertification; (ii) watershed improvement; (iii) management and extension of forest land and; (iv) conserving natural ecosystems. Since 2009 forestry policy has been developed and implemented to firmly support this 'Rural Renewal'. Hence, the stated approach to forestry is participatory and bottom-up, and one of the stated main objectives is sustainable management of forests. This policy aims to improve the living conditions of the rural population in order to reduce the pressure on natural resources.
42. In terms of action on the ground, the two most important national programmes related to forest management in recent years have been:
  - Programs to combat desertification, improve watersheds and manage forestry heritage under rural development, 2009-2014. Although reasonably well funded, these programmes have now been completed. They did not focus on cork oak forests;
  - The national reforestation plan (*Plan national de Reboisement*, PNR) from 2000, which set out to replant 1,245,000 hectares by 2020. The PNR received funding from the national government, although not enough to meet the targets. Cork oak forests are a priority under this programme. However, the recent fall in oil revenues has led to a great reduction in the available budget.
43. In summary, in the past, the well-funded forestry initiatives have taken place within the framework of 'Rural Renewal'. In cork oak forests they have focused mostly on re-planting. In general, the agriculture and rural renewal programs have made some progress in developing and implementing bottom-up, participatory approaches, although the PNR has not been very successful in this.
44. The recent decline in oil prices has led the Government to develop the 'New Economic Growth Model' which includes diversifying the economy and generating increased value added from natural resources, including from forestry. In response, MADRP and DGF have recently formulated "Forest Strategy until 2035 (*Stratégie des Forêts à l'Horizon 2035*)<sup>16</sup>. However, as of yet no new implementation programmes have commenced under this Strategy.

### **Baseline Scenario**

#### General Department for Forests (DGF)

45. Implementation of Forest Management Plans and the PNR. The baseline consists primarily of the DGF preparing and implementing local Basic Forest Management Plans at the Plot and sub-Plot levels. In the baseline, the success of these will be limited as in recent years, as indicated by the following:

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<sup>16</sup> DGF/MADRP, 2017

- Nationally, with regards to cork oak forests, the PNR target was approximately 75,000 hectares, however unofficial records suggest the amount achieved was in the order of 6,000 hectares, and that the success rate after 5 years of the planted trees is likely to be low.<sup>17</sup> This reflects the technical and institutional difficulties associated with planting and regenerating cork oak forests;
- In one of the important and more successful Wilayas – Jijel – the targeted replanting rate is 1,000 hectares/year. However, in reality, only 300 hectares have been replanted, and the success rate of this re-planting is very low, possibly below 10%<sup>18</sup>;
- As mentioned previously, national annual cork production has declined from 4,000,000 quintals in the 1950's to 90,000 quintals in recent years

46. In the baseline, the preparation of forest management plans will continue as in the past. As in the past, these plans will be characterized by: (i) prepared by forest engineers with little participation; (ii) a focus on cutting, planting and fire protection; and (iii) a focus on one or a small number of tree species, rather than on the ecosystem. Compared to the recent years, the funds for replanting through the PNR are likely to be greatly reduced in the baseline.

47. Implementation of National Parks. Almost 37,000 hectares of cork oak forest ecosystem lie in protected areas, within the El Kala, Tlemcen and Taza National Parks. These three areas are also classified as Biosphere Reserves (part of the Man and the Biosphere Programme MAB) by UNESCO. In the baseline, this does offer some degree of protection to those areas.

48. DGF is also initiating several small scale related actions in the baseline, notably:

- Creation of a nursery dedicated to the production of cork oak plants (DGF already has a network of nurseries, many of which include cork oak);
- Developing a plan to establish a system for cork traceability, and exploring other measures regarding adding value to NTFPs, notably cork;
- Creating a cartographic database of cork oak forest ecosystems;
- Developing basic management plans and sustainable development plans for medicinal and aromatic plants (MAPs);
- Signing an agreement with National Youth Employment Support Agency (Agence nationale de soutien à l'emploi de jeunesse, ANSEJ) to support the creating of micro and small scale enterprises based on NTFP;

49. Despite these actions, overall, in the baseline, with some minor exceptions, DGF's approach is notable by:

- the focus on replanting and regenerating cork oak trees, with limited success;
- the focus on a limited number of tree species, and cork oak in particular, and the limited attention to the ecosystem and to the many other species present;
- very limited success in adding value to NTFPs;
- limited efforts to develop incentives for forest ecosystem services (IFES);
- the limited participatory and bottom-up approach to planning and forestry.

50. In the baseline, the above efforts will continue as in recent years and will not address the barriers or threats causing cork oak forest ecosystem loss and degradation. Moreover, in the baseline, forests will not make a significant contribution to the economy in rural areas, which is a significant missed opportunity.

### International Cooperation

51. The principal international partners in the forestry sector in Algeria include the German Government (through GiZ) and FAO.

52. GiZ has notably been very involved in supporting a response to climate change in the forestry sector, and in developing tools to add value to key NTFP. This has led to a series of reports, recommendations, action plans, and this has led to

<sup>17</sup> Personal communication, DGF staff

<sup>18</sup> Presentation made in Jijel on 6<sup>th</sup> February, 2017

significant capacity built. Notably through two regional projects<sup>19</sup>, GiZ has built capacity in Algeria related to understanding climate change, it has helped develop an action plan to establish a traceability system for cork, and it has supported an analysis of the value chain and developed an action plan for four NTFP: cork, mastic resin, honey and charcoal. This work provides a good basis for future action with these and other NTFPs.

53. Algeria joined FAO in 1963. Since then, FAO has provided policy and technical assistance, including in areas related to rural development, natural resource management and adapting to climate change. Notably, the FAO supported Project “*National Strategy for the Management and Sustainable Development of Forest Resources*” included a thorough analysis of the forestry sector and supported the elaboration of the *Forest and Alfalfa Policy* (2006). Recently, the FAO Algeria Country Programming Framework (CPF) for 2013 - 2016 included three priorities, one of which was “*improved natural resource management, through a better understanding and constant monitoring of the status of agricultural and other natural resource*”. This includes support to the forestry sector.

54. In the baseline, the ongoing and planned FAO country programme includes the following projects which are complementary to this proposed GEF intervention:

Project	Short Description	Status	Amount (for Algeria)
TA for forest fire management (TCP/ALG/3501- Baby 1)	The overall objective is the preparation of a project document that can be used by the Algerian government to launch a national forest fire management program including preventive measures, means to combat fire, and restoration of forest ecosystems after fires.	Implemented from April 2014 – March 2017)	US\$ 50,699
TA to promote organic olive oil production in Algeria (TCP/ALG/3603)	The project supports agricultural extension, the rejuvenation and regeneration of traditional olive groves and the modernization of olive tree management. Overall this will improve the quality of olive oil production and compensate for the low competitiveness of the Algerian olive oil sector.	Implemented from February – December	US\$ 145,000
Promoting Decent Agricultural Employment for the Rural Youth Population in the Maghreb (Regional project - TCP/SNE/3502)	The expected impacts of this regional project are: improved access of young women and men to decent employment in the agricultural sector in rural areas in the Maghreb countries and the increased employability of young women and men in rural areas. Through this project, rural development shall be integrated into agricultural and rural development policies, strategies and programs.	Implemented from June 2015 to December 2017	US\$ 492,000
Social Innovation in Marginalized Rural Areas (SIMRA) (global project - GCP /SNE/004/EC)	SIMRA seeks to advance understanding of social innovation and innovative governance in agriculture, forestry and rural development, particularly in marginalised rural areas across Europe, with a focus on the Mediterranean region (including non-EU) and in areas where there are limited supporting conditions.	Implemented from January 2016 to January 2020	US\$ 103,425
In addition, 2 project concepts are under development, i.e. a Great Green Wall climate resilience GCF supported programme and an <i>Integrated Development of the Bibans Mountain Massif</i> project to be submitted for GEF funding (USD2M GEF grant).			

55. Finally, the French GEF (FFEM) funded the regional project “*Optimising the production of goods and services by Mediterranean forest ecosystems in a context of global change*” from 2011 – 2016. This was also partly funded by GiZ, the European Union and the French Ministry of Agriculture, Agrifood and Forestry. Algeria was one of the five partner countries. The project was jointly implemented by FAO (Silva Mediterranea) and UNEP (Plan Bleu). This project developed significant capacity for developing NTFP and ecosystem services in Algeria, and it provides a good basis for future action.

56. In summary, in the baseline, the main actions are traditional forestry actions with some associated studies and capacity building related to market development and sustainable forestry harvesting, and small scale interventions. These are not sufficient to address the barriers or threats causing cork oak forest ecosystem loss and degradation.

<sup>19</sup> «Silva Mediterranea – Partenariat collaboratif pour les forêts méditerranéennes» and «Adaptation au changement climatique des politiques forestières dans la région MENA »

#### 1.4 Proposed alternative scenario, with a brief description of expected outcomes and components of the project

57. As described in the above sections, Algeria's cork oak forests host significant biodiversity and represent an untapped potential in terms of sustainable production for local communities. Currently, the forest ecosystems are slowly degrading and disappearing and the biodiversity is under threat. In the baseline, due to the barriers listed in the previous section, this situation of degradation and biodiversity loss will continue. As a result, local communities will lose a key resource and a source of sustainable revenue, and access to a number of other products, goods and ecosystem services provided by the cork oak forest ecosystems.
58. The alternative proposed through this Project is to remove the barriers to sustainable management of Algeria's cork oak forests. This will contribute to the reversal of the current situation of degradation, it will help preserve the rich biodiversity, and it will lead to increased social and economic benefits from forests for local people.

#### **The objective of the proposed Project is *to sustainably manage, conserve and sustainably harvest Algeria's globally significant cork oak forest ecosystems.***

59. To remove the barriers to sustainable forest management, the proposed Project has three Components and five Outcomes. These are described below.
60. The first Component is to pilot alternative approaches to forest management at pilot sites. Through this, at three diverse and representative sites, the Project will develop and implement, in a participatory manner, a sustainable forest management system/plan that responds to local needs and conserves the ecosystems. Strategically, these pilot sites will serve as a 'learning school' for forest managers from across Algeria, i.e. forest sector engineers and planners will actively observe the pilot activities and learn directly from the pilot experience.
61. The second Component relates to developing financial and economic incentives for sustainable forest management. As explained in previous sections, the cork oak forests produce many valuable products, goods and services, unfortunately these goods and services are not monetized, they are not optimized. None are well integrated into the local and broader economy. This Component will address this missed opportunity, leading to economic revenue and economic forces that will pull and push sustainable forest management.
62. The third Component will ensure that the results, lessons, tools and capacity developed are disseminated to all sites with cork oak forest ecosystems across Algeria. This will directly lead to a broad uptake of sustainable management and sustainably harvesting plans in cork oak forest ecosystems across the country.

#### **Component 1: Piloting of sustainable management, conservation and sustainable harvesting of Algeria's globally significant cork oak forest ecosystems – at diverse and representative sites**

##### **Outcome 1.1: At three globally significant and diverse sites, sustainable forest management systems developed and implemented that conserve biodiversity and provide sustainable revenue for local populations.**

63. The following criteria are used to select sites: (i) biodiversity value; (ii) commitment of local authorities and people; (iii) the existence of real, but not insurmountable, threats to the biodiversity; and (iv) logistical capacity to implement the Project – i.e. the sites should be accessible and there should be reasonable forest management infrastructure (buildings, paths, equipment and people). Finally, taken together, the sites should represent diverse but representative environmental, economic and social conditions.
64. Based on these criteria, an *initial* choice of three sites has been made. During the PPG phase, these three and other sites will be assessed and the final site selection confirmed. Notably, it is possible that four sites rather than three will be necessary to provide the range of necessary examples. The initial sites chosen are: (i) Taouririt Ighil Forest in Bejaia Wilaya. This represents medium quality forest surrounded by high population density and high socio-economic pressure in Eastern Algerai; (ii) Beni Idder forest in Jijel Wilaya. This represents high and medium quality forests, surrounded by medium-low level population density, with lower levels of threats to the forests at present, and again in eastern Algeria and (iii) Hafir forest in Tlemcen Wilaya. This represents high quality, mixed oak (including cork) forests in low populated areas in west Algeria, with climate change and land degradation major threats. The map in Figure 2 illustrates the location of these three potential sites. Annex 1 provides introductory information on the sites (i.e. Annex 1 provides information on the demographic and administrative situation, the forest status, an overview of threats, the ongoing actions, the key stakeholders, the currently harvested NTFPs and the notable biodiversity).

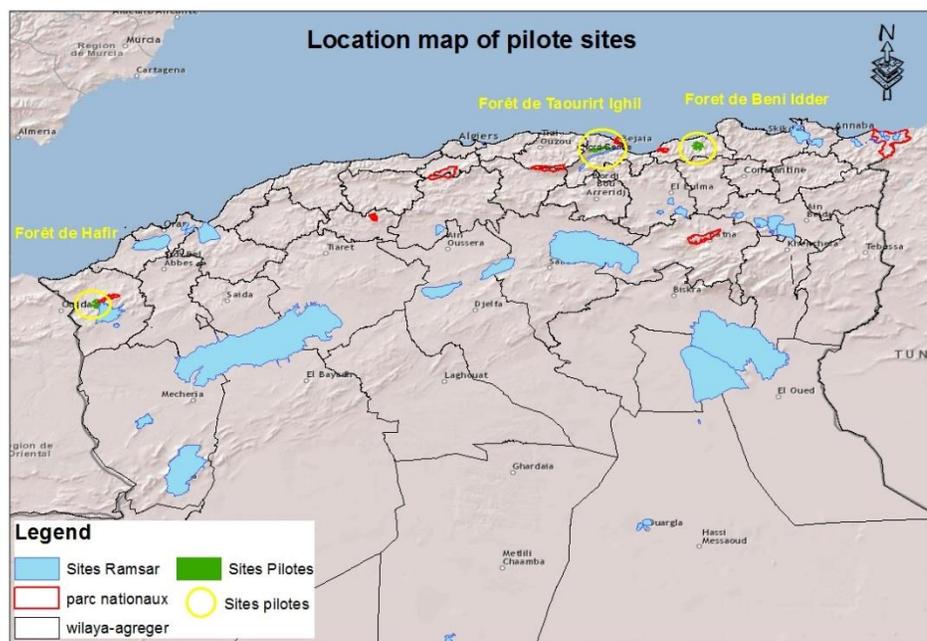


Figure 2: Illustrating the location of the potential pilot sites.

65. At each site the *process* to be followed is very similar – it will be participatory, multi-stakeholder, integrated and designed as a learning process. However, the different socio-economic and geographical contexts will lead to different opportunities and priorities at each site, and therefore different activities are to be supported at each site. The process will consist of:

- Creation of a local participatory mechanism, led by the Wilaya governor, involving the CF, the Forest Ward staff, representatives of local communities, representative of local enterprises and technical experts;
- Consensual identification and implementation of urgent, priority measures (e.g. fire protection). These priority measures will both conserve the forest and help generate understanding and commitment to the Project;
- The thorough and participatory preparation of an integrated, sustainable, biodiversity-oriented forest ecosystem management plan. The management plan will also include a clear budget and source of resources; a clear M&E system; a participatory governance structure; and a clear description of responsibilities. The management plan will notably include a description of globally significant biodiversity and a simple system for monitoring this biodiversity;
- Implementation of priority measures from the management plan.

**Output 1.1.1: A sustainable forest management system developed and implemented that conserves biodiversity and provides sustainable revenue for the local population in a highly populated area in eastern Algeria (Taourirt Ighil Forest in Bejaia Wilaya).**

66. Taourirt Ighil Forest covers 7,265 hectares in seven communes. An estimated 29,800 people live in the areas surrounding the forest. There is clear potential for significant revenue from NTFP and ecosystem services. However, the socio-economic situation and the challenges facing cork oak forest ecosystem in the Wilaya are complex. Hence, generating this revenue in a sustainable manner, whilst conserving biodiversity, will require a strategic mix of social, ecological and economic interventions. At this pilot site, the Project will support a series of activities to develop and implement, in a highly participative manner, a sustainable forest management plan that leads to improved forest, biodiversity and revenue. Although details are to be determined during the PPG and in the preparation of the management plan, the following activities are considered likely:

- Regeneration and rejuvenation of existing cork oak stands (these investments will be primarily financed by the Government);
- Replanting of cork oak (not financed by GEF);
- Measures to reduce and control forest fire (these investments will be primarily financed by the Government);
- Development of specific NTFP and revenue generating activities for local communities (notably honey and hunting), with specific involvement of women;
- Training on forestry techniques;

- Identification of globally significant biodiversity in the forest and the preparation of environmental awareness raising material;
- Promotion of priority NTFP and ecosystem services – linked closely to Outcome 2;
- Promotion of eco-tourism and development of related tourism products, with benefits flowing to local people, notably women;
- Monitoring of biodiversity;
- Mobilization of resources necessary to implement the management plan;
- Monitoring and evaluation of the management plan.

**Output 1.1.2: A sustainable forest management system developed and implemented that conserves biodiversity and provides sustainable revenue for the local population in a low populated area in eastern Algeria (Beni Idder forest in Jijel Wilaya).**

67. Beni Idder Forest covers 5,108 hectares in four communes. An estimated 4,051 people live in the areas surrounding the forest. The Algerian Nuthatch was recently observed in areas near the forest and may well be residing in the forest.
68. Specific information on the Beni Idder forest can be found in Annex 1. There is clear potential for significant revenue from NTFP and ecosystem services. However, the socio-economic situation and the challenges facing cork oak forest ecosystem in the Wilaya are complex. Hence, generating this revenue in a sustainable manner, whilst conserving biodiversity will require a strategic mix of social, ecological and economic interventions. At this pilot site, the Project will support a series of activities to develop and implement, in a highly participative manner, a sustainable forest management plan that leads to improved forest, biodiversity and revenue. In this pilot site agriculture is one of the main activities essentially led by women; this activity is the main source of the family incomes. This activity is one of reasons driving forest encroachment therefore the project will work with the family farmer on sustainable agriculture techniques
69. Although details are to be determined during the PPG and in the preparation of the management plan, the following activities are considered likely:
- Measures to reduce and control forest fire (these investments will be primarily financed by the Government);
  - Development of specific NTFP and revenue generating activities for local communities (notably ecotourism, biological agriculture, medicinal plants ...), with specific involvement of women;
  - Training on forestry techniques;
  - Development of family farming in areas around Beni Idder, working closely with women farmers;
  - Identification of globally significant biodiversity in the forest and the preparation of environmental awareness raising material;
  - Promotion of priority NTFP and ecosystem services – linked closely to Outcome 2;
  - Monitoring of biodiversity;
  - Mobilization of resources necessary to implement the management plan;
  - Monitoring and evaluation of the management plan.

**Output 1.1.3: A sustainable forest management system developed and implemented that conserves biodiversity and provides sustainable revenue for the local population in a lowly populated, mixed oak forest area in western Algeria (Hafir forest in Tlemcen Wilaya).**

70. The Hafir Forest (details in Annex 1) covers 10,157 hectares in five communes, of which 3,500-4,000 hectares are cork oak. An estimated 2,500 people live in the areas surrounding the forest. Although isolated from much of the cork oak forest ecosystems, Hafir is surrounded by other rich oak forest. It is also included in the Tlemcen National Park and MAB (with a recorded 850 floral species, of which 31 are endemic).
71. The Hafir Forest has a semi-arid Mediterranean climate and is highly impacted by climate change. It is located in the Beni Bahdel dam basin, and protects fertile agricultural lands. The forest is also subjected to anthropic pressures. The ecosystem is well suited though to protect the land against desertification, acute in this area of the country, and should be valued for this important service it provides.

72. Although details are to be determined during the PPG and in the preparation of the management plan, the following activities are considered likely:
- Reinforce the governance mechanism of this forest (there is a model forest in Tlemcen and a MAB site) ;
  - Elaborate a participative and integrated management plan, taking into account biodiversity, conservation of water resources, and the socio-economic context;
  - Development of value chains of forest products and other sustainable activities benefitting the local population, in particular women and youth;
  - Valorization of ecosystem services provided by the forest;
  - Implementation of the participative and integrated management plan.

### **Component 2: Sustainably creating value from cork oak ecosystem products, goods and services**

73. Some of the many NTFPs are cork, honey, pine nuts, mushrooms, carob-tree fruits, mastic oil and myrtle, in addition to a large number of medicinal, aromatic and edible crops. Ecosystem services include hydrological regulation, carbon offsetting, habitat, hunting and eco-tourism. Algerian stakeholders have already initiated actions to develop NTFPs, and Outcome 2.1 will build on that. Until now, little has been done to develop incentives for ecosystems services, Outcome 2.2 will address this.

74. Although Component 2 aims to develop the national level enabling framework for NTFPs and ecosystem services, much of the initial work will occur at the pilot sites, in order to ensure that the national level enabling framework is grounded in the best availability data and draws from practical, participatory, multi-stakeholder experience. For each national initiative, for each good or service supported under Component 2, a pilot programme will first be undertaken. This will be undertaken at one of the sites from Component 1, and it will be undertaken within the sustainable forest plans developed under Component 1. Hence, the ideas for the piloting will have been generated in a participatory and multi-stakeholder manner in Component 1, and the participatory and multi-stakeholder context established under Component 1 will provide supervision and guidance to the development of goods and services under Component 2.

### **Outcome 2.1: Value chains strengthened for priority NTFPs in cork oak forest**

75. This Outcome will greatly increase the chances that local people can generate increased revenue from NTFP. This work will build on previous work in Algeria – notably supported by FFEM and GiZ-CPMF - and it will build on ongoing work supported by DGF. The Outcome will work in two areas: at the national level, to develop the national tools and capacity; and at the local level, in combination with Outcome 1, to pilot the exploitation of value chains to generate local revenue and help conserve the cork oak forest ecosystems. The following Outputs are anticipated. At the National level, DGF will work mainly with national agencies supporting SME creation (ANSEJ, CNAC) to develop a national framework for NTFP value chains, and at local level with local populations and private enterprises to develop a local economy based on NTFP.

76. **Output 2.1.1 Three site specific inventories and one national inventory of NTFP in cork oak forests.** Based on previous studies, and on reports from other countries (notably in the Mediterranean) an inventory of NTFP will be prepared listing the main ecological characteristics, the geographical distribution, the main market structures and characteristics, and the main barriers to product development across Algerian cork oak forests. Then, in combination with Outcome 1, inventories will be prepared for the pilot sites, leading to the identification of specific actions and measures to develop NTFP at these sites (these actions/measures will be included into the management plans prepared under Outcome 1).

77. **Output 2.1.2 Traceability system for at least two NTFPs, including cork.** A plan to establish a traceability system has been prepared<sup>20</sup> for cork, honey, charcoal and mastic resin. The plan has the following actions: (i) establish a national traceability committee; (ii) develop electronic traceability system; (iii) pilot a project at one site in Jijel Wilaya followed by possible expansion to other areas; (iv) build capacity; and (v) establish an independent verifier and a national policy for traceability. The plan will be updated and elaborated, during the PPG phase, to include costs and responsibilities. The full project will implement the plan and establish a national cork traceability system that guarantees the origin of the product and is compatible with international systems (this is connected to Outcome 1). Depending on the PPG

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<sup>20</sup> Plan de développement d'un système de traçabilité pour le chêne-liège et autres produits forestiers non ligneux en Algérie, GiZ/DGF, 2015.

feasibility study results, traceability systems for other products (honey, charcoal and mastic resin) may also be established.

78. **Output 2.1.3 Economic value-adding tools (e.g. labels, certificates) for at least three NTFP.** A recently completed analysis of the value chains for four NTFPs (cork, honey, charcoal and mastic resin)<sup>21</sup> identified the optimal measures to add value and develop the four NTFP. This includes, for each NTFP, a series of measures at the micro, meso and macro scale. This includes measures with local communities, with intermediary enterprises, and with national regulatory or trade promotion bodies. Algerian stakeholders are already implementing many of the proposed measures. During the PPG phase, the analysis will be reviewed, and, based on the up-to-date situation, the optimal measures for adding value to NTFPs will be determined. Emphasis will be given to activities that directly favour biodiversity conservation – such as biodiversity friendly labels and certificates. This will include activities closely coordinated with pilot activities under Outcome 1, and including the local rural population.

**Outcome 2.2: A basis for the development and implementation of incentives for forest ecosystem services (IFES)**

79. The Algerian cork oak forest ecosystem provide many ecosystem services – notably water conservation, soil conservation, carbon sequestration and also providing a context for eco-tourism. However, in the past and currently, these services have not been valued. Further, there have been no attempts to create incentive systems for these forest ecosystem services (IFES), ranging from regulatory (permits, laws, quotas) to voluntary (certification, labelling)<sup>22</sup>. As has been demonstrated in many other parts of the world, IFES can provide strong incentives to local people to sustainably manage and conserve the forest ecosystems. Under this Outcome, an effective basis for the implementation of such IFES will be developed.

80. In close association with the pilot site activities in Outcome 1, likely Outputs include:

- Output 2.2.1: An inventory of ecosystem services at the pilot sites;
- Output 2.2.2: Stakeholder analysis – notably the beneficiaries of the ecosystem services and the custodians of the concerned forests;
- Output 2.2.3 Report determining monetary values - for at least one ecosystem service at each pilot site.
- Output 2.2.4: Raised awareness, locally and nationally, of the importance of forest ecosystem services and the potential usefulness of IFES for all stakeholders;
- Output 2.2.5: Clear plan of action for developing IFES at three cork oak forests in Algeria. These may be included in the management plans under Outcome 1.
- Output 2.2.6: The implementation of selected action plans at the regional level for a selection of NTFP through appropriate incentive mechanisms.

**Component 3: Replication and upscaling successful approaches**

**Outcome 3.1: Sustainable management and sustainable harvesting plans initiated at all cork oak forest ecosystem sites across the Algeria**

81. This Outcome, led by DGF centrally, and greatly financed by DGF, will first prepare the institutional and technical tools to replicate the successful approaches from Outcome 1. It will then build the human capacity for this replication

<sup>21</sup> Analyse d’identification des chaînes de valeur - Produits forestiers non-ligneux (PFNL), Algérie (GiZ/DGF, 2014)

<sup>22</sup> FAO encompasses a wide array of incentive mechanisms under its Incentives for Ecosystem Services umbrella, governed by private or public actors, and combinations of different types of incentives, as illustrated in the table below:

	Regulatory	←—————→	Voluntary
<b>Public</b>	<ul style="list-style-type: none"> <li>• Prohibition of use</li> <li>• Taxes and charges</li> </ul>		<ul style="list-style-type: none"> <li>• Subsidies</li> <li>• Green public procurement</li> </ul>
<b>Private</b>	<ul style="list-style-type: none"> <li>• Property and use rights</li> <li>• Permits and quotas</li> <li>• Offsets</li> </ul>	<ul style="list-style-type: none"> <li>• Standards</li> <li>• Smart Environmental Impact Assessment Investments</li> <li>• Payments for Ecosystem Services</li> </ul>	<ul style="list-style-type: none"> <li>• Corporate Environmental and Social Responsibility</li> </ul>

to all cork oak forest sites in Algeria. Accordingly, for all cork oak forest ecosystem areas across Algeria, the local CF and Forest Wards will be able to initiate the sustainable, integrated forestry management that conserves biodiversity.

82. **Output 3.1.1 A national technical platform to support cork oak forest ecosystems.** This informal platform will be available to provide technical support to all localities with forest cork oak forest ecosystems. It will also be able to coordinate activities and provide training related especially to forest ecosystem engineering and participatory approaches.
83. **Output 3.1.2 Typology of cork oak forest ecosystems.** DGF has already initiated preparation of the Typology. This Typology will systematically classify the Algerian cork oak forest ecosystems. It will classify forest ecosystem types by altitude, meteorology, soil types etc. The Typology will be a key tool as a basis for the planning processes (Output 3.1.6)
84. **Output 3.1.3 Database on Algeria cork oak forest ecosystems.** This multi-dimensional database will combine information on cork oak forest ecosystems, covering: geographical location and coverage, typology, status, threats, biodiversity, partners, activities, etc. DGF has already initiated preparation.
85. **Output 3.1.4 Guidelines on approaches to participatory, integrated management of cork oak forests that conserve biodiversity.** The Guidelines will be prepared mostly through activities that are *fully associated with Outcome 1*. That is, the process to each pilot in Outcome 1 will be planned, structured, observed and documented; all lessons will be captured, and the findings and results from the pilots will be combined into a single national Guidelines. The Guidelines will be designed to be of use to all forest planners and engineers at all cork oak forests across Algeria.
86. **Output 3.1.5 Trained forestry staff in all Forest Wards with cork oak forests.** The training will be undertaken in activities that are *fully associated with Outcome 1*. That is, staff from across Algeria will observe the piloting activities in Outcome 1. Around the piloting, a structured training programme for the staff will be prepared based on the observations of Outcome 1 and based on the lessons and results emanating from Outcome 1.
87. **Output 3.1.6 Management plans for all Wards in Algeria with cork oak forests.** The Project and DGF will support the preparation of sustainable management and sustainable harvesting plans for all cork forest areas across Algeria. The plans will be developed in line with the Guidelines from 3.1.4. The plans will be designed to conserve biodiversity. Notably, the process will be participatory, and adequate emphasis will be given to generating local revenue. The plans will include financial investment plans and an M&E plan.

### **Outcome 3.2: Project monitored and Project results captured and lessons learnt widely disseminated**

88. This Outcome will identify and disseminate lessons learned, best practices, and support full communication. There will be three outputs:
89. **Output 3.2.1 Project Monitoring & Evaluation.** Performance monitoring of the Project will rely essentially on the M&E system. The M&E system – to be developed during the PPG phase - will specify indicators at the impact, outcome and output levels. It will list the activities to be performed, the methodology, and it will clarify the roles and responsibilities of partners and stakeholders. The monitoring and evaluation system will also cover the GEF BD and LD tracking tools. Indicators will be gender sensitive, or a specific gender indicator will be developed.
90. **Output 3.2.2 Project Mid-term and Final Evaluations.**
91. **Output 3.2.3 A Communication Strategy developed and implemented.** This Strategy will facilitate the strategic dissemination of the Project's best practices and lessons learned. It will also create linkages with regional and global lesson learning processes, for example by linking to the FAO Global Forest Resources Assessments (FRA) and the FAO/Global Forest and Landscape Restoration Mechanism. Multi-media products to raise public awareness and public appreciation of forests (e.g. video, website, posters etc.) may also be developed.
92. **Barrier removal strategy** The following table illustrates how the Project Outcomes address the Barriers that were described in Section 1.2 above.

Outcome	Barrier addressed	Comment and threat removal strategy
<p>Outcome 1.1: At three globally significant and diverse sites, sustainable forest management systems will be developed and implemented that conserve biodiversity and provide sustainable revenue for local populations.</p>	<p>Inexistence of successful models and examples of participatory and sustainable forest ecosystem management.</p>	<p>The pilot activities will deliver a successful model and example of participatory and sustainable forest ecosystem management.</p> <p>Removing this barrier will mean that all the following threats can be addressed: fire; encroachment; unsustainable harvesting; invasive species, disease and parasites; and climate change. Removing this barrier provides a technical demonstration of how to achieve sustainable forest management that can be replicated. It is a foundational activity.</p>
	<p>Shortage of (forestry) tools and information.</p>	<p>The pilot activities will contribute to the preparation of tools and the collection of an improved information base and methods for participatory forest management and NTFP value chain development.</p> <p>Removing this barrier will ensure that improved information and tools are available as a foundation for removing all the following threats: fire; encroachment; unsustainable harvesting; invasive species, disease and parasites; and climate change.</p>
	<p>Local people, and many local politicians, see the forest as a barrier to economic development and escaping poverty.</p>	<p>At the pilot sites, local people will see the benefits of sustainable forest use, and their attitudes to forests will change. This will be achieved through NTFP value chain and ecotourism development but also through the incentives for forest ecosystem services. The aim is to make local people realize that they can build their economic development on forest biodiversity, instead of practicing unsustainable activities, leading them to the encroachment of the forest and grazing in young planted cork oak forest hampering the forest renewal, etc.</p> <p>Local people will become supportive of forest protection, forest fire management and forest plantation – and so these measures will be successful.</p>
<p>Outcome 2.1: Value chains strengthened for priority NTFPs in cork oak forests.</p> <p>Outcome 2.2: A basis for the development of payments for forest ecosystem services (IFES).</p>	<p>The economic system greatly undervalues the many ecosystem goods and services.</p>	<p>These Outcomes aim to modify the economic system so that it places high value on economic products, goods and services.</p> <p>Removal of this barrier will help local people to appreciate forests and want to conserve them. As they will learn to benefit from the forest, they will become supportive of forest protection, forest fire management and forest plantation – and so these measures will be more successful.</p>
	<p>The local rural population is poor and faces short-medium term economic challenges.</p>	<p>These outcomes will start a process to generating significant revenue from ecosystem services and goods, helping to alleviate poverty.</p> <p>Removal of this barrier will help local people to appreciate forests and want to conserve them. As they will learn to benefit from the forest, they will become supportive of forest protection, forest fire management and forest plantation – and so these measures will be more successful.</p>
	<p>Local people, and many local politicians, see the forest as a barrier to economic development and escaping poverty.</p>	<p>By helping to generate revenue to local people, people will see the benefits of sustainable forest use, and their attitudes to forests will change.</p> <p>Removal of this barrier will help local people to appreciate forests and want to conserve them. As they will learn to benefit from the forest, they will become supportive of forest protection, forest fire management and forest plantation – and so these measures will be more successful.</p>
<p>Outcome 3.1: Sustainable management and sustainable harvesting</p>	<p>Outdated (forestry) approaches and attitudes to forest use.</p>	<p>Building on the model from the pilot, the Project will develop new approaches/attitudes, and will help disseminate this through the platform and the guidelines.</p>

plans initiated at all cork oak forest ecosystem sites across the Algeria.	Shortage of (forest) management skills.	These Outcomes provide significant training on the new approaches and attitudes.
Outcome 3.2: Project monitored and Project results captured and lessons learnt widely disseminated.	Local people, and many local politicians, see the forest as a barrier to economic development and escaping poverty.	The management plans being supported across the country, prepared in a participatory manner, will help raise awareness of the benefits of the new approaches to forestry, and thereby reduce opposition to forests.

### 1.5 Incremental cost reasoning and expected contributions from the baseline, from the GEF and co-financing

#### **Component 1: Piloting of sustainable management, conservation and sustainable harvesting of Algeria’s globally significant cork oak forest ecosystems.**

93. Baseline and co-financing: The baseline support is the support of DGF to the CF and Forest Ward activities at the three pilot sites during the five years of the Project. This includes the provision of staff, facilities, materials, nurseries, mapping and consultation activities. This also includes some support to infrastructure and forestry engineering actions in the three sites. This will notably include investments in fire control and management and into forest regeneration and replanting. This is estimated to be the equivalent of US\$3,000,000 input from DGF.
94. GEF support and financing: In the baseline, the forestry actions will follow the traditional approaches to forestry. GEF will provide the technical support to the three sites to ensure that forestry is planned and implemented in an integrated and sustainable manner, and in a manner that leads to both biodiversity conservation and to increasing revenues for local people. GEF will also support some pilot activities related to biodiversity conservation and GEF will support local people (particularly women) to generate revenue from activities that are in support of biodiversity. GEF will provide capacity development related to forest biodiversity conservation. This GEF support and activities are entirely innovative in Algeria and contribute to reversing ecosystem degradation and conserving biodiversity. GEF support to this Component is US\$1,500,000,

#### **Component 2: Sustainably creating value from cork oak ecosystem goods and services.**

95. Baseline and co-financing: The baseline support is the support of DGF to the development of ecosystem goods and services, through developing the traceability system for various NTFP products, supporting the development of value chains, and initiating action to facilitate IFES. DGF has already initiated some actions and will continue in the baseline. This will be in the form of staff, material, and facilities and in recruiting experts and institutes to support with studies and training. In the baseline, this DGF action will focus primarily on generating revenue for local people. In the baseline, these initiatives will not benefit from global experience, and will not focus significantly on biodiversity or on land degradation. This is estimated to be the equivalent of US\$4,174,462 input from DGF.
96. GEF support and financing: GEF notably will provide two innovative and additional dimensions to these processes: (i) international experience related to value chain development and IFES, as this component is innovative to Algeria and the international experience is vital to ensure lesson learning; (ii) the technical support to ensure that the development of goods and services is done in such a way as to lead to the conservation of biodiversity and to reversal of ecosystem degradation. GEF support to this Component is US\$600,000

#### **Component 3: Replication and upscaling successful approaches**

97. Baseline and co-financing. The baseline is the planned actions of DGF, CF and Forest Ward staff at all the sites across Algeria with cork oak forests during the five years of the Project – over a total of almost 320,000 hectares. This is in the form of staff, facilities, materials, nurseries, mapping, and consultation. This also includes some support to infrastructure and forestry engineering actions. This will notably include wide-scale investments in fire control and management and into forest regeneration and replanting, for example through the PNR. In the baseline, these investments will take place, but will take place in the traditional manner, and will not reverse the biodiversity loss nor the ongoing forest ecosystem degradation. This is estimated to be the equivalent of US\$13,699,042 input from DGF.
98. GEF support and financing: GEF will provide technical support to ensure that all the lessons from Outcome 1 are disseminated and mainstreamed into forest management at all the Forest Wards with cork oak forests across the country. This will mainstream biodiversity conservation and forest ecosystem restoration into forest management in Algeria. This will include support to prepare the Typology and database, and the preparation of the Guidelines, and the wide-scale training of forest staff. This will effect a rolling out of the integrated, participatory approach to sustainable forest

management and harvesting. GEF support to this Component is US\$1,149,644

## 1.6 Global environmental benefits

### Biodiversity

99. Component 1 will *directly* ensure that approximately 20,000 hectares of high biodiversity cork oak forests are placed under sustainable management regimes, and thereby securing the conservation of the globally significant biodiversity.

100. Subsequently, Components 2 and 3 will indirectly and directly replicate and disseminate the successful practices developed under Component 1 to all good quality cork oak forests across the country that currently are globally significant in terms of biodiversity – covering approximately 229,000 hectares.

### Aichi Targets:

101. The following table illustrates to which Aichi targets the Project primarily contributes.

<b>Aichi Target</b>	<b>SMART Indicators</b>	<b>How the Project contributes</b>
1: 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.	More than 36,000 inhabitants of the three pilot sites are aware of the value of biodiversity and the steps they can take to conserve and use it sustainably.	The Project will work with population in and around the 229,000 hectares of quality cork oak forest, a population estimated at 2-300,000. The Project will raise awareness, and develop incentives, so that local people are able and committed to conserving cork oak forest biodiversity.
2: 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.	The value chains of at least 2 forest products are integrated into national and/or local development and poverty reduction strategies and planning processes; and one ecosystem service of the cork oak forest is incorporated into national accounting, as appropriate, and reporting systems.	The Project focuses on ensuring cork oak forest ecosystems generate their full value through the development of goods and services. The resulting work should lead to the goods and services being accounted for in local and national development plans and strategies.
5: 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.	The rate of loss of Algerian cork oak forest is reduced by 60% at least.	The Project specifically sets out to halt and reverse the loss and degradation of cork oak forest ecosystems. By the Project end, the current rate of 10,000's hectares of forest being degraded annually in Algeria should be reduced to zero.
7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	229,000 hectares of cork oak forests and surrounding agriculture areas are managed sustainably, ensuring conservation of biodiversity.	The Project specifically sets out to bring all existing cork oak forest ecosystems – 229,000 hectares, including currently degraded forests, under sustainable forest management practices.
15: 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.	At least, 121,000 hectares of cork oak forests will be restored and will contribute to increasing carbon stocks.	The project, by reversing the degradation and loss of cork oak forests will, to some extent, reduce the loss of carbon stock in Algeria.

### Land Degradation

102. Component 1 will directly ensure that approximately 20,000 hectares of cork oak forest ecosystems are brought into sustainable forest management regimes, thereby securing the conservation of the concerned land and water and of the ecosystems.

103. Subsequently, Components 2 and 3 will indirectly and directly replicate and disseminate the successful forest management practices developed under Component 1 to all existing cork oak forests ecosystems across the country – included forests that suffer from low – medium degradation and including forests that no longer contain globally significant biodiversity. This will also include some land which is highly degraded and will require replanting and/or regeneration. Total coverage of land degradation addressed will therefore be approximately 350,000 hectares.

### **Climate change mitigation**

104. Sustainable forest management is also likely to lead to increased sequestration of carbon and therefore contribute to mitigating global climate change. This potential will be explored during the Project implementation.

### **Sustainable Development Goals**

105. This Project will contribute to the Sustainable Development Goals (SDG) and in particular to Goal no 15: *Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss*. Indirectly, the Project will also make a contribution to the following SDGs:

- *Goal 1: End poverty in all its forms everywhere* – the Project focuses in areas where poverty resists. The Project will focus on the poor and marginal in these communities, developing their capacity, and helping to bring a number of people out of poverty;
- *Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture*. The Project will develop forest ecosystem goods, including edible species, and it is anticipated that several thousands of people will benefit from this. This will notably include mushrooms, honey and nuts. This will also include the use of cork oak acorns to prepare couscous – a local delicacy. All the edible goods supported by the Project are considered healthy and will make an important contribution to balanced, healthy diets.
- *Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all*. Component 2 of the Project focuses on developing the value chain of forest goods and developing payments for forest ecosystem services. This will lead to the generation of employment opportunities for local people in the Project area.

### 1.7 Innovativeness, sustainability and potential for scaling up.

#### **Innovativeness**

106. This is the first large-scale forestry Project in Algeria with DGF to be supported by GEF. It occurs at a time uniquely conducive to generating a sustainable utilization of cork oak forest ecosystems: the concerned national and local stakeholders are all committed to making this happen; the international community is showing interest; the private sector demand for cork is strong; and there is a strong need for the forest's goods and services. Hence, the Project is likely to have significant leverage.

107. Many of the forestry practices to be demonstrated and replicated by the Project are very innovative for Algeria. In particular: (i) the approach to developing goods and services and developing value chains is innovative (ii) the overall participatory approach to planning and management is innovative. It is noted that this approach will also seek to increase the linkages between local communities and to ensure that communication and learning occurs *horizontally* rather than uniquely following the top-down method; (iii) the approach to developing forests as *ecosystems* rather than stands of individual trees is innovative for Algeria and; (iv) the fact that the Project will provide a means by which local innovation and best practices can be identified, documented and shared is also innovative in Algeria. This overall combination of innovative approaches and tools forms a very innovative project.

108. Finally, this Project seeks to create a platform of cooperation between research, government and communities to support and maintain the sustainable management of cork oak forest ecosystems.

#### **Sustainability**

109. Many studies demonstrate that the conservation of cork oak forest ecosystems makes economic and financial sense, if the incentives and value flows are appropriately constructed. This Project sets out to construct the generation and distribution of benefits from ecosystem goods and services, so that the agents currently responsible for damaging the forests are sufficiently motivated to change attitudes and practices and so contribute to forest conservation. In summary, the Project sets out to make cork oak forest ecosystem conservation both economically and financially sustainable – this will provide a basis for institutional and social sustainability at the local level.

110. At the national level, two important factors suggest the initiative will be sustainable: (i) the strong commitment and willingness to learn in the forestry sector, in particular the DGF and (ii) the national economic situation in which the

development of alternative streams of revenue in rural areas has become critical.

## Scaling-up

111. In Outcome 1, the pilot sites are to be designed in such a way as to provide a ‘school of learning’ for cork oak forest stakeholders across the country. The Project will facilitate the observation and involvement of stakeholders from across the country at the pilot sites – so they observe and participate in the full cycle of pilot activities, and they directly learn from the pilot sites. Stakeholders from almost all Forest Wards with cork oak forest will be exposed to the pilot site work in this way. This will provide a basis for the transfer of successful approaches and practices to other sites.

112. Outcomes 2 and 3 of this Project are entirely devoted to sustainability and upscaling. Outcome 2 focuses on developing the private sector linkages and the economic incentives to scale up. By developing the value chains and the incentive mechanisms for goods and services, the Project will establish the necessary private sector motives for sustainable harvesting and therefore for ecosystem conservation. This will act as a strong force *pulling* the sustainable management of cork oak forest ecosystems. Outcome 3 provides a more traditional approach to scaling-up, through the provision of training, the preparation of lesson learning tools and direct dissemination of tools and practices by DGF to cork oak forest managers across the country.

**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.

113. During the Project identification stage consultations were held with diverse potential stakeholders and partners. Annex 1 provides basic information on the main stakeholders at the three potential pilot sites. A full social analysis, including stakeholder analysis and gender analysis, will be conducted during Project preparation.

114. A main stakeholder is the General Department for Forestry (DGF) and its subordinates, notably the Forest Conservation Officers at the Wilaya level and the Forest Ward offices. Within DGF, the Department for Managing Forest Lands (*Direction de la Gestion du Patrimoine des Forêts*) will take the lead in Project management and coordination, and in replication/disseminating Project successes.

115. The following stakeholders and stakeholder groups have been identified:

Stakeholder	Likely role
Ministry of Foreign Affairs (MoFA)	As the GEF Political focal point, MoFA will be involved in monitoring and follow-up.
Ministry of Water Resources and Environment (MWRE)	As the GEF operational focal point and the CBD focal point, MWRE will notably be involved in project monitoring and follow-up.
The various Ministries responsible for : Trade, Handicrafts, Tourism, Industry, Women, Local governance, Skills development	These ministries will most notably support revenue generation activities from forest goods and services. They will also support efforts to involve marginalized and vulnerable sections of the community. Overall, they will be engaged by the Forest Sector in the management planning as follows (to be detailed during PPG): <ul style="list-style-type: none"> <li>- the Ministry of Water Resources and Environment, as there are several dams near the pilot areas and water is considered to be an important ecosystem service;</li> <li>- the Ministry of Industry, as they can collaborate on value chain development of cork and other products;</li> <li>- Ministry of Labour and its agencies (e.g. ANSEJ, CNAC). They can collaborate with the development of NWFP value chains through SME creation and skills development - especially for youth and women;</li> <li>- Ministry of Tourism and Craft can support the development ecotourism activities; and</li> <li>- Ministry of Agriculture can ensure that production areas buffering the forests are sustainably managed to secure biodiversity conservation, whilst contributing to sustainable livelihoods for the communities.</li> </ul>
National Parks	The management of National Parks will be key project partners at a technical level – two of the pilot sites lie close to National Parks.
National Forest Research Institute ( <i>Institut National pour les ressources forestiere</i> , INRF).	INRF will provide technical support to the Project.
Capacity building institutions (e.g. CFATSF under MADRP)	These institutions will be partners in developing and providing capacity development activities.

Universities (e.g. Tlemcen)	Universities will provide technical support to the Project.
Public sector economic enterprises	Although few in number, these enterprises are involved in the harvesting, processing and sale of ecosystem goods, notably of cork.
Inter-sectoral Cork Committee ( <i>Comité National Inter-professionnel pour le Liège</i> , CNIL).	The CNIL will help with coordination. It will also provide general support to project implementation. It may benefit from capacity development.  CNIL has four established Commissions, one of which is responsible for the regeneration of cork oak forests. This Commission, and its members, are likely to be key Project partners. The CNIL and all its Commission include representatives of private sector.
NGOs and Local Associations (at the national, Wilaya and communal level)	National level NGOs may be involved as partners or to provide technical support. This includes environmentally organized associations.  Local associations already exist in many sites and consist of motivated local resource users. DGF is already working with many of these - in many cases DGF helped to establish or strengthen these associations. This work will be expanded. It is expected that these associations will provide the link between the Project and the local communities.
Local communities	These are currently involved in informal production activities using forest goods and services, and are involved in activities that may damage the forest. They are to be involved in all analysis, planning and implementation of activities. They are to be beneficiaries of training and other Project support activities.
Private forest owners	Partners, as appropriate, in the adoption of sustainable forestry practices.
Private enterprises	These enterprises are involved in Forest products harvesting and processing.

116. The ultimate beneficiaries of the Project will be the communities and individuals that are dependent on forest resources. Currently, these communities are suffering from the ongoing degradation of resources and are not optimally benefitting from the ecosystem goods and services. The Project will implement different activities for strengthening community engagement in sustainable forestry and for generating benefits to local communities. These small-scale initiatives will bring different ecological and socio-economic benefits to members of local communities, including women.

117. In the past, the vast majority of forests and forest products were managed by state organizations with almost no involvement of communities, non-government and business sectors. Through this project, a multi-stakeholder management of forests and forest products will be developed. Notably, at all sites, all products and services developed will require some considerable collaboration with private and business sector stakeholders, including small-scale farmers and agriculturalists, local entrepreneurs, value-adding processing and distribution industries, tourist operators and industrial associations. Each of these will benefit from an increased but sustainable production from cork oak forests. Accordingly, each of these should transform from being neutral or hostile to forests, to being supportive of sustainable forest management.

**3. Gender Considerations** 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.

118. Women enjoy the same civil and political rights as men and have the status of full citizens under the Algerian Constitution. Algeria has ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1996 but it has not ratified the Optional Protocol on violence against women. In the UNDP Gender Development Index, Algeria ranks 83<sup>rd</sup>, between Peru and Albania. Hence, in many ways, the position of women in Algeria is strong compared to many Middle East and North African countries. However, women find it challenging to enter into decision-making positions, particularly in rural areas.

119. Women play a key role in forest management. Women in the local community are mostly responsible for the harvesting of NTFPs, including some cork. Women are also responsible for the education of children, for maintaining social relations with neighbours and relatives. Some women, among the poorer families, assist their husbands or replace them in farming activities. Many women have skills in the packaging, processing and storage of many NTFP products (mushrooms, honey, nuts, oils, etc.). Women's know-how about medicinal and aromatic plants (recognition, use, preparation) is important and needs to be safeguarded and promoted. Hence women are particularly important stakeholders.

120. During the PPG phase, an analysis of the gender situation at the proposed sites will be undertaken, and gender

segregated data will be collected. This will lead to an understanding of the situation regarding gender. It will specifically lead to (i) the mainstreaming of gender into Project activities and (ii) the identification of any specific activities to support women or address gender issues.

121. Recognizing the leading role women have in the management of natural resources, and building on the results of the PPG, during the full project implementation, a strong gender perspective will be incorporated in order to address the needs and priorities of women while enhancing their opportunities for full inclusion in the planning and implementation of sustainable forestry initiatives. Specific activities will be identified while carefully taking into account local cultural sensitivities with regard to gender relations.

#### **4 Risks**

<b>Risk</b>	<b>Rating</b>	<b>Risk Mitigation measures</b>
Security issues lead to delays in activities and undermine efforts to develop sustainable activities (e.g. tourism, but also harvesting).	Low	Security has improved greatly in recent years and the government is committed to maintaining security. Further, tourism is not expected to be a major economic sector in the medium term, so this is not a mainstay for the project success.  Most activities take place at 3 pilot sites, if activities are delayed at one, the project will accelerate activities at the other two sites.
Decreased project ownership and support from governmental agencies	Low	DGF and local government agencies are currently very supportive. To maintain this support, they will be fully involved in the Project preparation and are expected to be fully involved in Project implementation and management.  The Project design takes into consideration the need of achieving results in the short-term in order to demonstrate the relevance of the Project objectives, results, and activities to local and national governmental agencies.
Climate change may lead to increased threats to forest, through fire, pests, diseases and changing climatic conditions (temperature, precipitation).  Some forests are currently vulnerable to pests and diseases – these are two vectors that are likely to be exacerbated by the impacts of climate change.	Low	The time scale for climate change should mean that it does not significantly impact forests during the Project implementation. Further, the Project, by greatly increasing overall forest management capacity, should greatly contribute to climate change resilience in Algeria.  The situation will be monitored and the project approach adapted as necessary.
Within the project timeframe, it is not possible to monetize the value of the ecosystem goods and services, and therefore not possible to create incentives for local people to support forest conservation.	Med	The forest and ecosystem provide sufficient goods and services to justify their conservation. However, these need to be monetized, and a significant proportion of the benefits need to flow to local communities, so that communities feel the need to conserve the forest. It takes time to construct such value chains and incentive mechanisms.  This is the aim of the second Component. It is expected that some (not all) goods and services will be monetized during the project lifetime, that the benefits will start to flow, and that both local communities and national government will appreciate the vision of the project. This should be sufficient to create the long term commitment of concerned stakeholders.  The situation will be monitored and the project approach refined if necessary.
Low involvement and participation of local institutions in planning and monitoring mechanisms.	Med	The Project will encourage local participation, empowerment and ownership by supporting multi-stakeholder processes for the development of sustainable harvesting and for the coordination of project activities. Developing this is one of the main rationales for the Project.

#### **5. Coordination**

122. The DGF and FAO will be directly responsible for coordination. FAO will lead in ensuring coordination with international partners and initiatives, whereas DGF will ensure coordination with national and local partners and national

initiatives.

123. The Project will notably be coordinated with the following GEF projects:

- *Conservation of Globally Significant Biodiversity and Sustainable Use of Ecosystem Services in Algeria's Cultural Parks*. This project, implemented by UNDP, started up in 2010 and will run until mid-2018. Although now almost complete, linkages will be developed where appropriate, and lessons will be learnt from this project (\$5.4 million GEF grant).
- *Developing a National Strategy and Legal and Institutional Framework on Access to Genetic Resources and Related Benefit Sharing and Traditional Knowledge in Line with the CBD and Its Nagoya Protocol in Algeria*. This project, implemented by UNDP, started up in 2016 and is implemented by the DGF. Working linkages will be developed where appropriate (\$1.9 million GEF grant);
- *The UNDP/GEF Small Grants Programme (SGP)*. The SGP started operations in Algeria in 2012 and includes many local initiatives to conserve biodiversity and improve land management. SGP has already learnt many lessons and developed a strong network, particularly related to participatory approaches. The proposed Project will explore the approach and successes of the SGP and learn from that experience.

124. DGF will ensure an appropriate coordination with all the stakeholders listed in Section 2 above.

125. FAO will ensure appropriate linkages are made with sustainable forestry initiatives in other Maghreb and Mediterranean countries.

126. To assist coordination, a national Project Technical Committee (PTC) will be established. Membership of this PTC will be the current membership of CNIL expanded to include representative of many of the stakeholders groups listed in Section 2 above. The role of the PTC will be: (i) to review and comment on workplans and terms of reference; (ii) to mobilize stakeholders and resources to project activities; (iii) to review and comment on draft outputs and; (iv) to share information and facilitate joint planning of activities. The PTC will be supported by a Project Management Unit, and one staff member will be responsible for supporting coordination.

## **6. Consistency with National Priorities**

### **Sustainable Development**

127. Two of the key national economic policies in Algeria are:

- The policy of '*Rural Renewal*', which notably includes two programmes of (i) management and extension of forest land and (iv) conserving natural ecosystems. This Project has been designed to contribute to these programmes.
- The '*New Economic Growth Model*', which aims to diversify the economy, notably through the innovative use of natural resources. Again, this Project aims to support this policy, directly, in rural areas, through the development of goods and services in the cork oak forest ecosystems.

### **Forestry**

128. Forestry policy in Algeria has recently been updated and modernized through the issuance of *Forest Strategy until 2035*<sup>23</sup>. The proposed Project presents an excellent opportunity to turn this Strategy into action, and has been designed to do so. First, this proposed Project is designed to contribute to the Forest Strategy's vision which is that it "*aims to serve the social, economic and environmental needs of the country, creating sustainable employment and income while contributing to improving the resilience of the natural environment to climate change*". The Project clearly is aligned to this. In addition, the Forest Strategy has six Strategic Directions, and this Project will continue to the following five of these:

- A1 - Sustainable management of the forest ecosystem and esparto grass (alfa);
- A2 - Water and soil conservation and combating desertification;
- B2 - Conservation and rehabilitation of wildlife, development of the practice of hunting and hunting activities;
- C1 - Economic valuation of forest products;
- C2 - Economic valuation of ecosystem services.

129. Hence this project has been designed to be aligned to, and to contribute to, the implementation of forestry policy in Algeria.

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<sup>23</sup> DGF/MADRP, 2017: "*Strategie des Forets a l'Horizon*"

## Biodiversity

130. Algeria’s NBSAP was updated recently and formally issued in 2016. It therefore constitutes the latest national policy objectives in Algeria. This project contributes directly to several objectives in the NBSAP<sup>24</sup>, as explained through the following table:

NBSAP National Objective	How the Project contributes
12: Protect, conserve and restore ecosystems in order to maintain their equilibrium, ensure their sustainability, and ensure sustainable production of ecosystem services, aiming at the conservation of at least 20% of terrestrial areas, 5% of marine and coastal areas and restoration of natural ecosystems over an area of at least 5 million hectares.	The project will help protect, conserve and restore equilibrium to 229,000 hectares of globally significant cork oak forests ecosystems.
14: Integrate the population into the management, conservation, restoration and enhancement of biodiversity by capitalizing on good co-management practices in order to create ownership and accountability for biodiversity conservation.	The project will demonstrate and provide incentives to integrate local communities into the sustainable utilisation of the goods and services in cork oak forests ecosystems, thereby contributing to biodiversity conservation. It will also develop participatory management approaches.
17: Integrate climate change adaptation approaches (ecosystem resilience, restoration of degraded ecosystems, combating desertification) and prevention of natural hazards and disasters into ecosystem management.	The ecosystems targeted by this Project are threatened by climate change. The project will demonstrate how adapting to climate change is central to forestry management plans, and will develop tools and capacity to support adaptation to climate change.
19. Investing in natural ecosystems with high added value, in particular to the added value of key biodiversity sectors contributing to the creation of permanent jobs and income for the local populations.	The project is designed to contribute directly to this objective, notably through the entire Component 2 (value chain and IFES development).

## Land degradation

131. Algeria is one of 14 countries to have piloted the preparation of a national land neutrality degradation (LDN) report. The Algerian LDN report was prepared during 2014-2016 and is currently pending formal approval. This report can be considered the updated formulation of national policy towards land degradation. This proposed Project has been developed within the spirit of the LDN report and is designed to contribute to several of its targets. Notably, the LDN has the following two (out of six) Objectives, to which the Project contributes:

- Objective 1: *“Integrated management of dam watersheds, with the aim of an “integrated watershed management program upstream of the reservoirs will contribute to the conservation of soils and waters and the improvement of the living standards of the populations”*. This proposed Project will contribute to that objective in concerned geographical areas;
- Objective 2: *“The National Reforestation Plan”*. For this, LDN reaffirms the national commitment to re-plant 1.25 million hectares, of which over 750,000 hectares have already been planted<sup>25</sup>. This Project has several activities contributing to that program.

132. Hence this Project is in support of the vision of achieving land degradation neutrality in Algeria, and has been designed to directly contribute to two of the LDN programme objectives.

## 7. Knowledge management

133. Knowledge generation and management is integrated throughout the Project’s components and there are specific activities to support knowledge management. Component 1 – the pilot site activities, can be seen as a generator of knowledge, as the basis for a school to demonstrate sustainable forest management. The pilot sites will serve as a living demonstration, and stakeholders from throughout Algeria will observe and witness the activities, successes and failures at the pilot sites.

134. Component 3 focuses on replication and upscaling. Formal activities will be taken to replicate the lessons learnt

<sup>24</sup> Ministry of Environment and Water Resources, 2016

<sup>25</sup> Although variable success rates

under Component 1 to all pertinent sites across Algeria, notably through training and through the support to the development of participatory forest management plans. Exchanges among the Project beneficiaries will be encouraged through study tours, forums and workshops, and the Project will use best available technologies and partnerships with key national and international partners to ensure lasting capacity building. Further under Component 3, several tools will be created to support knowledge management and the dissemination of lessons learnt – notably the Typology and the Guidelines. Component 3 will also include Project monitoring and evaluation – to provide additional lessons learnt for dissemination.

135. The Project will establish a national project office and national coordination mechanism, the ToR for these will include the active support of knowledge management and lesson learning.
136. Finally, FAO, through its regional and international networks will ensure a two-way flow of information and knowledge: to Algeria to support the Project technically, and from Algeria to ensure the lessons learnt are captured in other countries. For instance, FAO is one of the 3 GEF Agencies of The Restoration Initiative (GEF ID 9264) and will therefore ensure full access and exposure to results and lessons from the many child projects within the TRI programmatic approach, addressing similar challenges and barriers.

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

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**  
 (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Karim BABA	GEF Operational Focal Point	MINISTRY OF WATER RESOURCES AND ENVIRONMENT	11/07/2016

**A. GEF AGENCY(IES) CERTIFICATION**

<b>This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for project identification and preparation under GEF-6.</b>					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Daniel Gustafson Deputy Director-General (Programmes) and Officer- in-Charge, TCI, Investment Centre Division		25 October 2017	Maude Veyret- Picot Natural Resources Officer	+39 065705236 2	Maude.veyretpicot @fao.org
Jeffrey Griffin Senior Coordinator FAO-GEF unit FAO, Rome, Italy					

## Annex 1 – Introduction to the Three Potential Pilot Sites

### Sites Pilotes :

Pour un meilleur impact du projet, il a été décidé de choisir trois à quatre sites pilotes à titre démonstratif des résultats des approches et activités innovante de gestion qui seront entreprises dans le cadre de ce projet.

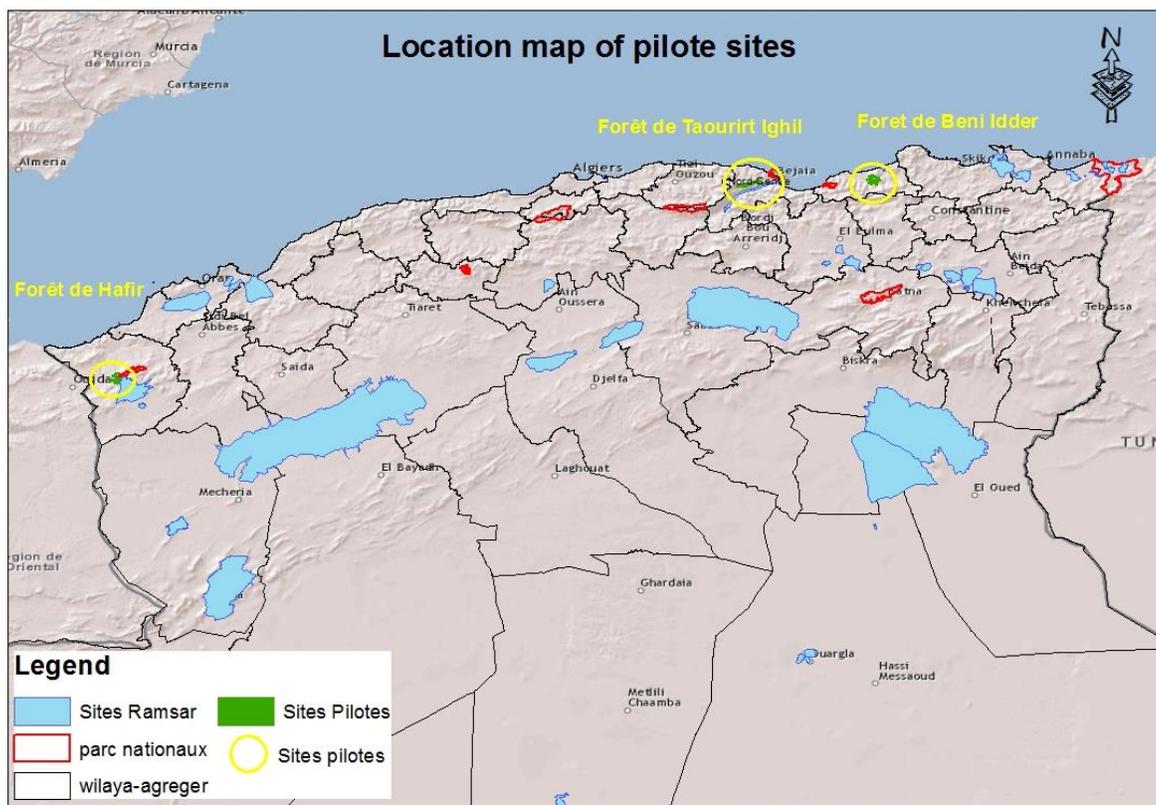
La subéraie est en elle-même une formation remarquable existant uniquement dans le bassin méditerranéen occidental. Cette formation forestière naturelle est menacée de disparition considérant les pressions anthropiques et changement climatique qu'elle subit.

Les sites pilotes choisis sont :

- Forêt de Taourirt Ighil dans le secteur biogéographique numidien de la grande Kabylie (K1) ;
- Forêt Beni Idder dans le secteur biogéographique numidien de la petite Kabylie (K2) ;
- Forêts de Hafir dans le secteur biogéographique de la plaine oranaise intérieur (O2) ;

Les deux premières ont été choisies car ce sont des subéraies naturelles qui subissent une dégradation principalement causée par les activités humaines, et où les actions de réhabilitation de l'écosystème et sa gestion durable sont des challenge réalisable.

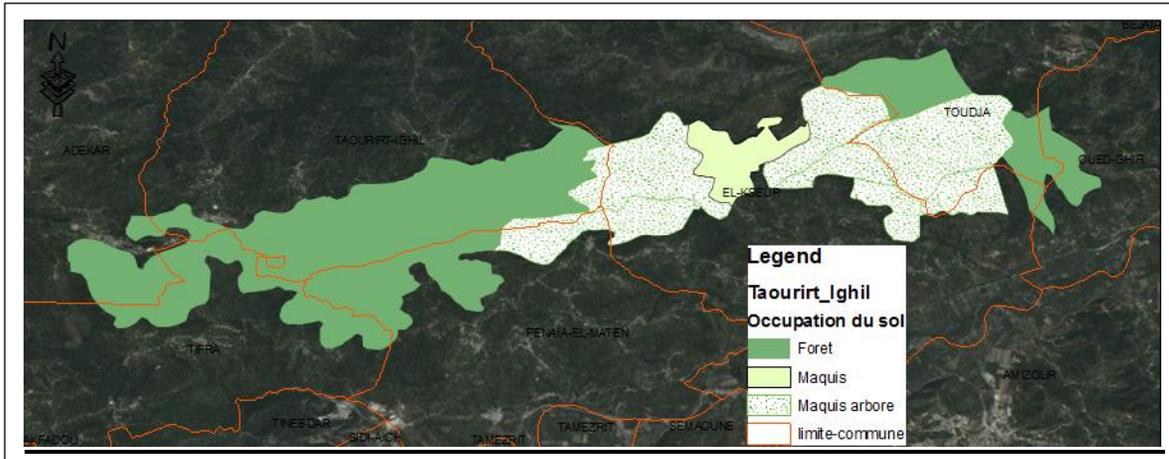
La forêt de Hafir est l'une des subéraies situées le plus au sud elle subit l'aridification du climat et des pressions anthropiques importante. Cette forêt présente pour ce projet un bon exemple de gestion forestière durable dans un contexte d'adaptation au changement climatique.



## 1. Massif forestier Taourirt Ighil

### SITUATION GEOGRAPHIQUE

- **Wilaya :** Bejaia
- **Conservation :** Bejaia
- **Forêt :** Forêt domaniale de Taourirt Ighil
- **Communes :** Adekar, Taourirt Ighil, Fenaia, Tifra, El Kseur, Toudja et Oued Ghir
- **Population :** 29 800 habitants dans et autour de la forêt.
- **Superficie des forêts, de la subéraie :** 7 265 Ha



- **Statut (qualité) de la subéraie, et statistiques :** forêt 4 296 ha (59%), 2 969 ha de maquis arboré et maquis soit 41 % de la forêt est dégradé. C'est une subéraie à *Quercus canariensis*, la forêt de Taourirt Ighil est constituée de 2 945 ha de peuplement de chêne liège pur, 1 194 ha de peuplement de chêne liège en mélange avec le chêne Zeen (*Quercus canariensis*) et 157 ha de peuplement de chêne zeen pur.

#### **-Production actuelle des biens et des services de la subéraie :**

La forêt de Tourirt Ighil est située dans le bassin versant de l'oued Soumam qui est un site classé site Ramsar des zones humides d'importance internationale.

La forêt de Taourirt Ighil recèle un énorme potentiel de production de liège mais qu'il faudra protéger, réhabiliter et améliorer pour atteindre les objectifs.

La moyenne annuelle de production de liège est de l'ordre de 400Qx (statistiques 2005-2010)

La production de produits ligneux durant l'année 2015 est comme suit:

- Bois de feux : 152 stères
- Souche de bruyère : 42 stères
- Perches : 385 unités
- Piquets : 90 unités

-L'activité Apicole est aussi assez développée dans cette forêt, 52,26Ha sont amodiées par l'administration pour cette activité.

La diversité des paysages (forêt à affleurement rocheux, prairies) et le climat tempéré de la forêt de Taourirt Ighil, se prête non seulement à l'éco tourisme mais aussi aux activités cynégétiques. En effet la forêt renferme une faune très diverse pour la pratique de la chasse (lapins, perdrix, sangliers.....)

#### **-Menace principales (avec statistiques)**

- *Les incendies:*

La forêt de Taourirt Ighil est ravagée presque dans toute sa totalité par les incendies durant la décennie noire. Les superficies incendiées entre 2000 et 2016 dans la zone d'étude

-Année 2000 :	09 incendies	509Ha
-Année 2001 :	néant	
-Année 2002 :	05 incendies	61Ha
-Année 2003 :	02 incendies	04Ha
-Année 2004 :	17 incendies	91Ha
-Année 2005 :	17 incendies	257Ha

-Année 2006 :	13 incendies	384,5Ha
-Année 2007 :	14 incendies	323,5Ha
-Année 2008 :	03 incendies	16,5Ha
-Année 2009 :	02 incendies	11Ha
-Année 2010 :	15 incendies	304,5Ha
-Année 2011 :	10 incendies	39,25Ha
-Année 2012 :	21 incendies	426,5Ha
-Année 2013 :	néant	
-Année 2014 :	10 incendies	26Ha
-Année 2015 :	néant	
-Année 2016 :	01 incendie	40Ha

- *Les occupations illicites :*

13 occupations illicites (constructions) sont recensées au niveau de la zone d'étude

- *Le pacage :* pour pallier à l'insuffisance des terres fertiles, les riverains, pratiquent l'élevage traditionnel au dépend de la forêt ce qui élimine toute chance de régénération et développement du patrimoine forestier.

*Coupe de bois :* les délits de coupe sont rares, les riverains préfèrent le bois de chêne zeen qui n'est pas très disponible dans cette partie de notre forêt.

#### **-Les actions en cours, et prévues (par le DGF, etc)**

Repeuplement en chêne liège sur un volume de 30Ha est en cours de réalisation

- *Programme neuf pour l'année 2017 à travers les communes concernées:*

1/. Commune de Tifra :

Aménagement de tranchées pare feux : 05HA (Foret de taourirt ighil).

2/. Commune de Fenaia :

Travaux sylvicoles : 30HA (Foret de taourirt ighil).

Aménagement de tranchées pare feux : 10HA (Foret de taourirt ighil).

3/. Commune d'Adekar :

Travaux sylvicoles : 100HA (Foret de taourirt ighil).

4/. Commune de Taourirt ighil :

Travaux sylvicoles : 40HA (Foret de taourirt ighil).

#### **-Autres produits/secteurs clés économique/agricole/forestier**

Ecotourisme, activité agricole, apiculture, chasse, élevage

#### **-Parti-prenants clés ou notables :**

- Collectivités locales : President de l'Assemblée Populaire Communale et chefs de Dairas
- Administration des forêts
- Les comités des villages
- Associations :
  - Les amis de la nature,
  - Arc en ciel de Tizi El Korn,
  - Assirem Gouaraya
- Institut National de la Recherche Forestière (INRF station d'Azazga, Tizi ouzou)
- Université de Tizi Ouzou

#### **-Biodiversité notable :**

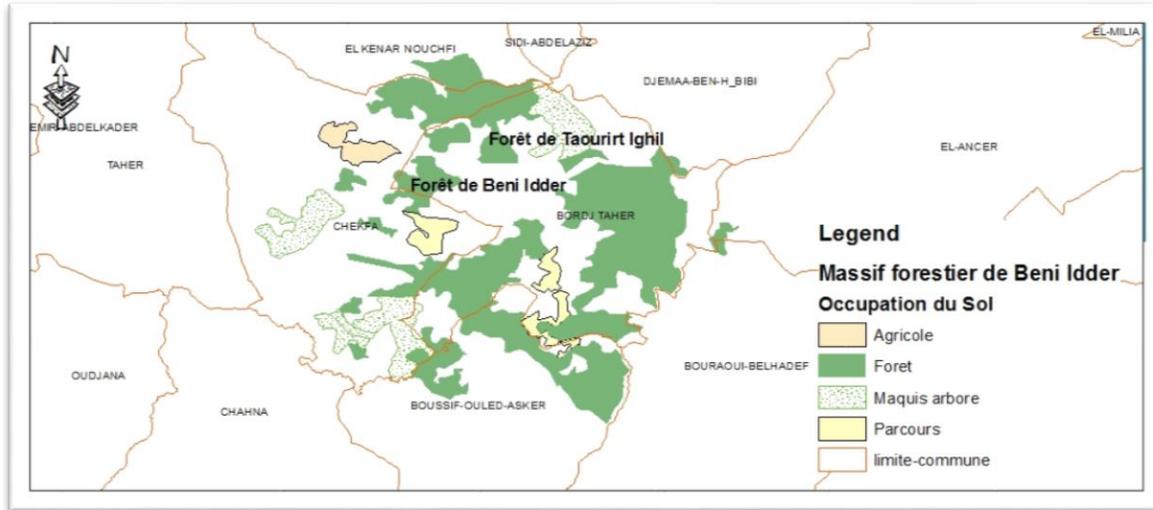
Dans le sous-bois et les maquis de cette forêt on trouve de la bruyère arborescente, de l'Arbousier, du pistachier lentisque, du ciste, du calycotome épineux,...

Concernant la faune, sanglier, lièvre, perdrix, ...

## 2. Massif forestier Beni Idder

### SITUATION GEOGRAPHIQUE

- **Wilaya :** Jijel ;
- **Daira :** Chekfa ;
- **Communes :** Bordj T'har ; Chekfa ; Boussif Ouled Askeur ; El Kenar Nouchfi
- **Forêt domaniale :** Beni Idder ;



- **Population (Statistiques 2010) :** 4 051 habitants ;
- **Superficie des forêts, de la subéraie :** 5 108 ha ;
- **Statut de la subéraie:** Domaine Public de l'Etat ;
- **Qualité de la subéraie :** vieille futaie claire, moyennement dense à dense par endroit. Elle est constituée de 3 874 ha de forêt, 824 ha de maquis arboré soit 16% de la forêt qui présente une dégradation. Il y a aussi des vides qui sont destinés à l'agriculture familiale 144 Ha et 266 ha destiné au parcours (pâturage). Le chêne liège forme des peuplements purs de 3 593 ha, des peuplements en mélange avec le Pin Maritime de moins de 20 ha et des peuplements en mélange avec le chêne zeen sur 196 h. Le chêne zeen colonise 69 ha le reste de la forêt est constituée d'Olivier sauvage, de bruyère arborescente, et de calycotome.
- **Production actuelle des biens et des services de la subéraie**

Canton	Année	Nom de la forêt	Total
Enchid	1989	Beni Idder	2 068,20
	1998	Beni Idder	1 114,50
	2006	Beni Idder	967,40
<b>Total Enchid</b>			<b>4 150,10</b>
Taourerts	1999	Beni Idder	1 200,00
	2002	Beni Idder	416,00
	2008	Beni Idder	1 077,75
	2009	Beni Idder	306,20
<b>Total Taourets</b>			<b>2 999,95</b>
T'saroubia	1992	Beni Idder	1 930,00
	1998	Beni Idder	896,00
	1999	Beni Idder	2 100,00
	2002	Beni Idder	1 400,00
	2006	Beni Idder	1 449,10
	2011	Beni Idder	1 207,30
	2014	Beni Idder	519,00
<b>Total T'saroubia</b>			<b>9 501,40</b>
<b>Total général</b>			<b>16 651,45</b>

Chêne liège (liège, gland, tanin), bois de chauffage. Tourisme de montagne (activité non encadrée).

- **Menace principales (avec statistiques)**

• **Incendie :**

Canton	Année	Superficies incendiées (Ha)				
		Forêt	Maquis	Broussaille	Autres	Total
Enchid	2005	170	0	0	5	175
	2007	4	0	0	3	7
	2011	2,5	0,5	0	0	3
	2012	1	0	8	0	9
	2013	3,5	0	0	0	3,5
	2014	5	0,5	0	0	5,5
<b>Enchid+ Taourerts</b>	2012	102	27	0	15	144
T'saroubia	2003	7	0	0	2	9
	2004	0	1	0	0	1
	2005	4,5	0	0	5	9,5
	2009	2,5	0	0	2	4,5
	2012	26,5	0	0	1	27,5
	2014	5,5	0,75	0	0	6,25
Taourerts	2005	105	0	0	10	115
	2014	1,5	0	2	0	3,5
<b>Total général</b>		<b>440,5</b>	<b>29,75</b>	<b>10</b>	<b>43</b>	<b>523,25</b>

• **Occupations illicites (extension urbaines et/ou agricole) :**

Canton	Nombre d'occupants	Superficie totale occupée (Ha)	Nature de l'occupation
T'saroubia	07	03	Extension Agricole
Enchid	18	05	Extension urbaine
Taourerts	0,5	01	Extension Agricole

• **Exploitation illicite :** coupe d'arbre à des fins de carbonisation (absence de statistiques).

• **Pacage :** les riverains pratiquent l'élevage extensif libre en forêt (absence de statistiques).

- **Les actions en cours, et prévues (par le DGF, etc)**

• **Actions en cours :** Néant

• **Actions prévues :**

- Travaux sylvicoles : 50 Ha.

- Repeuplement (chêne liège) : 50 Ha.

• **Actions réalisées :**

Année	Travaux	Canton	Quantité	Unité
2005	Assainissement des forêts	T'saroubia	100,0	Ha
2005	Assainissement des forêts	Enchid	50,0	Ha
2006	Aménagement de TPF	T'saroubia	20,0	Ha

2008	Assainissement des forêts	Taourerts	80,0	Ha
2011	Repeuplement	Enchid	50,0	Ha
2011	Aménagement de piste	T'saroubia	9,0	Km
2011	Aménagement de piste	Enchid	9,0	Km
2014	Aménagement de piste	Enchid	4,0	Km

- **Autres produits/secteurs clés économique/agricole/forestier**

Huile d'olive, souche de bruyère, fruits divers « BIO », huile de lentisque, miel, élevage (bovin, ovin et caprin), plantes médicinales et aromatiques (verveine).

- **Parti-prenants clés ou notables**

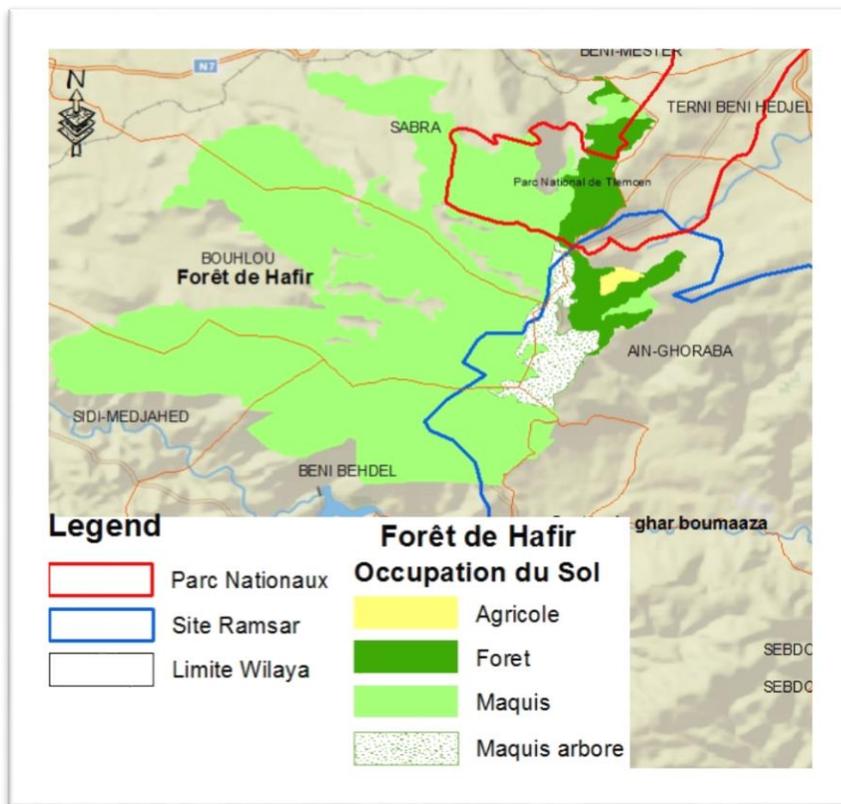
Administration des forêts, Assemblée Populaire Communale, riverains, propriétaires de subéraies privées, unités de transformation de liège, Conseil National Interprofessionnel de la filière Liège, Entreprise Régionale du Génie Rural, Institut National de Recherche Forestière, Institut National de Recherche Agronomique Algérien, mouvement associatif, direction du tourisme.

### 3. Massif forestier Hafir

#### Localisation géographique du projet :

- Wilaya : Tlemcen
- Dairas : Mansourah, Beni Snous.
- Districts : Tlemcen
- Communes : Sabra, Terny, Ain Ghoraba, Beni mester, Beni Bahdel.
- Forêts : FD Hafir
- Population : 2 500 habitants
- Superficie de la FD Hafir : 10 157 ha 55are 60 Ca (3500 à 4000 ha Liège).

Une partie est située à l'intérieur du Parc National de Tlemcen, également réserve de la biosphère (UNESCO-MAB). Cette forêt est aussi sur le territoire de la forêt Modèle de Tlemcen.



Etant une forêt de chêne liège, futaie jardinée à l'origine, elle n'a été aménagée qu'entre 1936 et 1939 et a donné lieu, depuis, à l'exploitation du liège à coupon réglé au lieu de la récolte par jardinage.

L'altitude dans la forêt de Hafir varie entre 600 et 1300m. Plus de 60% du territoire est sur des pentes de moins de 12%, et 35% sur les pentes de plus de 12%

#### *Statut de la subéraie:*

La forêt de Hafir se situe dans la wilaya de Tlemcen, à 20 km au sud-ouest du chef-lieu de wilaya, elle est limitée :

- Au Nord par la route nationale n°7 qui relie Maghnia à Tlemcen.
- Au Sud et à l'Ouest par la partie centrale de la vallée de l'oued Tafna.
- A l'Est par la RN22 qui relie Tlemcen à El Aricha.

La forêt domaniale de Hafir s'étend sur 10 157,5560 Ha (Fascicule de propriété FD Hafir), elle relève du domaine forestier public de l'Etat, et composée de 24 cantons, qui sont répartis sur le territoire de deux circonscriptions de Maghnia et Tlemcen, dont la superficie la plus importante est gérée par la circonscription de Maghnia.

La forêt de Hafir a été soumise au régime des forêts en 1891 (C.O.I.T., 1900). La majeure partie du massif est couverte de formations forestières. Elle comprend en outre 24 enclaves cultivées totalisant environ 200 ha de terrains inexploitable. Ces derniers, en général rocheux ou dégradés et couverts d'une végétation basse ou buissonnante, sont impropres aux plantations.

Les peuplements de chêne-liège couvrent une superficie de l'ordre de 3 500 (Boudy, 1955) à 4 000 ha (Thintoin, 1956 ; Sauvagnac, 1956). Ils sont localisés dans de nombreux cantons (11 au moins) dont les plus importants sont S'Rutou, Moutas, Tatsa, Tijdit, Oued Tlet, Oued Fernane et Koudiet Hafir.

En matière d'équipement d'infrastructures la Forêt Hafir est desservi par un réseau de pistes d'environ 92 Km, et de 45 Ha de Tranchée Pare Feu (TPF) et d'une Maison Forestière double.

- **Production actuelle des biens et des services de la subéraie**
- **Bilan de récolte**

Année d'exploitation	Forêt	Quantité de liège récolté	Obs
1996	Hafir	1247Qx	
2002	FD Hafir	675Qx	
2004	FD Hafir	514Qx	
2005	FD Hafir	633 Qx	
2015	FD Hafir	588Qx	
2016	FD Hafir	374 ,5Qx	

- **Menace principales (avec statistiques)**
- La principale menace est les incendies répétés.

Année	Forêt	Superficie (ha)
2001	FD Zarifet	2
2004	FD Zarifet	67
2004	FD Hafir	120
2005	FD Zarifet	250
2007	FD Zarifet	55
2007	FD Hafir	150
2014	FD Hafir	5

- **Les actions en cours, et prévues (par le DGF, etc)**
- **- Travaux Réalisés dans la Forêt Domaniale de Hafir :**

Circonscription	Commune	Périmètre	Action	Volume
Maghnia	Bouhlou	Tameksalet	Aménagement de Pistes Forestiers	20 Km
			Travaux Sylvicoles	217 Ha
			Poste Vigie	01 Unité
Tlemcen	Béni Bahdel	Saf El Ali	Travaux Sylvicoles	50 Ha
	Ain Ghoraba	FD Hafir	Reboisement	20 Ha
			Repeuplement	20 ha

- **Actions prévues :**
- Repeuplement : 55 ha
- TPF : 10 ha

- **Autres produits/secteurs clés économique/agricole/forestier**
- **Parti-prenants clés ou notables**
- Conservation des forêts de Tlemcen, le Parc National de Tlemcen, l'université de Tlemcen, Centre cynégétique de Tlemcen, la Réserve de chasse de Tlemcen, l'Institut National de Recherche Forestière, les collectivités locales, les associations (ONG) notamment l'association forêt modèle de Tlemcen...

- **Biodiversité notable :**

Elle est composée à l'état naturel essentiellement de feuillus, tels que les trois espèces de chêne (*Quercus suber*, *Q. rotundifolia* et *Q. faginea* ssp. *tlemcenensis*), l'olivier sauvage (*Olea europaea* ssp. *oleaster*) et quelques pieds de frênes oxyphylles (*Fraxinus oxyphylla*). Mais aussi de résineux comme le thuya de berberie (*Tetraclinis articulata*) et le genévrier oxycèdre (*Juniperus oxycedrus*), le Pin d'Alep, le pin pignon, le cyprès commun et l'eucalyptus qui se rencontrent dans certains cantons dégradés. Ils y ont été introduits lors de reboisements traités en D.R.S sur 575 ha entre 1965 et 1969 (C.F.W.T., 1995).

Faunes : chacal, aigle, Chardonnet, hérisson ; chat forestier, lapin de garaine, sanglier, ect...