Republic of Lebanon
Ministry of Environment

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United Nations Development Programme

Project Document

Project title: Land degradation neutrality of mountain landscapes in Lebanon		
Country: LEBANON	**Implementing Partner:** Ministry of Environment	**Management Arrangements:** Support to National Implementation Modality (NIM)
UNDAF/Country Programme Outcome: Outcome 3.3. Lebanon has adopted measures to improve environmental governance		
UNDP Strategic Plan 2018-2021 Output: Development Setting B: Accelerating structural transformations for Sustainable Development. Signature solution 4: Promote nature-based solutions for a sustainable planet		
UNDP Social and Environmental Screening Category: Moderate	**UNDP Gender Marker: 2**	
Atlas Project ID/Award ID number: 00098955	**Atlas Output ID/Project ID number: 00102170**	
UNDP-GEF PIMS ID number: 5837	**GEF ID number:** 9388	
Planned start date: 01 June 2019	**Planned end date:** 31 May 2024	
LPAC date: 9 May 2019		

Brief project description:

The project seeks land degradation neutrality in mountain lands by rehabilitating degraded land and preventing further degradation. It will do this initially at the pilot scale to gain the necessary skills and know-how as well as confidence, before it can be up-scaled and replicated post-project comprehensively.

Rehabilitation practices will be tested for technical effectiveness, cost-effectiveness and benefits in the agriculture, mountain pastures and forestry sectors, the quarrying sector, and the eco-tourism and outdoor recreation sectors. Prevention will be achieved through comprehensive land use planning and the monitoring for compliance with set conditions and their enforcement.

There will be clarification of roles and enhancement of capacities particularly at local government level. The institutional and regulatory context will be reviewed, updated and strengthened so as to prevent new degradation of forests, rangelands and agricultural lands. The project will aim for a robust, comprehensive and appropriate legal framework which will assess biodiversity and key ecosystem goods and services to inform permitting decisions.

Finally the project will develop new financing mechanisms for SLM/SFM based on international best practice and a knowledge management platform to facilitate sustainability, replication and up-scaling of the new practices leading to land degradation neutrality.

FINANCING PLAN	
GEF Trust Fund	USD 4,621,005
UNDP TRAC resources	USD 120,000
(1) Total Budget administered by UNDP	**USD 4,741,005**
OTHER CO-FINANCING (*all other co-financing that is not cash co-financing administered by UNDP)*	
Government – Ministry of Environment	USD 7,500,000
Government – Council for Development and Reconstruction	USD 7,000,000
NGO – Lebanon Reforestation Initiative (LRI)	USD 2,000,000
(2) Total other co-financing	**USD 16,500,000**
(3) Grand-Total Project Financing (1)+(2)	**USD 21,241,005**

SIGNATURES		
Signature: **Mr. Nabil El-Jisr, President**	**Agreed by Government** **Council for Development and Reconstruction**	**Date/Month/Year:** 14 JUN 2019
Signature: **H.E. Mr. Fady Jreissati, Minister**	**Agreed by Implementing Partner** **Ministry of Environment**	**Date/Month/Year:** 31/05/2019
Signature: **Ms. Celine Moyroud, Resident Representative**	**Agreed by UNDP**	**Date/Month/Year:** 29/07/2019

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ACRONYMS AND ABBREVIATIONS

AFDC	Association for Forests, Development and Conservation
CBD	Convention on Biological Diversity
CDR	Council for Development and Reconstruction
EU	European Union
FAO	Food and Agriculture Organization (of the United Nations)
FSP	Full Sized Project
GEF	Global Environment Facility
GEFSeC	Global Environment Facility Secretariat
IA	Implementing Agency (of the GEF)
IBA	Important Bird Area
IEO	Independent Evaluation Office (of UNDP and of GEF)
LDN	Land Degradation Neutrality
LD-PMAT	Land Degradation – Portfolio Monitoring and Tracking Tool
LMT	Lebanon Mountain Trail
LRI	Lebanon Reforestation Initiative
LUP	Land Use Planning
M&E	Monitoring and Evaluation
MoA	Ministry of Agriculture
MoE	Ministry of Environment
NAP	National Action Plan (of the UNCCD)
NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non-Governmental Organization
NIM	National Implementation Modality
NFP	National Focal Point (for the GEF)
NPMPLT	National Physical Master Plan for the Lebanese Territory
OECD	Organization for Economic Cooperation and Development
OMSWA	Office of the Minister of State for Women's Affairs
PIF	Project Identification Form
PIR	Project Implementation Report
PMU	Project Management Unit
POPP	Programme and Operations Policies and Procedures (of UNDP)
PPG	Project Preparation Grant (of GEF)
STAP	Scientific and Technical Advisory Panel (of GEF)
RAPTA	Resilience, Adaptation Pathways Transformation Assessment (Framework)
RTA	Regional Technical Advisor (of UNDP)
SDG	Sustainable Development Goal
SEA	Strategic Environmental Assessment
SLM	Sustainable Land Management
SPNL	Society for the Protection of Nature in Lebanon
TRAC	Target from Resource Assignment from the Core (Funding)
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commission for Refugees
USAID	United States Agency for International Development
USD	United States Dollar

1 DEVELOPMENT CHALLENGE

1.1 Background

1. Lebanon has a total land area of 10,452 km^2, and lies entirely within the Mediterranean Basin Ecoregion. It is situated east of the Mediterranean Sea, has a coastline of 210 km and stretches 50 km inland. Inland from the coast is the Mount Lebanon mountain range which stretches some 240 km, is characterized by high precipitation and has an average altitude of around 2000 m[1] with the highest peak, Qurnat al-Sawda rising to just over 3000 m.

2. Jurassic, Cretaceous and Tertiary Karstic limestone, Cretaceous and Quaternary sandstone, and Conglomerate make up most of Lebanon's geology. Carbonated rock formations make up most of the two main mountain ranges. Soils in Lebanon are young and shallow and have a poor consistency, especially on sloping terrains. The most common soil types in Lebanon are the calcareous Terra-Rossa and Rendzinas, which are in the agricultural plains of the country. Other soil types include sandstone, basalts and similar older volcanic materials. Precipitation averages 840 mm/year – varying from 200 mm/year in the northern inland region to more than 1,500 mm/year on the peaks of Mount Lebanon.

3. Land use activities in the Mount Lebanon range include irrigated and non-irrigated arboriculture (olive trees, apple, almonds) and vineyards. Extensive grasslands allow for the development of livestock, particularly goats. Forests in Lebanon cover 139,376 ha while Other Wooded Lands (OWLs) cover 108,378 ha, 13% and 10% of the surface area of the country, respectively[2]. The highest concentrations of forests in the country are found in Mount Lebanon (37%) and North Lebanon (30%), such that oak forests occupy the largest surface areas, estimated at 52%[3].

Figure 1: Governorates and Districts of Lebanon

4. Lebanon makes up only 0.007% of the world land surface area but it is home to 1.11% of world plant species and 2.63% of reptile, bird and mammal species. Lebanon's floral diversity is one of the highest in the Mediterranean, a region which is considered to be among the most biologically diverse in the world. About 12% of plant species in Lebanon are endemic. Lebanon is also home to nine nature reserves, three biosphere

[1] Yighni, Y. et al (2013). Soil Resources of Mediterranean and Caucasus Countries
[2] Ibid.
[3] UNDP / MOE (2011), State and Trends of the Lebanese Environment

reserves, one UNESCO World Heritage Site and 15 Important Bird Areas (IBAs) recognized by Birdlife International[4]. The Lebanon NBSAP[5] provides a comprehensive and detailed overview of protected areas in Lebanon. At the species level, 9,119 species have been documented - 4,633 flora and 4,486 fauna. Of these species, 96 are considered rare or threatened. Eleven tree species are on the IUCN red list at low risk levels while *Arbutus*, *Ceratonia*, *Pistacia*, *Pinus*, *Quercus* and *Laurus* are among the surviving remnants of ancient forests[6].

5. Lebanon is administratively divided into 6 governorates and 25 districts as shown in the map in Figure 1. Of particular interest to this project, with its focus on mountain lands, are the districts of Akkar and Jbeil, in North Lebanon and Mount Lebanon Governorates, respectively.

6. A feature of the Mount Lebanon range is the Lebanon Mountain Trail (LMT) which starts in Akkar, runs across Jbeil and terminates in Marjaayoun in the south having traversed 470 km passing through more than 75 towns and villages at altitudes ranging from 570 to 2,011 m above sea level. The LMT showcases the natural beauty and cultural wealth of Lebanon's mountains and demonstrates the determination of the people of Lebanon to conserve this unique heritage. The trail brings communities closer together and expands economic opportunities in rural areas through environmentally and socially responsible tourism. Every year, more than 25,000 visitors walk on the LMT, including Lebanese and foreign hikers, providing an economic lifeline to the rural communities along the trail.

1.2 Land degradation problems facing Lebanon

7. Current land management practices in Lebanon are not sustainable as they continue to erode the country's natural resource base (soil, water, green cover, and landscape). While traditional practices such as terracing, controlled grazing and forest management have helped protect the land, modern practices have significantly altered the natural and social make-up of the land including perceptions of natural resources. Population growth, the continued loss of arable land and biodiversity, concerns about food security and the expanding infrastructure due to population growth and urban sprawl are major factors impacting land resources and the natural environment and leading to land degradation.

8. Land degradation in Lebanon is of particular concern in mountain lands and high country. This is due in part to natural factors typical of mountain rocky lands with shallow soils and bare rocks where accelerated soil erosion and landslides are a characteristic of the topography. A soil assessment showed that over 90% of the central Lebanese mountain areas have moderate to high erosion rates[7]. However, this is exacerbated by human induced pressures including overgrazing, deforestation by both permitted and illegal logging, conversion of forest land for pasture, agricultural malpractices including overuse of fertilizers, quarrying and urban settlement.

9. According to some estimates, there has been little change in overall forest cover at the national level over the past ten years. This is because reforestation measures have balanced out illegal logging, forest fires, urbanization, infrastructure development, human intervention, and overgrazing. However, and especially at the local level, there has been degradation and fragmentation of forests and although annual reforestation is estimated at 0.83% leading to a small net gain at the national level annually[8], high density forests have decreased by 0.4% annually and at the local level there are forest losses[9]. There is also a differing estimation put forward by the UNCCD NAP which states that Lebanon has experienced a loss in forest cover between 2000 and 2010 of 1,783 ha and a loss of SOC[10] of 120,943 tonnes.

10. Agricultural cropland in Lebanon covers 25% (248,000 ha) of the country's 10,452 km^2 and about 216,643 people (family and non-family) work full-time on farms with seasonal family labour reaching 239,007 people[11]. However, farmers are considered to be among the most vulnerable Lebanese. Some 70.2% of farming households are small-scale farmers and 75% are not registered with the National Social Security Fund. Around 22% of poor farmers in Lebanon are located in Mount Lebanon Governorate while 15% are found in Akkar. Of these, the worst affected are women although due to the lack of gender-disaggregated data, and the fact that the last census carried out in Lebanon was in 1970, it is difficult to give detailed information on the role of women in agriculture. According to an early but much-cited FAO source[12], "*women comprised 40.7% of the agricultural*

[4] Yighni, Y. et al (2013). Soil Resources of Mediterranean and Caucasus Countries
[5] https://www.cbd.int/doc/world/lb/lb-nbsap-v2-en.pdf
[6] MOE / GEF / UNDP (2011), Lebanon's Second National Communication to the UNFCCC
[7] Yighni, Y. et al (2013). Soil Resources of Mediterranean and Caucasus Countries
[8] UNDP / MOE / ECODIT (2011) State and Trends of the Lebanese Environment
[9] Data and statistics exist for Lebanon at the national level, but at the district level they are usually non-existent. The project will establish its own baselines through surveys that will be carried out during the inception phase.
[10] Soil Organic Carbon
[11] Government of Lebanon / FAO (2010) Census of Agriculture
[12] FAO (1994) Fact Sheet: Lebanon - Women, agriculture and rural development. http://www.fao.org/docrep/v9322e/v9322e01.htm

labour force in 1990" and this is because "*rural women have had to become the main contributors to agricultural production, from planting to marketing, due both to extensive male migration to urban areas and to increasing widowhood as a result of war. More than 10% of rural households were headed by women in 1987. Most women work on family farms, although a considerable number work as seasonal daily paid labourers, particularly in harvesting, where their wages are only half those of men. Women are also employed as cheap labour in food processing industries".* It is a well-known fact that women undertake a large bulk of the agricultural work, including seeding, weeding and harvesting.[13] However, due to traditional gender roles, women officially represent only 8.5% of farmer holdings[14] and agricultural assets, especially land, continue to be registered and reported under the male member of the household, and it is men who are the main decision-makers in the context of farming[15].

11. The districts of Akkar (78,800 ha) and Jbeil (43,000 ha) where a number of factors have contributed to the degradation of the environment, are of particular interest to the project. The land area targeted by the project in Akkar and Jbeil is 19,365 ha and 28,019 ha, respectively, for a total of 47,385 ha. Of these, 29,621 ha (17,210 ha in Akkar, 12,411 ha in Jbeil) are considered productive lands, with the difference of 17,764 ha consisting of artificial lands, water bodies and natural (mountain) lands without vegetation. In the Akkar site, forests and shrubland comprise the predominant land type with 11,342 ha, whereas agricultural cropland amounts to 5,375 ha and grasslands are 493 ha. In the Jbeil site there are 8,377 ha of forests and shrubland, 3,106 ha of agricultural cropland, and 928 ha of grasslands. Please refer to Annex 18 for details and maps and to the LD-PMAT in Annex 4. Akkar forests are of key ecological value. It is also one of the most deprived regions in Lebanon with high poverty rates, and the forests are heavily impacted by unsustainable anthropogenic practices[16] necessitated by the need for survival, encroachment by infrastructure development such as roads and urban sprawl. By contrast, the mountain areas in Jbeil, which has relatively good socioeconomic indicators compared to other districts in Lebanon, are attractive to tourists and residents equally. However, as in other highland areas in Mount Lebanon, urban sprawl and tourism development in Jbeil is a continuous threat to natural areas and agricultural productivity, especially in the absence of adequate land use planning and enforcement. Unsustainable agriculture practices, mainly the excessive use of pesticides and fertilizers, have affected agricultural areas in both districts. In addition, logging and urbanization have also posed serious threats on a local scale[17] and the landscape has also been altered by the proliferation of quarries in both districts. Akkar hosts about 28 quarries[18], while Ehmej in Jbeil District has many abandoned quarries as the municipality banned quarrying some time ago.

12. Lebanon has extensive grasslands/rangelands which make up over 50% of land cover, some 645,160 ha in all. In the sites targeted by the project in Akkar and Jbeil, however, the extent of grasslands is not large, at 493 ha and 928 ha respectively, and they are overgrazed. The lack of permanent pastures has resulted in shepherds letting their livestock graze in forests, wooded lands, and agriculture areas and this is a major factor contributing to the degradation of vegetation cover, particularly serious in mountain ecosystems. The depletion of vegetation cover has jeopardized the possibility for self-regeneration[19] in some forests.

13. Tourism and outdoor recreation have also been identified as causes of land degradation. Lebanon's 5th National Report to the CBD identifies "*recreational pressure as an additional cause for habitat loss, destruction and fragmentation*" and cites the absence of an adequate strategy as the root cause. Relevant examples of such activities include expansion of ski resorts, construction of mountain resorts and country clubs and camping and outdoor activities that lead to forest fires and littering[20]. Pine forests are shrinking rapidly to make way for resorts that are paradoxically marketed as being located in a green oasis or surrounded by forests. Despite the fact that such projects try to restore the lost greenery through landscaping, they usually use imported or introduced species that are not well suited for Lebanon[21] and may be invasive.

14. The Lebanon Mountain Trail, with its eco-friendly and passive "use" of the mountain environment, is experiencing increasing impacts through land degradation. Deforestation, urban sprawl, quarrying and similar activities are reducing the visual appeal and the quality of the experience. Many kilometres are affected annually.

[13] Institute for Women's Studies in the Arab World (n.d.), Gender Profile: Lebanon. http://iwsaw.lau.edu.lb/publications/documents/Country%20Gender%20Profile%20Lebanon-Online%20.pdf
[14] Government of Lebanon / United Nations (2017), Lebanon Crisis Response Plan 2017-2020
[15] Government of Lebanon / United Nations (2017) Lebanon Crisis Response Plan 2017-2020
[16] Rita El-Hajj, Dalia Al-Jawhary, Tala Moukaddem, and Carla Khater (2014) *Forest Sustainability in North Lebanon: A Challenging Complexity in a Changing Environment*. Int Journal Forestry Research, Vol 2014, Article ID 212316
[17] Mada (2008), Forgotten Akkar: Socio-Economic Realty of the Akkar Region
[18] World Bank (2003) Republic of Lebanon Cost Assessment of Environmental Degradation
[19] MOE / GEF / UNDP (2011) Lebanon's Second National Communication to the UNFCCC
[20] MOE/GEF/UNEP (2015) Fifth National Report of Lebanon to the Convention on Biological Diversity
[21] UNDP / MOE / ECODIT (2011) State and Trends of the Lebanese Environment

15. Causal chain analysis (see Annex 5b) has found that the lack of environmental awareness and insufficient appreciation for new and more environmentally-friendly approaches are among the main reasons for unsustainable practices. Disregard for the law and non-compliance arise from the lack of monitoring and enforcement and are a further cause of land degradation. For example, in 2010, a study found four types of violations within the quarry sector, which are the extension of excavation outside the designated licence area, non-compliance with conditions of the quarry licence, exceeding allowable heights for cliffs and quarry, and no site rehabilitation after closure[22]. However, an even more fundamental root cause of land degradation is the lack of any consideration of Sustainable Land Management principles in the Land Use Planning process. This is in spite of the MoE requirement[23] that the Land Use Planning process is subject to a Strategic Environmental Assessment (SEA).

16. Land degradation is undermining ecosystem functions and services and there have also been a decline in productivity in terms of crop cultivation, recreational opportunities and tourism, ecological values, and in land and property values. Ultimately, as shown graphically in Annexes 5a-c, land degradation is affecting the welfare of rural people dependent upon these services for their subsistence and for their livelihoods.

17. The problem is recognized and the response to date is described below.

1.3 Baseline scenario

18. Despite the various obstacles and instability troubling Lebanon and the region in the last few decades, the Government has achieved much progress in environmental protection by issuing legislations, establishing relevant institutions, and undertaking initiatives and projects aimed mainly at safeguarding natural resources in the country. The following sections describe the Government of Lebanon's response to achieving sustainable land management through its various institutions and investments in relevant sectors.

1.3.1 Institutions

19. Various entities in Lebanon were established with a mandate relevant to land, natural resource and environmental management. They are described below.

20. **Ministry of Environment:** As the environmental regulatory arm of the country, its mandate includes formulating laws, regulations, standards and guidelines, preparing environment policies and strategies, monitoring and ensuring water, air, and soil quality, providing environmental conditions for issuing permits and licenses for development projects, specifying protected areas (and sites) and developing criteria and guidelines for their management and implementing environmental projects in Lebanon.

21. **Ministry of Agriculture (MoA):** The Department of Forest and Natural Resources at the MoA is responsible for forestry legislation and enforcement. It also manages rangelands and agricultural activities, designates protected forests and regulates grazing permits and agreements on municipal lands. The MoA is also the UNCCD focal point for Lebanon.

22. **Ministry of Public Works and Transport (MoPWT):** The Directorate General of Urban Planning (DGUP) is under the authority of the MoPWT and it is designated with developing urban regulations. It is involved in issuing building permits, as well as preparing and reviewing urban master plans for most urban areas of Lebanon (excluding Beirut, Tripoli, Jbail, Kesrouan, and Metn). The DGUP is also responsible for the implementation of the National Physical Master Plan prepared by the CDR, which is discussed below. Regional Departments of Urban Planning under the MoPWT were established in every governorate to assess construction permits and ensure that there are no violations to the urban planning regulations. The role of the Higher Council of Urban Planning (HCUP) under the MoPWT is to review and approve urban master plans and large sized projects greater than 3,000 m^2 in Beirut and 10,000 m^2 and outside Beirut. It also reviews decisions related to licenses for construction and parcelling and proposed changes to urban planning and construction legislation.

23. **Ministry of Energy and Water (MoEW):** Responsible for the water sector in Lebanon, one of their main responsibilities is to protect water resources from pollution. In relation to land resources, the ministry provides advice on the licensing of mines and quarries that could have an impact on water resources. The MoEW has developed a national plan on water stocks. The objective of the plan is to increase water stocks across the whole country by constructing dams on most of the main rivers. The dams would reduce the impact of droughts and help local communities cope with desertification and drought.

24. **Council of Development and Reconstruction (CDR):** An independent and autonomous government entity, CDR is mandated with instituting a general framework for urban planning in Lebanon. CDR thus

[22] UNDP / MOE (2011) State and Trends of the Lebanese Environment

[23] Strategic Environmental Assessment *Decree* - MoE *Decree* 8213 of 2012

developed the National Physical Master Plan of the Lebanese Territories (NPMPLT) in collaboration with the DGUP in 2005. Details on this plan are described below. The CDR's major functions are to prepare investment plans for Lebanon, design, plan and implement programmes and projects for reconstruction and development and mobilize external financing from development partners. CDR is also responsible for selecting, in cooperation with line ministries, the institutions for the implementation of programmes and projects.

25. **Municipalities:** Under the tutelage of the Ministry of the Interior and Municipalities (MOIM), Municipalities in Lebanon are responsible for preparing general land use plans as well as programmes for water, sanitation and solid waste projects. They are also in charge of operations and maintenance of municipal solid waste collection, in addition to general matters concerning protection of the environment and pollution control. Construction permits in Lebanon are only issued by the President of the relevant municipality. Many municipalities in Lebanon form municipal unions with the aim of pooling their resources and fund regional development projects. Municipalities in Lebanon are also involved in reforestation efforts through cooperation with various entities including NGOs. They have on occasion provided common land (Mashaa) for the purpose of establishing forests. It is the responsibility of the Municipal Police (smaller cases) and the Internal Security Forces (larger cases) to enforce decisions and court case rulings regarding environmental abuses. Although the MoA is responsible for the enforcement of forestry regulations, this is usually orchestrated through the Municipal Police.

26. **Non-governmental Organizations:** In addition to government efforts, NGOs also played a prominent role in reforestation campaigns in the past 20 years in Lebanon with support from local and international donors, and in partnership with government agencies. The impacts of these campaigns are uncertain due to the lack of reliable information. AFDC's State of Lebanon Forests report in 2007 claimed that the survival rate of transplanted trees varies between 10 and 40 percent. However, development of skill and techniques have likely improved on this rate.

27. An organization worth noting is the **Lebanon Reforestation Initiative (LRI)**, which was established in 2014. LRI started off as a project launched in 2010 by the United States Forest Service (USFS) and funded by the United States Agency for International Development (USAID). LRI aims to conserve and expand Lebanon's forests through a community-based approach that has resulted in the planting of more than half-a-million native trees throughout Lebanon since 2011. LRI's strategic goals include improving the management and conservation of forests and contributing to Lebanon's LDN national targets. With funding from USAID worth US$9 million, LRI is currently working on a variety of activities related to reforestation, forest management and sustainable land management, including rehabilitating quarries. The new phase also aims to solidify institutions and financing necessary to sustain reforestation efforts in the future by working more closely with the private sector.

28. **United Nations Development Programme:** The United Nations Strategy Framework (UNSF) for 2017 – 2020 focuses on the link between poverty reduction and sustainable development in a gender sensitive manner and with a human rights-based approach. This includes support specifically to the agricultural sector, to improving land management and to the protection of natural resources as some of the key strategic outcomes that were agreed with the Government of Lebanon. UNDP also reflects those priorities in its Country Programme Document for the period 2017 – 2020 as part of the objective to improve environmental governance and management in Lebanon.

1.3.2 Land Use Planning and Management

29. The **National Physical Master Plan for the Lebanese Territory** (NPMPLT) approved by Council of Ministers Decree 2366/2009, defines the principles of development for various regions as well as the basis of land use for all areas[24]. Comprised of a detailed report and set of maps, NPMPLT proposes facilities and sites of planned activities, specifying their objectives, dimensions and locations[25]. The Plan introduced the "green and blue network" for the protection of the most important natural resources of Lebanon, and for the stabilization of steep slopes from excessive erosion risks. It also identifies three planning zones related to natural and cultural heritage conservation - including high mountain plateaus, cedar corridors, mountain horticulture, connection areas of forests, valleys and other natural sites. Unfortunately, **Land use plans** are available for a mere 16% of the Lebanese territory and planning is often restricted to a formula for building:plot ratio rather than having a comprehensive and holistic consideration of the area's resources, limitations and resources for development, including environmental and socio-economic considerations for community welfare. On the positive side, CDR has rolled out Territorial Strategic Development Plans and a declination of projects that address land degradation and the sustainable use of resources. Two of these are in North Lebanon – the first is the **Strategic**

[24] CDR (2005), National Physical Master Plan of the Lebanese Territory
[25] Although the NPMPLT itself does not require it, a Strategic Environmental Assessment is required for any such plan according to the MoE's Strategic Environmental Assessment Decree - MoE *Decree* 8213 of 2012

Sustainable Regional Development Plan for the Governorate of Akkar (2014), developed within the context of the ADELNORD project supported by the EU and which has three main components: 1) Agricultural infrastructure, 2) Community development, and 3) Environment; and, the **Territorial Strategic Development Plan of Donniyeh Region (2012)** developed under the UNDP-ARTGOLD project in close collaboration with the Donniyeh Union of municipalities, and which prepared a strategic development plan for the region of Donniyeh promoting and enhancing the sustainable use of land resources reflecting the area's potential for agriculture, eco-tourism, forest resources, while controlling environmental degradation.

30. Of special interest to this project is the MoE's 2009 proposal for a **National Strategy for the Protection of Mountain plateaus, natural areas, beaches, green areas**, **and agricultural areas.** These efforts were reiterated in 2014 in a wider consultation exercise with line ministries and related stakeholders, namely the Ministry of Public Works and Transportation (DGUP) and the CDR, however, due to political stagnation resulting from regional turmoil, not much progress has been achieved.

1.3.3 Strategies and Investments

31. ***Environmental Management:*** The **Strengthening Environmental Governance (StREG) (2014-2018)** Project is supported by the EU and designed with the overall objective of improving the environmental performance of the public sector through improved governance. Out of a total budget of USD 9.8 million, USD 300,000 was used to develop an approach for the delineation of protected areas and their integration in local master plans. The project also looks at strengthening environmental inspection and enforcement and at determining the best strategies for preventing the environmental harm that could result from the expected growth of the quarry and building materials sector in response to anticipated regional and national demand.

32. ***Agriculture:*** The **MoA strategy for 2015-2019** commits the Government to the good governance and sustainable management of land, rangelands, and forest resources in line with previous strategies. Similarly, the **FAO Country Programming Framework** for 2012-2015, addressed the agriculture sector, including forests and its subsectors, from a sector-wide and integrated perspective. **MoA** is implementing a number of continuous programmes for the promotion of sustainable agricultural practices and the development of nurseries. An on-going project implemented by Green Plan is the **Hilly Areas for Sustainable Agriculture Development (HASAD)** project financed by IFAD, OPEC and the government with a budget of USD16.5 million and running between 2012 and 2019. The project targets areas with low agricultural production and prone to desertification, and aims at improving water and land management through the construction of 20 hill lakes to secure a total of 900,000 m^3 of water. To date, 8 lakes have been constructed benefiting over 1,250 individuals. Another component of the project is the development of farmer service centres, of which three have already been established in Akkar, Hermel and Bint Jbeil, benefiting over 2,400 individuals.

33. The **Lebanon Industry Value Chain Development (LIVCD)** is a seven-year (2012-2019), $41.7 million U.S. Agency for International Development (USAID) project aimed at improving Lebanon's economic stability and providing income-generating opportunities for small business while creating jobs for the rural population, in particular women and youth. LIVCD aims to improve the competitiveness and value of products and services in both local and export markets by increasing the quality, quantity, and consistency of Lebanese products and companies. Activities include the promotion of agrofood products like honey, medicinal herbs, culinary herbs and spices using sound agricultural practices like the introduction of nitrogen fixing intercrops, conservation and organic agriculture, etc. In the tourism sector, activities include new responsible tourism ventures such as bed and breakfast and community-based rural holidays.

34. ***Forestry:*** In the forestry area, the **National Reforestation Plan (NRP)**, initiated in 2001 by the MoE, aims to restore the forest cover lost throughout the years. Two phases of reforestation activities were executed and the third reforestation phase started in 2009 with a total budget of USD 2,255,000. This effort is complemented by the **Lebanon Reforestation Initiative (LRI),** described in Section 1.3.1 above; and, the **National Afforestation/Reforestation Programme (NARP): 40 Million Forest Trees Planting Programme** which is currently being implemented by the MoA. The programme has currently received funding from the Agence française de développement in the amount of almost USD 5 million to forest nine sites throughout the country and covering an area of over 700 hectares. The project duration is three years, from 2018 until 2021.

35. Recently instigated by StREG is **Lebanon's National Strategy for Forest Fire Management**[26] prepared in 2009, which addresses the phenomenon through: (1) Research, (2) Risk modification, (3) Readiness, (4) Response, and (5) Recovery, including the rehabilitation and ecological restoration of healthy forest conditions. Another relevant programme is the UNDP/GEF project **Safeguarding and Restoring Lebanon's Woodland Resources** which was developed to complement what has been started under the NARP in 2009. Furthermore,

[26] MoE/AFDC 2009

an inventory of afforestation and reforestation projects was made available in the **Third National Communication to the UNFCCC**[27], testifying to the efforts of local actors in increasing forest cover and the restitution of lost forests.

36. ***Land degradation:*** The **National Action Plan to Combat Desertification** was developed by the MoA in 2003 and it seeks to (1) restore forest landscapes through reforestation and sustainable forest management, (2) restore rangeland landscapes through sustainable grazing and animal production, (3) promote sustainable agricultural practices, climate smart agriculture and conservation agriculture and (4) improve soil organic carbon in croplands and bare lands through sustainable agriculture and afforestation. Currently, Lebanon is in the process of setting targets for its Land Degradation Neutrality initiative. Early indications show the following targets: reforesting 10,000 hectares of land, restoring 1,000 hectares of grasslands in the mountains of Lebanon and implementing sustainable agriculture practices on 80,000 hectares of farmland.

37. The **Sustainable Land Management in the Qaraoun Catchment** project is a GEF/UNDP project with a total budget of USD 21,237,671 (GEF contribution of USD 3,187,671). The project, which is on-going, aims to develop institutional tools at national level which will provide the MoE and the MoA as well as related agencies such as the CDR, the MoIM, the Bekaa Governorate, and District Administrations and Municipalities in West Bekaa, Zahle and Rachaya Districts with the know-how, means and mechanisms for promoting sustainable land use. Land-use plans at the landscape level will benefit from the project through the identification of land productivity values and ecosystem services and how they can be protected. An effective monitoring system will be established to maintain all data up to date and discover any worrying trends before they become irreversible. At site-specific level, forests, rangelands and arable land that are currently weakly managed and poorly funded will benefit from comprehensive land use plans that will provide information and education as well as livelihoods and financial security. The project is expected to lead to the restoration of natural productivity and conservation of the habitats of a number of plant and animal species and valuable ecosystems and will secure migratory bird pathways. As a result, globally significant biodiversity will be conserved and valuable ecosystem services will be safeguarded.

38. ***Gender equality and empowerment of women:*** Many of these strategies and measures, such as the **MoA Strategy for 2015-2019** and the **Strategic Sustainable Regional Development Plan for the Governorate of Akkar** (2014), highlight the need to focus on women and youth as groups particularly prone to living in poverty on the one hand, and encourage their engagement in response initiatives as important actors of change on the other.

39. The **Office of the Minister of State for Women's Affairs (OMSWA)** was established in December 2016 and is hence a rather new governmental body. Its mission is to empower, enhance their capabilities and build their capacities. Amongst other things, this will be achieved through mainstreaming women's rights in the sustainable national development process.

2 STRATEGY

2.1 Barriers, root causes and theory of change

40. Despite the above efforts, there is no systematic practice of sustainable land management in Lebanon and this is especially so in mountain areas. Little effort has been made for an integrated and holistic approach, whether at the central level or at the local level particularly with farmer groups. This has prevented the development of an approach to landscape-scale management and regeneration that would maintain / increase agricultural productivity and the continued delivery of multiple benefits from forest and rangeland ecosystems. The newly introduced concept of Land Degradation Neutrality is hence far from achieved.

41. An analysis of the problem (see Annex 5a-c) has led to a focus on three ultimate major impacts of land degradation, namely, 1) Loss of biodiversity and habitat, 2) Reduced ecosystem services, and 3) Loss of income and Poverty. The analysis identified a number of underlying and root causes of land degradation and barriers to the possible solutions. These are identified in Table 1 below together with the response by the project which is incremental to the baseline response to date as discussed in section 1.3 above.

42. Taking the Theory of Change approach (see diagram in Annex 5a) it is possible to trace the logical pathway from the present baseline situation to the end-of-project gains that will eventually lead to Land Degradation Neutrality in Lebanon.

[27] MoE/UNDP. 2015

43. Four leading fundamental causes of land degradation have been identified, namely –

- No sustainable land management or land degradation neutrality principles in the Land Use Planning process.
- Lack of monitoring, low compliance and lack of enforcement
- Lack of information and know-how for rehabilitation
- Lack of resources for replication and long-term planning

Table 1. Analysis of problems, root causes and the project's response

MAJOR IMPACTS OF LAND DEGRADATION	IMMEDIATE AND UNDERLYING CAUSES	ROOT CAUSES AND BARRIERS	PROJECT RESPONSE
Loss of biodiversity and habitat **Reduced ecosystem services** **Loss of income, poverty**	• Inadequate recognition of the extent of degradation of mountain lands and the "cost" of degradation • Limited experience in the implementation of Good Agricultural Practices • Limited know-how and experience in assessing the adequacy of rehabilitation plans and their implementation • Lack of experience in biomass production, eco-tourism potential, harvesting and pruning, etc, in forests to justify restoration • Limited technical capabilities of the MoE and MoA to oversee and critically review and monitor reclamation and rehabilitation • Lack of guidelines for rehabilitation of degraded sites by the private sector	**1 No concept of Sustainable Land Management or Land Degradation Neutrality in the Land Use Planning process**	**OUTCOME 1: REHABILITATION** Degraded mountain land in selected mountain districts of northern Lebanon identified, rehabilitated and restored • Socio-ecological survey • Degraded forest restoration • Degraded rangelends restoration • Degraded quarries rehabilitation • Degraded farmland rehabilitation • Tourism impacts minimized
	• Planning instruments do not factor in SLM • Limited resources for addressing non-compliance and weak enforcement of existing legal framework • Lack of experience, resources and know-how for monitoring and enforcement • Limited know-how in the development of strategic and local development plans • Lack of territorial strategic planning to guide development, and when available, no legal mechanism for enforcing the plans to ensure sustainable land management • Absence of comprehensive environmental guidelines for land management • Weak role and capacity of local authorities in monitoring and enforcement of laws, regulations, and environmental guidelines	**2 Lack of monitoring, low level of compliance, and lack of enforcement** **3 Lack of information and know-how for rehabilitation**	**OUTCOME 2: PREVENTION** Mountain lands managed sustainably to prevent degradation • Improved land use planning • Enhanced capacity at central and local levels • Review of policies and procedures • Technical guidance for SEA and EIA • Strengthen compliance and enforcement capacity • Instil LDN into Quarries Master Plan being reviewed • Assist development of Master Plan for the Protection of Mountain Plateaus, etc • GIS platform for land use planning
	• Inability to capitalize on experience gained • Lack of decision support instruments • Limited funds available for the rehabilitation of public lands • Absence of clear procedural and regulatory provisions for utilizing bonds and guarantees • Lack of incentives for the private sector to incorporate SLM in land development • Limited financial incentives for the promotion of the agricultural sector and for the rehabilitation of lands for agricultural production • No incentive for forest management as a source of income	**4 Lack of resources for replication and long-term planning**	**OUTCOME 3: REPLICATION** Project monitoring and evaluation, communication, knowledge management, and financial mechanisms for the dissemination and replication of the results of the project with the aim of achieving land degradation neutrality • Learning from project monitoring and evaluation • Communication and Knowledge Management • Effective sustainable financing mechanisms developed

44. The challenge for the project is to address these root causes and barriers through various approaches and activities so as to achieve rehabilitation of degraded land and prevention of new degradation. Then, after their evaluation and necessary refinement, the innovative approaches and activities will be made available for replication and up-scaling post-project through mechanisms put in place by the project.

45. As a result of the project activities, Lebanon will gain a number of incremental benefits comprising innovative, tested and evaluated mechanisms, approaches, strategies and enabling elements which will serve as the foundations for Land Degradation Neutrality. These benefits will accrue to central and local government officials, the private sector, NGOs, communities and individuals and families who live and work in the Lebanon mountain environment.

46. In predicting such an auspicious transformation, the project assumes that the desire by the Government and people of Lebanon, as expressed in various key strategies and documents, for a recovery of degraded land and minimization of new degradation, will remain strong and paramount – this will lead to the immediate project benefits.

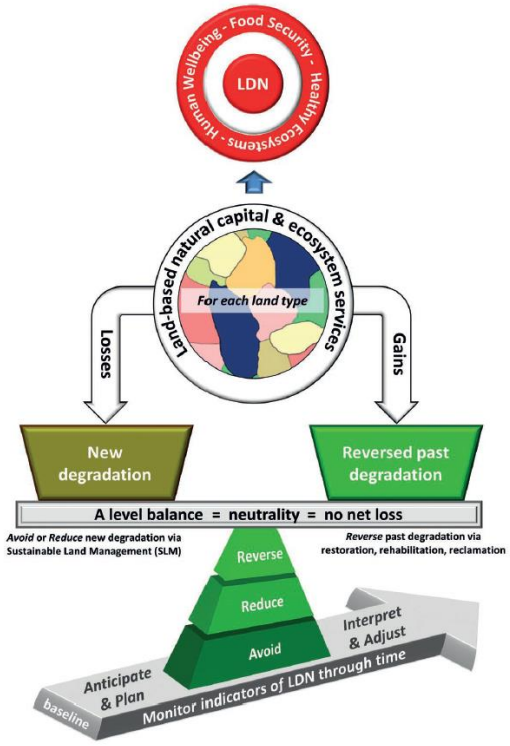
2.2 Land Degradation Neutrality

47. In spite of the extensive baseline of mechanisms, activities and resources described above, land degradation remains a visible problem in the mountain environment, ecosystem services and livelihoods continue to be jeopardized, and the barriers to possible solutions remain.

48. In addressing this challenge, the project will work towards **Land Degradation Neutrality (LDN)** in Lebanon, applying the UNCCD LDN framework as appropriate.

49. LDN was defined at the 12th Meeting of the Conference of the Parties to the UNCCD as "*a state whereby the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security remain stable or increase within specified temporal and spatial scales and ecosystems*" - an optimal mix of measures designed to avoid, reduce and/or reverse land degradation in order to achieve a state of no net loss of healthy and productive land[28]. The LDN framework is explained in the following diagramme:

Figure 2: Scientific Conceptual LDN Framework for Land Degradation Neutrality, UNCCD 2016.



50. The LDN conceptual framework focuses on the goal of LDN and the supporting processes required to deliver this goal, including biophysical and socio-economic aspects, and their interactions.

51. The conceptual framework explains the underlying scientific processes and principles that support achievement of LDN and its intended outcomes. The framework provides a scientifically- sound basis to understand LDN, to inform the development of practical guidance for pursuing LDN and to monitor progress towards the LDN target. The LDN conceptual framework emphasises the goal of LDN which is focused on maintaining or enhancing the stocks of natural capital associated with land resources, in order to sustain the ecosystem services that flow from them, including food production and other livelihood benefits.

52. The framework defines the following principles to be followed in pursuit of LDN, to ensure consistency and scientific rigour and help prevent unintended outcomes during implementation and monitoring of LDN:

- Maintain or enhance land-based natural capital.

[28] See also https://www2.unccd.int/publications/scientific-conceptual-framework-land-degradation-neutrality-report-science-policy and https://www2.unccd.int/sites/default/files/relevant-links/2017-09/CST13_Item2a_Cowie_Orr_LDN%20conceptual%20framework_0.pdf

- Protect the rights of land users.
- Respect national sovereignty.
- For neutrality, the LDN target equals (is the same as) the baseline.
- Neutrality is the minimum objective: countries may elect to set a more ambitious target.
- Integrate planning and implementation of LDN into existing land use planning processes.
- Counterbalance anticipated losses in land-based natural capital with interventions to reverse degradation, to achieve neutrality.
- Manage counterbalancing at the same scale as land use planning.
- Counterbalance “like for like” (Counterbalance within the same land type).
- Balance economic, social and environmental sustainability.
- Base land use decisions on multi-variable assessments, considering land potential, land condition, resilience, social, cultural and economic factors.
- Apply the response hierarchy in devising interventions for LDN: Avoid > Reduce > Reverse land degradation.
- Apply a participatory process: include stakeholders, especially land users, in designing, implementing and monitoring interventions to achieve LDN.
- Reinforce responsible governance: protect human rights, including tenure rights; Develop a review mechanism; and ensure accountability and transparency.
- Use the “one-out, all-out” approach to interpret the result of these three global indicators.
- Use additional national and sub-national indicators to aid interpretation and to fill gaps for ecosystem services not covered by the three global indicators.
- Apply local knowledge and data to validate and interpret monitoring data
- Apply a continuous learning.

53. Ultimately, at the core of LDN are better land management practices and better land use planning.

54. The concept of neutrality involves counterbalancing anticipated losses with measures to achieve equivalent gains. The scale of implementation of LDN, at which neutrality is to be achieved, is the individual land type, within the landscape. To facilitate counterbalancing, LDN introduces a new proactive approach in which management of land degradation is coupled with existing land use planning. LDN promotes a long term approach in which land use planners consider the likely outcomes of land use and land management decisions, so that anticipated degradation can be counterbalanced by interventions to reverse the impacts of land degradation elsewhere, in order to achieve LDN.

55. In order to plan effective interventions for any specific site, several preliminary assessments should be conducted:

- Land degradation assessment: the current state and trends of land degradation;
- Land potential assessment: the inherent, long-term potential of the land to sustainably generate ecosystem services;
- Resilience assessment: the capacity of the land use system to continue to deliver the same ecosystem services in face of disturbance; its adaptive capacity, its likely trajectory under anticipated stressors and shocks, such as climate change, and proximity to known thresholds;
- Socio-economic assessment: the social and economic impacts of alternative land use options and proposed interventions, with particular attention to gender considerations and vulnerable rural communities.
- The LDN response hierarchy guides decision-makers in planning measures to achieve LDN. The response hierarchy of Avoid > Reduce > Reverse land degradation is based on the recognition that “prevention is better than cure” i.e. avoiding or reducing further land degradation, such as through sustainable land management practices, will maximize long-term benefits and is more cost-effective than efforts to reverse past degradation.
- Informed by the assessment of land potential, priority for intervention is placed first on lands where prevention or avoidance of land degradation is possible, followed by land where mitigation through improved land management practices is suited, and lastly on reversing degradation through restoration, rehabilitation or reclamation on land that has lost productivity.
- The implementation of LDN will be managed at the landscape scale. However, implementing LDN requires multi-stakeholder engagement and planning across scales and sectors, supported by national-scale coordination that should work with and incorporate any existing local and regional governance structures.

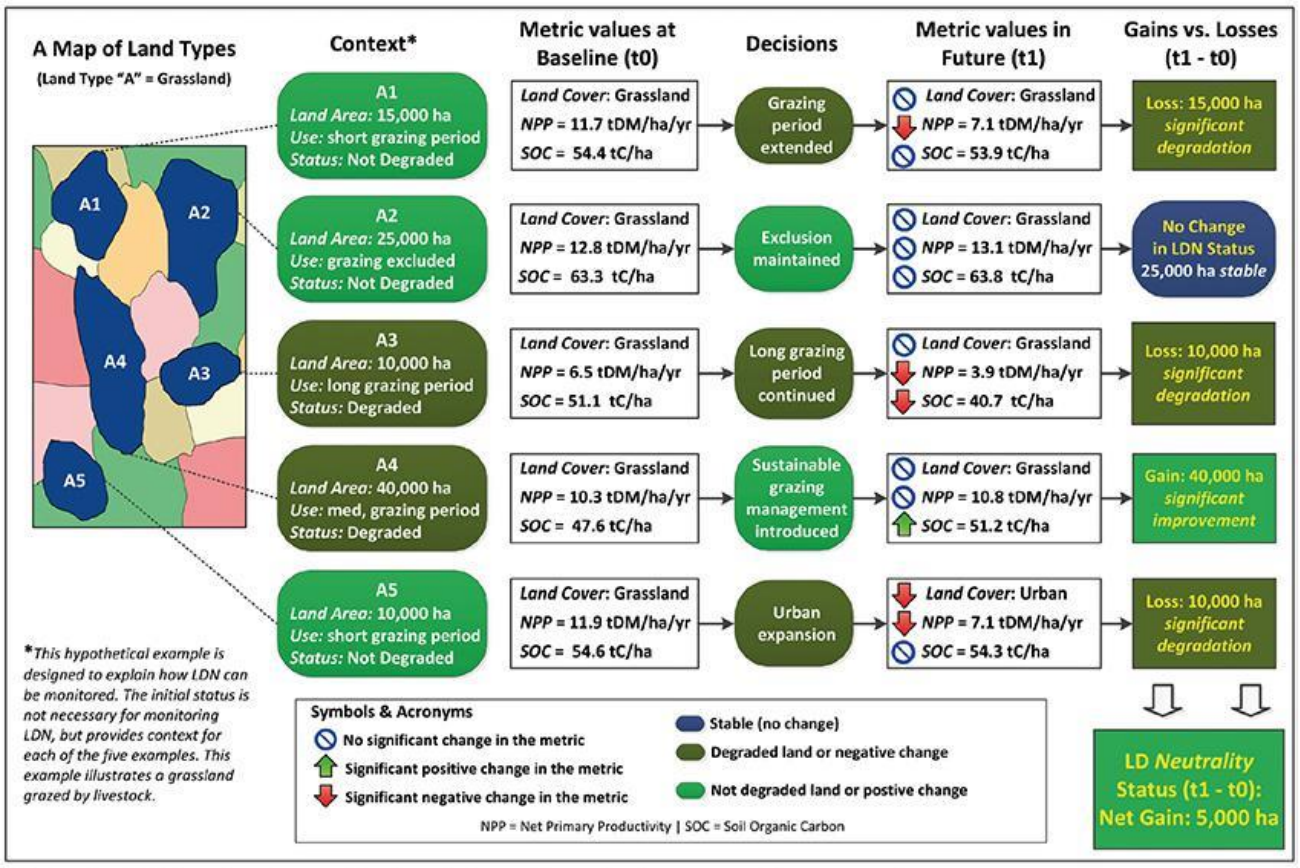
56. The novel aspect of LDN, that sets it apart from earlier efforts to tackle land degradation, is the specific adoption of neutrality as the goal. To assess whether this goal has been met, a reference (baseline) must be established, against which performance can be assessed. Neutrality means no net degradation, compared with this baseline. So the baseline becomes the (minimum) target to be achieved.

57. The primary indicators for LDN are the UNCCD land-based global progress reporting indicators (and associated metrics), being :

- Land cover (land cover change)
- Land productivity (net primary productivity)
- Carbon stocks (soil organic carbon)

58. In the monitoring of LDN, the following aspects are to be considered:

Figure 3: Monitoring of LDN



Monitoring LDN based on changes in value of the metrics, using the one-out, all-out approach.
From The UNCCD SPI Science-Policy Brief 02/September 2016.

2.3 LDN project response

59. The project's endorsement of the LDN approach demonstrates an innovative way of tackling land degradation, and is reflected in the project Objective, *To achieve land degradation neutrality of mountain landscapes in Lebanon through integrated landscape management.*

60. The project is very timely for Lebanon as the country is developing its UNCCD LDN Targets and the two initiatives will be mutually supportive and synergistic. Reflecting the overall LDN framework, Lebanon's LDN targets will revolve around three key actions – and so will the project:

1. Avoid: Many forms of land degradation can be avoided through proactive measures to confer resilience and prevent adverse change in the quality of non-degraded land via appropriate regulation, planning or activity design – the project will do this through Outcome 2.

2. Reduce: Land degradation can be mitigated through reactive practical actions that reduce in situ impacts on land currently undergoing degrading use (e.g. sustainable land management) – the project will do this through Outcome 1.

3. Reverse: Where feasible, some (but rarely all) of the productive potential and ecological services of degraded land can be restored or rehabilitated through actively assisting the recovery of ecosystem functions – the project will attempt this through Outcome 1.

61. The project will build on the baseline in an incremental and cost-effective way so as to contribute to land degradation neutrality in mountain lands by rehabilitating degraded land and preventing further degradation. It will do this at the pilot scale[29] to gain the necessary skills and know-how as well as confidence, before it can be up-scaled and replicated comprehensively post-project (as further elaborated in Outcome 3).

62. Rehabilitation practices will be tested for technical effectiveness, cost-effectiveness and benefits in the pastoral, agriculture and forestry sectors, the quarrying sector, and the eco-tourism and outdoor recreation sectors. The project will use a mix of sectoral approaches in a comprehensive manner in each area to showcase the land degradation neutrality approach and the ecosystem linkages. Prevention will be achieved through comprehensive Land Use Planning and the monitoring for compliance with set conditions and their enforcement.

63. There will be clarification of roles and enhancement of capacities particularly at local government level. The institutional and regulatory context will be reviewed, updated and strengthened so as to prevent new degradation of forests and agricultural lands. The project will aim for a robust, comprehensive and appropriate legal framework which will assess biodiversity and key ecosystem goods and services to inform permitting decisions.

64. Finally, the project will identify new financing mechanisms and sources based on international best practice, and develop knowledge management platforms to facilitate sustainability, replication and up-scaling of the new practices leading to land degradation neutrality.

2.4 Project alignment

65. The project is in conformity with national environmental strategies such as the NBSAP, environmental protection strategies including for mountain lands, various forest and sustainable agriculture strategies and the current effort to manage and contain the damage resulting from quarrying.

66. The Lebanon SDG report[30] has a particular focus on the goals of eradicating poverty, ensuring food security, protecting the environment and using natural resources sustainably. The project will support each of these goals as well as SDG 8 by promoting sustainable tourism that creates jobs and promotes local culture and products. It will also contribute to the eradication of poverty through its work at community level; it will help ensure food security through its sustainable management of productive land; it will protect the environment by rehabilitating degraded land and ecosystems and preventing further degradation; and, it will ensure sustainability of natural resources such as forests and grasslands.

67. The project also reflects the United Nations Strategic Framework (UNSF) for Lebanon for the period 2017-2020. More specifically, it reflects *Core Priority 3: Lebanon reduces poverty and promotes sustainable development while addressing immediate needs in a human rights/gender sensitive manner*, with its targets of strengthening productive capacities and generating inclusive growth, improving equitable access and delivery of social services, and promoting environmental protection and effective natural resource management. While the UNSF provides the overall vision, implementation is through the country programmes of various agencies. The UNDP Country Programme Document for Lebanon for 2017-2020 provides a strong context for the project with its programme priority *(d) Improve current environmental management systems*.

2.5 Project site selection

68. The project has a focus on mountain lands, more specifically mountain lands around or higher than 800 m above sea level in the Mount Lebanon range which runs almost the entire length of the country, a distance of around 240 km. In an effort to better focus project LDN activities, land use and forest cover maps of mountain areas were studied, experts were consulted (see Annexes 16 and 17) and field investigations were carried out (see Annex 18) in a search for administrative entities with examples of forests, grasslands, agricultural land, orchards, abandoned and/or operational quarries, and tourism and outdoor recreation developments. The project needs opportunities to test its approaches to restore degraded land and apply land use planning to prevent further degradation, thus achieving land degradation neutrality. The districts of Akkar and Jbeil presented all or most of these features and have been selected as the project localities. More specific sites for project pilot activities within these two districts will comprise Unions of Municipalities and/or similar contiguous areas and communities which will be selected following the comprehensive survey planned under Output 1.1 which will be carried out at the project inception phase.

[29] In the context of this project, "pilot" is used to describe the scale of the activities. It also refers to the exploratory, trialling approach of the interventions. Finally, it conveys the pioneering nature of the Land Degradation Neutrality approach

[30] United Nations, Lebanon (2017) Sustainable Development Goals : 17 Goals to Transform our World – In Lebanon. See http://www.lb.undp.org/content/lebanon/en/home/library/sdg.html

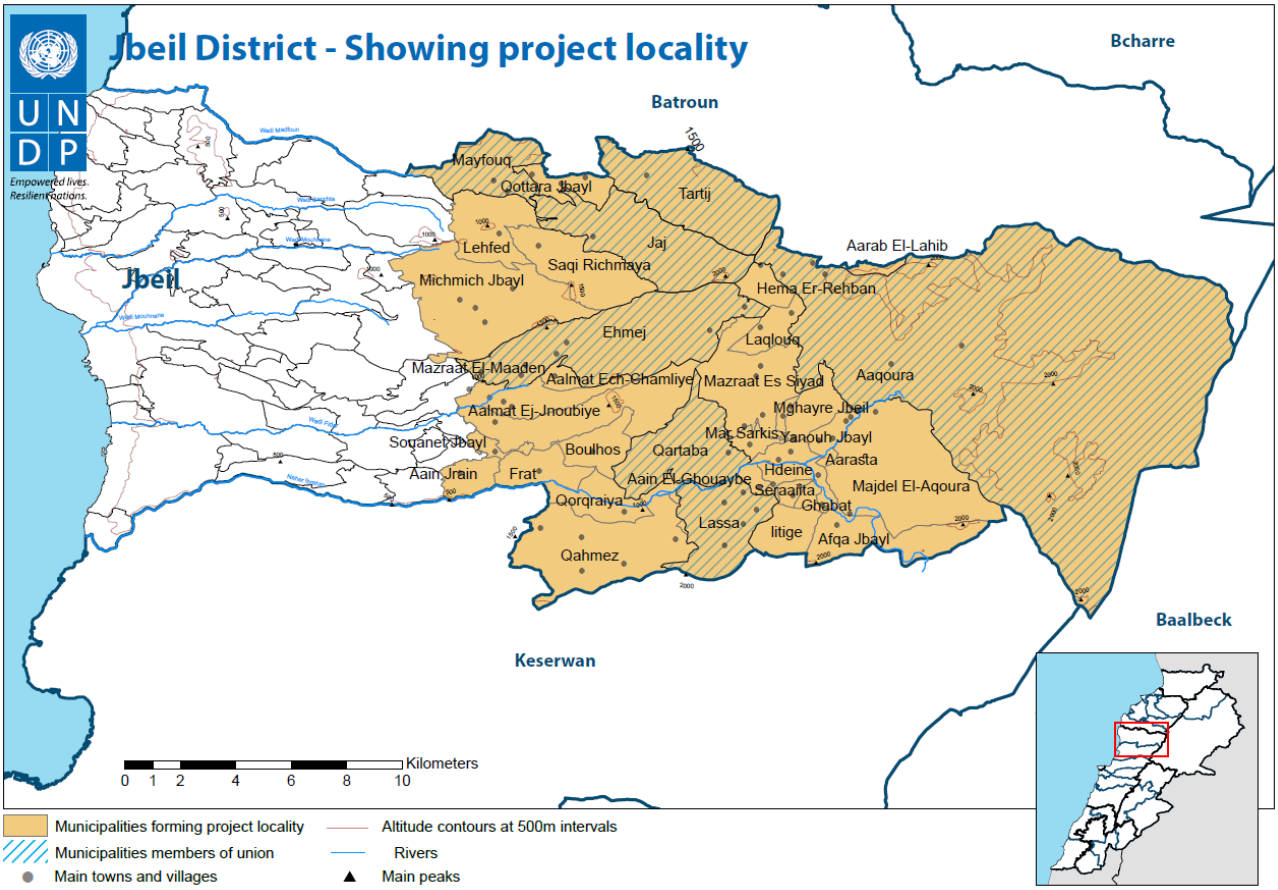
69. The search for specific sites, under Output 1.1 will be guided by a number of criteria – at or above 800 m; with reasonable road access; comprising cooperative communities; soil quality without toxicity and capable of rehabilitation; manageable size, but enough to serve as a realistic example; challenging but doable; representative and not unique; doable within 3-4 years; subject to application of RAPTA[31] to ensure intervention will be effective.

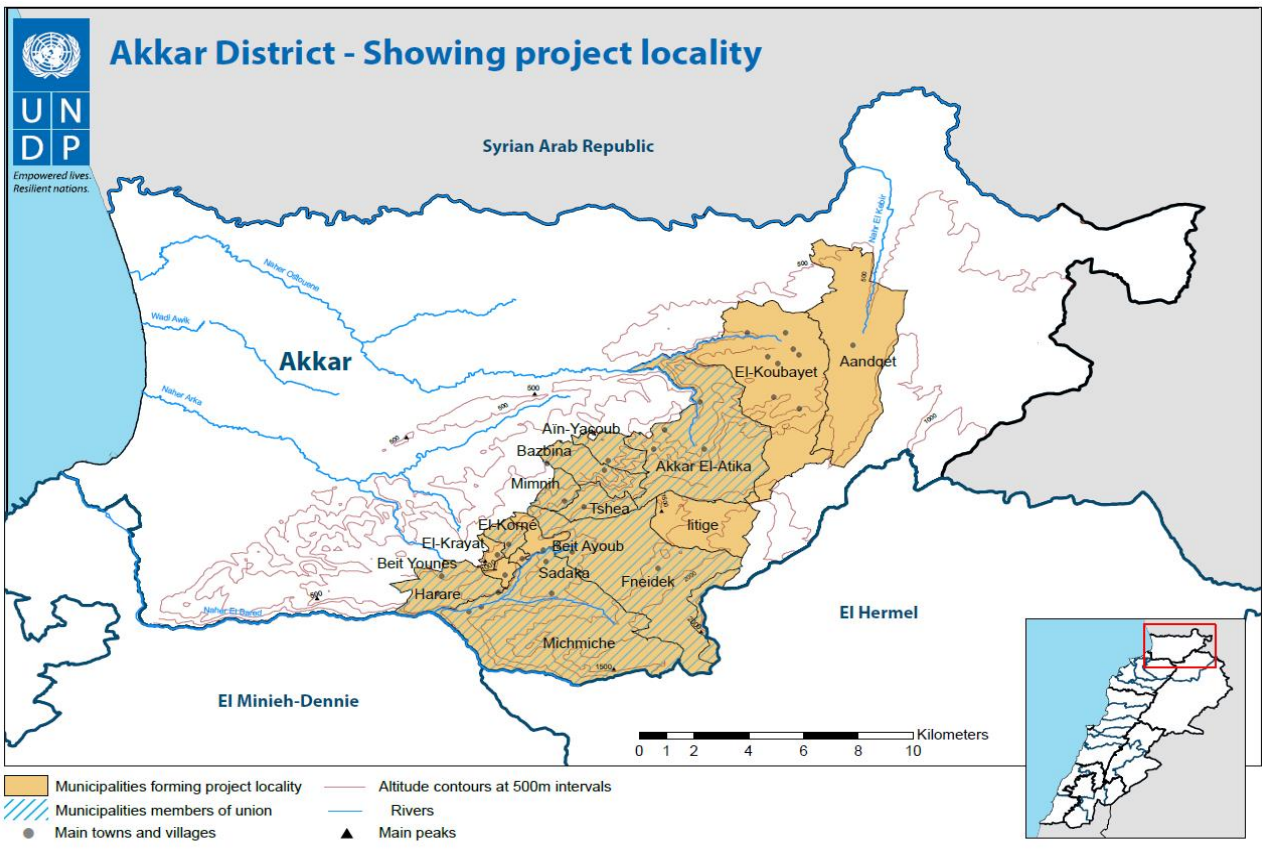
70. The **District of Akkar** is characterized by large agriculture plains and is considered to be one of the most important landscapes in Lebanon[32]. It hosts a number of coniferous woods and forests comprising junipers, cedars, turkey oaks, and pines[33]. These important forests, which are protected by the Ministry of Agriculture, include Besbina, Qammouaa, Karm Shbat (which is also a nature reserve), and El Sfina. Other protected sites in Akkar are Arqa River to sea outfall and Al Qammoua Area[34]. The Upper Mountains of Akkar-Donnieh have been declared an IBA. In 2014, the population of Akkar was estimated at 286,866, i.e. around 6% of the Lebanese population, living in c. 285 villages and towns. Between 2010 and 2014, its population growth rate was around 3.5%, about 2% higher than the national rate[35]. As of December 2016, the district of Akkar hosted also over 100,000 Syrian refugees, of which however only about 8% lived in the mountain areas over 1000 m[36]. Akkar is considered the poorest and most marginalized district in the country, with reported poverty rates of over 60%[37].

71. The **District of Jbeil**, in Mount Lebanon Governorate, is bound in the north by al-Madfoun River and by Nahr Ibrahim in the south. The district's population was estimated at 98,051 in 2015[38], around 2% of the Lebanese population, living in c. 100 villages and towns. It is the smallest district of the Mount Lebanon Governorate with a population growth rate of around 1% a year[39]. It has one of the lowest recorded poverty rates in the country, at just over 15%[40]. As of June 2017, over 10,000 Syrian refugees were registered in Jbeil District, however, most of these refugees reside in the coastal towns[41]. The majority of the district lies above 1000 m in altitude and the village of Laqlouq, which has an altitude of 1,750 m to 2,000 m, is a ski resort. Within the administrative territory of the village of Bentael is the first protected area in Lebanon, established in 1981 and since declared an IBA, while the village of Jaj hosts cedar trees from the ancient cedar forests within its territory.

[31] RAPTA is the Resilience, Adaptation Pathways Transformation Assessment framework for assessing and reporting on resilience. It allows for considerations of social, economic and environmental changes in order to focus efforts where interventions will be more effective. See http://www.stapgef.org/the-resilience-adaptation-and-transformation-assessment-framework
[32] CDR (2005) National Physical Master Plan of the Lebanese Territory
[33] UNDP / MoE (2011) State and Trends of the Lebanese Environment
[34] MoE/GEF/UNEP (2015) Fifth National Report of Lebanon to the Convention on Biological Diversity
[35] MOPH (2014) Statistical Bulletin 2014 (population statistics are not available in sex-disaggregated format)
[36] UNHCR (2016) Syria Refugee Response Lebanon, Akkar Governorate: Distribution of the Registered Syrian Refugees at the cadastral level.
[37] UNDP (2008) Poverty, Growth and Income Distribution in Lebanon
[38] https://www.citypopulation.de/php/lebanon-admin.php
[39] MOPH (2014) Statistical Bulletin 2014 (population statistics are not available in sex-disaggregated format)
[40] UNDP (2008), Poverty, Growth and Income Distribution in Lebanon
[41] UNCHR (2017), Syria Refugee Response Lebanon, Mount Lebanon Governorate: Distribution of the Registered Syrian Refugees at the cadastral level.

Figs. 4 and 5: Project localities in Jbeil and Akkar Districts





3 RESULTS AND PARTNERSHIPS

3.1 Expected Results

72. The **Project Objective is *To achieve land degradation neutrality of mountain landscapes in Lebanon through integrated landscape management,*** and this will be achieved through the following three Outcomes and respective Outputs:

73. To achieve this objective, the project will follow the LDN conceptual framework on various fronts. Ultimately, the key to achieving LDN is in making the most effective land use planning decisions and in implementing and upscaling these together with appropriate restoration measures – which is reflected in the three Outcomes of the project.

74. The project will equally integrate climate risk considerations together with adaptation and resilience thinking, with regard to both on-the-ground interventions and central planning measures, and using the references provided by GEF-STAP[42].

75. It will do so by applying wherever appropriate the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security to protect the rights of local land users.

Outcome 1: Degraded mountain land in selected mountain districts of northern Lebanon identified, rehabilitated and restored

76. One element of land degradation neutrality is the rolling-back of degradation by restoring and rehabilitating the impacted environment. Having identified the extent of degradation, and the values/resources that have been lost, the project will focus on significant impacts that can be reversed through the appropriate technology and approach. To pilot the approach, the project will focus on the districts of Akkar and Jbeil and apply comparative remedial methodologies to restore mountain lands to their valuable ecological functions such as sustainable agricultural productivity, biodiversity habitat and ecosystem services.

Output 1.1: Landscape-scale survey of mountain lands and high country areas in Akkar and Jbeil Districts

77. The survey will take place at project start-up and will focus on the potential project localities within Akkar and Jbeil Districts, with the aim of identifying specific sites for project pilot interventions. The initial thrust of the survey will be broad and on a landscape-scale and will aim to ascertain the state of the environment and confirm the baseline situation, and assess ecosystem health, ecological values and vulnerabilities, agricultural productivity and degraded land that merits rehabilitation/restoration; in doing so, the project will coordinate with an ecosystem study supported by the US Middle East Partnership Initiative.

78. Following the initial landscape scale survey and identification of specific pilot sites, each will be assessed through the RAPTA[43] framework, the Land Potential Assessment[44] and the JRC Soil Resources Report[45], applying soil testing, assessing slope stability, determining erosion potential, etc, to ensure that sites earmarked for rehabilitation are suitable for the end-use identified.

79. The project will also recognize the economic impact of land degradation on socio-economic development and ecosystem service provision; it will generate economic evidence about cost and benefits of environmental services addressing major drivers of LD using a specific sectoral approach to assess, in economic terms, responsibilities towards LD and their impact on productivity and impact on GDP. Finally, the survey will help identify unions of municipalities or similar contiguous areas with the potential for multiple activities by the project. The survey will apply a gender-responsive approach (see Annex 15).

[42] CGIAR's portal: https://ccafs.cgiar.org/downscaled-gcm-data-portal#.V-lmoSErKUk ; Haydamous, P. et al 2016 "Lebanon's agricultural sector policies: considering inter-regional approaches to adaptation to climate change". https://www.aub.edu.lb/ifi/publications/Documents/policy_memos/2015-2016/20160213_lebanon_agricultural.pdf

[43] RAPTA stands for "Resilience, Adaptation Pathways and Transformation Assessment", see https://research.csiro.au/eap/what-is-rapta/

[44] See http://www.fao.org/docrep/t8300e/t8300e09.htm

[45] Talal Darwish, Soil Resources of Lebanon. In Yigini, Y. et al. "Soil Resources of Mediterranean and Caucasus Countries, Extension of the European Soil Database". (2013) JRC Technical Report, European Commission Joint Research Centre, Institute for Environment and Sustainability.

Output 1.2: Degraded forests restored at selected project sites and sustainable forest management applied

80. Arising from the survey under Output 1.1, biodiversity habitat in degraded forests in Akkar and Jbeil Districts, will be enhanced through planting in collaboration with experienced NGOs, municipalities and men and women from local communities, and in close coordination with the Lebanon Reforestation Initiative. Care will be taken to ensure that the seedlings used are of native species, avoiding any species that pose invasive risks (see also SESP in Annex 10); noting that the species to be planted can only be defined once the actual intervention sites are determined,

81. Community forestry, including co-management and traditional Hima approach[46] will be established, as appropriate, so as to work towards the conservation of sites, species, habitats, and people in order to achieve the sustainable use of natural resources. In community engagement and the definition of resource co-management arrangements, the project will apply the principles and discussions proposed by Orstom and Agrawal to ensure a favourable governance environment.

82. Non-timber forest products (e.g. honey, culinary and medicinal herbs, tourism and similar passive opportunities) will be identified and promoted, and the project will provide advice on supply chains, markets, sustainability aspects, management, and collection practices. The stresses on identified ecosystem services (see Annexes 5a-c) will be reduced (e.g. enhancing vegetative cover to improve slope stability).

Output 1.3: Sustainable rangeland management practices for selected sites in high country grasslands

83. In partnership with land owners, municipal authorities and nomadic herders, 2-3 grassland sites in Akkar and/or Jbeil Districts which were identified as degraded by the Output 1.1 survey, will be restored through sustainable management. More specifically, project activities will be selected from *e.g.* improvement of the pasture resources, management of the grazing ecosystems (woodlands, rangelands, pastures), more sustainable use of fodder crops, various technical support for farmers and shepherds providing them with the necessary veterinary, hygiene, handling and transformation equipment and services, so as to increase the income generated from their activity. Since it is largely men who own land or function as municipal authorities or nomadic herders[47], the project will pay attention to the gendered structure of society on site and ensure that both men's and women's interests are considered (see Annex 15). Also here the Orstom and Agrawal governance principles will be applied as appropriate to maximise impact.

Output 1.4: Degraded quarries rehabilitated

84. Following the survey in Output 1.1, one to two publicly-owned (mostly municipal) operating quarries will be "adopted" by the project and technical expertise and financial support for remedial works will be provided to establish a continuing rehabilitative process which will manage and reduce the impacts on local residents (e.g. noise and dust), ecosystem services (e.g. water quantity and quality), and biodiversity (e.g. habitat disruption). One or two disused or abandoned quarries will be selected for testing rehabilitation techniques so as to be made safe (e.g. through terracing and other stabilization), planted (e.g. afforestation using native species; application of green wall and hydroseeding technologies) to achieve a vegetative cover against dust and run-off, landscaped and converted for social and ecological benefit, and possibly enhanced for eco-tourism activities and other outdoor recreation potential. Rehabilitation work will be preceded by the formulation of a **Public Safety and Accident Prevention Plan** which will be considered and approved by the Project Board and implemented by the contractors under the monitoring of the project Technical Team Leader.

85. The project will not provide financial support to private quarry owners, however, they will benefit through the promotion of the technical studies that will showcase the rehabilitation techniques successfully tested by the project. Capacity building activities in this regard will be promoted through the MoE.

Output 1.5: Sustainable agricultural practices in degraded farmland in selected sites

86. Sites will be selected early in the project implementation following the surveys under Output 1.1. The most appropriate rehabilitation techniques will be determined in collaboration with agricultural experts, land owners and selected individuals working in agriculture, including women. The techniques will be selected from one or more of contour bunds, mulching, planting of riparian vegetation strips, introduction of nitrogen-fixing intercrops, conservation and organic agriculture, integrated crop management, drip-irrigation, recycling compost and other natural fertilizer, cover crops, soil enrichment, natural pest and predator controls, bio-intensive integrated pest management and similar techniques. Activities with low or no impact such as the production of

[46] See for example http://www.spnl.org/hima/
[47] Bazalgette, E. & Mohamed, M. (2015). Gender Profiles of the Neighbourhood South Countries: Lebanon. See http://eeas.europa.eu/archives/delegations/lebanon/documents/related_links/20150713_1_en.pdf

honey, mushrooms, medicinal herbs, culinary herbs and spices, will be favoured in localities where land is vulnerable.

Output 1.6: Enabling environment established for responsible tourism and minimum impact outdoor recreation

87. Arising from the survey under Output 1.1, and working in collaboration with the Ministry of Tourism and relevant NGOs, on-going tourism and outdoor recreation operations in Akkar and/or Jbeil will be assessed to ascertain any impacts they are having on productive land, protected areas, and ecosystem services, and improvements put in place to minimize impacts. A tourism charter for nature will be developed and zero discharges will be among its aims so that LDN approaches are mainstreamed into the sector. On-going and new responsible tourism ventures, such as farm homestays for family holidays, bed and breakfast for Lebanon Mountain Trail walkers and similar community-based rural holidays, will be encouraged and supported as ecosystem-friendly ventures generating sustainable income.

Outcome 2: Mountain lands managed sustainably to prevent degradation

88. The second element of land degradation neutrality is the control and management of land and natural resources while integrating the national land degradation neutrality targets so as to prevent any further ecosystem deterioration. The enabling environment for this sustainable management will comprise policies, legislation, procedures, licensing, finances, capacity, know-how and integrated land use planning – all in line with the LDN framework.

Output 2.1: Improved land use planning through strengthened frameworks and capacity at central and local levels

89. This output provides one of the basic foundations for preventing land degradation. The project will work with the responsible government agencies at the national, regional and local levels to significantly strengthen land use planning in Lebanon and especially the target regions.

90. The project will apply UNDP and GEF guidance to assess capacity[48] of men and women at institutional and individual level for land use planning and management including the efficient processing of land use permit applications, compliance monitoring and enforcement (including monitoring of conditions arising from the SEA process and Land Use Planning) and to enable meaningful participation at community level. This process will also include a component that assesses stakeholders' gender-related knowledge and skills in the context of land use planning and management (see Annex 15). The project will then provide technical training courses to enhance capacity and address identified needs, at the central, regional and local levels.

91. Gaps will be identified which may be hindering the effective implementation of the LUP process so as to avoid insensitive infrastructure development (e.g. rural roading, electricity transmission lines, renewable energy programmes and policies), conversion of productive lands, poor range and farm land management practices, and encroachment on natural ecosystems especially forests.

92. Activities to achieve this output will include reviews and clarifications of current planning, permitting and licensing procedures and removing any regulatory barriers, assessing and enhancing appropriate policy and monetary incentives and disincentives, improving the management of the bond/guarantee system in the case of quarries, and considering levies and royalties, fines and penalties as a control mechanism. The project will also identify the respective roles and responsibilities for compliance monitoring, enforcement and prosecution as necessary, and strengthen related interventions. Also included are technical guidance and enhanced frameworks and enforcement regarding SEAs, which is already an integral part of land use planning but must be strengthened to better inform land use trade-off decisions and monitor and mitigate harmful effects. A number of planning mechanisms will be strengthened through the introduction of integrated land management principles and practices so as to avoid impacts and degradation.

93. In addition the processes and guidelines underpinning EIA in Lebanon will be reviewed and strengthened so as to guard against land degradation arising from development proposals. In applying these to specific development proposals such as tourism developments, quarries, and similar developments, developers will be guided to prevent or minimize impacts, identify opportunities for mountain landscape rehabilitation and regeneration, identify opportunities for biodiversity and social gains, and minimize impacts on other land uses such as agricultural production, impact on ecosystem services and loss to society. The ultimate aim of the environmental assessment process is to obtain "no net loss".[49]

[48] See https://www.thegef.org/sites/default/files/documents/Capacity_Development_Indicators.pdf and http://content-ext.undp.org/aplaws_publications/1670209/UNDP%20Capacity%20Assessment%20Users%20Guide.pdf

[49] See http://ec.europa.eu/environment/nature/biodiversity/nnl/index_en.htm

Output 2.2: LDN capacity enhanced and LDN mainstreamed into land use planning and key policies targeting mountain lands

94. Accompanying the activities under Output 2.1, the project will work to mainstream considerations of land degradation neutrality into the LUP process so as to achieve sustainable land and forest management.

95. In doing so the project will deploy LDN-specific training to relevant stakeholders, including especially from the MoE, MoA and regional and local administrations.

96. Looking specifically at mountain lands, the project will work with the MoE in developing the mountain lands component of the planned Master Plan for the Protection of Mountain Plateaus, Natural Areas, Beaches, Green Areas, and Agricultural Areas through the provision of technical documents and policy briefs.

97. In addition, the project will work with the MoE and in collaboration with the National Council for Quarries and Crushers, to instil the principles of LDN in the Quarries Master Plan which is being reviewed by the government. Between them, these two strategic documents will ensure a better focus on environmental protection, impact abatement, no net loss, rehabilitation, compliance, and sustainable land use on a landscape-wide approach.

Output 2.3: GIS platform established for land use planning and related monitoring

98. Lastly, the project will assist the MoE and MoA with processing the data generated by the project and beyond, as well as establish, equip and train a dedicated LUP GIS system / database, with a particular focus on mountain lands. The data will be made available through a web portal accessible to government authorities and the public.

Outcome 3: Project monitoring and evaluation, communication, knowledge management and financial mechanisms for the dissemination and replication of the results of the project with the aim of achieving land degradation neutrality

99. In the application of technical and other solutions to the problems of land degradation, the project will operate at the pilot level. As such, it will only achieve its ultimate objective of land degradation neutrality when project interventions, having been evaluated and validated, are communicated to a wider audience for replication and upscaling. It will do this through wide communication and dissemination of project lessons and experiences including the production of gender responsive knowledge. This Outcome will also put in place innovative finance mechanisms as a key element for replication and sustainability.

Output 3.1: The project is monitored and evaluated on a continuing basis according to the adopted M&E Plan

100. The Project Results Framework (section 5 below) comprises a number of input, process and output indicators which provide a measuring stick for assessing progress towards the achievement of the targeted outcomes and objective, the inputs that have been used, and the efficiency with which they have been used. Where applicable, these indicators also facilitate evaluating the project's progress through a gender lens. In addition to recording the ultimate success of the project or progress towards it, the M&E process also serves as a tool for project management through which judicious adjustments can be made to enhance the chances of project success, namely adaptive management. In addition, all activities carried out by the project will be evaluated and assessed in terms of their effectiveness, efficiency and potential for replication and upscaling, and the results shared through the Communication and Knowledge Management Strategy (see Output 3.2 below).

Output 3.2: Communication and Knowledge Management Strategy implemented

101. The project will implement the adopted Communication and Knowledge Management Strategy (see Annex 19) so as to manage the knowledge and information which will accrue from the survey under Output 1.1, the Land Use Planning process, the application of the SEA process, the compliance monitoring activities, and other data generation and gathering activities associated with the land degradation neutrality approach. The data – together with the GIS planning system under Output 2.3 – will be made accessible to relevant stakeholders, to keep all those involved in the permitting, running and management of mountain land use, up to date with the latest statistics and developments (disaggregated by sex, if applicable).

102. The strategy will also enable the project to communicate its message widely by developing and using KM products such as knowledge bases, expert systems, information repositories, group decision support systems, and intranets, so as to reach a cross-sector audience. Through reports, feature articles and its website, the

project will directly share its experiences on LDN with the GEF, UNCCD and the WOCAT platform[50], as well as member countries proposing to apply the concept as a contribution to the international discussions on LDN.

Output 3.3: Effective sustainable financing mechanisms identified and developed

103. In alignment with the LDN framework, the project will in this output identify and mobilise new financing sources and mechanisms to generate/capture additional resources towards SLM/SFM and achieving LDN.

104. Building on the preliminary study of financial mechanisms conducted during the PPG (see consultant's report in Annex 20), the project will start with a financial needs assessment to clarify the current financial baseline and the cost associated to implementing a set of different strategies and technologies to achieve land degradation neutrality. This information provides the financial targets for decision makers at local and national level, international cooperation, business sector and public in general. This financial approach will be later complemented with an economic valuation assessment, directed to understand and quantify who benefits from environmental services, and who is responsible for land degradation in the project area.

105. This comprehensive understanding of the economics of LD will provide the base for designing a portfolio of financial and economic tools, addressing the specific stakeholders to fill the financial gaps to avoid, reduce and reverse LD.

106. The project will engage the necessary expertise to explore, assess and propose a diversified mix of conventional funding sources (e.g., national budgetary allocations, taxes, overseas development assistance, the LDN Fund, the National Council for Environment Fund, the planned National Reforestation Fund) and innovative funding sources (e.g., economic incentives, payments for ecosystem services, trust funds and green taxes, concessions, tariffs, compensation schemes). Other mechanisms that can be considered include fees on tourism and other resource uses, raising funds from new markets (such as carbon offsets, water, or other payments for ecosystem services), finding new donors (such as large corporations, private philanthropists, other government agencies or tax revenue-sharing), sharing costs and benefits with local stakeholders (e.g., private landholders and local communities), employing new financial tools (such as business planning), improving wider policy and market conditions (such as reforming environmentally-harmful subsidies and creating positive incentives), and devolving funding and management responsibilities (for example to NGOs, local communities, individuals or businesses). These financial and economic tools will be further assessed and prioritized based on its legal, political, financial and technical feasibility.

107. The project will implement at least one priority finance mechanism from amongst the above to deliver additional financing by the end of the project.

3.2 Project benefits and beneficiaries

108. The project falls under the GEF-6 Results Framework for Land Degradation and the global environmental benefits targeted. More specifically, the project addresses Program 3: Landscape, Management and Restoration (Sustainable management of forests and agroforestry for increased ecosystem services; and, Landscape regeneration through use of locally adaptive species and good practices in community and small-holder land management), and Program 5: Mainstreaming SLM in Development (Incorporating SLM in public-private investments; and, securing innovative financing mechanism and scaling-up best practices for landscape regeneration).

109. The land area targeted by the project in Akkar and Jbeil is 19,365 ha and 28,019 ha, respectively, for a total of 47,385 ha. From a global environment perspective, sustainable land management as proposed by the project is expected to benefit an estimated 29,621 ha of productive lands (forest, range and agricultural lands) on the ground – of which 17,210 ha are in Akkar District and 12,411 ha are in Jbeil District (see Annex 18; in Akkar, 11,342 ha of forests and shrubland, 5,375 ha of cropland and 493 ha of grasslands; in Jbeil 8,377 ha of forests and shrubland, 3,106 ha of cropland, and 928 ha of grasslands). In addition the project will prepare the way for a reduction of land degradation through enhanced planning and the promotion of the LDN framework.

110. The project will work through and with local communities in the designated mountain areas of Akkar and Jbeil where the pilot projects will be implemented. Beneficiaries will include individual farmers, shepherds, responsible tourism operators, gatherers of non-timber forest products such as herbs and honey, and small quarry owners/operators. In addition, the project will benefit a number of NGOs, and local and central government institutions and individuals. While the exact localities for project interventions are not yet

[50] www.wocat.net, World Overview of Conservation Approaches and Technologies. WOCAT is a global network on Sustainable Land Management that promotes the documentation, sharing and use of knowledge to support adaptation, innovation and decision-making in SLM.

designated, it is estimated that the project will directly and indirectly benefit approximately 5% of the population in the two districts – 10,000 women and 10,000 men in c. 20 villages/towns altogether.

111. The targeted mountain communities will benefit from an improvement in their socio-economic status – family incomes, migration from mountain areas – as a result of project activities. In terms of income, the project assumes a baseline average annual household income of USD 6000, to be confirmed at project start for the targeted localities, with targets of +5% by mid-term and +10% by project end.

3.3 Incremental reasoning

112. As a result of the project activities, Lebanon will gain a number of incremental benefits comprising innovative, tested and evaluated mechanisms, approaches, strategies and enabling elements which will serve as the foundations for Land Degradation Neutrality. These benefits include global environmental benefits and will accrue to central and local government officials, the private sector, NGOs, communities and individuals and families who live and work in the Lebanon mountain environment.

ROOT CAUSES AND BARRIERS	PROJECT INCREMENTAL RESPONSE
Lack of information and know-how for rehabilitation **No concept of Sustainable Land Management or Land Degradation Neutrality in the Land Use Planning process** **Lack of monitoring, low level of compliance, and lack of enforcement** **Lack of resources for replication and long-term planning**	**OUTCOME 1: REHABILITATION (GEF USD2,787,000; CO-FIN USD14,500,000)** Degraded mountain land in selected mountain districts of northern Lebanon identified, rehabilitated and restored • Socio-ecological survey • Degraded forest restoration • Degraded rangeland restoration • Degraded quarries rehabilitation • Degraded farmland rehabilitation • Tourism impacts minimized
	OUTCOME 2: PREVENTION (GEF USD883,700; CO-FIN USD1,500,000) Mountain lands managed sustainably to prevent degradation • Improved land use planning • Enhanced capacity at central and local levels • Review of policies and procedures • Technical guidance for SEA and EIA • Strengthen compliance and enforcement capacity • Instill LDN into Quarries Master Plan being reviewed • Assist development of Master Plan for the Protection of Mountain Plateaus, etc • GIS platform for land use planning
	OUTCOME 3: REPLICATION (GEF USD730,275; CO-FIN USD500,000) Project monitoring and evaluation, communication, knowledge management, and financial mechanisms for the dissemination and replication of the results of the project with the aim of achieving land degradation neutrality • Project monitoring and evaluation • Communication and Knowledge Management • Effective sustainable financing mechanisms developed

3.4 Gender equality and the empowerment of women

113. The gender analysis carried out during project formulation has found that patriarchal structures and traditional gender roles persist in Lebanon. Women continue facing discrimination at various levels, and their involvement in certain domains, such as decision-making processes, is restricted.[51] In the agricultural sector, women and youth count as one of the most vulnerable groups of society – while also being important actors of change. These and further results have informed the gender mainstreaming plan (Annex 15) for this project which aims at achieving equitable distribution of its benefits, resources, status and rights, thereby responding to the different vulnerabilities and needs of women and men in furthering land degradation neutrality. It is also the project's aim to bring about transformative changes in the norms, cultural values and the roots of gender inequalities and discriminations, for instance through the integration of gender-related issues and opportunities in capacity building and knowledge management activities (see Annex 15).

114. Despite the overall patriarchic structure of the local society, there are signs in the Lebanon mountain environment that some headway has been made in removing gender inequalities. For instance, some 30% of

[51] Institute for Women's Studies in the Arab World (n.d.), Gender Profile: Lebanon. http://iwsaw.lau.edu.lb/publications/documents/Country%20Gender%20Profile%20Lebanon-Online%20.pdf

the guides on the Lebanon Mountain Trail are women and most of the B&Bs/homestays on the Trail are owned and operated by women.

115. Aiming to directly and indirectly benefit 10,000 women overall, the project will make targeted efforts to ensure that men and women in the selected communities, including particularly vulnerable groups, such as female-headed households, will participate in and benefit from its activities equitably. One entry-point for such gender-responsive action is its work with tourism operators. Women's economic participation in Lebanon remains low, but they have been successful in business, and especially their engagement in rural tourism has provided significant opportunities for women's socio-economic empowerment.[52] The project will further foster women's engagement in the tourism sector and promote gender equality and women's empowerment in its other areas of focus such as in forestry and farming. The project's focus on gatherers of non-timber forest products offers distinct opportunities in this regard as well, given women's engagement in respective food value chains.[53]

116. The project will also utilize the positive political developments at the national level regarding gender equality and women's empowerment, including through cooperation with the newly established Office of the Minister of State for Women's Affairs (OMSWA).

117. The project will take into account women's as well as men's vulnerabilities and needs and experiences and skills as an integral dimension of the implementation process, monitoring and evaluation. This will result in women and men participating and benefitting according to their respective needs and ensures the project avails itself of the whole spectrum of knowledge, skills and expertise required to achieve maximum development results.

3.5 Partnerships and stakeholder engagement

118. The following table makes a distinction between primary stakeholders and other less involved ones, describing their mandate and noting how they relate to the project.

Table 2. Stakeholders, their respective mandates and their relationship with the project

STAKEHOLDER	MANDATE	RELATIONSHIP WITH PROJECT
PRIMARY STAKEHOLDERS		
Ministry of Environment (MoE)	MoE is the national environment agency in Lebanon, responsible for all environmental protection issues. Its responsibilities are: (i) to strengthen environmental inspection and enforcement; (ii) to promote sustainable management of land and soil; (iii) to preserve and promote Lebanon's ecosystem capital (iv) to promote hazardous and non-hazardous waste management; (v) to control pollution and regulate activities that impact the environment. The MoE is actively represented in the Higher Council of Urban Planning.	MoE is the implementing partner and as such it will work with the project under all Outcomes and Outputs and provide significant co-financing. It will also benefit directly under Outputs 2.1-2.3
Ministry of Agriculture (MoA)	The MoA oversees the majority of land use in Lebanon. It is also the National Focal Point for the UNCCD and as such it is responsible for setting the LDN targets although it shares the mandate for LDN implementation with a number of other agencies. More specifically, it has responsibility for the management of forests, rangelands and agricultural activities.	The MoA will be consulted and involved throughout the project, and will provide advice and expertise for project activities at the local level, in particular Outputs 1.2-1.4. MOA will also directly benefit under Outputs 2.1- 2.3
Council for Development & Reconstruction (CDR)	The CDR has three main tasks: compiling a plan and a time schedule for the resumption of reconstruction and development, guaranteeing the funding of projects, supervising their execution and utilization by contributing to the process of rehabilitation of public institutions, thus enabling it to assume responsibility for the execution of a number of projects under the supervision of the Council of Ministers. More recently, CDR has focused on land use and land use planning and as such will be a key stakeholder and partner for the project.	CDR will collaborate with the project in a number of aspects dealing with land use planning, particularly Output 2.1. It will also provide co-financing

[52] Institute for Women's Studies in the Arab World (n.d.), Gender Profile: Lebanon. http://iwsaw.lau.edu.lb/publications/documents/Country%20Gender%20Profile%20Lebanon-Online%20.pdf

[53] USAID (2016). Resource Guide for Gender Integration in Value Chain Development in Lebanon. http://pdf.usaid.gov/pdf_docs/pa00mczz.pdf

Lebanon Reforestation Initiative (LRI)	LRI's strategic goals include 1) Improve the management and conservation of forests across Lebanon, and 2) Contribute to the LDN national targets. LRI is working on a variety of activities related to reforestation, forest management and sustainable land management, including rehabilitation of quarries.	LRI will provide advice and co-financing support to the project's forest initiatives particularly under Outputs 1.2 and 1.4
Lebanon Industry Value Chain Development (LIVCD) Initiative	With funding from USAID, LIVCD is working, inter alia, on activities related to eco-tourism, local development and support to sectors that complement the project's interventions in the mountain environment. Examples of such activities include the promotion of agro-food products such as honey, medicinal herbs, culinary herbs and spices. In the tourism sector, activities include new responsible tourism ventures such as bed & breakfast, trails, improved service delivery and increased awareness of local tourism destinations and heritage.	LIVCD will complement and supplement the project's work under Outputs 1.5 and 1.6
Ministry of Tourism (MoT)	The Ministry of Tourism is entrusted with the promotion of tourism, regulation of tourism-related professions and encouraging the development of touristic projects, including the inter-region and sustainable tourism projects as part of local development. The Ministry recently launched its Rural Tourism Development Strategy, such that one of its strategic objectives is to improve and enforce conservation and protection of the environmental, cultural, historical, agricultural heritage of rural areas.	The MoT will work with the project towards primarily Output 1.6, but also 2.1-2.3.
Private Sector	Both private sector land owners and/or operators are stakeholders in the project as it affects their land use and development practices. SLM and SFM principles will be mainstreamed into their operations as they work within the guidance provided by land use plans and sector development plans. It is expected that the private sector exponents will include farmers, orchardists, quarry owners, tourism operators, etc.	Collaboration is likely with land owners and others under Outputs 1.2, 1.3, 1.4, 1.5 and 1.6
Office of the Minister of State for Women's Affairs (OMSWA)	The OMSWA was established in December 2016 and is hence a rather new governmental body. Its mission is to empower women and enhance their capabilities and build their capacities. Amongst others this will be achieved through mainstreaming women's rights in the sustainable national development process.	The project will consult and work with OMSWA as appropriate right across all three Outcomes
NGOs	A number of NGOs have been very active in the implementation of projects contributing to land reclamation and rehabilitation and would therefore be considered a very important partner for the replication of project outcomes, whether on the agriculture front, on afforestation and reforestation, on quarries rehabilitation and on eco-tourism. They are also able to access funds from international donors. There are also some NGOs working on gender equality and women's empowerment, including in the context of environment – these will also be engaged. Key NGOs that the project will collaborate with include – SPNL, LMTA, AFDC, Jouzour Lubnan, SEEDS, Safadi Foundation, and Atayeb El Rif.	The project will work with NGOs, as appropriate, in a number of its initiatives, primarily under Outcome 1
Local Government	Akkar and Jbeil have been identified as the Districts in which project activities will take place on the ground. Specific sites will be confirmed following the survey under Output 1.1. These local administrations are charged with the day-to-day management of all public works within their area of jurisdiction including water and waste networks, waste disposal, internal roads, urban planning.	Identified local government entities will be beneficiaries under all three Outcomes of the project which is being carried out in their territory. They will collaborate under Output 2.1 and benefit from Output 2.2
OTHER STAKEHOLDERS		
UNCCD / LDN TA Facility	The UNCCD/LDN TA facility will be sought to support implementation of the project, and also possible further co-financing opportunities through the LDN Fund will be investigated	LDN TA Facility operational and LDN Fund capitalised
Ministry of Finance (MoF)	The Ministry of Finance leads the Government's economic reform through formulation and management of fiscal policy and public debt in order to foster economic growth. Through its various departments, it is involved in taxation aspects of land use activities (Income tax and indirect taxes). It also includes the Directorate for Land Registry and Cadastre, which handles ownership and trading of privately-held land parcels including the surveying of the lands for that purpose.	The MoF is developing a project, in collaboration with the World Bank, to set up a GIS Land Database; while the purpose of this GIS system cannot be linked to land use planning, project collaboration (Outputs

		1.1 and 3.1-3.3) will lead to mutual gain
Ministry of Public Works and Transport (Urban Planning DGUP)	The Directorate General for Urban Planning (DGUP) of the Ministry of Public Works and Transport has responsibility for land use planning in Lebanon although to date this has focussed on the urban environment, dealing mainly with the formulation and/or review of urban master plans	The project will stay in touch with DGUP in spite of the latter's focus on the urban environment
Ministry of Interior & Municipalities (MoIM)	The Ministry of Interior and Municipalities (MoIM), through municipalities, federations of municipalities, and Governors has a crucial role in land use planning, the monitoring of land use activities, rehabilitation of degraded land and enforcement of regulations and permitting conditions (including environmental provisions). The MoIM is also represented in the Higher Council of Urban Planning.	The project will work with MoIM on LUP such as under Output 2.1
Ministry of National Defense (MoND)	The Ministry of National Defense through the Directorate of Geographic Affairs is a key partner in the assessment and monitoring of land use activities. The MoE often relies on the MoND for the production of satellite imagery on regular basis to be used by the responsible department in the management of legal and illegal activities.	The MoND could assist with remote sensing to repeat surveys for Indicators 4, 5 and 6, and possibly 7
Order of Engineers	The Order of Engineers can be a very efficient entry point to the private sector/contractors. Environmental considerations are increasingly present in proposed development projects mostly driven by improvement of the legislation but also due to increasing awareness. The Order can be brought in at various stages of the project, in building capacities for development planning (particularly extraction activities) and rehabilitation planning.	OE can assist the project particularly with activities under Outputs 1.4 as well as 2.1 and 2.2
Academic and Research institutions	Building on existing experience, academic and research institutions can be considered as a very important source of local expertise to be brought in on the various project components, but mainly on technical aspects.	Main areas of collaboration are likely to be under Outcome 1

119. A tentative stakeholder engagement plan for the project is included in Annex 9. This will be reviewed, refined and adopted at the Inception Workshop and approved by the Project Board. It will ensure that stakeholders are given the opportunity to participate meaningfully in project implementation, monitoring and evaluation.

3.6 South-South and Triangular Cooperation

120. Given that the concept of land degradation neutrality is being rolled out it several countries in the region and since targets are being set, the project will whenever possible and/or relevant seek to support or benefit from other countries in this area.

4 FEASIBILITY

4.1 Cost efficiency and effectiveness

121. LDN is a new conceptual approach to addressing land degradation and this is one of the first projects aiming for LDN. While the individual elements of LDN have been around for some time, LDN is a pioneering approach in that it is aiming to both recover degraded land as well as prevent new degradation in the Lebanon mountain environment.

122. The business-as-usual scenario in Lebanon, with little or no forward planning, in which minimal consideration is given to sustainable land management, is leading to land degradation in the mountain environment. Ecosystem services are affected, productivity is depressed and the aesthetic appeal to tourists is reduced. Under the present scenario, there is little or no effort on prevention and rehabilitation of degraded land is only sporadic, focusing on the elimination of consequences after a threat materializes. This approach is not cost-effective. The project will address both prevention and rehabilitation of degraded land aiming for no net loss thus safeguarding the ecological, financial and social values these lands generate – this is cost effective.

123. The cost effectiveness of this project will be further ensured by the following elements that have been included in project design.

- The project will develop a financial needs assessment as a means to propose financial targets to achieve LDN, based on a comparative costing of different strategies, activities and tools. This

approach ensures that decision-making considers, right from the start of the process, information about associated costs and expected benefits arising from each particular activity to avoid, reduce and reverse LD. This would lead to information for decision-makers to build a portfolio of strategies in the short, medium and long term.

- The project design combines upstream and site specific actions. It includes the development of the policy and regulatory framework at the central upstream level complemented by on-the-ground activities that will help develop and test a land use and LDN-sensitive planning approach that will prevent land degradation. It will also implement innovative approaches to recover and rehabilitate land which has been degraded. This approach, tackling both prevention and rehabilitation is very cost-effective leading to no net loss.
- The upstream prevention effort will be comprehensive while retaining a strong focus on land use planning. It will clarify roles and enhance capacities, particularly at local government level; it will review, update and strengthen the institutional and regulatory context so as to prevent new degradation of forests, rangelands and agricultural lands; it will aim for a robust, comprehensive and appropriate legal framework; it will establish an efficient system to monitor for compliance with set conditions and their enforcement; it will assess and identify biodiversity values and key ecosystem goods and services to inform permitting decisions.
- The project approach involves the development or refinement of remedial approaches, processes and other tools and their testing on a pilot scale to gain the necessary skills and know-how as well as confidence, before it can be up-scaled and replicated comprehensively post-project. In this way, wholesale adoption of these tools will only take place after they have been tried and tested and are therefore both more reliable and more acceptable, avoiding ineffective investment. This is considered to be the best and safest use of the available resources.
- The project will adopt a landscape-scale approach at selected sites ranging across forests, rangelands, agricultural lands, quarries and venues of tourist and outdoor recreational activity. This broad brush approach is considered both technically effective and cost-effective. Implementing interventions in cohesive and contained localities, rather than in geographically dispersed areas, will reduce operational costs significantly.
- Selection of project localities that exhibit a range of biogeographical and socio-economic characteristics. This will make the site-level experiences relevant to a greater number of districts for further replication.
- The project will focus its interventions on localities selected because land is degraded or under serious threat of degradation. This will maximize the visible impacts and allow the beneficiary locations to act as models for wise land use in the mountain environment.
- The project will develop effective financing mechanisms based on international best practice and knowledge management platforms to facilitate sustainability, replication and up-scaling of the new practices leading to land degradation neutrality.
- The project will place equal emphasis on assisting compliance as well as enforcement which will require less intense and less costly levels of monitoring and prosecution. This will allow the project to work effectively with local communities and stakeholders to share management responsibilities and costs, as well as to develop sustainable economic activities that can benefit these partners and generate revenue streams from wise land use. This is more cost effective than an exclusionary strategy which is likely to be costly to enforce and unlikely to be sustainable.
- The project will facilitate the meaningful participation of both men and women, especially at community level, thus ensuring that the full spectrum of local knowledge and wisdom is accessed. It will also ensure that the results and benefits of the project will reach all those that stand to benefit from it, regardless of gender – this is a most cost-effective and viable approach.
- Close coordination with on-going or recent initiatives such as those funded by UNDP, the EU, FAO and the USAID. Some of these projects have been under implementation for some time and have accumulated practical experiences with aspects of land use which are going to be invaluable for this project. While the focus on land degradation neutrality is unique to this project, many of the experiences and models developed by these other projects are relevant and advantageous to the project.

4.2 Risks to project success and mitigation measures

124. Six risks have been identified as having the potential to hinder the successful implementation of the project and these are noted in Table 3 below together with mitigation measures that will be confirmed at the inception phase. Of the six risks identified, two are rated as having an Impact of 4, however, their Likelihood (Probability) is not high. The overall significance of the identified risks is seen as low to moderate and mitigation measures, as noted in Table 3, are expected to cope well should the risks eventuate.

Table 3. Potential risks to project success and proposed mitigation measures

PROJECT RISKS			
DESCRIPTION	**TYPE**	**LIKELI-HOOD & IMPACT**	**MITIGATION MEASURES**
Risk 1: Insecurity and political unrest may result in considerable delays and postponement of project implementation	Political	L = 2 I = 4	The current political situation in Lebanon is stable, but the volatile political situation may delay the prioritisation of the project thematic area at the level of the political agenda. The project team, with support of the UNDP Country Office, will implement a continuous monitoring of the security situation in the country and update the project board on a regular basis so there is sufficient lead time for adequate response actions and adjustment in project strategy. The UN also constantly assesses country and localised risk in all areas where it operates through the unified UN Security System. The system of security clearances will be enforced for any project related field deployment.
Risk 2: Land owners/users circumvent planning regulations resulting in urban encroachment on valuable agricultural areas, high use of agricultural chemicals, the proliferation of quarries, and other impacts on ecosystems affecting ecosystem services	Regulat-ory	L = 3 I = 3	The project targets specifically capacity for compliance monitoring and enforcement to address these undesirable behaviours on the part of individual land owners and managers. Establishment of landscape level management fora and landscape level management planning through participatory processes, as well as robust implementation of monitoring mechanisms will work towards minimising the risk. A dialogue with the private sector (real estate development, agricultural producers, quarry operators and the ecotourism and outdoor recreation sector) will be established as part of the process of district land use planning to obtain their buy-in and address concerns, so as to improve compliance.
Risk 3: Rehabilitation of disused and abandoned land surfaces may encounter resistance from land owners (public and/or private) and from political figures who might be unaware of the potential gains and favour the status quo	Political Regulat-ory	L = 2 I = 4	The project will work to reduce the likelihood of this risk occurring by ensuring that initiatives will be designed and implemented with the full participation of stakeholders from the public sector, namely municipalities and from the private sector, fostering an understanding of the need for striking the right balance between planned and occurring land use and safeguarding of ecosystems for the services they provide. If the risk arises, the project will stress the economic case of sustainable natural resource use versus the development of certain sectors in sensitive areas delivering critical ecosystem services. It will also implement the communication strategy and stakeholder engagement plan (see Annexes 9 and 19) which is expected to lead to an appreciation, and defence, of what the project is proposing
Risk 4: Future Government Administrations may be reluctant to increase areas designated for conservation for fear of losing state revenues	Political	L = 1 I = 3	The project will invest in the development of a decision support system for land-use, with valuation tools for different types of ecosystem services and other land use values. This will establish the impact from land degradation losses as a result of the different anthropogenic land degrading activities and will help convince Government of the importance of preserving these services for their economic as well as their ecological value
Risk 5: Local stakeholders may have difficulty collaborating – they may not be able to do without income over the brief period until the new system is up and running	Other	L = 1 I = 1	The project, operating at a pilot scale, will cover all costs either from its own resources or through co-financing so this is not a risk during project implementation. However, it could be a risk for replication and up-scaling post-project hence its work towards effective sustainable financing mechanisms under Output 3.3

Risk 6: Impacts from climate change	Other	L = 1 I = 1	Climate change is unlikely to have an impact on project implementation. However, project outcomes may be vulnerable to climate change and adaptive measures will be adopted in all project activities, especially agricultural practices

125. As per standard UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probablity are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual PIR.

4.3 Social and environmental risks and safeguards

126. The project has been assessed through the UNDP Environmental and Social Screening Procedures to ascertain whether its activities posed any potential social and/or environmental risks. From the assessment, the project was found to include activities and outputs that support upstream planning processes as well as downstream interventions at local level, some of which were deemed to pose potentially negative environmental or social impacts. The full assessment, together with mitigation measures is to be found in Annex 10 while Table 4 below provides a summary.

Table 4. Social and environmental project risks and mitigation

Risk Description	***Impact and Probability (1-5)***	***Significance (Low, Moderate, High)***	***Assessment and mitigation measures***
Risk 1: Access to resources to marginalized individuals or groups could be restricted (through grazing management practices). Principle 1 on Human Rights, question 3	I = 2 P = 3	**Moderate**	In order to avoid this risk, the project will apply the Hima approach, which is community based and used for the conservation of sites, species, habitats, and people in order to achieve the sustainable use of natural resources. It applies a system for organizing, maintaining, regulating, and utilizing natural pasture and rangelands in a way fitting with ecosystems and local practices. It has already been used successfully in Lebanon in several areas. Ensure meaningful consultation with shepherds in the area who may be affected by grazing management practices.
Risk 2:Project activities (most notably tourism activities) proposed within or adjacent to critical habitats and/or environmentally sensitive areas could negatively affect them, if good practice is not followed. Standard 1 on Biodiversity, questions 1.1 and 1.2	I = 3 P = 2	**Moderate**	Responsible tourism and sustainability concepts have been built into the design of the project, and will be communicated to all players (including guides and visitors), as part of the project's activities, per the ProDoc. Under Output 1.2, on-going tourism and outdoor recreation operations in Akkar and/or Jbeil will be assessed to ascertain any impacts they are having on productive land, protected areas, and ecosystem services, and improvements put in place to minimize impacts.
Risk 3: Invasive alien species might be introduced through reforestation, quarry rehabilitation, and rangeland restoration activities. Standard 1 on Biodiversity, questions 1.5 and 1.6	I = 4 P = 1	**Moderate**	As described in the ProDoc, and specifically supported by the surveys that will take place under Output 1.1, only local, non-invasive species will be used for all reforestation, quarry rehabilitation, and rangeland restoration activities.
Risk 4: Project outcomes could be vulnerable to climate change. Standard 2 on Climate Change, question 2.2	I = 2 P = 3	**Moderate**	Climate change adaptive measures have been included in all project activities, especially agricultural practices, as documented in the ProDoc.
Risk 5: Women face discrimination at various levels, and their involvement in certain domains, such as decision-making processes, is restricted, all of	I = 3 P = 2	**Moderate**	The gender analysis carried out during project formulation informed the Gender Mainstreaming Plan (Annex 15), which aims at achieving equitable distribution of its benefits, resources, status and rights, thereby responding to the

which could be reproduced during project activities. Principle 2 on Gender Equality, question 2			different vulnerabilities and needs of women and men in furthering land degradation neutrality. It is also the project's aim to bring about transformative changes in the norms, cultural values and the roots of gender inequalities and discriminations.
Risk 6: Rehabilitation activities, particularly in quarries, could present safety risks to works and communities. Standard 3 on Community Health, Safety and Working Conditions, questions 3.1 and 3.7	I = 4 P = 2	**Moderate**	Prior to commencement of quarry rehabilitation activities, a Public Safety and Accident Prevention Plan will be developed to ensure any safety risks are minimized. Measures will include providing the workers with personal protective equipment and training them on safety protocols on site.
Risk 7: Rehabilitation activities, particularly in quarries, may produce noise and air pollution through the use of heavy machinery and vehicles.	I = 2 P = 4	**Moderate**	Prior to commencement of quarry rehabilitation activities, a Public Safety and Accident Prevention Plan will be developed to minimize air emissions and control noise. Measures will include maintaining the machinery and vehicles and moistening the ground during windy days.

127. These risks, having been acknowledged, will be easily mitigated through measures as noted above, many of which have already been integrated into the project design and noted in the project document. These include meaningful consultation with shepherds who may be affected by grazing management practices; the promotion of responsible tourism according to sustainability concepts to all players (including guides and visitors); the exclusive use of only native species for all re/afforestation, quarry rehabilitation, and rangeland restoration activities; and, the inclusion of climate change adaptive measures in all project activities, especially agricultural practices. As an additional safeguard, the project will consider a project-level grievance response mechanism at the inception phase. This mechanism, if deemed as needed, will be developed by the project and approved by the Project Board.

128. The project's environmental and social benefits far outweigh the potential impacts as it aims to achieve land degradation neutrality. It will do this by protecting the environment by rehabilitating degraded land and preventing further degradation thus contributing to the eradication of poverty through its work at community level; help ensure food security through its sustainable management of productive land; and ensuring sustainability of natural resources such as forests and grasslands.

129. As a result of this assessment, the project has been rated as posing a **moderate risk** to people, communities and the environment. However, project monitoring and evaluation during project implementation will include consideration of social and environmental safeguards and any environmental and social grievances and plans for addressing them will be reported to the GEF in the annual PIR.

4.4 Innovation, sustainability and scaling up

130. The aim of the project is fundamentally twofold – firstly, it will identify, test and evaluate innovative techniques for the rehabilitation of various degraded mountain lands; secondly, it will review and refine the policies, strategies, legislation and procedures for the Land Use Planning process, which hasn't been effectively achieved in Lebanon and must hence be seen as a key innovation. LDN considerations will be mainstreamed into both processes, which also is a key innovation reflecting recent global discussions under the UNCCD. Also the establishment of a GIS platform for LUP is an innovation for government agencies in Lebanon.

131. However, while this invaluable work will have an immediate positive impact, it will be on a pilot scale and in merely few localities. The project therefore depends on sustainability and replication and scaling up post project to achieve its ultimate objective of contributing to land degradation neutrality in mountain lands in Lebanon. The project will therefore work through a dedicated Outcome 3 – *Project monitoring and evaluation, communication, knowledge management and financial mechanisms for the dissemination and replication of the results of the project with the aim of achieving land degradation neutrality.* The outputs that will be achieved under this outcome include a Communication and Knowledge Management Strategy to broadcast and disseminate the results of the project to the various stakeholders who will inherit the results of the project; and the identification and development of effective sustainable financing mechanisms to start providing new means for scaling-up and replication of best practices for rehabilitation of degraded land, the prevention of further degradation and achievement of land degradation neutrality.

5 PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goals: Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. Goal 5: Achieve gender equality and empower all women and girls. Goal 6: Ensure access to water and sanitation for all. Goal 8: Promote inclusive and sustainable economic growth, employment and decent work for all. Goal 12: Ensure sustainable consumption and production patterns. Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss.					
This project will contribute to the following country outcome included in the UNDAF/Country Programme Document: **UNDAF Outcome 4.3**. Number of national development plans and processes integrating: biodiversity, renewable energy, energy efficiency, sustainable consumption and production, climate change, sound chemical management, sustainable consumption & production and ecosystem services values. **CPD Output 4.2.** National Environmental Management Strengthened					
This project will be linked to the following output of the UNDP Strategic Plan 2018-2021: Development Setting B: Accelerating structural transformations for Sustainable Development. Signature solution 4: Promote nature-based solutions for a sustainable planet					
	Objective and Outcome Indicators	**Baseline[54]**	**Mid-term Target[55] (by 2nd PIR)**	**End of Project Target**	**Assumptions[56]**
Project Objective: To achieve land degradation neutrality of mountain landscapes in Lebanon through integrated landscape management	**Indicator 1[57]**: Total land/ vegetative cover in the project localities in Akkar and Jbeil [GEF guidance: tracking vegetation cover as defined in the Land Cover Classification System (LCCS) as areas that have a vegetative cover of at least 4% for at least two month of the year. This cover may consist of woody life forms (trees, shrubs), herbaceous life forms (forbs, grasses), and includes natural and cultivated area.]	Of the 29,621 ha in project localities, 9,300 ha are considered degraded at baseline (t.b.c. at inception phase)	No net loss in the project localities in Akkar and Jbeil	No Net Loss over the 29,621 ha 10% reduction of degraded areas i.e. an increase in vegetative cover over c. 930 ha Area (ha, %) of land with increased vegetation cover still to be determined	In case of absence of national survey/ data, international open access remote sensing data can be found
	Indicator 2: Forest cover in the project localities in Akkar and Jbeil	19,719 ha (11,342 ha in Akkar and 8,377 ha in Jbeil project localities)	No net loss in the project localities in Akkar and Jbeil	Increase by 2% (400 ha) in the project localities in Akkar and Jbeil	The project is in harmony with the new UNCCD-NAP which has yet to be finalized and which seeks to (1) restore forest landscapes through reforestation and sustainable forest management, (2) restore rangeland landscapes through sustainable grazing and animal production, (3) promote sustainable agricultural practices,
	Indicator 3: Net Primary Productivity, in kg C/m^2 in the project localities in Akkar and Jbeil	NPP at Akkar project locality – forest 813, cropland 766, grassland 590; at Jbeil project locality – forest 350, cropland 327, grassland 224	An average improvement of 2% in NPP	An average improvement of 5% in NPP	

[54] Baseline, mid-term and end of project target levels must be expressed in the same neutral unit of analysis as the corresponding indicator. Baseline is the current/original status or condition and need to be quantified. The baseline must be established before the project document is submitted to the GEF for final approval. The baseline values will be used to measure the success of the project through implementation monitoring and evaluation.

[55] Target is the change in the baseline value that will be achieved by the mid-term review and then again by the terminal evaluation.

[56] Risks must be outlined in the Feasibility section of this project document.

[57] Objective Indicators 1-4 are in harmony with the national indicators proposed for Land Degradation Neutrality but with a focus on the project localities. Baseline figures are derived from satellite imagery dated October 2016 – see report in Annex 16 for methodology.

	Indicator 4: Soil organic carbon in tC/ha in productive lands in the project localities in Akkar and Jbeil *(tC/ha is the SOC parameter used in the LDN framework)*	SOC in Akkar project locality – forest 86.30, cropland 82.65, grassland 87.65; in Jbeil project locality – forest 89.82, cropland 88.9, grassland 87.87	No net loss in overall SOC of lands under forest, cropland and grassland at the project localities in Akkar and Jbeil	An improvement of 2% in overall SOC of lands under forest, cropland and grassland at the project localities in Akkar and Jbeil	climate smart agriculture and conservation agriculture and (4) improve soil organic carbon in croplands and bare lands through sustainable agriculture and afforestation. It is assumed that these NAP targets will prevail and that the project's contribution will be a valid increment.
Outcome 1: Degraded mountain land in selected mountain districts of northern Lebanon identified, rehabilitated and restored	**Indicator 5**: Percentage of land area in target sites in which sustainable agricultural or rangeland practices are being applied	Nil – no known sustainable agricultural or rangeland practices in the project localities of Akkar and Jbeil	Farmers/ herders/ producers, male and female, applying sustainable agricultural or rangeland practices in up to 5% of land in project localities	Farmers/ herders/ producers, male and female, applying sustainable agricultural or rangeland practices in up to 10% of land in project localities	It is assumed that the project's approach to design and implement rehabilitation initiatives with the full participation of stakeholders, will foster an understanding of the need for striking the right balance between planned and occurring land use and safeguarding of ecosystems for the services they provide. The project will also stress the economic case of sustainable natural resource use versus the development of certain sectors in sensitive areas delivering critical ecosystem services. The project's communication strategy and stakeholder involvement plan are expected to lead to an appreciation, and defence, of what the project is proposing. Traditions and cultural values allow gender mainstreaming
	Indicator 6: Yields of three most commonly grown crops	To be determined at project start	10% increase in yields over baseline value	20% increase in yields over baseline value	
	Indicator 7: Number of quarries in which rehabilitation techniques are applied	No quarries are currently being rehabilitated in the project localities	One abandoned or operational quarry applying rehabilitation techniques	Two additional abandoned or operational quarries applying rehabilitation techniques	
	Indicator 8: Annual household livelihoods/ income levels in selected mountain communities in Akkar and Jbeil (disaggregated by gender)	Household survey (under Output 1.1) of representative samples in Akkar and Jbeil project localities will confirm/ establish the baseline of $6,000/annual household income and define any other parameters and baselines	Repeat survey showing up to 5% improvement (disaggregated male and female) in parameters identified by experts for the survey under Output 1.1	Repeat survey showing up to 10% improvement (disaggregated male and female) in parameters identified by experts for the survey under Output 1.1	
	Indicator 9: Women participating in and benefiting from project interventions	N/A	5,000, to be confirmed at project start	10,000, to be confirmed at project start	
Outcome 2: Mountain lands managed sustainably to prevent degradation	**Indicator 10**: LDN capacity of key government stakeholders as per adapted Capacity Development Scorecard	Score 36 / 84 (43%)	Score 50	Score 70	The project will adopt a participatory approach and one with local ownership of the LUPs, which is expected to create an understanding and recognition of the value to the administrations and residents alike of planning for sustainable land management
	Indicator 11: LDN reflected in LUP at district/ municipal level in Akkar and Jbeil	LDN not reflected	Progress in mainstreaming LDN principles	LDN reflected in LUP process	
	Indicator 12: LD and LDN mainstreamed in i) Master Plan for the Protection of Mountain Plateaus, Natural Areas, Beaches, Green Areas, and	Strategies under development/ review and do not reflect LD/LDN	Strategies under review	Strategies reviewed and adopted with LD/LDN reflected in strategies and sector decisions	

	Agricultural Areas ii) Quarries Master Plan				
	Indicator 13: Existence and use of appropriate GIS system/platform for LUP in productive and natural ecosystems	No such GIS system/ platform emplaced	GIS system/ platform for LUP established at national level	GIS system/ platform has been used in LUP for productive mountain lands	
Outcome 3: Project monitoring and evaluation, communication, knowledge management and financial mechanisms for the dissemination and replication of the results of the project with the aim of achieving land degradation neutrality	**Indicator 14**: Recommendations from M&E (regular, PIRs, MTR) integrated into project design and management	N/A	Project-specific M&E system operational and its recommendations and those from PIRs enacted by project	Project-specific M&E system operational and its recommendations and those from MTR and PIRs enacted by project	It is assumed that the land rehabilitation efforts (through Outcome 1) and the prevention strategies (through Outcome 2) will lead to very specific beneficial results and that these results will be evident soon enough to ensure the sustainability of project benefits. This will be underpinned by the project's Communication and Knowledge Management Strategy and the financial mechanisms it develops.
	Indicator 15: Reach of Communication and Knowledge Management	Draft Communication and Knowledge Management Strategy available	Strategy adopted and under implementation National Communication & KM products on LD, LDN, LUP (publications, events, advocacy etc.) reach central and local government, NGOs, private sector	National Communication & KM products on LD, LDN, LUP (publications, events, advocacy etc.) have effectively supported better LUP and mainstreaming of LD/LDN. At least 2 LDN-relevant KM products submitted to UNDP-GEF/ GEF / UNCCD / WOCAT	
	Indicator 16: Identification and operationalisation of new financing mechanism s for SLM/ SFM/ LDN	No use of innovative financing mechanisms for SLM/ SFM/ LDN Preliminary assessment of financing options available	Suitable new financing mechanisms for SLM/ SFM/ LDN identified, assessed and plans confirmed to operationalise at least one.	At least one suitable new financing mechanism operationalised and providing additional resources for SLM/ SFM/ LDN work	

6 MONITORING AND EVALUATION (M&E) PLAN

132. The project results as outlined in the project results framework will be monitored annually and evaluated periodically according to the M&E plans in Annexes 2 and 3 to ensure the project effectively achieves these results. This will be supported by *Outcome 3: Project monitoring and evaluation, communication, knowledge management and financial mechanisms* through which this project monitoring and evaluation plan will also facilitate learning and ensure knowledge is shared and widely disseminated to support the scaling up and replication of project results.

133. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. While these UNDP requirements are not outlined in this project document, the UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high *quality* standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies[58].

134. In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF Tracking Tools) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF Tracking Tools for all GEF-financed projects in the country, including projects supported by other GEF Agencies.[59]

M&E Oversight and monitoring responsibilities:

135. Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

136. The Project Manager will develop annual work plans based on the multi-year work plan included in Annex 1, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. gender strategy, KM strategy etc..) occur on a regular basis.

137. Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

138. Project Implementing Partner: The Implementing Partner is responsible for providing any and all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary and appropriate. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used by and generated by the project supports national systems.

139. UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the independent mid-term review and the independent terminal

[58] See https://www.thegef.org/gef/policies_guidelines
[59] See https://www.thegef.org/gef/gef_agencies

evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

140. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

141. The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure in order to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).

142. UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

143. Audit: The project will be audited according to UNDP Financial Regulations and Rules and applicable audit policies on Support to NIM implemented projects.[60]

Additional GEF monitoring and reporting requirements:

144. Inception Workshop and Report: A project inception workshop will be held within two months after the project document has been signed by all relevant parties to, amongst others:

- Re-orient project stakeholders to the project strategy and discuss any changes in the overall context that influence project strategy and implementation;
- Discuss the roles and responsibilities of the project team, including reporting and communication lines and conflict resolution mechanisms;
- Review the results framework and finalize the indicators, means of verification and monitoring plan;
- Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP in M&E;
- Update and review responsibilities for monitoring the various project plans and strategies, including the risk log; Environmental and Social Management Plan and other safeguard requirements; the gender strategy; the knowledge management strategy, and other relevant strategies;
- Review financial reporting procedures and mandatory requirements, and agree on the arrangements for the annual audit; and
- Plan and schedule Project Board meetings and finalize the first year annual work plan.

145. The Project Manager will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.

146. GEF Project Implementation Report (PIR): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

147. The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

148. Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyse and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

[60] See guidance here: https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx

149. GEF Focal Area Tracking Tools: The LD-PMAT Tracking Tool will be used to monitor global environmental benefit results as agreed with the UNDP-GEF Regional Technical Advisor. The baseline/CEO Endorsement GEF Tracking Tool – included as Annex 4 to this project document – will be updated by the Project Manager/Team (not the evaluation consultants hired to undertake the MTR or the TE) and shared with the mid-term review consultants and terminal evaluation consultants before the required review/evaluation missions take place. The updated GEF Tracking Tool will be submitted to the GEF along with the completed Mid-term Review report and Terminal Evaluation report.

150. Independent Mid-term Review (MTR): An independent mid-term review process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3rd PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

151. Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Manager will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center. As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publically available in English on the UNDP ERC.

152. The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP Evaluation Resource Centre (ERC). Once uploaded to the ERC, the UNDP IEO will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.

153. Final Report: The project's terminal PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Table 5. Mandatory GEF M&E Requirements and M&E Budget

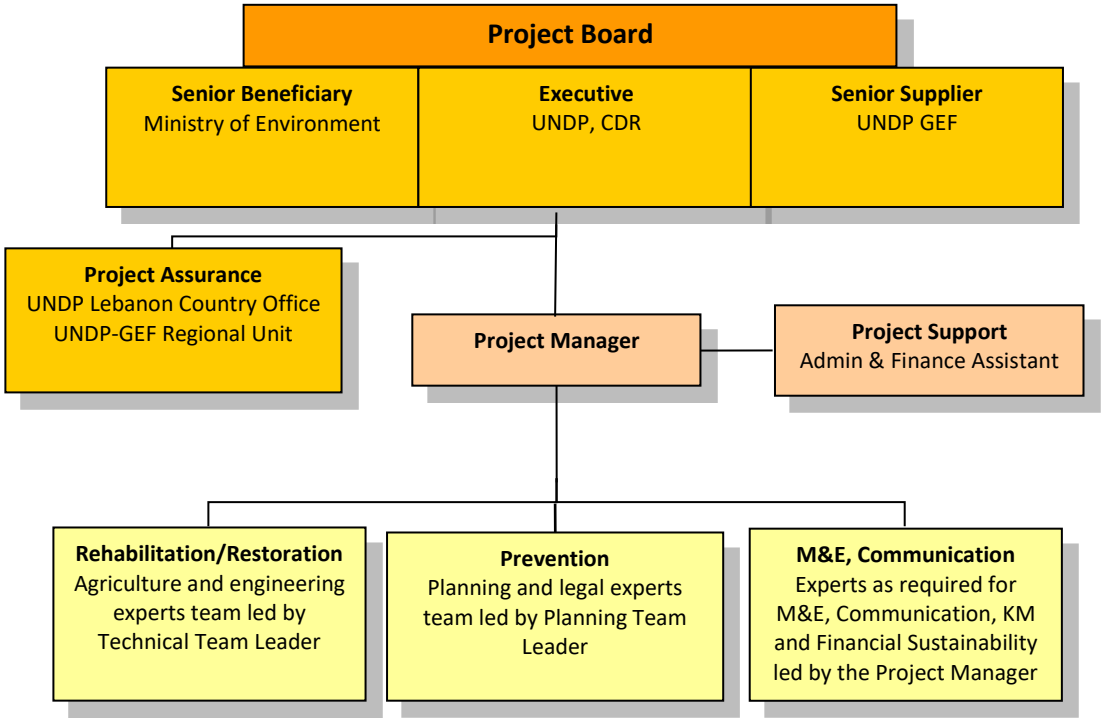
GEF M&E requirements	Primary responsibility	Indicative costs to be charged to Project Budget[61]		Time frame
		GEF grant	Co-financing	
Inception Workshop	UNDP Country Office	USD 10,000	USD 2,500	Within 2 months of project document signature
Inception Report	Project Manager	None	None	Within two weeks of inception workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework	Project Manager	USD 30,000 (6,000 per year)	USD10,000	Annually
GEF Project Implementation Report (PIR)	Project Manager, UNDP Country Office and UNDP-GEF team	None	None	Annually
NIM Audit as per UNDP audit policies	UNDP Country Office	Per year: USD 5,000	USD 2,000	Annually or as per UNDP Audit policies
Lessons learned and knowledge generation	Project Manager	USD 5,000	USD 5,000	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	Project Manager Project Technical Team Leader UNDP CO	None	None	On-going
Addressing environmental and social grievances	Project Manager UNDP Country Office BPPS as needed	None for time of project manager, and UNDP CO	USD10,000	Costs for missions, workshops, BPPS expertise etc can be charged to project budget
Project Board meetings	Project Board UNDP Country Office Project Manager	USD 5,000	USD10,000	At minimum annually
Supervision missions	UNDP Country Office	None[62]	None	Annually
Oversight missions	UNDP-GEF team	None	None	Troubleshooting as needed
Knowledge management as outlined in Outcome 3	Project Manager	USD41,200	USD20,000	On-going
GEF Secretariat learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	None	None	To be determined.
Mid-term GEF Tracking Tool update	Project Manager	USD 10,000	USD 5,000	Before mid-term review mission
Independent Mid-term Review (MTR) and management response	UNDP Country Office and Project team and UNDP-GEF team	USD 25,000	USD10,000	Between 2nd and 3rd PIR.
Terminal GEF Tracking Tool update	Project Manager	USD 10,000	USD 5,000	Before terminal evaluation mission
Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response	UNDP Country Office and Project team and UNDP-GEF team	USD 40,000	USD10,000	At least three months before operational closure
Translation of MTR and TE reports into English	UNDP Country Office	USD 5,000	None	As required. GEF will only accept reports in English
TOTAL indicative COST (USD)		USD 206,200[63]	USD 89,500	

[61] Excluding project team staff time and UNDP staff time and travel expenses.
[62] The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee
[63] The costs of M&E are covered partly by Project Management and partly by the budget for Outcome 3

7 GOVERNANCE AND MANAGEMENT ARRANGEMENTS

154. The project will be implemented following UNDP's procedures as Support to National Implementation (NIM) modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of Lebanon, and the Country Programme.

155. The project organization structure is as follows:



156. The **Implementing Partner** for this project is the Ministry of Environment of Lebanon.

157. MoE will appoint a high level official who will serve part time as the **National Focal Point (NFP)** for the project. The NFP will be a senior person appointed to oversee the project who is accountable to the Government and UNDP for the implementation of the project in line with the signed project document. He/she is the approving officer for the project and will be responsible for providing government oversight and guidance for project implementation. The NFP will not be paid from project funds, but will represent part of the government in-kind contribution to the project.

158. Among the duties and responsibilities of the NFP are the following:

- Serves as a focal point for coordination of the project with implementing agencies, UNDP, Government and other partners;
- Ensures that Government inputs for the project are available and that the project activities are in line with national priorities;
- Leads and coordinates partners working with the project;
- Coordinates with the projects and facilitates its work and all staff;
- Ensures that the required project work plan is prepared and updated and distributed to the Government relevant entities when applicable;
- Will represent the Implementing Partner at project meetings and annual reviews;
- Will lead efforts to build partnerships for the support of outcomes indicated in the project document;
- Will support resource mobilization efforts to increase resources in cases where additional outputs and outcomes are required.

159. The Ministry of Environment will be responsible for:

- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year.

160. The **Project Board** (also called Project Steering Committee) is responsible for making by consensus, management decisions when guidance is required by the Project Manager, including recommendation for

UNDP/Implementing Partner approval of project plans and revisions. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency and effective international competition. When a consensus cannot be reached within the Board, the final decision shall rest with the UNDP Programme Manager.

161. Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible countermeasures and management actions to address specific risks;
- Agree on project manager's tolerances as required;
- Review the project progress, and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Appraise the annual project implementation report, including the quality assessment rating report; make recommendations for the workplan;
- Provide ad hoc direction and advice for exceptional situations when the project manager's tolerances are exceeded; and
- Assess and decide to proceed on project changes through appropriate revisions.

162. The terms of reference for the Project Board are contained in Annex 14.

163. The Project Board will be made up of the representatives of the following organizations: Ministry of Environment, CDR and UNDP.

164. The composition of the Project Board must include the following roles:

165. Executive: The Executive is an individual who represents ownership of the project who will chair the Project Board. The Executive will be: UNDP and CDR.

166. The Executive is ultimately responsible for the project, supported by the Senior Beneficiary and Senior Supplier. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The executive has to ensure that the project gives value for money, ensuring cost-conscious approach to the project, balancing the demands of beneficiary and suppler.

167. Specific Responsibilities: (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organisation structure and logical set of plans;
- Set tolerances in the AWP and other plans as required for the Project Manager;
- Monitor and control the progress of the project at a strategic level;
- Ensure that risks are being tracked and mitigated as effectively as possible;
- Brief relevant stakeholders about project progress;
- Organise and chair Project Board meetings.

168. Senior Supplier: The Senior Supplier is an individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project. The Senior Supplier role must have the authority to commit or acquire supplier resources required. The Senior Suppler is: UNDP-GEF.

169. Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Make sure that progress towards the outputs remains consistent from the supplier perspective;
- Promote and maintain focus on the expected project output(s) from the point of view of supplier management;
- Ensure that the supplier resources required for the project are made available;
- Contribute supplier opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Arbitrate on, and ensure resolution of, any supplier priority or resource conflicts.

170. Senior Beneficiary: The Senior Beneficiary is an individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries. The Senior Beneficiary role is held by a representative of the government or civil society. The Senior Beneficiary is: The Ministry of Environment of Lebanon.

171. The Senior Beneficiary is responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The Senior Beneficiary role monitors progress against targets and quality criteria. This role may require more than one person to cover all the beneficiary interests. For the sake of effectiveness, the role should not be split between too many people.

172. Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes;
- Specification of the Beneficiary's needs is accurate, complete and unambiguous;
- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target;
- Impact of potential changes is evaluated from the beneficiary point of view;
- Risks to the beneficiaries are frequently monitored.

173. The Project Manager is in attendance at all Project Board meetings and consultations. A full Board meeting will be held at least annually and the Executive Team will meet more often as required. In between meetings, the Board will conduct its meetings electronically.

174. **Project Manager**: The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

175. The Implementing Partner appoints the Project Manager, who should be different from the Implementing Partner's representative in the Project Board.

176. Specific responsibilities include:

- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- Capture lessons learned during project implementation;
- Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
- Prepare the GEF PIR and submit the final report to the Project Board;
- Based on the GEF PIR and the Project Board review, prepare the AWP for the following year.
- Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Board.
- Identify follow-on actions and submit them for consideration to the Project Board;
- Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board;

177. The PM will head the **Project Management Unit** which will be located in office premises provided by the MoE as part of the government's co-financing in kind. The PMU will moreover comprise a Project Assistant, a Technical Team Leader specializing in agriculture and engineering, a Planning Team Leader with expertise in planning and legal matters, and a number of experts, as required, engaged for variable lengths of time. Annex 14 provides Terms of Reference for a number of key project positions.

178. The Project Manager function will end when the final project terminal evaluation report and corresponding management response, and other documentation required by the GEF and UNDP, have been completed and submitted to UNDP (including operational closure of the project).

179. **Project Assurance**: As the **GEF Implementing Agency** for this project, **UNDP** is responsible to the GEF for the timely and cost-effective delivery of the agreed project outcomes. UNDP provides a three – tier supervision, oversight and quality assurance role – funded by the GEF agency fee – involving UNDP staff in Country Offices and at regional and headquarters levels. Project Assurance must be totally independent of the Project Management function. The quality assurance role supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. This project oversight and quality assurance role is covered by the GEF Agency.

180. UNDP will achieve project assurance through its understandings with the Government. UNDP has an obligation to ensure accountability, and its efforts in this respect for this project are spearheaded by the UNDP/GEF RTA and the Environment and Energy Section of the Country Office in Beirut. As IA, UNDP is responsible for monitoring progress and reporting back to the GEF. This responsibility is shared with the Executing Agency and is exercised through full participation in Project Board meetings, consideration of AWPs and Budgets, regular meetings with the OFP, visits to project sites (including by senior management) and the annual PIR including performance ratings.

181. Using the IA fees, and working closely with the MoE, UNDP will be responsible for overseeing project implementation, project budgets and expenditures including revisions thereof, AWP implementation, risk management, project evaluation and reporting, and results-based project monitoring including through site visits.. At the RTA level, UNDP provides technical backstopping to the CO and project; ensures technical quality assurance; clears budgets/ASL and AWP; monitors project implementation to ensure that activities funded comply with GEF policy guidance and approved project design as per the signed Prodoc. Special attention will be paid to linking the project outputs to relevant CPAP Outcomes and to ensuring gender is considered in these processes (see Annex 15). Financial transactions, auditing and reporting will be carried out in compliance with UNDP procedures for support to national implementation.

182. The **UNDP Country Office** may provide, at the request of the designated institution, the following support services (Direct Project Costing) for the activities of the project:

- Payments, disbursements and other financial transactions
- Recruitment and oversight of performance and delivery of staff, project personnel, and consultants
- Payroll management services and Medical Clearance Services for all staff, external access to ATLAS for project managers and other staff
- Procurement of services and equipment, including disposal
- Organization of training activities, conferences, and workshops, including fellowships
- Travel including visa requests, ticketing, and travel arrangements
- Shipment, custom clearance, vehicle registration, and accreditation
- Security management service and Malicious Acts Insurance Policy

183. The UNDP Country Office will also provide, the following corporate management services for the activities of the project which include the following (as per the DOA, IA fee will be credited directly to the CO account based on delivery):

- Corporate executive management and resource mobilisation
- Corporate accounting, financial management, internal audit, legal support and human resources management
- Policy guidance and Bureau/Country Office management
- Quality assurance and quality control
- Policy advisory support
- Thematic and technical backstopping
- Resource management and reporting

184. **Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information:** In order to accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in

accordance with relevant policies notably the UNDP Disclosure Policy[64] and the GEF policy on public involvement[65].

8. FINANCIAL PLANNING AND MANAGEMENT

185. The total cost of the project is USD 21,241,005. This is financed through a GEF grant of USD 4,621,005, USD 120,000 in cash co-financing to be administered by UNDP and USD 16,500,000 in further co-financing. UNDP, as the GEF Implementing Agency, is responsible for the execution of the GEF resources and the cash co-financing transferred to UNDP bank account only.

186. Co-financing: The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. The planned co-financing will be used as follows:

Table 6. Co-Financing

Co-financing source	Co-financing type	Co-financing amount in USD	Planned Activities/Outputs	Risks
Ministry of Environment (MoE)	Grant & In kind	7,500,000 (7m grant, 500k in kind)	MoE is the Implementing Partner and as such will work with the project under all Outcomes and Outputs. It will provide the venue for the PMU and benefit directly under Outputs 2.1-2.3	Low risk
Lebanon Reforestation Initiative, LRI	Grant	2,000,000	LRI is working on a variety of activities related to reforestation, forest management and sustainable land management, including rehabilitation of quarries. It will provide advice and support to the project's forest initiatives in particular under Outputs 1.2-1.4.	Low risk
Council for Development and Reconstruction (CDR)	Grant	7,000,000	CDR will collaborate with the project in a number of aspects dealing with land use planning, particularly Output 2.1	Low risk
United Nations Development Programme, UNDP	Grant	120,000	UNDP co-financing will be utilized primarily for project management, more specifically for contractual services, travel, and miscellaneous expenses	No risk
TOTAL CO-FINANCING		**16,620,000**		

187. UNDP Direct Project Services as requested by Government: UNDP, as GEF Agency for this project, will provide project management cycle services for the project as defined by the GEF Council. In addition, the Government of Lebanon may request UNDP direct services for specific projects, according to its policies and convenience. The UNDP and Government of Lebanon acknowledge and agree that those services are not mandatory, and will be provided only upon Government request. If requested the services would follow the UNDP policies on the recovery of direct costs. These services (and their costs) are specified in the Letter of Agreement (Annex 13) as well as in Section 7 *Governance and Management Arrangements*. As is determined by the GEF Council requirements, these service costs will be assigned as Project Management Cost, duly identified in the project budget as Direct Project Costs. Eligible Direct Project Costs should not be charged as a flat percentage. They should be calculated based on estimated actual or transaction based costs and should be charged to the direct project costs account codes: 64397 – 'Services to projects - CO staff' and 74596 – 'Services to projects - GOE for CO'.

188. Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the Project Board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project Manager and UNDP Country Office will seek the approval of the UNDP-GEF team as these are considered major amendments by the GEF: a) Budget re-allocations among components in the project with amounts involving 10% of the total project grant or more; b) Introduction of new budget items/or components that exceed 5% of original GEF allocation.

[64] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[65] See https://www.thegef.org/gef/policies_guidelines

189. Any over-expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

190. Refund to Donor/GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the UNDP-GEF Unit in New York.

191. Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP.[66] On an exceptional basis only, a no-cost extension beyond the initial duration of the project will be sought from in-country UNDP colleagues and then the UNDP-GEF Executive Coordinator.

192. Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

193. Financial completion: The project will be financially closed when the following conditions have been met: a) The project is operationally completed or has been cancelled; b) The Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

194. The project will be financially completed within 12 months of operational closure or after the date of cancellation. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

[66] see https://info.undp.org/global/popp/ppm/Pages/Closing-a-Project.aspx

9. TOTAL BUDGET AND WORKPLAN

Atlas Project ID (formerly Award ID):	00098955	Atlas Output ID (formerly Project ID):	00102170
Atlas Proposal or Award Title:	Land degradation neutrality of mountain landscapes in Lebanon		
Atlas Business Unit	LBN10		
Atlas Primary Output Project Title	Land degradation neutrality		
UNDP-GEF PIMS No.	5837		
Implementing Partner	Ministry of Environment, Lebanon		

GEF Outcome/ Atlas Activity	Resp. Party/ Imp. Agent	Fund ID	Donor Name	Atlas Budget Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)		See Budget Note
1. Degraded mountain land in selected mountain districts of northern Lebanon identified, rehabilitated and restored	UNDP /MoE	62000	GEF	71200	International Consultants	-	20,000	20,000	-	-	40,000	1
				71300	Local Consultants	-	26,250	26,250	-	-	52,500	2
				71400	Contractual Services-Individuals	36,000	91,000	91,000	91,000	91,000	400,000	3
				71600	Travel	2,000	2,000	2,000	2,000	2,000	10,000	4
				72100	Contractual Services-Companies	75,000	345,000	661,500	736,500	466,500	2,284,500	5
	Total Outcome 1 (GEF)					**113,000**	**484,250**	**800,750**	**829,500**	**559,500**	**2,787,000**	
2, Mountain lands managed sustainably to prevent degradation	UNDP /MoE	62000	GEF	71300	Local Consultants	50,000	42,000	42,000	50,000	-	184,000	6
				71400	Contractual Services-Individuals	38,900	91,000	91,000	91,000	91,000	402,900	7
				72100	Contractual Services-Companies	-	100,000	100,000			200,000	8
				72500	Office Supplies	2,800	2,800	2,800	2,800	2,800	14,000	9
				72800	Information Technology Equipment	18,000	-	-	20,000	20,000	58,000	10
				75700	Training, Workshops, Conferences	4,800	5,000	5,000	5,000	5,000	24,800	11
	Total Outcome 2 (GEF)					**114,500**	**240,800**	**240,800**	**168,800**	**118,800**	**883,700**	
3, Project monitoring and evaluation, communication, knowledge management and financial mechanisms for the dissemination and replication of the results of the project in place with the aim of achieving land degradation neutrality	UNDP /MoE	62000	GEF	71200	International Consultants	-	40,000	40,000	-	40,000	120,000	12
				71300	Local Consultants		30,000	30,000	10,000	10,000	80,000	13
				71400	Contractual Services-Individuals	48,200	48,200	48,200	48,200	48,200	241,000	14
				72100	Contractual Services-Companies	-		95,000	95,000	-	190,000	15
				74200	Printing & Publications	15,000	15,000	15,000	15,000	15,000	75,000	16
				75700	Training, Workshops, Conferences	-	6,000	6,000	6,000	6,805	24,805	17
	Total Outcome 3 (GEF)					**63,200**	**139,200**	**234,200**	**174,200**	**120,005**	**730,805**	
Project Management	UNDP /MoE	62000	GEF	71400	Contractual Services-Individuals	12,320	15,780	15,780	15,780	15,780	75,440	18
				64397	Direct Project Costs – Staff	28,810	28,810	28,810	28,810	28,820	144,060	19
				Sub-total Project Management (GEF)		**41,130**	**44,590**	**44,590**	**44,590**	**44,600**	**219,500**	
	UNDP /MoE	4000	UNDP	71400	Contractual Services-Individuals	18,100	18,100	18,100	18,100	18,100	90,500	20
				71600	Travel	2,900	2,900	2,900	2,900	2,900	14,500	21
				74500	Miscellaneous	3,000	3,000	3,000	3,000	3,000	15,000	22
				Sub-total Project Management (UNDP)		**24,000**	**24,000**	**24,000**	**24,000**	**24,000**	**120,000**	
	Total Outcome 4 (GEF + UNDP)					**65,130**	**68,590**	**68,590**	**68,590**	**68,600**	**339,500**	
TOTAL GEF without PMC						**290,700**	**864,250**	**1,275,750**	**1,172,500**	**798,305**	**4,401,505**	
PROJECT TOTAL GEF						**331,830**	**908,840**	**1,320,340**	**1,217,090**	**842,905**	**4,621,005**	

PROJECT TOTAL UNDP	**24,000**	**24,000**	**24,000**	**24,000**	**24,000**	**120,000**	
PROJECT TOTAL	**355,830**	**932,840**	**1,344,340**	**1,241,090**	**866,905**	**4,741,005**	

SUMMARY OF FUNDS

	Amount	Amount	Amount	Amount	Amount	Total
	Year 1	Year 2	Year 3	Year 4	Year 5	
GEF	331,830	908,840	1,320,340	1,217,090	842,905	**4,621,005**
UNDP	24,000	24,000	24,000	24,000	24,000	**120,000**
MoE	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	**7,500,000**
LRI	400,000	400,000	400,000	400,000	400,000	**2,000,000**
CDR	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	**7,000,000**
TOTAL	**3,655,830**	**4,232,840**	**4,644,340**	**4,541,090**	**4,166,905**	**21,241,005**

BUDGET NOTES

1- International consultant for tourism - activity under Output 1.6
2- National consultant for responsible tourism – Output 1.6
3- 25% of Project Manager overall cost for technical input into outcome 1; 1 Site Engineer for the implementation of activities at selected sites; 20% of Project Assistant for technical support and assistance in activities related to outcome 1.
4- Local travel fees to cover field visits
5- 5 contracts to carry out a) landscape-scale survey of mountain lands and high country areas in Akkar and Jbeil districts (1 survey at the beginning and one at the end of the project); b) Planting of seedlings for the restoration of degraded forests at 2-3 pilot sites; c) Capacity building for local communities and purchase of equipment and seeding to restore high country grasslands in 2-3 pilot sites; d) Rehabilitation of a quarry; and e) Training of farmers and purchase of equipment for the restoration of degraded farmland in 2-3 pilot sites
6- 4 national consultants: a) Legal consultant - activity under Output 2.1; b) LUP consultant - activity under Output 2.1; c) Expert to undertake needs assessment and capacity building; and d) technical support on GIS and information technology
7- 25% of Project Manager overall cost for technical input into outcome 2; 1 local level coordinator; 20% of Project Assistant for technical support and assistance in activities related to outcome 2
8- 2 contracts: a) to undertake a technical review and study of guidelines; b) to provide technical support and implement IT system with regards to the masterplan
9- Office consumables – stationery, books, etc for the project
10- Purchase of equipment to implement the GIS/masterplan database
11- Cost of capacity building and training workshops
12- 3 international consultants: a) to undertake the Mid-Term Review of the project; b) to undertake the Terminal Evaluation of the project c) to undertake audit of the project and d) SLM M&E expert.
13- 2 national experts: a) Environmental economist – activities related to Output 3.3; and b) Communication specialist – activities related to Output 3.2
14- 40% of Project Manager overall cost for technical input into outcome 3; 20% of Project Assistant for technical support and assistance in activities related to outcome 3
15- 2 contracts: a) to develop the GIS/land database ; and b) to undertake a study on SLM/SFM/LDN financial mechanisms and oversee key implementation (Output 3.3)
16- Production of handbooks, guidance documents, and other knowledge management tools
17- Publicize project, outreach and exchange lessons, as well as for personal professional development
18- 20% of Project Assistant for administrative and finance assistance; 100% of Project Driver
19- Direct Project Costs are estimations based on the expected services to be provided. A Letter of Agreement will be signed between UNDP and the Government of Lebanon, and will include the description and the breakdown of the support services – please see Annex 13. The exact amount will be charged annually based on the actual services provided.
20- 10% of project manager for project management responsibilities; 20% of Project Assistant for administrative and finance assistance;
21- Travel for project personnel - preparing for replication, outreach, project exposure
22- Miscellaneous, contingency. To provide for unpredictable expenses.

10. LEGAL CONTEXT

195. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Lebanon and UNDP, signed on 10 February 1986. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

196. This project will be implemented by the Ministry if Environment ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

197. Any designations on maps or other references employed in this project document do not imply the expression of any opinion whatsoever on the part of UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

11. RISK MANAGEMENT

198. Consistent with the Article III of the SBAA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

- put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

199. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

200. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

201. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

202. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

203. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

204. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

205. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

206. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

207. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

208. Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

209. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement.

210. Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

211. *Note:* The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

212. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

213. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

214. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

12. ANNEXES

Annex 1: Multi-year Workplan

GEF Outcome	Task	Responsible Party	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
OUTCOME 1:																						
Outcome 1: Degraded mountain land in the Governorates of North Lebanon and Mount Lebanon identified, rehabilitated and restored	1.1 Landscape-scale survey of mountain lands and high country areas in Akkar and Jbeil	UNDP																				
	1.2 Degraded forests restored at selected project sites and sustainable forest management applied	UNDP																				
	1.3 Sustainable rangeland management practices for selected sites in high country grasslands	UNDP																				
	1.4 Degraded quarries rehabilitated	UNDP																				
	1.5 Sustainable agricultural practices in degraded farmland in selected sites	UNDP																				
	1.6 Enabling environment established for responsible tourism and minimum impact outdoor recreation	UNDP																				
OUTCOME 2:																						
Outcome 2: Mountain lands managed sustainably to prevent degradation	2.1: Improved Land Use Planning through strengthened frameworks and capacity at central and local levels	UNDP																				
	2.2: LDN capacity enhanced and LDN mainstreamed into land use planning and key policies targeting mountain lands	UNDP																				
	2.3: GIS platform established for land use planning and related monitoring	UNDP																				
OUTCOME 3:																						
Outcome 3: Project monitoring and evaluation, communication, knowledge management and financial mechanisms for the dissemination and replication of the results of the project with the aim of achieving land degradation neutrality	3.1: The project is monitored and evaluated on a continuing basis according to the adopted M&E Plan	UNDP																				
	3.2: Communication and Knowledge Management Strategy implemented	UNDP																				
	3.3: Effective sustainable financing mechanisms identified and developed	UNDP																				

Annex 2: Monitoring Plan

Data for most indicators will be sought from existing and credible national or international sources. Frequency will be annual as in PIR

Monitoring	Indicators	Data source/Collection Methods	Responsible party	Means of verification	Assumptions and Risks
Project Objective indicators	Indicator 1 : Total land/vegetative cover in the project localities in Akkar and Jbeil	Satellite imagery	Expert Consultant engaged by UNDP	Consultant's report and National agricultural statistics	The project is in harmony with the new GEF PMAT, LDN framework and UNCCD-NAP which has yet to be finalized and which seeks to (1) restore forest landscapes through reforestation and sustainable forest management, (2) restore rangeland landscapes through sustainable grazing and animal production, (3) promote sustainable agricultural practices, climate smart agriculture and conservation agriculture and (4) improve soil organic carbon in croplands and bare lands through sustainable agriculture and afforestation. It is assumed that these NAP targets will prevail and that the project's contribution will be a valid increment.
	Indicator 2: Forest cover in the project localities in Akkar and Jbeil				
	Indicator 3: Net Primary Productivity, in kg C/m2 in the project localities in Akkar and Jbeil	Satellite imagery & ground truthing			
	Indicator 4: Soil organic carbon in tC/ha in productive lands in the project localities in Akkar and Jbeil	Satellite imagery & ground truthing			
Outcome 1 indicators	Indicator 5: Percentage of land area in target sites in which sustainable agricultural or rangeland practices are being applied	Survey of project target localities	Project Technical Advisor and staff	PIRs	It is assumed that the project's approach to design and implement rehabilitation initiatives with the full participation of stakeholders, will foster an understanding of the need for striking the right balance between planned and occurring land use and safeguarding of ecosystems for the services they provide. The project will also stress the economic case of sustainable natural resource use versus the development of certain sectors in sensitive areas delivering critical ecosystem services. The project's Communication and Knowledge Management Strategy and Stakeholder Involvement Plan are expected to lead to an appreciation, and defence, of what the project is proposing.
	Indicator 6: Yields of three most commonly grown crops				
	Indicator 7: Number of quarries in which rehabilitation techniques are applied	Physical inspection	MoE	MoE report	
	Indicator 8: Annual household livelihoods/ income levels in selected mountain communities in Akkar and Jbeil (disaggregated by gender)	Social survey	Consultant engaged by PCU	Consultant's report	
	Indicator 9: Women participating in and benefiting from project interventions				
Outcome 2 indicators	Indicator 10: LDN capacity of key government stakeholders as per adapted Capacity Development Scorecard	CD scorecard	Project Planning Advisor and staff	PIRs	It is assumed that the project's focus at local level, building capacity, awareness and appreciation, will overcome the challenges faced by the LUP and EIA processes. The project will also adopt a participatory approach and one with local ownership of the LUPs, which is expected to create an understanding and recognition of the value to the
	Indicator 11: LDN reflected in LUP at district/ municipal level in Akkar and Jbeil	Review of LUP activities in project localities	Project Planning Advisor and staff	PIRs	
	Indicator 12: LD and LDN mainstreamed in i) Master Plan for the Protection of Mountain Plateaus, Natural				

	Areas, Beaches, Green Areas, and Agricultural Areas ii) Quarries Master Plan				administrations and residents alike of planning for sustainable land management
	Indicator 13: Existence and use of appropriate GIS system/platform for LUP in productive and natural ecosystems	Assessment of equipment and staffing			
Outcome 3 indicators	Indicator 14: Recommendations from M&E (regular, PIRs, MTR) integrated into project design and management	Ex post review of project implementation	UNDP LEB EFO, UNDP GEF RTA, TE consultant	PIRs, TE	It is assumed that the land rehabilitation efforts (through Outcome 1) and the prevention strategies (through Outcome 2) will lead to very specific beneficial results and that these results will be evident soon enough to ensure the sustainability of project benefits. This will be underpinned by the project's Communication and Knowledge Management Strategy and the financial mechanisms it develops
	Indicator 15: Reach of Communication and Knowledge Management	Survey as for Ind 8-9	Consultant engaged by PMU	Consultant's report	
	Indicator 16: Identification and operationalisation of new financing mechanism s for SLM/ SFM/ LDN	Assessment of legal and institutional progress and new funds generated	PM in preparation of PIR, and again by independent consultants at MTR and TE	Consultant Expert's report and PIRs	

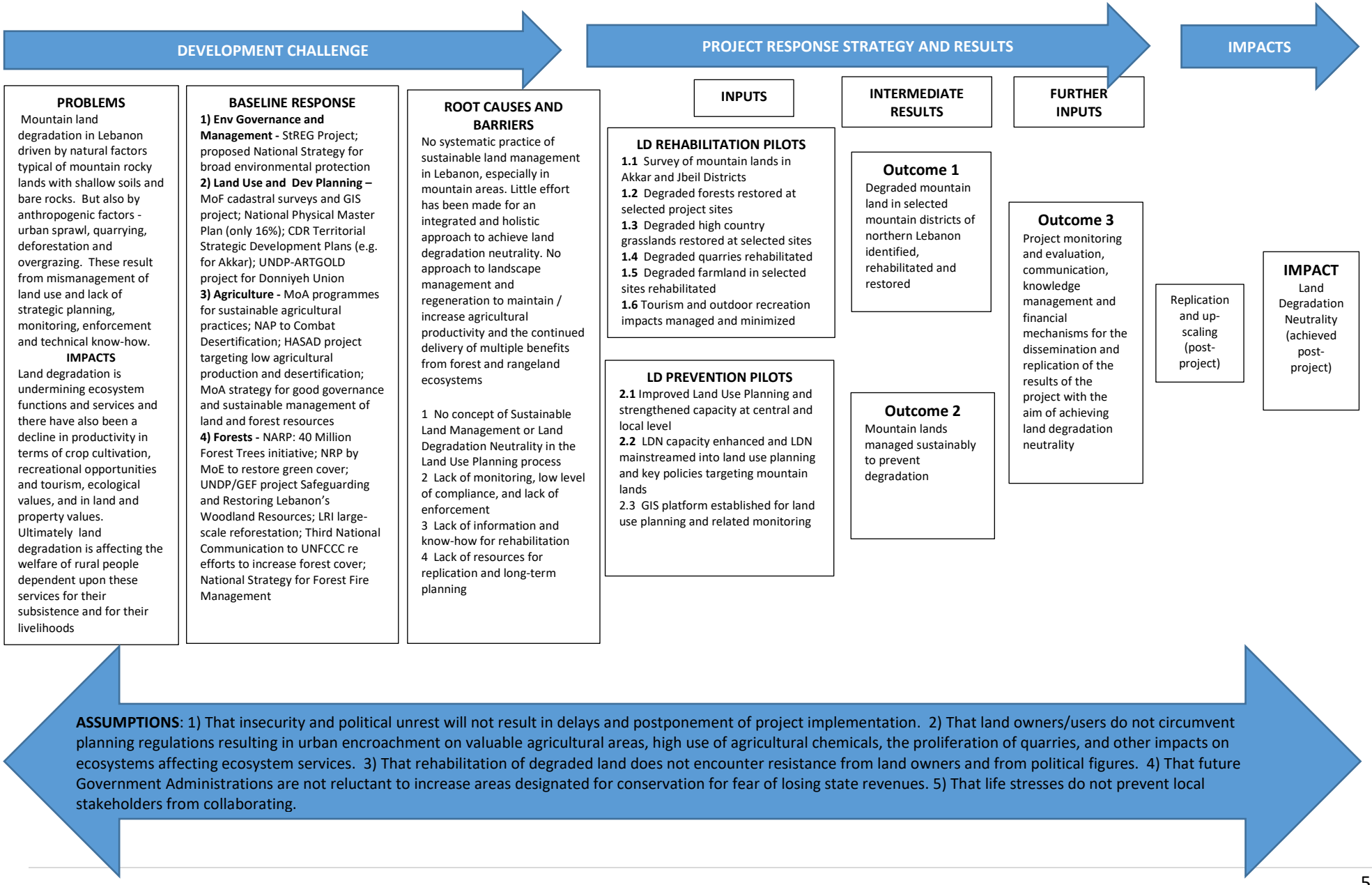
Annex 3: Evaluation Plan

	Data source / methodology	Timing	Responsible	Verification	Notes
Mid-term GEF Tracking Tool	Standard GEF Tracking Tool available at www.thegef.org	After 2nd PIR submitted to GEF	Consultant (not evaluator) with MoE	Completed GEF Tracking Tool	Baseline GEF Tracking Tool included in Annex 4
Mid-term Review	As per guidance provided by - http://web.undp.org/evaluation/documents/guidance/GEF/mid-term/Guidance_Midterm%20Review%20_EN_2014.pdf	February 2021 and submitted to GEF same year as 3rd PIR	Independent evaluator	Country Office Evaluation Plan; Completed MTR	45 working days between 2 consultants - USD30,000; other budget USD20,000
Environmental and Social risks and management plans, as relevant	Updated SESP and management plans	Annually	Project Manager with UNDP CO	Updated SESP	Baseline SESP in Annex 10
Terminal GEF Tracking Tool	Standard GEF Tracking Tool available at www.thegef.org	After final PIR submitted to GEF	Consultant (not evaluator) with MoE	Completed GEF Tracking Tool	Baseline GEF Tracking Tool included in Annex 4
GEF Terminal Evaluation	As per guidance provided by – http://web.undp.org/evaluation/documents/guidance/GEF/UNDP-GEF-TE-Guide.pdf	November 2023 or 3 months before project operational closure	Independent evaluator	Country Office Evaluation Plan; Completed TE	45 working days between 2 consultants - USD30,000; other budget USD20,000

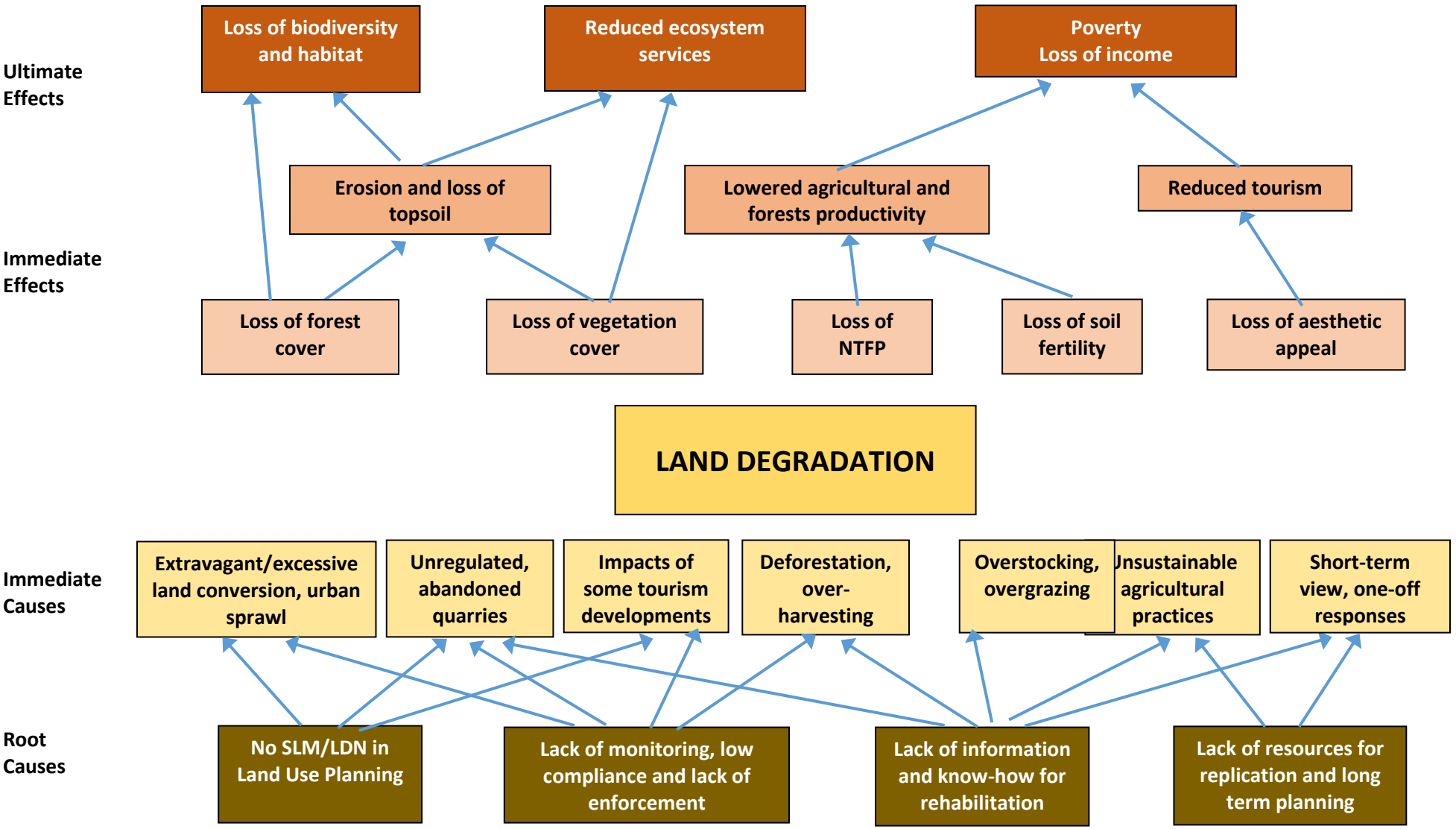
Annex 4: GEF Tracking Tools at baseline LD-PMAT

Please refer to the separate Excel file

Annex 5a: Theory of change showing project response to the Development Challenge and Results/Impacts achieved



Annex 5b: Causal Chain Analysis of the problem of Land Degradation in Lebanon



Annex 5c: Ecosystem Services in the mountain environments of Lebanon

<table>
<tr><td colspan="3">SUPPORTING
Nutrient cycling: Natural processes, especially water, serve as agents for nutrient cycling; plants capture and store nutrients temporarily
Soil formation: Ecosystem processes generate and preserve soils and renew their fertility
Primary production: Forests and rangeland grasslands serve as the basis of the food chain</td></tr>
<tr><td>PROVISIONING

Food: Rangelands provide food for stock and in turn serve as food for humans; insects serve as pollination agents for fruit
Fresh water: Numerous freshwater springs, including those that provide potable water to many towns and villages
Wood and fibre: Forests managed for sustainability, provide wood
Non-Timber Forest Products: honey, culinary herbs,
Fuel: Forests managed for sustainability, provide fuelwood
Medicine: Forests and rangelands provide medicinal herbs and potions
Habitat: Mountain landscapes provide habitat for numerous species of mammals, reptiles, insects
Biodiversity: natural ecosystems maintain the viability of gene-pools, and biological diversity; natural agents disperse seeds</td><td>REGULATING

Climate regulation: Forests and grasslands sequester CO_2, moderate weather extremes and impacts, and contribute to climate stability
Flood regulation: Vegetative land cover soaks up rainwater and mitigates flood events
Water purification: Riparian vegetation filters nutrients and other impurities from run-off water, providing waste management and detoxification
Erosion control: Forests and grasslands bind soil and prevent erosion
Pest control: Birds control insect pests; some plants inhibit plant pests; natural systems regulate disease-carrying organisms</td><td>CULTURAL

Aesthetic: Forests, rangelands, wetlands and other natural ecosystems provide a pleasing and appealing environment
Spiritual: Natural landscapes are mystical and inspirational
Educational: Natural ecosystems serve as outdoor teaching laboratories; they provide for intellectual development
Recreational: Forests and highlands provide the venue for the Lebanon Mountain Trail, horse trekking and other outdoor pursuits</td></tr>
</table>

Annex 6: UNDP Project Quality Assurance

PROJECT QA ASSESSMENT: DESIGN AND APPRAISAL				
OVERALL PROJECT				
EXEMPLARY (5) ◉◉◉◉◉	**HIGHLY SATISFACTORY (4)** ◉◉◉◉○	**SATISFACTORY (3)** ◉◉◉○○	**NEEDS IMPROVEMENT (2)** ◉◉○○○	**INADEQUATE (1)** ◉○○○○
At least four criteria are rated Exemplary, and all criteria are rated High or Exemplary.	All criteria are rated Satisfactory or higher, and at least four criteria are rated High or Exemplary.	At least six criteria are rated Satisfactory or higher, and only one may be rated Needs Improvement. The SES criterion must be rated Satisfactory or above.	At least three criteria are rated Satisfactory or higher, and only four criteria may be rated Needs Improvement.	One or more criteria are rated Inadequate, or five or more criteria are rated Needs Improvement.
DECISION				
• **APPROVE** – the project is of sufficient quality to continue as planned**.** Any management actions must be addressed in a timely manner. • **APPROVE WITH QUALIFICATIONS** – the project has issues that must be addressed before the project document can be approved. Any management actions must be addressed in a timely manner. • **DISAPPROVE** – the project has significant issues that should prevent the project from being approved as drafted.				
RATING CRITERIA				
STRATEGIC				
1. Does the project's Theory of Change specify how it will contribute to higher level change? (Select the option from 1-3 that best reflects the project): • **3:** The project has a theory of change with explicit assumptions and clear change pathway describing how the project will contribute to outcome level change as specified in the programme/CPD, backed by credible evidence of what works effectively in this context. The project document clearly describes why the project's strategy is the best approach at this point in time. • **2:** The project has a theory of change. It has an explicit change pathway that explains how the project intends to contribute to outcome-level change and why the project strategy is the best approach at this point in time, but is backed by limited evidence. • **1:** The project does not have a theory of change, but the project document may describe in generic terms how the project will contribute to development results, without specifying the key assumptions. It does not make an explicit link to the programme/CPD's theory of change. *Note: Management Action or strong management justification must be given for a score of 1				3 | 2 1 **Evidence**
2. Is the project aligned with the thematic focus of the UNDP Strategic Plan? (select the option from 1-3 that best reflects the project):				3 | 2 1

• **3:** The project responds to one of the three areas of development work[67] as specified in the Strategic Plan; it addresses at least one of the proposed new and emerging areas[68]; an issues-based analysis has been incorporated into the project design; and the project's RRF includes all the relevant SP output indicators. *(all must be true to select this option)* • **2:** The project responds to one of the three areas of development work[1] as specified in the Strategic Plan. The project's RRF includes at least one SP output indicator, if relevant. *(both must be true to select this option)* • **1:** While the project may respond to one of the three areas of development work[1] as specified in the Strategic Plan, it is based on a sectoral approach without addressing the complexity of the development issue. None of the relevant SP indicators are included in the RRF. This answer is also selected if the project does not respond to any of the three areas of development work in the Strategic Plan.	**Evidence**
RELEVANT	
3. Does the project have strategies to effectively identify, engage and ensure the meaningful participation of targeted groups/geographic areas with a priority focus on the excluded and marginalized? (select the option from 1-3 that best reflects this project): • **3:** The target groups/geographic areas are appropriately specified, prioritising the excluded and/or marginalised. Beneficiaries will be identified through a rigorous process based on evidence (if applicable.)The project has an explicit strategy to identify, engage and ensure the meaningful participation of specified target groups/geographic areas throughout the project, including through monitoring and decision-making (such as representation on the project board) *(all must be true to select this option)* • **2:** The target groups/geographic areas are appropriately specified, prioritising the excluded and/or marginalised. The project document states how beneficiaries will be identified, engaged and how meaningful participation will be ensured throughout the project. *(both must be true to select this option)* • **1:** The target groups/geographic areas are not specified, or do not prioritize excluded and/or marginalised populations. The project does not have a written strategy to identify or engage or ensure the meaningful participation of the target groups/geographic areas throughout the project. *Note: Management Action must be taken for a score of 1, or select not applicable.	3 2 1 *Select (all) targeted groups: (drop-down)* **Evidence**
4. Have knowledge, good practices, and past lessons learned of UNDP and others informed the project design? (select the option from 1-3 that best reflects this project): • **3:** Knowledge and lessons learned (gained e.g. through peer assist sessions) backed by credible evidence from evaluation, corporate policies/strategies, and monitoring have been explicitly used, with appropriate referencing, to develop the project's theory of change and justify the approach used by the project over alternatives. • **2:** The project design mentions knowledge and lessons learned backed by evidence/sources, which inform the project's theory of change but have not been used/are not sufficient to justify the approach selected over alternatives. • **1:** There is only scant or no mention of knowledge and lessons learned informing the project design. Any references that are made are not backed by evidence. *Note: Management Action or strong management justification must be given for a score of 1	3 2 1 **Evidence**
5. Does the project use gender analysis in the project design and does the project respond to this gender analysis with concrete measures to address gender inequities and empower women? (select the option from 1-3 that best reflects this project): • **3:** A participatory gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men, and it is fully integrated into the project document. The project establishes concrete priorities to address gender inequalities in its strategy. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. *(all must be true to select this option)*	3 2 1 **Evidence**

[67] 1. Sustainable development pathways; 2. Inclusive and effective democratic governance; 3. Resilience building

[68] sustainable production technologies, access to modern energy services and energy efficiency, natural resources management, extractive industries, urbanization, citizen security, social protection, and risk management for resilience

• **2:** A gender analysis on the project has been conducted. This analysis reflects on the different needs, roles and access to/control over resources of women and men. Gender concerns are integrated in the development challenge and strategy sections of the project document. The results framework includes outputs and activities that specifically respond to this gender analysis, with indicators that measure and monitor results contributing to gender equality. *(all must be true to select this option)* • **1:** The project design may or may not mention information and/or data on the differential impact of the project's development situation on gender relations, women and men, but the constraints have not been clearly identified and interventions have not been considered. *Note: Management Action or strong management justification must be given for a score of 1	
6. Does UNDP have a clear advantage to engage in the role envisioned by the project vis-à-vis national partners, other development partners, and other actors? (select from options 1-3 that best reflects this project): • **3:** An analysis has been conducted on the role of other partners in the area where the project intends to work, and credible evidence supports the proposed engagement of UNDP and partners through the project. It is clear how results achieved by relevant partners will contribute to outcome level change complementing the project's intended results. If relevant, options for south-south and triangular cooperation have been considered, as appropriate. *(all must be true to select this option)* • **2:** Some analysis has been conducted on the role of other partners where the project intends to work, and relatively limited evidence supports the proposed engagement of and division of labour between UNDP and partners through the project. Options for south-south and triangular cooperation may not have not been fully developed during project design, even if relevant opportunities have been identified. • **1:** No clear analysis has been conducted on the role of other partners in the area that the project intends to work, and relatively limited evidence supports the proposed engagement of UNDP and partners through the project. There is risk that the project overlaps and/or does not coordinate with partners' interventions in this area. Options for south-south and triangular cooperation have not been considered, despite its potential relevance. *Note: Management Action or strong management justification must be given for a score of 1	3 2 1 **Evidence**
SOCIAL & ENVIRONMENTAL STANDARDS	
7. Does the project seek to further the realization of human rights using a human rights based approach? (select from options 1-3 that best reflects this project): • **3:** Credible evidence that the project aims to further the realization of human rights, upholding the relevant international and national laws and standards in the area of the project. Any potential adverse impacts on enjoyment of human rights were rigorously identified and assessed as relevant, with appropriate mitigation and management measures incorporated into project design and budget. *(all must be true to select this option)* • **2:** Some evidence that the project aims to further the realization of human rights. Potential adverse impacts on enjoyment of human rights were identified and assessed as relevant, and appropriate mitigation and management measures incorporated into the project design and budget. • **1:** No evidence that the project aims to further the realization of human rights. Limited or no evidence that potential adverse impacts on enjoyment of human rights were considered. *Note: Management action or strong management justification must be given for a score of 1	3 2 1 **Evidence**
8. Did the project consider potential environmental opportunities and adverse impacts, applying a precautionary approach? (select from options 1-3 that best reflects this project): • **3:** Credible evidence that opportunities to enhance environmental sustainability and integrate poverty-environment linkages were fully considered as relevant, and integrated in project strategy and design. Credible evidence that potential adverse environmental impacts have been identified and rigorously assessed with appropriate management and mitigation measures incorporated into project design and budget. *(all must be true to select this option)*. • **2:** No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Credible evidence that potential adverse environmental impacts have been identified and assessed, if relevant, and appropriate management and mitigation measures incorporated into project design and budget.	3 2 1 **Evidence**

• **1:** No evidence that opportunities to strengthen environmental sustainability and poverty-environment linkages were considered. Limited or no evidence that potential adverse environmental impacts were adequately considered. *Note: Management action or strong management justification must be given for a score of 1		
9. Has the Social and Environmental Screening Procedure (SESP) been conducted to identify potential social and environmental impacts and risks? The SESP is not required for projects in which UNDP is Administrative Agent only and/or projects comprised solely of reports, coordination of events, trainings, workshops, meetings, conferences and/or communication materials and information dissemination. [if yes, upload the completed checklist. If SESP is not required, provide the reason for the exemption in the evidence section.]	Yes	No
	SESP Not Required	
MANAGEMENT & MONITORING		
10. Does the project have a strong results framework? (select from options 1-3 that best reflects this project): • **3:** The project's selection of outputs and activities are at an appropriate level and relate in a clear way to the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators that measure all of the key expected changes identified in the theory of change, each with credible data sources, and populated baselines and targets, including gender sensitive, sex-disaggregated indicators where appropriate. *(all must be true to select this option)* • **2:** The project's selection of outputs and activities are at an appropriate level, but may not cover all aspects of the project's theory of change. Outputs are accompanied by SMART, results-oriented indicators, but baselines, targets and data sources may not yet be fully specified. Some use of gender sensitive, sex-disaggregated indicators, as appropriate. *(all must be true to select this option)* • **1:** The results framework does not meet all of the conditions specified in selection "2" above. This includes: the project's selection of outputs and activities are not at an appropriate level and do not relate in a clear way to the project's theory of change; outputs are not accompanied by SMART, results-oriented indicators that measure the expected change, and have not been populated with baselines and targets; data sources are not specified, and/or no gender sensitive, sex-disaggregation of indicators. *Note: Management Action or strong management justification must be given for a score of 1	3	2
	1	
	Evidence	
11. Is there a comprehensive and costed M&E plan in place with specified data collection sources and methods to support evidence-based management, monitoring and evaluation of the project?	Yes (3)	No (1)
12. Is the project's governance mechanism clearly defined in the project document, including planned composition of the project board? (select from options 1-3 that best reflects this project): • **3:** The project's governance mechanism is fully defined in the project composition. Individuals have been specified for each position in the governance mechanism (especially all members of the project board.) Project Board members have agreed on their roles and responsibilities as specified in the terms of reference. The ToR of the project board has been attached to the project document. *(all must be true to select this option)*. • **2:** The project's governance mechanism is defined in the project document; specific institutions are noted as holding key governance roles, but individuals may not have been specified yet. The prodoc lists the most important responsibilities of the project board, project director/manager and quality assurance roles. *(all must be true to select this option)* • **1:** The project's governance mechanism is loosely defined in the project document, only mentioning key roles that will need to be filled at a later date. No information on the responsibilities of key positions in the governance mechanism is provided. *Note: Management Action or strong management justification must be given for a score of 1	3	2
	1	
	Evidence	
	3	2

13. Have the project risks been identified with clear plans stated to manage and mitigate each risks? (select from options 1-3 that best reflects this project): • **3:** Project risks related to the achievement of results are fully described in the project risk log, based on comprehensive analysis drawing on the theory of change, Social and Environmental Standards and screening, situation analysis, capacity assessments and other analysis. Clear and complete plan in place to manage and mitigate each risk. *(both must be true to select this option)* • **2:** Project risks related to the achievement of results identified in the initial project risk log with mitigation measures identified for each risk. • **1:** Some risks may be identified in the initial project risk log, but no evidence of analysis and no clear risk mitigation measures identified. This option is also selected if risks are not clearly identified and no initial risk log is included with the project document. *Note: Management Action must be taken for a score of 1	1 **Evidence**
EFFICIENT	
14. Have specific measures for ensuring cost-efficient use of resources been explicitly mentioned as part of the project design? This can include: i) using the theory of change analysis to explore different options of achieving the maximum results with the resources available; ii) using a portfolio management approach to improve cost effectiveness through synergies with other interventions; iii) through joint operations (e.g., monitoring or procurement) with other partners.	Yes (3) / No (1)
15. Are explicit plans in place to ensure the project links up with other relevant on-going projects and initiatives, whether led by UNDP, national or other partners, to achieve more efficient results (including, for example, through sharing resources or coordinating delivery?)	Yes (3) / No (1)
16. Is the budget justified and supported with valid estimates? • **3:** The project's budget is at the activity level with funding sources, and is specified for the duration of the project period in a multi-year budget. Costs are supported with valid estimates using benchmarks from similar projects or activities. Cost implications from inflation and foreign exchange exposure have been estimated and incorporated in the budget. • **2:** The project's budget is at the activity level with funding sources, when possible, and is specified for the duration of the project in a multi-year budget. Costs are supported with valid estimates based on prevailing rates. • **1:** The project's budget is not specified at the activity level, and/or may not be captured in a multi-year budget.	3 / 2 1 **Evidence**
17. Is the Country Office fully recovering the costs involved with project implementation? • **3:** The budget fully covers all project costs that are attributable to the project, including programme management and development effectiveness services related to strategic country programme planning, quality assurance, pipeline development, policy advocacy services, finance, procurement, human resources, administration, issuance of contracts, security, travel, assets, general services, information and communications based on full costing in accordance with prevailing UNDP policies (i.e., UPL, LPL.) • **2:** The budget covers significant project costs that are attributable to the project based on prevailing UNDP policies (i.e., UPL, LPL) as relevant. • **1:** The budget does not adequately cover project costs that are attributable to the project, and UNDP is cross-subsidizing the project. *Note: Management Action must be given for a score of 1. The budget must be revised to fully reflect the costs of implementation before the project commences.	3 / 2 1 **Evidence**

EFFECTIVE		
18. Is the chosen implementation modality most appropriate? (select from options 1-3 that best reflects this project): • **3:** The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted, and there is evidence that options for implementation modalities have been thoroughly considered. There is a strong justification for choosing the selected modality, based on the development context. *(both must be true to select this option)* • **2:** The required implementing partner assessments (capacity assessment, HACT micro assessment) have been conducted and the implementation modality chosen is consistent with the results of the assessments. • **1:** The required assessments have not been conducted, but there may be evidence that options for implementation modalities have been considered. *Note: Management Action or strong management justification must be given for a score of 1	3	2
	1	
	Evidence	
19. Have targeted groups, prioritizing marginalized and excluded populations that will be affected by the project, been engaged in the design of the project in a way that addresses any underlying causes of exclusion and discrimination? • 3: Credible evidence that all targeted groups, prioritising marginalized and excluded populations that will be involved in or affected by the project, have been actively engaged in the design of the project. Their views, rights and any constraints have been analysed and incorporated into the root cause analysis of the theory of change which seeks to address any underlying causes of exclusion and discrimination and the selection of project interventions. • 2: Some evidence that key targeted groups, prioritising marginalized and excluded populations that will be involved in the project, have been engaged in the design of the project. Some evidence that their views, rights and any constraints have been analysed and incorporated into the root cause analysis of the theory of change and the selection of project interventions. • 1: No evidence of engagement with marginalized and excluded populations that will be involved in the project during project design. No evidence that the views, rights and constraints of populations have been incorporated into the project.	3	2
	1	
	Evidence	
20. Does the project conduct regular monitoring activities, have explicit plans for evaluation, and include other lesson learning (e.g. through After Action Reviews or Lessons Learned Workshops), timed to inform course corrections if needed during project implementation?	Yes (3)	No (1)
21. The gender marker for all project outputs are scored at GEN2 or GEN3, indicating that gender has been fully mainstreamed into all project outputs at a minimum. *Note: Management Action or strong management justification must be given for a score of "no"	Yes (3)	No (1)
	Evidence	
22. Is there a realistic multi-year work plan and budget to ensure outputs are delivered on time and within allotted resources? (select from options 1-3 that best reflects this project): • **3:** The project has a realistic work plan & budget covering the duration of the project *at the activity* level to ensure outputs are delivered on time and within the allotted resources. • **2:** The project has a work plan & budget covering the duration of the project at the output level. • **1:** The project does not yet have a work plan & budget covering the duration of the project.	3	2
	1	
	Evidence	
SUSTAINABILITY & NATIONAL OWNERSHIP		
23. Have national partners led, or proactively engaged in, the design of the project? (select from options 1-3 that best reflects this project):	3	2
	1	

<table>
<tr><td>• <u>3:</u> National partners have full ownership of the project and led the process of the development of the project jointly with UNDP.
• <u>2:</u> The project has been developed by UNDP in close consultation with national partners.
• <u>1:</u> The project has been developed by UNDP with limited or no engagement with national partners.</td><td colspan="2">Evidence</td></tr>
<tr><td rowspan="4">24. Are key institutions and systems identified, and is there a strategy for strengthening specific/ comprehensive capacities based on capacity assessments conducted? (select from options 0-4 that best reflects this project):
• <u>3:</u> The project has a comprehensive strategy for strengthening specific capacities of national institutions based on a systematic and detailed capacity assessment that has been completed. This strategy includes an approach to regularly monitor national capacities using clear indicators and rigorous methods of data collection, and adjust the strategy to strengthen national capacities accordingly.
• <u>2.5:</u> A capacity assessment has been completed. The project document has identified activities that will be undertaken to strengthen capacity of national institutions, but these activities are not part of a comprehensive strategy to monitor and strengthen national capacities.
• <u>2:</u> A capacity assessment is planned after the start of the project. There are plans to develop a strategy to strengthen specific capacities of national institutions based on the results of the capacity assessment.
• <u>1.5:</u> There is mention in the project document of capacities of national institutions to be strengthened through the project, but no capacity assessments or specific strategy development are planned.
• <u>1:</u> Capacity assessments have not been carried out and are not foreseen. There is no strategy for strengthening specific capacities of national institutions.</td><td>3</td><td>2.5</td></tr>
<tr><td>2</td><td>1.5</td></tr>
<tr><td colspan="2">1</td></tr>
<tr><td colspan="2">Evidence</td></tr>
<tr><td>25. Is there is a clear strategy embedded in the project specifying how the project will use national systems (i.e., procurement, monitoring, evaluations, etc.,) to the extent possible?</td><td>Yes (3)</td><td>No (1)</td></tr>
<tr><td>26. Is there a clear transition arrangement/ phase-out plan developed with key stakeholders in order to sustain or scale up results (including resource mobilisation strategy)?</td><td>Yes (3)</td><td>No (1)</td></tr>
</table>

Annex 7: UNDP Risk Log

Project Title: Land degradation neutrality of mountain landscapes in Lebanon	**Award ID: 00098955**	**Date: 03 April 2018**

Description	Date Identified	Type	Likelihood & Impact	Countermeasures / Mngt response	Owner	Updated by	Date of Update	Status
Risk 1: Insecurity and political unrest may result in considerable delays and postponement of project implementation	Risk identified during project formulation	Political	The current political situation in Lebanon is stable, but the potential for a spontaneous upsurge in violence is real. The volatile political situation may also delay the prioritisation of the project thematic area at the level of the political agenda. L = 3 I = 4	The project team, with support of the UNDP Country Office, will implement a continuous monitoring of the security situation in the country and update the project board on a regular basis so there is sufficient lead time for adequate response actions and adjustment in project strategy. The UN also constantly assesses country and localised risk in all areas where it operates through the unified UN Security System. The system of security clearances will be enforced for any project related field deployment.	Who has been appointed to keep an eye on this risk	Who updated the risk	When was the status of the risk last checked	e.g. dead, reducing, increasing, no change
Risk 2: Land owners/users circumvent planning regulations resulting in urban encroachment on valuable agricultural areas, high use of agricultural chemicals, the proliferation of quarries, and other impacts on ecosystems affecting ecosystem services	Risk identified during project formulation	Regulatory	Compliance monitoring is notoriously weak and resistance to legal requirements is the norm L = 3 I = 3	The project targets specifically capacity for compliance monitoring and enforcement to address these undesirable behaviours on the part of individual land owners and managers. Establishment of landscape level management fora and landscape level management planning through participatory processes, as well as robust implementation of monitoring mechanisms will work towards minimising the risk. A dialogue with the private sector (real estate development, agricultural producers, quarry operators and the ecotourism and outdoor recreation sector) will be established as part of the process of district land use planning to obtain their buy-in and address concerns, so as to improve compliance.				
Risk 3: Rehabilitation of disused and abandoned land surfaces may encounter resistance from land owners	Risk identified during project formulation	Political / Regulatory	There is a “natural” resistance to edicts from above which impose solutions to some problems at the expense of others	The project will work to reduce the likelihood of this risk occurring by ensuring that initiatives will be designed and implemented with the full participation of stakeholders from the public sector, namely municipalities and from the private sector, fostering an understanding of the				

(public and/or private) and from political figures			L = 2 I = 4	need for striking the right balance between planned and occurring land use and safeguarding of ecosystems for the services they provide. If the risk arises, the project will stress the economic case of sustainable natural resource use versus the development of certain sectors in sensitive areas delivering critical ecosystem services. It will also put into effect an effective communication strategy and stakeholder involvement plan which is expected to lead to an appreciation, and defence, of what the project is proposing				
Risk 4: Future Government Administrations may be reluctant to increase areas designated for conservation for fear of losing state revenues	Risk identified during project formulation	Political	The fluid political situation may lead to changes in decision-makers who may have different priorities L = 1 I = 3	The project will invest in the development of a decision support system for land-use, with valuation tools for different types of ecosystem services and other land use values. This will establish the impact from land degradation losses as a result of the different anthropogenic land degrading activities and will help convince Government of the importance of preserving these services for their economic as well as their ecological value				
Risk 5: Life stresses prevent local stakeholders from collaborating – they cannot afford it	Risk identified during project formulation	Other	For the poor and underprivileged, a new approach with uncertain and distant benefits can be considered a luxury L = 1 I = 1	The project, operating at a pilot scale, will cover all costs either from its own resources or through co-financing so this is not a risk during project implementation. However, it could be a risk for replication and up-scaling post-project hence its work towards effective sustainable financing mechanisms under Output 3.4				
Risk 6: Impacts from climate change	Risk identified during project formulation	Other	Climate change is unlikely to have an impact on project implementation. L = 1 I = 1	Project outcomes may be vulnerable to climate change and adaptive measures will be adopted in all project activities, especially agricultural practices				

Annex 8: Capacity Development Scorecard - Assessment of LDN Technical Capacity

NOTE: The assessment has a focus on land management for land degradation neutrality comprising the prevention of land degradation, the rehabilitation of degraded land, and knowledge management and communication for long-term sustainability. Capacity is assessed from a national perspective since this information is not available for Akkar and Jbeil Districts.

PROJECT - LAND DEGRADATION NEUTRALITY OF MOUNTAIN LANDSCAPES IN LEBANON

COMPILED BY: Lama Bashour (in cooperation with Sami Feghali from CDR)	**DATE: 07/03/18**

STRATEGIC AREA	ISSUE	SCORECARD	SCORE	COMMENTS / OBSERVATIONS
1. Capacity to conceptualize and formulate policies, legislation, strategies and programmes to prevent land degradation	1.1 The "sustainable land use" agenda is being effectively championed / driven forward	0 -- There is essentially no sustainable land management agenda; 1 -- There are some persons or institutions actively pursuing a sustainable land management agenda but they have little effect or influence; 2 -- There are a number of sustainable land management champions that drive the sustainable land management agenda, but more is needed; 3 -- There are an adequate number of able "champions" and "leaders" effectively driving forwards the sustainable land management agenda	**1**	The institutional set up for land use planning in Lebanon has primarily focussed on urban planning, i.e. regulating construction activities and delineating areas for urban development. Sustainability issues do not contribute directly to this process.
	1.2 There is a strong and clear legal mandate for the integration of sustainable land management into the land use planning process	0 -- There is no legal framework for integration of sustainable land management into land use planning; 1 -- There is a partial legal framework for integration of sustainable land management into land use planning but it has many inadequacies; 2 – There is a reasonable legal framework for integration of sustainable land management into land use planning but it has a few weaknesses and gaps; 3 -- There is a strong and clear legal mandate for integration of sustainable land management into land use planning	**1**	Article 38 of Law 444 for Environmental Protection addresses the issue of land degradation and set forth a legal requirement for sustainable use of land and water resources. A framework setting mandate, responsibilities and procedures for application of this article have not yet been developed.
	1.3 There is an institution or institutions responsible for land use planning	0 – Development Zone Authorities/Governorates have no land use plans or strategies; 1 -- Development Zone Authorities/Governorates do have land use plans, but these are old and no longer up to date or were prepared in a totally top-down fashion; 2 -- Development Zone Authorities/Governorates have some sort of mechanism to update their land use plans, but this is irregular or is done in a largely top-down fashion without proper consultation; 3 – Development Zone Authorities/Governorates have relevant, participatory prepared, regularly updated land use plans	**1**	The institutional responsible for planning (urban) in Lebanon is the Directorate General for Urban Planning (DGUP). Its responsibility is to support municipalities, districts and governorates to develop master plans for their areas.

STRATEGIC AREA	ISSUE	SCORECARD	SCORE	COMMENTS / OBSERVATIONS
				Due to lack of financial resources at the municipal level, the plans have thus far been dictated by DGUP in a top-down fashion. Due to lack of technical resources at DGUP, master plans have not been prepared at the district or governorate level. Due to lack of financial resources at DGUP, these plans are no longer up to date.
	1.4 There is an institution or institutions responsible for the application of Environmental Impact Assessment process	0 – There is no central and/or local government institutions responsible for applying the EIA Process; 1 – There is a government institution/s responsible for applying the EIA Process, but it is weak and ineffective; 2 – Central and/or local government institutions apply the EIA Process but it is not always effective and often overridden for high profile projects 3 – Central and/or local government have an institution/s responsible for the EIA Process which is applied fairly, effectively and in a participatory manner	**2**	
2. Capacity to monitor compliance and enforce land use plans and EIA conditions	2.1 There are adequate skills for land use planning and the EIA Process, monitoring and enforcement	0 -- There is a general lack of land use planning, monitoring and enforcement; 1-- Some skills exist but in largely insufficient quantities to guarantee effective land use planning, monitoring and enforcement; 2 -- Necessary skills for effective land use planning, monitoring and enforcement do exist but are stretched and not easily available; 3 -- Adequate quantities of the full range of skills necessary for effective land use planning, monitoring and enforcement are easily available	**2**	Land use planning and EIA skills are mostly available at the central level.
	2.2 There is a fully transparent oversight for the implementation of land use plans	0 -- There is no oversight at all of land use plans; 1 -- There is some oversight, but only indirectly and in a non-transparent manner; 2 -- There is a reasonable oversight mechanism in place providing for regular review but lacks in transparency (e.g. is not independent, or is internalized); 3 -- There is a fully transparent oversight authority for the land use plans.	**2**	DGUP has regional offices throughout Lebanon and cooperate with the Internal Security Forces to ensure that land use plans that are in place are being implemented properly. Some infringements are noted.
	2.3 There is a fully transparent oversight for the follow-up phase of the EIA Process	0 -- There is no oversight at all of the follow-up phase of the EIA Process; 1 -- There is some oversight, but only indirectly and not highly effectively; 2 -- There is a reasonable oversight mechanism in place providing for monitoring but it lacks in transparency (e.g. is not independent, or is internalized); 3 -- There is a fully transparent oversight mechanism which ensures that EIA conditions are observed	**1**	Note: I would have selected 1 but I have an issue with the term “non-transparent manner”. The main cited problem is not that, but lack of resources.
	2.4 Land Use management	0 -- Land use management institutions have a total lack of leadership; 1 -- Land use management institutions exist but leadership is weak and provides little guidance; 2 -- Some land use management institutions have reasonably strong leadership but there is still need for improvement; 3 -- Land use management institutions are effectively led	**2**	CDR prepares land use plans at the national and regional level (depending on funding) while DGUP is responsible for preparing and enforcing them at the local level. Both work with unions and municipalities.

STRATEGIC AREA	ISSUE	SCORECARD	SCORE	COMMENTS / OBSERVATIONS
	institutions[69] are effectively led			
	2.5 Human resources for land use management and environmental impact assessment are well qualified and motivated	0 -- Human resources are poorly qualified and unmotivated; 1 -- Human resources qualification is spotty, with some well qualified, but many only poorly and in general unmotivated; 2 -- HR in general reasonably qualified, but many lack in motivation, or those that are motivated are not sufficiently qualified; 3 -- Human resources are well qualified and motivated.	**1**	Land use planning activities in Lebanon are typically contracted out to local or international consultants. Universities in Lebanon do not offer sustainable land use planning degrees and thus the country relies more on Urban Architects to fill that role.
	2.6 Land use management institutions are able to adequately mobilize sufficient funding, human and material resources to effectively implement their mandate	0 -- Land use management institutions typically are severely underfunded and have no capacity to mobilize sufficient resources; 1 -- Land use management institutions have some funding and are able to mobilize some human and material resources but not enough to effectively implement their mandate; 2 -- Land use management institutions have reasonable capacity to mobilize funding or other resources but not always in sufficient quantities for fully effective implementation of their mandate; 3 -- Land use management institutions are able to adequately mobilize sufficient quantity of funding, human and material resources to effectively implement their mandate	**0**	DGUP has not had government funding for local land use plans in years. The regional land use plans that are currently being prepared in Lebanon are funded by international donors.
	2.7 Land use management and EIA institutions are effectively managed, efficiently deploying their human, financial and other resources to the best effect	0 -- While the land use management and EIA institutions exist, they have no management; 1 -- Institutional management is largely ineffective and does not deploy efficiently the resources at its disposal; 2 -- The institution(s) is (are) reasonably managed, but not always in a fully effective manner and at times does not deploy its resources in the most efficient way; 3 -- The land use management and EIA institutions are effectively managed, efficiently deploying human, financial and other resources to the best effect	**2**	
	2.8 Land use management and EIA institutions are highly transparent, fully audited, and publicly accountable	0 -- Land use management and EIA institutions are totally untransparent, not being held accountable and not audited; 1 – Land use management and EIA institutions are not transparent but are occasionally audited without being held publicly accountable; 2 -- Land use management and EIA institutions are regularly audited and there is a fair degree of public accountability but the system is not fully transparent; 3 -- The land use management and EIA institutions are highly transparent, fully audited, and publicly accountable	**3**	The annual budgets of all government institutions in Lebanon are audited by the Audit Bureau once every year. In addition, all donor-funded projects (such as land use plans and EIAs) are closely audited by the donor organization on a regular basis.

[69] Land Use Management Institutions include all institutions that are involved in the regulation, planning and enforcement of land use in the context of sustainable land management across the landscape.

STRATEGIC AREA	ISSUE	SCORECARD	SCORE	COMMENTS / OBSERVATIONS
	2.9 Legal mechanisms on sustainable land management exist for land use plan and EIA monitoring and enforcement	0 -- No enforcement of land use plans or EIA provisions is taking place or no land use plans in place; 1 -- Some enforcement of land use plans and EIA provisions but largely ineffective and external threats remain active; 2 – Land use plans and EIA conditions are regularly enforced but are not fully effective and external threats are reduced but not eliminated; 3 – Land use plans and EIA provisions are highly effectively enforced and all external threats are negated	**1**	The main thrust of enforcement is on zoning of urban land and creation of protected nature reserves. Outside city/town/village boundaries, little is done on actual land use or EIA monitoring and enforcement.
	2.10 Individuals working in land use regulation, planning and enforcement, and EIA process are able to advance and develop professionally	0 -- No career tracks are developed and no training opportunities are provided; 1 -- Career tracks are weak and training possibilities are few and not managed transparently; 2 -- Clear career tracks developed and training available; HR management however has inadequate performance measurement system; 3 -- Individuals are able to advance and develop professionally	**1**	
	2.11 Individuals working in land use and EIA regulation, planning and enforcement are appropriately skilled for their jobs	0 -- Skills of individuals do not match job requirements; 1 -- Individuals have some or poor skills for their jobs; 2 -- Individuals are reasonably skilled but could further improve for optimum match with job requirement; 3 -- Individuals are appropriately skilled for their jobs	**2**	This applies to central government employees who are in charge of land use planning activities and EIA regulation in Lebanon.
	2.12 There are appropriate systems of training, mentoring, and learning in place to maintain a continuous flow of new staff working in land use regulation, planning and enforcement, and EIA process	0 -- No mechanisms exist; 1 -- Some mechanisms exist but unable to develop enough and unable to provide the full range of skills needed; 2 -- Mechanisms generally exist to develop skilled professionals, but either not enough of them or unable to cover the full range of skills required; 3 -- There are mechanisms for developing adequate numbers of the full range of highly skilled land use planning professionals	**1**	
3. Capacity to rehabilitate and/or restore degraded land, forests	3.1 There is recognition that degraded land can/should be rehabilitated or restored	0 -- There is no recognition at all that degraded land needs to be rehabilitated/restored; 1 -- There is some recognition, but not among the wider public and restricted to specialized circles (NGOs); 2 -- There is a reasonably open public recognition but certain issues remain taboo; 3 -- There is a broad recognition that degraded land, forests and other ecosystems can, and must, be rehabilitated/restored	**1**	

STRATEGIC AREA	ISSUE	SCORECARD	SCORE	COMMENTS / OBSERVATIONS
and key ecosystems	3.2 There are adequate legal provisions to require owners of degraded land (including quarries) to take remedial action	0 – There are no legal provisions for the rehabilitation/restoration of degraded land; 1 – There is some legislation but it is largely ineffective and owners tend to ignore it; 2 – Existing legislation is enforced but it is not fully effective and remedial work falls short of requirement; 3 – Legislation is applied fully and fairly and owners honour their legal obligations to rehabilitate/restore degraded land	**1**	The amounts required for quarry bonds are too little to compensate for rehabilitating degraded land. In addition, the process to claim the bond for the purposes of rehabilitation is time-consuming.
	3.3 Human resources for remedial work at the national level on land, forests and quarries are well qualified and motivated	0 -- No suitably qualified and/or motivated specialists at all; 1 – There are some qualified and motivated individuals among officials and owners but most are not; 2 -- Many individuals are qualified and motivated but not all; 3 – Responsible officials and owners are highly qualified and motivated	**1**	
4. Capacity to engage and build consensus among all stakeholders	4.1 The integration of biodiversity conservation into land use management has political commitment	0 -- There is no political will at all, or worse, the prevailing political will runs counter to the interests of conserving sustainable land use management; 1 -- Some political will exists, but is not strong enough to make a difference; 2 -- Reasonable political will exists, but is not always strong enough to fully implement sustainable land management; 3 -- There are very high levels of political will to support sustainable land use.	**1**	Despite the priorities described in the National Biodiversity Strategy and Action Plan and the government's national communication to the CBD, there has been little political will to mainstream biodiversity conservation in land use management as focus has been primarily on economic development, poverty alleviation and urbanization
	4.2 The integration of sustainable land management into land use has the public support it requires	0 -- The public has little interest in conserving biodiversity in the wider landscape outside protected areas; 1 -- There is limited support for conserving biodiversity outside protected areas; 2 -- There is general public support for conserving biodiversity in the wider landscape outside protected areas and there are various lobby groups such as environmental NGOs strongly pushing them; 3 -- There is tremendous public support in the country for conserving biodiversity in the wider landscape outside protected areas	**1**	Some NGOs and private entities are active with regards to biodiversity conservation.
	4.3 Land use management institutions can establish the partnerships needed to achieve the objective of sustainable land use	0 – Land use management institutions operate in isolation; 1 -- Some partnerships in place but significant gaps and existing partnerships achieve little; 2 -- Many partnerships in place with a wide range of agencies, NGOs etc, but there are some gaps, partnerships are not always effective and do not always enable efficient achievement of objectives; 3 – Land use management institutions establish effective partnerships with other agencies and institutions, including provincial and local governments, NGOs and the private sector to enable achievement of objectives in an efficient and effective manner	**1**	The main partnership at the national level is the Higher Council for Urban Planning (HCUP), which is constituted of representatives from various relevant ministries and public institutions. The HCUP are currently only concerned with approving zoning plans at the local levels.

STRATEGIC AREA	ISSUE	SCORECARD	SCORE	COMMENTS / OBSERVATIONS
	within the wider landscape			At the local level, unions of municipalities exist and have the mandate to undertake land use planning. However, cooperation between municipalities within the unions have thus far been minimal with much political wrangling impeding their development.
5. Capacity to mobilize information and knowledge	5.1 Land use management institutions have the information they need to develop and monitor land use plans for sustainability	0 -- Information is virtually lacking; 1 -- Some information exists, but is of poor quality, is of limited usefulness, or is very difficult to access; 2 -- Much information is easily available and mostly of good quality, but there remain some gaps in quality, coverage and availability; 3 -- Land use management institutions have the information they need to develop and monitor land use plans for the conservation of biodiversity	**1**	Information obtained during preparation of the NLUMP is available on a GIS database and is used by both CDR and DGUP. However, this data is from 2004 and has not been updated since. Other information sources are outdated, not available or not reliable.
	5.2 Institutions responsible for land use management work effectively together as a team	0 – Institutions work in isolation and do not interact; 1 – Institutions interact in limited way and sometimes in teams but this is rarely effective and functional; 2 -- Institutions interact regularly and form teams, but this is not always fully effective or functional; 3 -- Institutions interact effectively and form functional teams	**1**	Most interactions are informal and on a project or ad hoc basis.
6. Capacity to monitor, evaluate, report and learn	6.1 Communities and society in general monitor the state of land, forests and biodiversity and have an avenue to communicate with responsible parties	0 -- There is no dialogue at all; 1 -- There is some dialogue going on, but not in the wider public and restricted to specialized circles; 2 -- There is a reasonably open public dialogue going on but certain issues remain taboo; 3 -- There is an open and transparent public dialogue about the state of land, forests and biodiversity conservation in the country	**1**	
	6.2 Land use management institutions are able to respond effectively to change	0 -- Institutions resist change; 1 -- Institutions do respond to change but only very slowly; 2 -- Institutions tend to adapt in response to change but not always very effectively or with some delay; 3 -- Institutions are highly adaptive, responding effectively and immediately to change	**1**	
	6.3 Land use management institutions have effective internal mechanisms for monitoring,	0 -- There are no mechanisms for monitoring, evaluation, reporting or learning; 1 -- There are some mechanisms for monitoring, evaluation, reporting and learning but they are limited and weak; 2 -- Reasonable mechanisms for monitoring, evaluation, reporting and learning are in place but are not as strong or comprehensive as they could be; 3 -- Institutions have effective internal mechanisms for monitoring, evaluation, reporting and learning	**2**	CDR prepares an annual review of its activities, including that regarding land use planning. In addition, the NLUMP has its own committee with representatives from various ministries and institutions that is required to meet twice a year to follow up on its implementation.

STRATEGIC AREA	ISSUE	SCORECARD	SCORE	COMMENTS / OBSERVATIONS
	evaluation, reporting and learning			
	6.4 Individuals at land use management institutions are able to evaluate monitoring results and trends, act accordingly, and learn from the experience	0 -- There is no evaluation of monitoring results or adaptive feedback; 1 -- The results of monitoring are irregularly and poorly evaluated and there is little use of feedback; 2 -- There is significant measurement of performance through monitoring and some feedback but this is not as thorough or comprehensive as it might be; 3 -- Performance is effectively measured through monitoring and adaptive feedback utilized effectively	**1**	
		TOTAL SCORE	**36**	
		OUT OF A MAXIMUM OF	**84**	
		Percent (%)	**43%**	

Annex 9: Stakeholder Engagement

STAKEHOLDER GROUP	WHY INCLUDED	PARTICIPATION and INVOLVEMENT	TIMELINE
KEY STAKEHOLDERS			
Ministry of Environment (MoE)	MoE is the national environment agency in Lebanon, responsible for all environmental protection issues. Its responsibilities are: (i) to strengthen environmental inspection and enforcement; (ii) to promote sustainable management of land and soil; (iii) to preserve and promote Lebanon's ecosystem capital (iv) to promote hazardous and non-hazardous waste management; (v) to control pollution and regulate activities that impact the environment. The MoE is actively represented in the Higher Council of Urban Planning.	MoE is the implementing partner and as such it will work with the project under all Outcomes and Outputs. It will also benefit directly under Output 2.5	Throughout the project implementation phase
Ministry of Agriculture (MoA)	The Ministry of Agriculture oversees the majority of land use in Lebanon. It is also the National Focal Point for the UNCCD. More specifically, it has responsibility for the management of forests, rangelands and agricultural activities.	The MoA will provide advice and expertise for project activities at the local level, in particular Outputs 1.2 and 1.4. Will benefit under Output 2.5	Throughout the project implementation phase
Council for Development & Reconstruction (CDR)	The CDR has three main tasks: compiling a plan and a time schedule for the resumption of reconstruction and development, guaranteeing the funding of projects, supervising their execution and utilization by contributing to the process of rehabilitation of public institutions, thus enabling it to assume responsibility for the execution of a number of projects under the supervision of the Council of Ministers. More recently, CDR has focused on land use and land use planning and as such will be a key stakeholder and partner for the project.	CDR will collaborate with the project in a number of aspects dealing with land use planning, particularly Outputs 2.1 and 2.3	Throughout the project implementation phase
Ministry of Tourism (MoT)	The Ministry of Tourism is entrusted with the promotion of tourism, regulation of tourism-related professions and encouraging the development of touristic projects, including the inter-region and sustainable tourism projects as part of local development. The Ministry recently launched its Rural Tourism Development Strategy, such that one of its strategic objectives is to improve and enforce conservation and protection of the environmental, cultural, historical, agricultural heritage of rural areas.	The MoT will work with the project towards primarily Output 1.5, but also 2.1, 2.2, 2.3.	Intermittently, as required
Office of the Minister of State for Women's Affairs (OMSWA)	The OMSWA was established in December 2016 and is hence a rather new governmental body and its mission is to empower women and enhance their capabilities and build their capacities. Amongst other ways, this will be achieved through mainstreaming women's rights in the sustainable national development process.	OMSA will collaborate with the project in activities that have a strong gender dimension	Intermittently, as required
Private Sector	Both private sector land owners and/or operators are stakeholders in the project as it affects their land use and development practices. SLM and SFM principles will be mainstreamed into their operations as they work within the guidance provided by land use plans and sector development plans. It is expected that the private sector exponents will include farmers, orchardists, quarry owners, tourism operators, etc.	Collaboration is likely under Outputs 1.2, 1.3, 1.4, and 1.5	Throughout the project implementation phase
NGOs	A number of NGOs have been very active in the implementation of projects contributing to land reclamation and rehabilitation and would therefore be considered a very important partner for the replication of project outcomes, whether on the agriculture front, on afforestation and reforestation, on quarries rehabilitation and on eco-tourism. They are also able to access funds from international donors. There are also some NGOs working on gender equality and women's empowerment, including in the context of environment, and these will also be engaged. Key NGOs that the project will collaborate with include – LRI, SPNL, LMTA, AFDC, Jouzour Lubnan, SEEDS, Safadi Foundation, and Atayeb El Rif.	The project will work with NGOs, as appropriate, in a number of its initiatives, primarily under Outcome 1	Intermittently, throughout the project implementation phase

Local Government	Akkar and Jbeil have been identified as the localities for project pilot activities. Specific sites will be confirmed following the survey under Output 1.1. These local administrations are charged with the day-to-day management of all public works within their area of jurisdiction including water and waste networks, waste disposal, internal roads, urban planning.	Identified local government entities will be beneficiaries under all three Outcomes of the project which is being carried out in their territory	Throughout the project implementation phase
OTHER STAKEHOLDERS			
Ministry of Finance (MoF)	The Ministry of Finance leads the Government's economic reform through formulation and management of fiscal policy and public debt in order to foster economic growth. Through its various departments, it is involved in taxation aspects of land use activities (Income tax and indirect taxes). It also includes the Directorate for Land Registry and Cadastre, which handles ownership and trading of privately-held land parcels including the surveying of the lands for that purpose.	The MoF is developing a project, in collaboration with the World Bank, to set up a GIS Land Database and project collaboration (Outputs 1.1 and 3.3) will lead to mutual gain	Intermittently, as required
Ministry of Public Works and Transport (Urban Planning - DGUP)	The Directorate General for Urban Planning (DGUP) of the Ministry of Public Works and Transport has responsibility for land use planning in Lebanon although to date this has focussed on the urban environment, dealing mainly with the formulation and/or review of urban master plans	The project will stay in touch with DGUP in spite of the latter's focus on the urban environment	Throughout the project implementation phase
Ministry of Interior & Municipalities (MoIM)	The Ministry of Interior and Municipalities (MoIM), through municipalities, federations of municipalities, and Governors has a crucial role in land use planning, the monitoring of land use activities, rehabilitation of degraded land and enforcement of regulations and permitting conditions (including environmental provisions). The MoIM is also represented in the Higher Council of Urban Planning.	The project will work with MoIM on LUP such as under Outputs 2.1, 2.2 and 2.3	When required
Ministry of National Defense (MoND)	The Ministry of National Defense through the Directorate of Geographic Affairs is a key partner in the assessment and monitoring of land use activities. The MoE often relies on the MoND for the production of satellite imagery on regular basis to be used by the responsible department in the management of legal and illegal activities.	The MoND could assist with remote sensing to repeat surveys for Indicators 4, 5 and 6, and possibly 7	When required
Order of Engineers	The Order of Engineers can be a very efficient entry point to the private sector/contractors. Environmental considerations are increasingly present in proposed development projects mostly driven by improvement of the legislation but also due to increasing awareness. The Order can be brought in at various stages of the project, in building capacities for development planning (particularly extraction activities) and rehabilitation planning.	Project activities under Outputs 1.3 and 1.4 as well as 2.2	When required
Academic and Research institutions	Building on existing experience, academic and research institutions can be considered as a very important source of local expertise to be brought in on the various project components, but mainly on technical aspects.	Main areas of collaboration are likely to be under Outcome 1	When required

Annex 10: Social and Environmental Screening Template

The SESP analysis conducted at the PIF stage concluded that no further environmental and social review and management required for downstream activities. Following further analysis, this conclusion has now been revised

Project Information

Project Information	
1. Project Title	**Land degradation neutrality of mountain landscapes in Lebanon**
2. Project Number	5837
3. Location (Global/Region/Country)	Lebanon

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?
Briefly describein the space below how the Project mainstreams the human-rights based approach
People and their rights are at the centre of the project and the beneficiaries will include individual farmers, shepherds, responsible tourism operators, gatherers of non-timber forest products such as herbs and honey, and operators of public quarries. The project targets local communities in the designated mountain areas of Akkar and Jbeil Districts where the pilot projects (specific sites to be determined during implementation) will be implemented. It is in response to declining productivity in forest areas, loss and decline in productivity in grasslands and loss of agricultural cropland and productivity. In addition to the decline in productivity in terms of crop cultivation, ecosystem services have been affected and there have also been losses in recreational opportunities and tourism, ecological values, and in land and property values. The project will focus on farmers in particular as they are considered to be among the most vulnerable Lebanese. Around a quarter of farming households are small-scale farmers and the majority are not registered with the National Social Security Fund. Some 22% of these farmers are located in Mount Lebanon Governorate (where Jbeil District is located) while 15% are found in Akkar Governorate (where Akkar District is located).
Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment
Due to traditional gender roles, especially in rural areas in Lebanon, women officially represent only 8.5% of farmer holdings. Project implementation will aim to overcome this barrier by taking into account women's as well as men's concerns and experiences as an integral dimension of the implementation process, monitoring and evaluation. This will result in women and men benefitting according to their respective needs. It will also ensure that the project avails itself of the whole spectrum of knowledge, skills and expertise regardless of gender. The gender analysis (see Annex 15) has informed the gender strategy for this project which is for the project to strive for an equitable distribution of its benefits, resources, status and rights, responding to the different needs of women and men in furthering land degradation neutrality. It is also the project's aim to bring about transformative changes in the norms, cultural values and the roots of gender inequalities and discriminations.

It is interesting to note that there are signs in the Lebanon mountain environment that some headway has been made in removing gender inequalities – some 30% of the guides on the Lebanon Mountain Trail are women and most of the B&Bs/homestays on the Trail are owned and operated by women. The project will build on this achievement by fostering gender equity in its other areas of focus such as in forestry and farming
Briefly describe in the space below how the Project mainstreams environmental sustainability
The core target of the project is land degradation neutrality, namely recovery and rehabilitation of degraded land and prevention of new degradation so as to achieve the sustainability of land and forests in the mountain environment of Lebanon. All that the project will do is in search of environmental sustainability.

Part B. Identifying and Managing Social and Environmental Risks

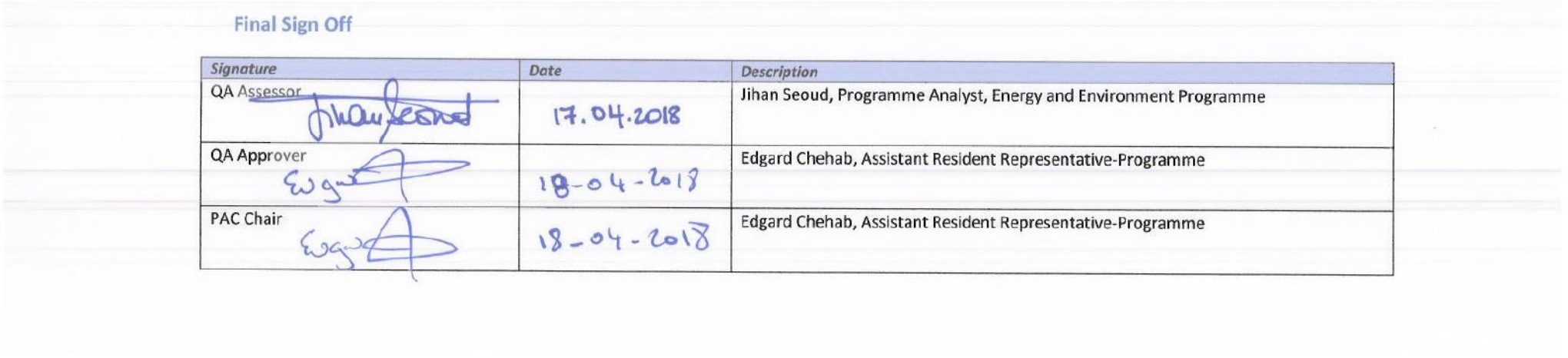
QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any "Yes" responses).*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5below before proceeding to Question 6*			**QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?**
Risk Description	***Impact and Probability (1-5)***	***Significance (Low, Moderate, High)***	***Comments***	***Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.***
Risk 1: Access to resources to marginalized individuals or groups could be restricted (through grazing management practices). Principle 1 on Human Rights, question 3	I = 2 P = 3	**Moderate**	**The project will cooperate with local organizations with a track record of successful experience in rangeland management in Lebanon.**	**The project will apply the Hima approach, which is community based approach used for the conservation of sites, species, habitats, and people in order to achieve the sustainable use of natural resources. It applies a system for organizing, maintaining, regulating, and utilizing natural pasture and rangelands in a way fitting with ecosystems and local practices. It has already been used successfully in Lebanon in several areas. Ensure meaningful consultation with shepherds in the area who may be affected by grazing management practices.**
Risk 2: Project activities (most notably tourism activities) proposed within or adjacent to critical habitats and/or environmentally sensitive areas could negatively affect them, if good practice is not followed. Standard 1 on Biodiversity, questions 1.1 and 1.2	I = 3 P = 2	**Moderate**	**This biodiversity project was designed by experts in the field, and takes into account international good practice. Negative impacts on the environment are unlikely.**	**Responsible tourism and sustainability concepts have been built into the design of the project, and will be communicated to all players (including guides and visitors), as part of the project's activities, per the ProDoc. Under Output 1.2, on-going tourism and outdoor recreation operations in Akkar and/or Jbeil will be assessed to ascertain any impacts they are having on productive land, protected areas, and ecosystem services, and improvements put in place to minimize impacts.**
Risk 3: Invasive alien species might be introduced through reforestation, quarry	I = 4 P = 1	**Moderate**	**-**	**As described in the ProDoc, and specifically supported by the surveys that will take place under Output 1.1, only local, non-invasive species will be used for all reforestation, quarry rehabilitation, and rangeland restoration activities.**

rehabilitation, and rangeland restoration activities. Standard 1 on Biodiversity, questions 1.5 and 1.6				
Risk 4: Project outcomes could be vulnerable to climate change. Standard 2 on Climate Change, question 2.2	I = 2 P = 3	**Moderate**	**-**	**Climate change adaptive measures have been included in all project activities, especially agricultural practices, as documented in the ProDoc.**
Risk 5: Women face discrimination at various levels, and their involvement in certain domains, such as decision-making processes, is restricted, all of which could be reproduced during project activities. Principle 2 on Gender Equality, question 2	I = 3 P = 2	**Moderate**	Women officially represent only 8.5% of farmer holdings and agricultural assets, especially land, continue to be registered and reported under the male member of the household, and it is men who are the main decision-makers in the context of farming.	**The gender analysis carried out during project formulation informed the Gender Mainstreaming Plan (Annex 15), which aims at achieving equitable distribution of its benefits, resources, status and rights, thereby responding to the different vulnerabilities and needs of women and men in furthering land degradation neutrality. It is also the project's aim to bring about transformative changes in the norms, cultural values and the roots of gender inequalities and discriminations.**
Risk 6: Rehabilitation activities, particularly in quarries, could present safety risks to works and communities. Standard 3 on Community Health, Safety and Working Conditions, questions 3.1 and 3.7	I = 4 P = 2	**Moderate**	Some quarries in Lebanon are not in compliance with the issued license in terms of area and other conditions. Some also exceed the allowable heights for cliffs and quarries.	**Prior to commencement of quarry rehabilitation activities, a Public Safety and Accident Prevention Plan will be developed to ensure any safety risks are minimized. Measures will include providing the workers with personal protective equipment and training them on safety protocols on site.**
Risk 7: Rehabilitation activities, particularly in quarries, may produce noise and air pollution through the use of heavy machinery and vehicles. Standard 7 on Pollution Prevention and Resource Efficiency, question 7.1	I = 2 P = 4	**Moderate**		**Prior to commencement of quarry rehabilitation activities, a Public Safety and Accident Prevention Plan will be developed to minimize air emissions and control noise. Measures will include maintaining the machinery and vehicles and moistening the ground during windy days.**

	QUESTION4: What is the overall Project risk categorization?		
	Select one (see SESP for guidance)		**Comments**
	Low Risk	☐	
	Moderate Risk	X	**The project has a few moderate social or environmental risks that can be easily mitigated through the proposed measures that have been integrated into the project document.**

	High Risk	☐	
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
	Check all that apply		**Comments**
	Principle 1: Human Rights	X	
	Principle 2: Gender Equality and Women's Empowerment	X	
	1. Biodiversity Conservation and Natural Resource Management	X	
	2. Climate Change Mitigation and Adaptation	X	
	3. Community Health, Safety and Working Conditions	X	
	4. Cultural Heritage	☐	
	5. Displacement and Resettlement	☐	
	6. Indigenous Peoples	☐	
	7. Pollution Prevention and Resource Efficiency	X	

Final Sign Off



Final Sign Off

Signature	*Date*	*Description*
QA Assessor	17.04.2018	Jihan Seoud, Programme Analyst, Energy and Environment Programme
QA Approver	18-04-2018	Edgard Chehab, Assistant Resident Representative-Programme
PAC Chair	18-04-2018	Edgard Chehab, Assistant Resident Representative-Programme

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
Principles 1: Human Rights		**Answer (Yes/No)**
1.	Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2.	Is there a likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups?[70]	No
3.	Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	Yes
4.	Is there a likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	No
5.	Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
6.	Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7.	Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8.	Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment		
1.	Is there a likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2.	Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	Yes
3.	Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4.	Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
1.1	Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats)and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	No
1.2	Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	Yes
1.3	Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4	Would Project activities pose risks to endangered species?	No
1.5	Would the Project pose a risk of introducing invasive alien species?	Yes

[70] Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority.References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

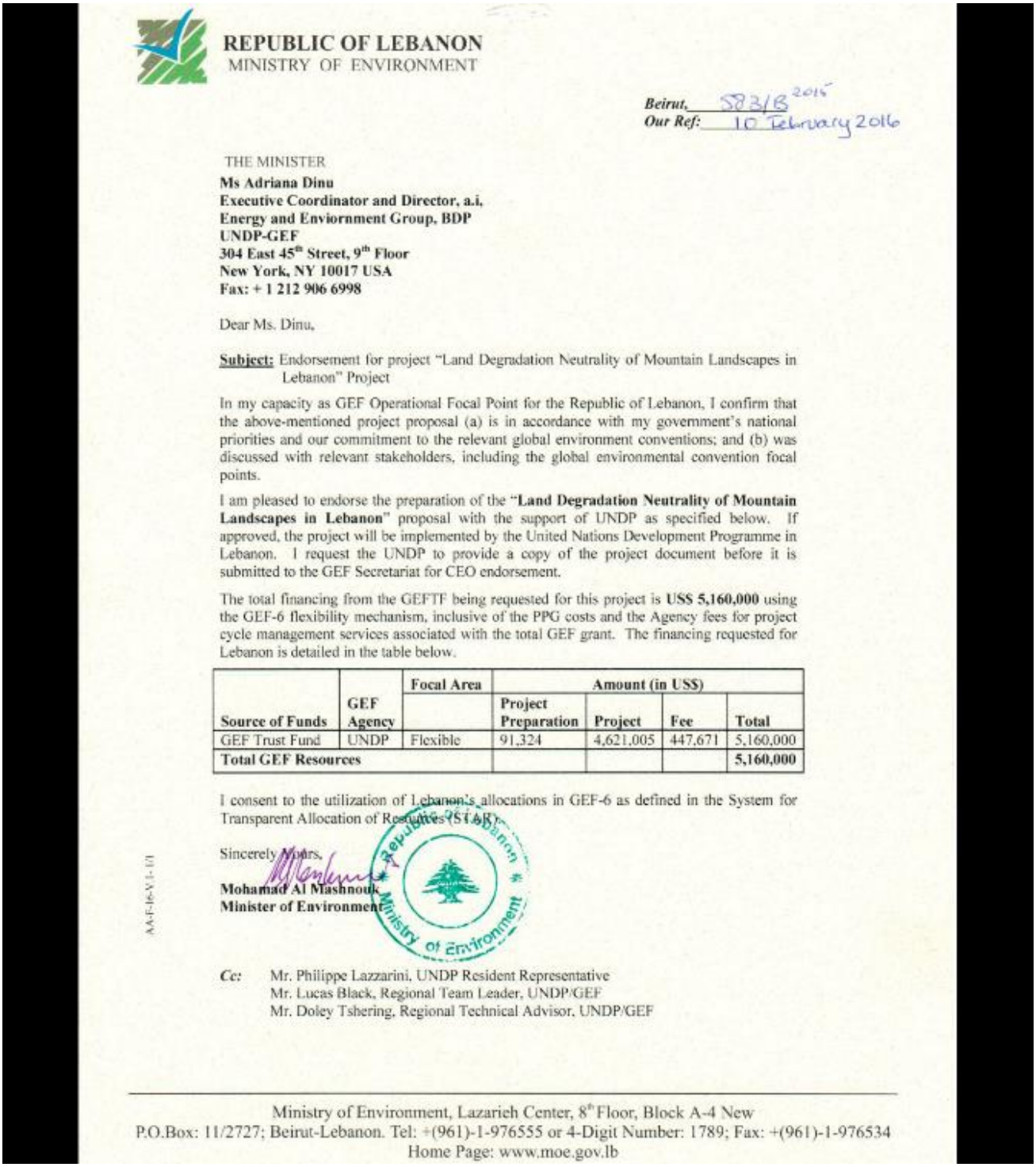
1.6	Does the Project involve harvesting of natural forests, plantation development, or reforestation?	Yes
1.7	Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	No
1.8	Does the Project involve significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	No
1.9	Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10	Would the Project generate potential adverse transboundary or global environmental concerns?	No
1.11	Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? *For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.*	No
Standard 2: Climate Change Mitigation and Adaptation		
2.1	Will the proposed Project result in significant[71] greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	Yes
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	No
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	Yes
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No
3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	Yes
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No

[71] In regards to CO_2, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3	Is there a risk that the Project would lead to forced evictions?[72]	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3	Would the proposed Project potentially affect the rights, lands and territories of indigenous peoples (regardless of whether Indigenous Peoples possess the legal titles to such areas)?	No
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.4	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.5	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.6	Would theProjectadversely affect the development priorities of indigenous peoples as defined by them?	No
6.7	Would the Project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	No
6.8	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	Yes
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol*	No
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No

[72] Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

Annex 11: Endorsement Letter by GEF OFP



REPUBLIC OF LEBANON
MINISTRY OF ENVIRONMENT

Beirut, 583/B 2016
Our Ref: 10 February 2016

THE MINISTER
Ms Adriana Dinu
Executive Coordinator and Director, a.i.
Energy and Enviornment Group, BDP
UNDP-GEF
304 East 45th Street, 9th Floor
New York, NY 10017 USA
Fax: + 1 212 906 6998

Dear Ms. Dinu,

Subject: Endorsement for project "Land Degradation Neutrality of Mountain Landscapes in Lebanon" Project

In my capacity as GEF Operational Focal Point for the Republic of Lebanon, I confirm that the above-mentioned project proposal (a) is in accordance with my government's national priorities and our commitment to the relevant global environment conventions; and (b) was discussed with relevant stakeholders, including the global environmental convention focal points.

I am pleased to endorse the preparation of the "**Land Degradation Neutrality of Mountain Landscapes in Lebanon**" proposal with the support of UNDP as specified below. If approved, the project will be implemented by the United Nations Development Programme in Lebanon. I request the UNDP to provide a copy of the project document before it is submitted to the GEF Secretariat for CEO endorsement.

The total financing from the GEFTF being requested for this project is **US$ 5,160,000** using the GEF-6 flexibility mechanism, inclusive of the PPG costs and the Agency fees for project cycle management services associated with the total GEF grant. The financing requested for Lebanon is detailed in the table below.

Source of Funds	GEF Agency	Focal Area	Amount (in US$)			
			Project Preparation	Project	Fee	Total
GEF Trust Fund	UNDP	Flexible	91,324	4,621,005	447,671	5,160,000
Total GEF Resources						**5,160,000**

I consent to the utilization of Lebanon's allocations in GEF-6 as defined in the System for Transparent Allocation of Resources (STAR).

Sincerely Yours,

Mohamad Al Mashnouk
Minister of Environment

Republic of Lebanon Ministry of Environment

Cc: Mr. Philippe Lazzarini, UNDP Resident Representative
Mr. Lucas Black, Regional Team Leader, UNDP/GEF
Mr. Doley Tshering, Regional Technical Advisor, UNDP/GEF

AA-F-16-V 1- 1/1

Ministry of Environment, Lazarieh Center, 8th Floor, Block A-4 New
P.O.Box: 11/2727; Beirut-Lebanon. Tel: +(961)-1-976555 or 4-Digit Number: 1789; Fax: +(961)-1-976534
Home Page: www.moe.gov.lb

Annex 12: Co-financing Letters

Commitment of financial support from Ministry of Environment

REPUBLIC OF LEBANON
MINISTRY OF ENVIRONMENT

THE MINISTER

Beirut, 21/2/2018
Our Ref.: 583/B 2015

Ms. Adriana Dinu
Executive Coordinator and Director, a.i.
Energy and Environment Group, BDP
UNDP-GEF
304 East 45th Street, 9th Floor
New York, NY 10017 USA
Fax: +1 212 906 6998

Dear Ms. Dinu,

Subject: Project on "Land Degradation Neutrality of Mountain Landscapes in Lebanon".
Ref.: Ministry of Environment letter 583/B dated 10 February 2016

Following our letter of 10 February 2016 (attached), the Ministry of Environment reiterates its full endorsement of the Land Degradation Neutrality of Mountain Landscapes in Lebanon project, which was prepared by UNDP Lebanon in full coordination with the Ministry of Environment and national stakeholders in the field. The project targets the protection of environmentally sensitive mountain areas and promotes the sustainable management of land; a priority for the Government of Lebanon over the past few years.

The Government has set up a Ministerial Committee to follow-up on the draft law which was presented to the Council of Minister for the protection of mountain areas. Furthermore, the ministry has allocated an estimated yearly recurrent funding of $1,400,000 for the duration of the project to be provided for the implementation of environmental projects with municipalities and local communities in this sector and for the management of mountainous protected areas. The Ministry also reconfirms its in-kind commitment to this project of $500,000 over the duration of the project.

We look forward to the approval and successful implementation,

Sincerely Yours,

Tarek Al Khatib
Minister of Environment

AA-F-16-V.1-1/1

Encl.: MoE Letter 583/B dated 10 February 2016

Cc: Mr. Yves de Soye, UNDP GEF Regional Technical Specialist
Mr. Tom Twining Ward, UNDP GEF Regional Team Leader
Mrs. Nancy Khoury, Acting Head, Department of Public Relations & External Affairs
Mr. Nadim Mroueh, Chief, Service of Natural Resources

Ministry of Environment, Lazarieh Center, 8th Floor, Block A-4 New
P.O.Box: 11/2727; Beirut-Lebanon. Tel: +(961)-1-976555 or 4-Digit Number: 1789; Fax: +(961)-1-976534
Home Page: www.moe.gov.lb

Commitment of financial support from the Lebanon Reforestation Initiative

Ms Celine Moyroud
Country Director
UNDP Lebanon
Beirut

February 13,2018

Dear Ms. Moyroud,

Co-financing for the "Land Degradation Neutrality of Mountain Landscapes in Lebanon" Project

Best Regards,

The Lebanon Reforestation Initiative (LRI) is a Lebanese NGO registered under nn. 1166 on 18 June 2014. LRI had started as a project launched in 2010 by the United States Forest Service (USFS) Office of International Programs (IP) through the support of the United States Agency for International Development (USAID).

LRI aims to conserve and expand Lebanon's forests through a community-based approach and promote public-private partnerships. In addition, LRI aims to empower communities to advocate to better manage their forest resources. LRI's strategic goals include: 1) Improve the management and conservation of forests across Lebanon; and 2) Contribute to the LDN national targets.

With funding from the USAID mission in Lebanon, the Lebanon Reforestation Initiative is working on various activities related to reforestation, forest management and sustainable land management, among which LRI is rehabilitating three aberdoned quarries in the North Beqaa and Rachaya regions of Lebanon. The current USAID-funded project has an overall budget of $9 Million, $2 Million of which are available as of the date of this letter and can be considered as parallel co-financing to the above-mentioned project.

We look forward to collaborating in the future when this project is initiated in Lebanon.

Sincerely,

Dr. Maya Nehme
LRI Director

Commitment of financial support from Council for Development and Reconstruction

COUNCIL FOR DEVELOPMENT & RECONSTRUCTION
BEIRUT - LEBANON

No. : 1102/1 Beirut, 08/03/2018

Ms. Adriana Dinu
Executive Coordinator and Director, a.i.
Energy and Environment Group, BDP
UNDP-GEF
304 East 45th Street, 9th Floor
New York, NY 10017 USA
Fax: +1 212 906 6998

Dear Ms. Dinu,

"Land Degradation Neutrality of Mountain Landscapes in Lebanon" Project

The Council for Development and Reconstruction in Lebanon has recently initiated a project funded by the Agence Française pour le Développement (AFD) to support environmental and rural resilience in Lebanon.

One of the components of this program is the implementation of reforestation activities aimed at community development, natural resource protection and enhancement of land resources in rural areas, particularly those in mountain regions. The budget allocated to implementation and management of these activities amounts to €5,500,000, equivalent to approximately $7,000,000, which can be considered as parallel co-financing to the above-mentioned project.

Furthermore, given the long-standing partnership between UNDP, the Ministry of Environment and the CDR on the national environmental agenda, we also fully endorse the objectives of this project and look forward to being engaged within the project steering committee.

We thank the Global Environment Facility in advance for funding this important project for Lebanon.

Sincerely yours,

Council for Development and Reconstruction

Nabil A. El-Jisr
President

REPUBLIC OF LEBANON • COUNCIL FOR DEVELOPMENT & RECONSTRUCTION •

Commitment of financial support from UNDP Lebanon

United Nations Development Programme
برنامج الأمم المتحدة الإنمائي

Empowered lives.
Resilient nations.

00102643
21/JS/JMS

Dear Ms. Dinu,

Subject: Submission of the "Land Degradation Neutrality of Mountain Landscapes in Lebanon" Full Project

Following the Global Environmental Facility's approved of the Project Preparatory Grant for the above-mentioned project on 28 September 2016, the UNDP Lebanon Country Office is very pleased to have completed the preparation of the full project document and CEO endorsement template in line with the GEF requirements and in full coordination with national counterparts and stakeholders.

UNDP Lebanon will also commit to providing cash co-financing to the project in the amount of $120,000 from its own resources. This contribution will support in the delivery of the project outputs as outlined in the project document. The Lebanon Country Office reiterates its commitment to the successful implementation of this project which will support in moving the national environmental agenda while contributing to the objectives of the UN Strategic Framework in Lebanon and the UNDP Country Programme.

We look forward to the positive review and approval of the project document.

Sincerely Yours,

Celine Moyroud
Country Director

Ms. Adriana Dinu
Executive Coordinator.
UNDP-Global Environmental Finance
Sustainable Development Cluster
Bureau for Policy and Programme Support
304 East 45th Street, 9th Floor
New York, NY 10017 USA
Fax: +1 212 906 6998

Cc: Mr. Yves de Soye, UNDP GEF Regional Technical Specialist
Mr. Tom Twining Ward, UNDP GEF Regional Team Leader

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بناية البنك العربي الإفريقي الدولي - شارع رياض الصلح، ساحة المجمة - بيروت ٢٠١١ ٥٢١١ - هاتف: ٠٠٠ ٩٦١ ١ ٩٦٢ - فاكس: ٩٦١ ١ ٩٦٢ ٤٩١ - ص.ب. ١١-٣٢١٨ بيروت - لبنان

Annex 13: Draft Letter of Agreement UNDP / Government of Lebanon on Direct Project Services

STANDARD LETTER OF AGREEMENT
BETWEEN UNDP AND THE GOVERNMENT FOR THE PROVISION OF SUPPORT SERVICES

Excellency,

1. Reference is made to consultations between officials of the Government of Lebanon (hereinafter referred to as "the Government") and officials of UNDP with respect to the provision of support services by the UNDP country office in Lebanon for nationally managed "**Land degradation neutrality of mountain landscapes in Lebanon"** Project ID 00102170. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution the Ministry of Environment designated in the relevant programme support document or project document, as described below.

2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution the Ministry of Environment is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.

3. The UNDP country office may provide, at the request of the designated institution, the following support services covered by the Direct Project Costs, for the activities of the programme/project:

i. Payments, disbursements and other financial transactions
ii. Recruitment of staff, project personnel, and consultants
iii. Payroll management services and Medical Clearance Services for all staff, external access to ATLAS for project managers and other staff
iv. Procurement of services and equipment, including disposal
v. Travel including visa requests, ticketing, and travel arrangements
vi. Organization of training activities, conferences, and workshops, including fellowships
vii. -Shipment, custom clearance, vehicle registration, and accreditation
viii. Security management service and Malicious Acts Insurance Policy

5. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraphs 3 & 4 above shall be detailed in an annex to the programme support document or project document, in the form provided in the attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex and related section in the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.

6. The relevant provisions of the Standard Basic Assistance Agreement with the Government (the "SBAA") dated 10 February 1986, including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution the Ministry of Environment. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.

7. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SBAA.

8. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraphs 3 & 4 above shall be specified in the annex to the programme support document or project document.

9. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.

10. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.

11. If you are in agreement with the provisions set forth above, please sign and return to this office two signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

_____
Signed on behalf of UNDP
Celine Moyroud
Resident representative

_____
For the Government
H.E. Mr. Fady Jreissati
Minister of Environment
Date:

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between [Governmental Institution Counterpart], the institution designated by the Government of Lebanon and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed project ID00102170 **Land degradation neutrality of mountain landscapes in Lebanon**, the "project".

2. In accordance with the provisions of the letter of agreement signed on xxx 2018 and the Project Document, the UNDP country office shall provide support services for the Project ID 00102170 as described below.

3. Support services to be provided:

Support services	Schedule for the provision of the support services	Estimated cost to UNDP for providing such support services	Method of reimbursement to UNDP
1. Financial Services 2. Human Resources Services	Project Duration	144,060.00 USD	The reimbursement of UNDP will be done on

3. Procurement services			quarterly basis through GLJE
4. Travel Services			
5. General Administration Services			
6. Security services			

4. Description of functions and responsibilities of the parties involved:

Support services	Description (but not limited to)
Financial Services	- Payment process - Issue check - Vendor profile
Human Resources Services	- Staff selection and recruitment process (advertising, short-listing, interviewing) - Medical clearance - Staff HR & Benefits Administration & Management (at issuance of a contract, and again at separation) - Recurrent personnel management services: staff Payroll & Banking Administration & Management (Payroll validation, disbursement, performance evaluation, extension, promotion, entitlements, leave monitoring) - Interns Management
Procurement services	- Consultant recruitment (advertising, short-listing and selection, contract issuance) - Procurement process involving local CAP and/or ITB, RFP requirements (Identification & selection, contracting/issue purchase order, follow-up) - Procurement not involving local CAP; low value procurement (Identification & selection, issue purchase order, follow-up) - Disposal of equipment
Travel Services	- Travel authorization and arrangements - F10 settlement
General Administration Services	- Issue/Renew IDs (UN LP, UN ID, etc.) - Shipment, customs clearance, vehicle registration - Issuance of visas, telephone lines - External access to Atlas - Organization of training activities, conferences, and workshops
Security services	- Security clearance - Security plan and management - Malicious Acts Insurance Policy

Annex 14: Terms of Reference and Procurement Plan

Project Executive Board

The Project Executive Board (PEB) is the group responsible for making, by consensus, management decisions for a project when guidance is required by the Project Manager, including recommendation for UNDP/Implementing Partner approval of project plans and revisions. In order to ensure UNDP's ultimate accountability, PEB decisions should be made in accordance with standards that shall ensure best value for money, fairness, integrity transparency and effective international competition. If a consensus cannot be reached, the final decision shall rest with the UNDP Programme Manager. Project reviews by this group are made at designated decision points during the running of a project, or as necessary when raised by the Project Manager. This group is consulted by the Project Manager for decisions when PM tolerances (normally in terms of time and budget) have been exceeded.

Based on the approved annual work plan (AWP), the PEB may review and approve project quarterly plans when required and authorize any major deviation from these agreed quarterly plans. It is the authority that signs off the completion of each quarterly plan as well as authorizes the start of the next quarterly plan. It ensures that required resources are committed and arbitrates on any conflicts within the project or negotiates a solution to any problems between the project and external bodies. In addition, it approves the appointment and responsibilities of the Project Manager and any delegation of its Project Assurance responsibilities.

Composition and organization: This group contains three roles, including:

- An Executive: individual representing the project ownership to chair the group.
- Senior Supplier: individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project. The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project.
- Senior Beneficiary: individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries.

Potential members of the PEB are reviewed and recommended for approval during the LPAC meeting. For example, the Executive role can be held by a representative from the Government Cooperating Agency or UNDP, the Senior Supplier role is held by a representative of the Implementing Partner and/or UNDP, and the Senior Beneficiary role is held by a representative of the government or civil society. Representative of other stakeholders can be included in the Board as appropriate.

Specific responsibilities include:

Defining the project

- Review and approve the Initiation Plan (if such plan was required and submitted to the LPAC).

Initiating the project

- Agree on Project Manager's responsibilities, as well as the responsibilities of the other members of the Project Management team;
- Delegate any Project Assurance function as appropriate;
- Review the Progress Report for the Initiation Stage (if an Initiation Plan was required);
- Review and appraise detailed Project Plan and AWP, including Atlas reports covering activity definition, quality criteria, issue log, updated risk log and the monitoring and communication plan.

Running the project

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the Project Manager;
- Provide guidance and agree on possible countermeasures/management actions to address specific risks;
- Agree on Project Manager's tolerances in the Annual Work Plan and quarterly plans when required;
- Conduct regular meetings to review the Project Quarterly Progress Report and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Review Combined Delivery Reports (CDR) prior to certification by the Implementing Partner;

- Appraise the Project Annual Review Report, make recommendations for the next AWP, and inform the Outcome Board about the results of the review;
- Review and approve end project report, make recommendations for follow-on actions;
- Provide ad-hoc direction and advice for exception situations when project manager's tolerances are exceeded;
- Assess and decide on project changes through revisions.

Closing the project

- Assure that all Project deliverables have been produced satisfactorily;
- Review and approve the Final Project Review Report, including Lessons-learned;
- Make recommendations for follow-on actions to be submitted to the Outcome Board;
- Commission project evaluation (only when required by partnership agreement)
- Notify operational completion of the project to the Outcome Board.

Project Manager (PM)

The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

The Implementing Partner appoints the Project Manager, who should be different from the Implementing Partner's representative in the Outcome Board. Prior to the approval of the project, the Project Developer role is the UNDP staff member responsible for project management functions during formulation until the Project Manager from the Implementing Partner is in place.

Specific responsibilities include:

Overall project management:

- Manage the realization of project outputs through activities;
- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board or its appointed Project Assurance roles to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Liaise with any suppliers;
- May also perform Team Manager and Project Support roles.

Running the project

- Plan the activities of the project and monitor progress against the initial quality criteria.
- Mobilize goods and services to initiate activities, including drafting TORs and work specifications;
- Monitor events as determined in the Monitoring & Communication Plan, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, using direct payments and purchase orders;
- Monitor financial resources and accounting to ensure accuracy and reliability of financial reports;
- Manage and monitor the project risks as initially identified in the Project Brief appraised by the LPAC, submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the Project Risks Log;
- Be responsible for managing issues and requests for change by maintaining an Issues Log.
- Prepare the Project Quarterly Progress Report (progress against planned activities, update on Risks and Issues, expenditures) and submit the report to the Project Board and Project Assurance;
- Prepare the Annual review Report, and submit the report to the Project Board and the Outcome Board;
- Based on the review, prepare the AWP for the following year, as well as Quarterly Plans if required.

Closing the Project

- Prepare Final Project Review Reports to be submitted to the Project Board and the Outcome Board;
- Identify follow-on actions and submit them for consideration to the Project Board;

- Manage the transfer of project deliverables, documents, files, equipment and materials to national beneficiaries;

Qualifications/experience :

- A graduate academic degree Environmental Policy, Environmental or Natural Resource Management, or Land Use Planning or closely related field;
- Minimum of 7 years of experience in the field with a Bachelor's Degree or 10 years of experience in the field with a Graduate degree.
- Experience in project management and experience in implementing development projects in the field of environment, preferably within the UN system or other development agencies.
- Experience in forestry, agriculture, rangelands or land use planning project management an advantage;
- Experience facilitating consultative processes, preferably in the field of natural resource management;
- Proven ability to promote cooperation between and negotiate with a range of stakeholders, and to organize and coordinate multi-disciplinary teams;
- Strong leadership and team-building skills;
- Self-motivated and ability to work under pressure;
- Demonstrable ability to organize, facilitate, and mediate technical teams to achieve stated project objectives;
- Familiarity with logical frameworks and strategic planning;
- Strong computer skills;
- Flexible and willing to travel as required;
- Excellent communication and writing skills in English and Arabic;
- Previous experience working with a GEF-supported project is considered an asset.

Project Assistant

The Project Assistant (PA) role provides project administration and financial support to the Project Manager as required by the needs of the project or Project Manager, and direct and specific support to technical activities carried out by various experts and led by the Technical Team Leader and the Planning Team Leader.

Some specific tasks of the PA include:

Provision of administrative services:

- Set up and maintain project files
- Collect project related information data
- Update plans
- Administer the quality review process
- Administer Project Board meetings

Project documentation management:

- Administer project revision control
- Establish document control procedures
- Compile, copy and distribute all project reports

Financial Management, Monitoring and Reporting:

- Assist in the financial management tasks under the responsibility of the Project Manager
- Provide support in the use of Atlas for monitoring and reporting

Direct support to technical activities:

- Support in research related to the project activities
- Assist with the overall process of engaging contractors and consultants under each of Outcomes 1, 2 and 3
- Maintain liaison with the co-financing partners (MoE, CDR, LRI) with a focus on their technical contributions
- Create and foster good working relationships with project partners particularly MoE, CDR, MoA, LRI, Min Tourism, LMTA especially under Outcomes 1 and 2
- Take lead role in organizing workshops, public meetings and similar events under Outcomes 1, 2 and 3
- Collaborate with the Technical and Planning Team Leaders on the production and publication of information material especially under Outcome 3
- Establish collaboration with the media as an avenue for project outreach especially under Outcome 3
- With the PM, lead efforts for project outreach and public participation, especially with identified and participating landowners under Outcome 1

Qualifications and Skills

- University degree in environmental science, agriculture, business and/or related fields;
- Minimum of 3 years of experience in related field with a Bachelor's Degree.
- Solid experience of budgeting, planning and reporting on foreign funded project.
- Knowledge in administrative and accounting procedures of the Government
- Good computer skills in common word processing (MS Word), spreadsheet (MS Excel), and accounting software.
- Appropriate English and Arabic language skills, both spoken and written.

Technical Team Leader

The Technical Team Leader (TTL) will lead the project work to be carried out under Outcome 1, namely, the rehabilitation and restoration of degraded land and resources. S/he will report to the Project Manager and through him/her to the Project Executive Board. It is likely that the TTL will need to spend a significant amount of time at project sites in Ehmej and Akkar Districts.

Duties and Responsibilities

Technical supervision, advice and quality assurance:

- Provide strategic analyses on issues relating to the degradation of forests, agricultural lands and rangelands, with a view to identifying appropriate 'entry points' and recommending appropriate strategic responses through the best possible project support;
- Lead and provide technical supervision, guidance and support to the project technical team (including consultants and local stakeholders) so it can carry out rehabilitation and restoration work as outlined under Outcome 1;
- Provide the necessary technical support to the PM and the PEB with the development of technical briefs and terms of reference for technical experts and consultants engaged for work envisaged under Outcome 1;
- Lead in designing and putting in place as required, quality control/peer review mechanisms for technical reviews/contributions from consultants, government experts and the private sector to ensure the highest quality of outputs/products, publications, discussion papers and briefs before approval by the PEB and release by the project;

Support to the PM with project planning, M&E and reporting:

- Provide leadership for any necessary update and revision of indicators, baselines, targets, and means of verification for Outcome 1, its outputs, and its activities (in the RRF) as required for effective implementation and M&E;
- Provide advice and inputs to the preparation of project progress reports, including reports to Project Donors as required, focusing on capturing results, lessons, and follow up actions;

Capacity building of the implementing partners and knowledge transfer:

- Lead in the development and provision of oversight in capacity building, including mentoring of local counterparts by consultants at community level, and identify appropriate training opportunities;
- Mainstream lessons and best practices learned elsewhere into capacity building activities for the project teams;
- Transfer and apply technical knowledge and experience from his/her academic background and professional experience to enhance technical knowledge on rehabilitation and restoration of degraded land to relevant staff of the Project.

Partnerships, advocacy and resource mobilization:

- Develop and maintain strategic networks and partnerships with relevant donors and development partners working on activities of interest to Outcome 1 with a view to mobilize resources to ensure achievement of the goal of land degradation neutrality;
- Search and analyze information and activities relating to rehabilitation of degraded land, identify possible aspects/themes of cooperation, advise on strategically linking the project with other national, regional and global initiatives by other development partners, the private sector, and communities;
- Identify opportunities for advocacy, policy dialogues, and technical discussions with the Government, development partners and all relevant stakeholders;

Required Skills and Experience

- Advanced university degree (Master's Degree) in engineering, forestry, agriculture or related discipline;
- At least 5 years of project management experience in forestry or agricultural engineering;
- Extensive experience in the analysis of degraded land and designing of rehabilitation and restoration interventions;
- Proven leadership experience with technical teams;
- A track record of engagement with senior levels of government, United Nations and donors;

- Experience working within a UN agency. Experience in Lebanon on similar issues would be a major asset;
- Ability to work equally successfully with community members at grassroots level and corporations and other private sector exponents;
- Fluency in English and Arabic, including excellent writing skills, is required.

Planning Team Leader

The Planning Team Leader (PTL) will lead the project work to be carried out under Outcome 2, namely, the prevention of land and resources degradation and their sustainable use. S/he will report to the Project Manager and through him/her to the Project Executive Board. It is likely that the PTL will need to spend a significant amount of time at project sites in Ehmej and Akkar Districts.

Duties and Responsibilities

Technical supervision, advice and quality assurance:

- Provide strategic analyses on issues relating to land use planning, planning law, sustainable land management, planning policy and strategy, with a view to identifying appropriate 'entry points' and recommending appropriate strategic responses through the best possible project support;
- Lead and provide technical supervision, guidance and support to the project planning team (including consultants and local stakeholders) so it can carry out the work envisaged under Outcome 2;
- Provide the necessary technical support to the PM and the PEB with the development of technical briefs and terms of reference for planning and other experts and consultants engaged for work envisaged under Outcome 2;
- Lead in designing and putting in place as required, quality control/peer review mechanisms for technical reviews/contributions from consultants, government experts and the private sector to ensure the highest quality of outputs/products, publications, discussion papers and briefs before approval by the PEB and release by the project;

Support to the PM with project planning, M&E and reporting:

- Provide leadership for any necessary update and revision of indicators, baselines, targets, and means of verification for Outcome 2, its outputs, and its activities (in the RRF) as required for effective implementation and M&E;
- Provide advice and inputs to the preparation of project progress reports, including reports to Project Donors as required, focusing on capturing results, lessons, and follow up actions;

Capacity building of the implementing partners and knowledge transfer:

- Lead in the development and provision of oversight in capacity building, including mentoring of local counterparts by consultants at community level, and identify appropriate training opportunities;
- Mainstream lessons and best practices learned elsewhere into capacity building activities for the project teams;
- Transfer and apply technical knowledge and experience from his/her academic background and professional experience to enhance technical knowledge on the prevention of land degradation to relevant staff of the Project.

Partnerships, advocacy and resource mobilization:

- Develop and maintain strategic networks and partnerships with relevant donors and development partners working on activities of interest to Outcome 2 with a view to mobilize resources to ensure achievement of the goal of land degradation neutrality;
- Search and analyze information and activities relating to the prevention of land degradation, identify possible aspects/themes of cooperation, advise on strategically linking the project with other national, regional and global initiatives by other development partners, the private sector, and communities;
- Identify opportunities for advocacy, policy dialogues, and technical discussions with the Government, development partners and all relevant stakeholders;

Required Skills and Experience

- Advanced university degree (Master's Degree) in land use planning, planning law or related discipline;

- At least 5 years of project management experience in land use planning, forestry or agricultural planning;
- Extensive experience in the prevention of land degradation and designing the policy and strategy instruments to achieve this;
- Proven leadership experience with technical teams;
- A track record of engagement with senior levels of government, United Nations and donors;
- Experience working within a UN agency. Experience in Lebanon on similar issues would be a major asset;
- Ability to work equally successfully with community members at grassroots level and corporations and other private sector exponents;
- Fluency in English and Arabic, including excellent writing skills, is required

PROCUREMENT PLAN FOR FIRST 24 MONTHS

TYPE OF CONSULTANT	POSITION/ TITLE	FEE / PERSON/ DAY	ESTIMATED PERSON DAYS	ESTIMATED $ COST (IF NOT INDIVIDUAL CONSULTANT)	TASKS AND DELIVERABLES	QUALIFICATIONS
Company	Landscape-scale survey of mountain lands and high country areas in Akkar and Jbeil Districts			$150,000	The survey will take place at project start-up and will focus on Akkar and Jbeil districts, with the aim of confirming or determining specific activities and work for project pilot interventions and determine baseline conditions across the various sectors and detail specific interventions. It will assess ecosystem health, ecological values and vulnerabilities, agricultural productivity and degraded land that merits rehabilitation/restoration. It will also recognize the economic impact of land degradation on socio-economic development and ecosystem service provision – see Output 1.1.	Specialised environmental and/or rural development consultancy firm with environmental specialists, GIS expert, surveyors
Company or NGO	Degraded forests replanted and restored in pilot project sites and sustainable forest management applied			$175,000 x3 = $525,000	Biodiversity habitat in degraded forests will be enhanced through planting in collaboration with experienced NGOs, municipalities and local communities. Community forestry, including co-management and traditional Hima approach will be established so as to work towards the conservation of sites, species, habitats, and people in order to achieve the sustainable use of natural resources. Non-timber forest products will be identified and promoted, and the stresses on identified ecosystem services will be reduced (e.g. enhancing vegetative cover to improve slope stability) – see Output 1.2.	Specialised in reforestation and forest management (3 - 4 contracts/1 for each site)
Company or NGO	Restoration of degraded high country grasslands restored in pilot sites			$120,000 x2 = $240,000	Based on the survey in output 1.1 and on-going activities in rangeland management especially for Jbeil region, work with existing NGOs or CSOs to pilot rangeland management in specific sites such as SPNL and others. Work will look at rehabilitation of pilot areas, using innovative techniques for rangeland management, working with herders to improve practices and land "leasing" system with the land owners and local decision-makers. This would include workshops and trainings at the local level – see Output 1.3	NGOs or CSOs experienced in rangeland management including work with herders and local communities

Local consultant	Legal consultant	$700	70	49,000	Analysis of the existing LUP legislation, institutional structures and procedures. Support the improvement of landuse planning and to ensure the integration of environmental considerations and SLM principles into the national process – see Output 2.1.	Legal expert with at least 7 years of experience in environmental policy at the national level
Local consultant	Landuse planning expert	$500	70	35,000	To identify the land-use planning needs at the local level in the two pilot localities and determine mechanisms to integrate land use sustainability into the plans. Develop the needed mechanisms to be used by the Ministry of Environment and provide technical support to prepare guidelines for sustainable land-use planning in mountain areas – see Output 2.1.	Environment or urban planning expert with at least 7 years of experience in local level planning and environmental policy
International consultant	Eco-tourism expert	$800	50	40,000	Develop a national eco-tourism and responsible tourism strategy taking into consideration the needs in Lebanon, with specific focus on mountain areas – see Output 1.6	Expertise in responsible rural and environmental tourism with experience in setting national strategies

Annex 15: Gender Analysis and Mainstreaming Plan

1 Objective of the gender mainstreaming plan

Gender mainstreaming is a strategy towards achieving greater equality between women and men – a development goal in its own right, and integral to achieving all other SDGs. Accordingly, gender equality and women's empowerment are at the heart of UNDP's development mandate, and the organization in its 2014-2017 Gender Equality Strategy commits to ensure that gender concerns are integrated in its projects.[73] The GEF, too, has a gender mainstreaming policy, which recognizes the relevance of gender to environmental issues and highlights that projects to be successful must consider gender.[74]

In line with these and noting that gender provisions are integrated in the project document and its annexes, the objective of this gender analysis and mainstreaming plan is to showcase in detail how gender mainstreaming will be attained in the project context. Towards this end, the following sections identify gender concerns and opportunities to ensure the project considers women and men's different vulnerabilities and needs as well as capacities and skills and achieves an equitable distribution of its benefits, resources, status and rights. They also outline ways for the project to influence transformative changes in the norms, cultural values and the roots of gender inequalities and discriminations. The gender analysis and mainstreaming plan is aligned to other strategies and processes of the project to ensure feasibility and will be mainstreamed as much as possible with on-going national processes and strategies at the time of project implementation and wherever feasible.

2 Overview of relevant gender dynamics

In comparison with some countries in the region, Lebanon counts as progressive with regards to gender equality and women's empowerment. In its Article 7, the country's constitution states "All Lebanese are equal under the law, enjoying equally civil and political rights, and performing duties and public responsibility without any discrimination among them." In December 2016, Lebanon established the Office of the Minister of State for Women's Affairs (OMSWA) as a new governmental body with the mission to empower women and enhance their capabilities and build their capacities. Lebanon also ratified - with reservations - important international instruments, such as the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), and committed to the implementation of the 1995 Beijing Declaration and Platform for Action and its twelve critical areas of concern, one of which refers to women and the environment.

Significant progress regarding gender equality and women's empowerment has indeed been achieved in some areas such as education, where gender parity has – judged by national-level statistics – largely been reached.[75] Overall, however, and despite the above-mentioned provisions and commitments, gender inequalities in Lebanon are stark, putting women at heightened vulnerability and risk: the value of the country's 2016 Gender Inequality Index which measures inequality based on reproductive health, empowerment, and economic status, placed Lebanon at rank 83 out of 159 countries studied.[76] The 2017 Global Gender Gap Index which evaluates economic participation and opportunity, educational attainment, health and survival, and political empowerment, ranks Lebanon 137 out of 144 countries analyzed.[77] Inequalities are also confirmed by research on

[73] UNDP (2014). Gender Equality Strategy 2014-2017. http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/gender-equality-strategy-2014-2017.html
[74] GEF (2013). Mainstreaming Gender at the GEF. https://www.thegef.org/sites/default/files/publications/Mainstreaming_Gender_Eng_3.pdf
[75] Fact Sheet on Current MDG Progress of Lebanon (Arab States) (2016). http://www.mdgmonitor.org/mdg-progress-lebanon-arab-states/
[76] UNDP (2016). Human Development Report. http://hdr.undp.org/en/composite/GII
[77] Word Economic Forum (2017). The Global Gender Gap Report 2017. http://www3.weforum.org/docs/WEF_GGGR_2017.pdf

female versus male-headed households: in certain parts of the country such as the North, female-headed households have been found to be poorer, thus facing particular hardship.[78]

The causes for gender inequality and discrimination in the country are largely related to deep-rooted patriarchal structures and traditional gender roles, which particularly prevail in remote, rural and agricultural areas, such as Akkar.[79] Furthermore, the dominance of customary law in relation to codified law plays a key role, as does the limited knowledge on gender equality and women's empowerment among certain parts of the population, including rural women many of which do not know their basic rights.[80,81]

One project-related area where inequalities are particularly pronounced is women's role in agriculture: Lebanese women, especially those in rural areas, comprise about 40% of the agricultural labor force in the country. They take on important work, such as seeding, weeding and harvesting, hence possess valuable knowledge and skills. At the same time, however, it is usually men who own important assets such as land, and make related decisions, for instance on farming.[82] Men also dominate relevant bodies such as farmer cooperatives; women's representation, at approximately 5%, is very low.[83] Decisions based on processes that neglect the consultation of women are unjust and can have perverse effects.

A second area where the gender gap is very large is women's economic participation and opportunity: currently, only 23.5% of women aged 15 and older participate in the country's labor force.[84] However, Lebanese women are increasingly successful with business.[85] Sectors that have proven to provide great opportunities for women's economic empowerment and that connect with the project are tourism and food value chains.[86] For example, some 30% of the guides on the Lebanon Mountain Trail are women and most of the B&Bs/homestays on the Trail are owned and operated by women.

[78] DeJong, J. & Meyerson-Knox, S. (2011). Lebanon: An Overview. https://www.mcgill.ca/isid/files/isid/pb_2011_02_dejong.pdf
[79] Aziz, J. (2014). Women in Lebanon still Threatened by Sexism, Violence. https://www.al-monitor.com/pulse/originals/2014/02/women-rights-lebanon-threatened.html
[80] Avis, W.R. (2017). Gender Equality and Women's Empowerment in Lebanon. https://reliefweb.int/sites/reliefweb.int/files/resources/175-Gender-Equality-and-Womens-Empowerment-in-Lebanon.pdf
[81] Institute for Women's Studies in the Arab World (n.d.), Gender Profile: Lebanon. http://iwsaw.lau.edu.lb/publications/documents/Country%20Gender%20Profile%20Lebanon-Online%20.pdf
[82] Institute for Women's Studies in the Arab World (n.d.), Gender Profile: Lebanon. http://iwsaw.lau.edu.lb/publications/documents/Country%20Gender%20Profile%20Lebanon-Online%20.pdf
[83] NOWARA (2011). Status of Lebanese Women in Rural Areas: Roles and Perspectives. http://www.nowara.org/assets/infoAndResources/studies/Executive_summary_of_Study_Women_in_rural_areas_2011.pdf
[84] Institute for Women's Studies in the Arab World (n.d.), Gender Profile: Lebanon. http://iwsaw.lau.edu.lb/publications/documents/Country%20Gender%20Profile%20Lebanon-Online%20.pdf
[85] Institute for Women's Studies in the Arab World (n.d.), Gender Profile: Lebanon. http://iwsaw.lau.edu.lb/publications/documents/Country%20Gender%20Profile%20Lebanon-Online%20.pdf
[86] USAID (2016). Resource Guide for Gender Integration in Value Chain Development in Lebanon. http://pdf.usaid.gov/pdf_docs/pa00mczz.pdf

3 Strategy to address gender risks/concerns and utilize opportunities

Gender mainstreaming is a cross-cutting strategy of the project. In order to address gender risks/concerns and utilize opportunities, the project will adopt tailored, output-specific actions as outlined in the table below.

	Gender risks/concerns and opportunities	Gender mainstreaming activities
Outcome 1: Degraded mountain land in the Districts of Akkar and Jbeil identified, rehabilitated and restored		
Output 1.1: Landscape-scale survey of mountain lands and high country areas in Akkar and Jbeil Districts	The key risk/concern is that the survey neglects consulting male and female stakeholders/beneficiaries, and recording data in sex-disaggregated format. The survey provides a major opportunity to systematically collect data reflecting the distinct LDN-related vulnerabilities and needs of women and men in the target districts; currently such information is not available.	• Ensure survey team has gender competence; • Consult/interview male and female stakeholders/beneficiaries; • Include specific survey questions that reveal relevant gender dimensions (e.g., economic impact of land degradation on women/men); • Collaborate with gender expert in design and implementation of the survey.
Output 1.2: Degraded forests restored at selected project sites and sustainable forest management applied	While women are not as active as men in planting, women take on major roles in sustainable forest management. As caregivers they are highly dependent on forests and are the primary users of forest products. However, they are often excluded from forestry-related decision-making. This bears the risk/concern that women's valuable knowledge remains underutilized. Given women's engagement in food value chains (e.g., honey), the identification and promotion of non-timber forest products under this output provides an entry-point to enhance women's (economic) empowerment.	• Consult and collaborate with women and men from target sites throughout the process; • Consult with stakeholders working on gender equality and women's empowerment (e.g., NGOs, OMSWA).
Output 1.3: Sustainable rangeland management practices for selected sites in high country grasslands	Relevant stakeholders and beneficiaries of this output, such as shepherds and herders, are almost exclusively men. However, the products of the herds as well as their high country environment are of great importance to women, which requires their involvement in respective decisions (e.g., whether to reduce herd sizes to protect grasslands from overgrazing). There is a risk/concern that women's knowledge and interests are not considered adequately. This output provides an opportunity to benefit women regarding its impacts on quality and quantity of raw materials, such as milk for cheese, wool, and medicinal and other herbs that can be used for household purposes and/or selling.	• Ensure that women and men's knowledge and interests are considered.

Output 1.4: Degraded quarries rehabilitated	The improvements achieved through the rehabilitation of quarries (e.g., suppression of wind-blown dust, flash flood run-off) will benefit both women and men, and the output does not have a strong gender dimension. However, given that the output involves the hiring of technical experts, there is a risk/concern for gender imbalance among these experts. Given women's active engagement in the tourism sector, the planned enhancing of quarries for eco-tourism under this output opens up particular opportunities for women's (economic) empowerment at a later stage.	• Undertake efforts towards gender-balance among recruited experts.
Output 1.5: Sustainable agricultural practices in degraded farmland in selected sites	The techniques to be tested under this output will be determined in collaboration with agricultural experts, landowners, and selected individuals working in agriculture, including women. Women play a significant role in the agricultural sector and meeting their needs and utilizing their knowledge is hence very important. However, it is largely men who make sector-related decisions and women are underrepresented in relevant decision-making bodies. Hence, there is a risk/concern that actions lead to sub-optimal results. This output bears great entry-points to work with women as well as most vulnerable groups, such as female-headed households, and make a tailored contribution to improving their and their family's lives (e.g., through increase in produce).	• Ensure consultation of women and men working in agriculture and food value chains; • Identify female headed households and facilitate their engagement in project activities (i.e., ensure that participation is possible given their particularly tight schedules).
Output 1.6: Enabling environment established for responsible tourism and minimum impact outdoor recreation	Given women's active role in the tourism sector, this output presents great opportunities for women's (economic) empowerment.	• Collaborate with stakeholders working on gender equality and women's empowerment (e.g., NGOs, OMSWA) and other relevant actors (e.g., Ministry of Tourism), including to find out about most suitable business opportunities (e.g., homestays, handicrafts, traditional foods); • Consult also with women working in the tourism sector and those interested to get engaged.
Outcome 2: Mountain lands managed sustainably to prevent degradation		
Output 2.1: Improved land use planning through strengthened frameworks	Land use planning is an active, collaborative process and precisely because of women's valuable knowledge and skills in this area the output presents a good opportunity to facilitate their engagement in decision-making; in fact, engaging women in	• Ensure women are included in decision-making processes (e.g., through highlighting the benefits of their involvement if need be, and ensuring consultations etc. are held at a

and capacity at central and local levels	respective processes is a requirement to achieve optimal results. Capacity-building initiatives offer important entry-points for the project to contribute to transformative change, including through the teaching of the benefits of gender equality and women's empowerment in the context of LDN.	time and place where women and men can participate). • Ensure trainers possess gender competence and are able to speak about the gender dimensions of the respective topic to the target audience; • Undertake efforts towards gender-balance among recruited trainers; • Ensure that trainings reflect on gender (e.g., through the presentation of sex-disaggregated data, distinct gender sessions etc.); • Ensure hurdles and impediments which prevent women from participation are addressed (e.g., through holding trainings/workshops in places and at times suitable for women and men; identification and invitation of suitable female participants; explaining the benefits of enhancing women and men's capacities, including for target communities as a whole, to authorities/decision-makers).
Output 2.2: LDN capacity enhanced and LDN mainstreamed into land use planning and key policies targeting mountain lands	The potential concerns outlined above regarding capacity building activities apply also to this output.	• As above
Output 2.3: GIS platform established for land use planning and related monitoring	This output does not bear any strong, direct gender risks/concerns or opportunities. However, the scope of the database must ensure that it reflects women's and well as men's interests and needs. If the GIS is prepared in a gender-blind manner, the respective products may yield sub-optimal results in the long run.	• Where applicable, all data reviewed and prepared for entry into the GIS database should be looked at through a gender lens, and reference gender if and where needed (i.e., who owns, controls, uses land areas in question, how will planned measures affect women and men etc.).
Outcome 3: Project monitoring and evaluation, communication, knowledge management and financial mechanisms for the dissemination and replication of the results of the project with the aim of achieving land degradation neutrality		
Output 3.1: The project is monitored and evaluated on a continuing basis according	The adopted M&E Plan considers gender, and UNDP/GEF M&E tools and requirements request reportage of gender-related information. However, there	• Ensure consultants and project personnel engaged in M&E have the required gender competence to reflect on progress and challenges related to gender, and how this connects with achieving the overall project results

to the adopted M&E Plan	is still a risk that the distinct project impacts on women and men are not fully evaluated, and that opportunities to establish how gender intersects with achieving project results and impact (e.g., how technical training improved women and men's lives, and how this related to improved livelihoods of households/communities) remain untapped.	• Ensure that all M&E reporting (e.g. quarterly and annual reports) capture gender-related progress/impact on men and women, and respective challenges in quantitative and qualitative ways (e.g., where applicable, present data in sex-disaggregated format) • Where M&E activities involve consultations with stakeholders and beneficiaries, ensure that the voices of women and men are captured, and stakeholders such as OMSWA consulted; • Undertake efforts towards gender-balance among recruited consultants for M&E purposes (e.g., mid-term and final evaluations).
Output 3.2: Communication and Knowledge Management Strategy implemented	The adopted Communication and Knowledge Management Strategy considers gender. The strategy provides an opportunity to produce data and knowledge related to gender and LDN, and to ensure that women and men as well as stakeholders working on gender equality and women's empowerment have access to these.	• Include sections on gender in knowledge products, and where applicable present data in sex-disaggregated format; • Consider producing a knowledge product specifically on gender and LDN; • Ensure that women and men and stakeholders working on gender equality and women's empowerment (e.g., NGOs, OMSWA) are informed and have access to the information and knowledge generated (e.g., through circulating links to knowledge products in respective networks)
Output 3.4: Effective sustainable financing mechanisms identified and developed	LDN has a strong gender dimension, which needs to be reflected in financing mechanisms, too. There is a risk that gender is not adequately considered in the complex processes of developing such mechanisms. This output provides a great opportunity to ensure that future LDN initiatives are gender-responsive, too.	• Collaborate with gender expert in developing finance mechanism (e.g., in identifying potential donors committed to support/fund LDN components that have a particularly strong gender dimension/positive effect on women); • Ensure that women and men are engaged in the development of the financing mechanism; • Ensure that future initiatives supported under the established finance mechanism are gender-responsive, too (e.g., through defining specific gender requirements for these initiatives to be approved); • Ensure that women and stakeholders working on gender equality and women's empowerment (e.g., NGOs) have direct access to the established financing mechanism, too, including in terms of engaging in responsibilities (e.g., management), and initiatives to scale-up and replicate LDN activities.

4 Gender mainstreaming measures across outputs

Complementing the above-listed output-specific actions, the project will ensure gender is mainstreamed in important project processes across outputs, most importantly recruitment practices, capacity-building initiatives, and research, information and knowledge. Such an approach facilitates utilizing the full spectrum of men and women's capacities and skills.

4.1 Recruitment practices

Recruitments undertaken as part of the project will aim at ensuring workforce diversity, including in terms of gender. This will be achieved through a variety of measures, including ensuring that ToRs target men and women as potential candidates ("He/She"), provisions that women are encouraged to apply, and requesting basic understanding, skills, experience and commitment required to work in a gender-sensitive manner. Where applicable, the latter will be assessed as part of written tests and/or interviews held as part of recruitment processes (e.g., through adding one or more gender-related questions). Further, the project will collaborate with and/or hire gender experts when needed (e.g., to prepare specific gender knowledge products and to contribute to the design and implementation of social surveys).

4.2 Capacity-building initiatives

Gender will also be integrated into capacity-building initiatives. Importantly, trainings/workshops will reflect on the gender dimensions of the respective topic. Given the specific context, this will be achieved through distinct gender sessions or side events, or references to gender throughout workshop/training sessions (e.g., pointing out the gender division of labor, presenting data disaggregated by sex, etc.). A necessary condition towards this end is that trainers/speakers have the required understanding, skills and experience regarding gender. The project will also make efforts towards gender-balance among trainers/speakers (see section 4.1 Recruitment processes).

It is also key to ensure that both women and men have access to capacity-building initiatives, and that hurdles or impediments which prevent women from benefitting from these activities are addressed. Given the specific context and if need be, this will be achieved through targeted efforts, such as ensuring trainings/workshops are held in places and at times where women have the chance to participate, identification of suitable female participants and invitation of these women, and explaining the benefits of enhancing women and men's capacities, including for target communities as a whole, to authorities/decision-makers.

4.3 Research, knowledge and communication

Research initiatives, for instance social/household surveys, are an integral part of the project. Where applicable, these initiatives will ensure that data are collected in sex-disaggregated format. Further, and again where applicable, research carried out under the project will ensure to capture the gender dimensions of the respective topic, including through consultations with women and men (if need be separately to facilitate open discussion), and the inclusion of specific questions related to gender.

The documentation/communication of research results will consider gender, too. To achieve this, knowledge products prepared under the project will reflect on gender to the extent possible, for instance through the presentation of data disaggregated by sex and the inclusion of sections that analyse the respective gender dimensions. The project will consider the option to prepare a specific knowledge product on gender and LDN.

Gender will also be considered in the dissemination of research results, knowledge and information. For instance, when circulating respective materials, the project will ensure inclusion of stakeholders (e.g., NGOs) that work on gender equality and women's empowerment. The project will also track access patterns of its major knowledge base, the Mountain Lands Database, disaggregated by sex.

The above measures are in line with the project's Communication and Knowledge Management Strategy, which adopts a gender-responsive approach.

Annex 16: Persons and organisations consulted during project development

Ministry of the Environment
Nadim Mroueh, Head of Service of Natural Resources
Lara Samaha, Biodiversity Focal Point
Manal Moussallem, Policy Advisor

Ministry of Finance
Talal Salman, Economic Advisor to the Minister, UNDP Project Director
Fatima Cheik Jaffal, Economic Officer

MADA
Delphine Compain, Executive Coordinator
Clement-Nadim Zakhia

UNDP Global Policy Centre for Resilient Ecosystems and Desertification
Elie Kodsi, Senior Technical Advisor

Food & Agriculture Organization of the UN (FAO)
Faten Adada, Agriculture Development Consultant, Social Protection Focal Point

Lebanon Reforestation Initiative (LRI)
Maya Nehme, Project Director
Karma Bouazza,

Lebanon Mountain Trail Association (LMTA)
Martine Btaich, President
Kamal Rizk
Zeinab Janbei
Christian Akhrass, Trail Expert

Council for Development and Reconstruction (CDR)
Sami Feghali

Ministry of Tourism
Petra Obeid, Head of Youth and Local Bodies Department

Ministry of Agriculture
Chadi H Mohanna, Director

Association for Forests, Development and Conservation (AFDC)
Sawsan Bou Fakhreddine, Director General
Elie Chnais, FAO Forest Seed Center, Lead National Consultant

Sustainable Land Management in the Qaraoun Catchment Project
Nour Masri, Project Manager
Dominique Choueiter, Project Officer
Tala Moukaddem, Project Assistant

United Nations Development Programme (UNDP) Country Office in Lebanon
Jihan Seoud, Programme Analyst, Head of Environment and Energy
Joelle Salame, Programme Officer, Environment and Energy
Nour Zuhairy, Programme Assistant, Environment and Energy
Luca Renda, Country Director

Potential project locality visit in Mount Lebanon Governorate, Kfardibean
Hicham Zgheib, Development section
Frem Sakr, Development section
Sylva Zgheib
Joséphine Zgheib, member of the Municipal Council and an LMT Board Member

Society for the Protection of Nature in Lebanon (SPNL), Beirut
Bassima Al Khatib, Assistant Director General

Potential project locality visit in Mount Lebanon Governorate, Ehmej
Chawqi Daher, Vice President of the Municipality of Ehmej
Adel Abi Younes, Member of Municipal Council
Chakib Abi Sa'ad, Member of Municipal Council
Imam Khalife, Municipality Staff

Potential project locality visit in Akkar El Attika, North Lebanon
Dr Rami Melhem, Vice President of the Municipality

Technical workshop for the adoption of the National Targets for Land Degradation Neutrality (LDN)
Fadi Asmar, Consultant and Workshop Facilitator
Elie Kodsi, Senior Technical Advisor, Global Centre on Resilient Ecosystems and Desertification, UNDP –
Juliette Amidi, Program Assistant, Association for Forest Development and Conservation

United States Agency for International Development, Awkar
Charbel Hanna, Project Management Specialist

Annex 17: Exploration and assessments of potential project localities

Potential project locality visit in North Governorate, Lebanon Mountain Trail

a) Kfir Bnine to Qemmamine, Minieh-Danniyeh District, North Governorate
Starting at Syr ed Donniyeh, the impression is one of abundant water, cascading through the villages, apparently of good quality, mostly originating in springs. The area is very remote – encountered one single herdsman with a herd of goats, a group of some four women collecting herbs, and no one else all day. There is very little farming activity – some wheat has been planted, and some small fields have been ploughed ready for sowing/planting. The trail uses mostly footpaths along forested hillsides and passes through the dramatic Jehannem valley with its deep gorges and high peaks with prolific oak, juniper and brutia pine forests. There is one, quite substantial permanent spring at the middle of the trail.

Some dieback is being experienced in male Juniper trees because of a mistletoe parasite. Not a lot is known about it but it seems to be affecting trees to the extent that they can die altogether. This is different to North American mistletoe parasites in Junipers – there the impact is minor and the host tree can easily tolerate and overcome the parasite. Junipers and other trees are also affected by the grazing that takes place in the area, with goats (mainly) taking any young saplings and preventing recruitment.

Approaching Qemmamine, there is a large quarry (see Google Earth below) below the village of Jairoun. The impact of this large-scale operation has been such that the LMT had to change its route. There are also other smaller quarrying operations, and a paved road, with little or no traffic, apparently built as part of a UN project.

The LMT has little or no apparent impact. The only possible (but uncertain) impact seems to be the odd plastic water bottle.

Quarries on the trail approaching Qemmamine

b) Qemmamine to Tachea, North Governorate
The trail starts in the spectacular locality of Qemmamine with its tall peaks and deep valleys. It passes through some very remote areas in forests and rocky outcrops and also follows mainly unpaved agricultural roads. Forests of juniper, cedar, and fir, rivers and deep valleys are the main highlights. There is also a wild

iron oak forest near Fnaideq, and an extensive pine forest between Mishmish and Qemmamine. As far as Mishmish, the environment is wilderness quality and comparatively pristine. After Mishmish there is more development impact with occasional quarries, paved roads and seemingly unplanned housing. From some vantage points there are views of some of Lebanon's highest peaks -- Jabal Arouba to the east, Jabal el Mekmel to the south , and also Qornet es Saouda, Lebanon's highest peak at 3088 m. There are more than five permanent springs.

Towards the Tachea end of this section, the trail passes through Sahlet el Qammoua (Qammoua Plain), at 1,437m asl, in Akkar District. This is an agricultural plain with wheat and other summer crops as well as pip fruit and stone fruit. As with the rest of the trail, there are also wild tulips, cyclamen, iris, poppies, and some 100 other varieties of wild flowers – environment appears in good condition.

Qammoua forest forms a backdrop to the plain rising to the mountains at the extreme end of the Mount Lebanon range, at around 1,600 m. Qammoua is considered an important tourist centre. The surrounding heights rise to 2,454 m. The forest, is thought to be at least a thousand years old. It has an abundance of junipers, hairy oaks, cypresses, cedars and Cilician firs and is considered as one of the most important forest regions of Lebanon. It covers 30 km by 25 km, from the valley of Wadi Gehanam to the sources of Kobbayat, and from the source of Fnaydik to that of the Nassarahs of Koubayat. It is no doubt a major contributor of ecosystem services in terms of water quantity and quality. In addition, a square kilometre of hairy oak forest gives off 600 tons of oxygen per year and absorbs more than 700 tons of carbon dioxide gas.

The forest has suffered historical damage when a great number of the trees were cut down for railway sleepers and some cutting still goes on. Parts are protected as a nature reserve.

Qammoua Plain and Forest

Subject to further discussion with MoE, MoA and Akkar District, the Qammoua area could be a good locality for project activities in forest protection, responsible tourism, conservation agriculture, organic farming; possibly afforestation in collaboration with MADA; Land Use Planning with CDR and Akkar District; active quarry management and disused quarry rehabilitation. Consideration of National Park status as pursued by MADA[87] with MoE new legislation. Major ecosystem services to benefit are in all the four broad categories:

[87] Hydrological Analysis and Vulnerability Mapping of Qammoua and the Surrounding Area, 2010

provisioning, particularly in the production of water; regulating, as in the alleviation of climate change through CO2 sequestration; supporting, as in nutrient cycles, crop pollination, medicinal herbs; and cultural, as in spiritual, historical and recreational benefits.

Potential project locality visit in Mount Lebanon Governorate, Kfardibean

Kfardibean has been a municipality since 1912 – it is one of the largest in area in Lebanon
Mzaar Kfardibean is largest ski resort in Middle East, extending 80km, altitudes between 1,913 and 2,465 m; Booking.com lists 13 hotels
Faqra is home to well preserved Roman temples, columns, altars and rock cut tombs; also a natural water-crafted bridge called "Jisr al-Hajar" or the "Stone Bridge" with an arch measuring 38 m
The need for awareness brought up continuously; Very enthusiastic
Claim to have Master Plan with zoning – more likely, something like a plan is being targeted, called a “town file”, which will comprise a descriptive d-base of situation
All quarries are on private land but owners considered cooperative
Claim quarries ready for rehabilitation exist – both abandoned and operational
Observed operational quarry, high impact, little or no constraints obvious
Wish to identify impacts and then go for solutions – would work with project on this
Waste management has been addressed – or will be addressed; aim is zero waste through recycling and composting. A certain amount of littering visible after snow melt
Junipers planted on alpine exposed summits (otherwise bare except for ground hugging, adapted vegetation). Each sapling protected individually; survival rate not known. Lack of appreciation that trees and forests may not always be the most desirable outcome from a piece of land. It is unlikely that the areas visited were ever covered in junipers.

Subject to the survey under Output 1.1, further discussion with MoE, MoA and Governorate, as well as the Mayor, the Kfardibean area could be a good locality for project activities in reforestation, responsible tourism, conservation agriculture, organic farming; Land Use Planning with CDR; active quarry management and disused quarry rehabilitation. Major ecosystem services to benefit are in all the four broad categories: provisioning, particularly in the production of water; regulating, as in the alleviation of climate change through CO2 sequestration; supporting, as in nutrient cycles, crop pollination, medicinal herbs; and cultural, as in spiritual, historical and recreational benefits. Emphasis for LDN could go into the effective management of tourism and the protection of alpine ecosystems in addition to forests.

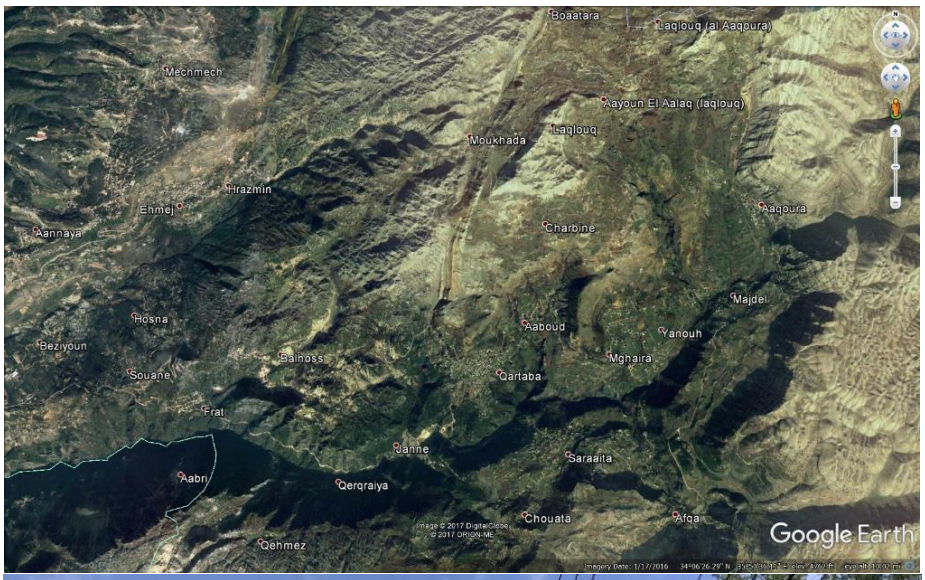
Potential project locality visit in Mount Lebanon Governorate, Ehmej

Ehmej is located in the District of Jbeil. It is part of the Federation of Jbeil District Municipalities which comprises of 14 municipalities. The municipality showed high interest in the project and its objectives.

DGUP designated mountain lands for agriculture and flat lands for residential, creating a challenges for agricultural development in the area. Land use plans have been undertaken but not yet finalized.

A USAID project prepared a simplified development plan for Ehmej village in 2014 (Arabic copy provided)

A lot of the masha’ (municipal mountain lands) have been degraded by quarries and other activities. The municipality has stopped all quarries on its lands and believes there is potential to work with the private sector on rehabilitation pilots.


Boaatara
Laqlouq (al Aaqoura)
Mechmech
Ayoun El Aalaq (laqlouq)
Laqlouq
Moukhada
Hrazmin
Ehmej
Aannaya
Aaqoura
Charbine
Majdel
Hosna
Aaboud
Yanouh
Beziyoun
Balnoss
Mghaira
Souane
Qartaba
Frat
Jaane
Saraaita
Aabri
Qerqraiya
Chouata
Afqa
Qehmez
Google Earth

Development projects in the region include two hill lakes constructed by Green Plan and funded by IFAD. Another hill lake was funded by BLC (a local bank). Below are some ponds used for agricultural purposes in the area.

The municipality has an agricultural committee (headed by Mr. Abi Sa'ad) to follow up on agricultural issues and projects. Work has been done with farmers to improve milk production, economic planning, tree production.

There is no grazing in Ehmej, however in Aaqoura, over 6,000 cattle use the rangelands. Another rangeland used is in Afqa-Mnaitra. The set up for grazing is as follows: the union (or municipality) rents out the grazing

rights in the area to an individual who manages it by charging shepherds to graze in the area. Some photos below illustrate the nature of the site in Afqa-Mnaitra.

According to shepherds encountered during the site visit, who have been coming to the area for over 15 years from Arsal, the number of cattle using the land has increased drastically, arriving earlier in the season and grazing on young plants before they have had a chance to grow properly.

Ehmej has developed several hiking trails through a USAID project and are now developing more with LMT. The area is suffering from certain tree diseases affecting some of the Junipers.

The municipality is working with the USAID funded Baladi CAP to turn part of the forest to a protected area. However, they lack the means to fight forest fires in mountainous areas.

The municipality is working on developing ecotourism guidelines for operators. Arz Ehmej (http://www.ehmej.org/en/come-and-enjoy-the-wonderful-nature-at-arz-ehmej/) operated by the municipality is considered as a low impact responsible tourism accommodation facility with caravans and a small lodge. Another site is currently being developed in the area contains 60 units, catering to more luxury tourism.

The USAID LIVCD project has funded the installation of an apple fridge in the municipality, as seen below.

Potential project locality visit in Akkar El Attika, North Lebanon

The area has large forests and agricultural areas. Limited rangelands and not much herders in the region we visited. Of course, there are many water sources and the Qammoua plain.

Deforestation because of illegal wood cutting and forest fires. So there is a need for forest protection and also improved management. Apparently, they are facing difficulties in getting the approvals from the Ministry of Agriculture to prune the trees and clear the forests. This can be tackled in the project. My feeling as well is that they consider the construction of roads within the forests as a requirement for its management however the municipality may not have the right technical insight to determine this. So, there is capacity building potential here as well. Attached is a photo a forest site that was burn about 5 years ago,. It also looks like the new trees are not being left to grow again because they look like they have been chopped off and the municipality was saying that some people are collecting wood from this area. Another issue that was highlighted is that the forest rangers are not so "present" and support is needed there.

Urban sprawl and quarries (land management): although not mentioned explicitly by the municipality, the area has obviously started to experience urban sprawl and land degradation issues as a result. We noticed a lot of new houses under construction between the agricultural lands. So there is potential to look at land-use management and improve that. We saw a couple of quarries on public land which are not too big and have been stopped by the Municipality. They are located near or practically in the forest areas so they have good potential for rehabilitation. Photos attached. The VP Mayor confirmed that they do not allow any new quarries but the issue is there are massive ones on the other side of the mountains in Fneidik which is another municipality that is difficult to work with (powerful mafia). There are historic land disputes and quarrels over the Qammoua area with that municipality.

Wastewater pollution: seems like this is a major issue and although beyond the scope of the project was flagged during the discussions. I also have to mention here that the municipality is taking the initiative to construct somewhat "big" dams or catchments to collect run-off and rainwater. It looks like these are being done without the required technical and more important, environmental assessments so there is room to work on these issues.

Tourism: the region has high potential for rural and responsible tourism. The Qammoua area in specific looks like it is being used for tourism purposes and not in very sustainable ways: mostly restaurants, motorcycle and winter sports that are not sensitive to the environment etc.

Discussions and exchange of emails with the Society for the Protection of Nature in Lebanon (SPNL)

Shared background documents on the hema project of Aakoura as follows:
http://www.spnl.org/arc-de-triomphe-at-hima-aakoura/
http://www.spnl.org/please-welcome-spnls-18th-hima-at-aakoura-mount-lebanon/

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CEPF FINAL PROJECT COMPLETION REPORT
MEET retroactively

Organization Legal Name:	Society for the Protection of Nature in Lebanon (SPNL)
Project Title:	Demonstrating Community-based Sustainable Management of Important Eastern Mediterranean KBA in Anti-Lebanon Mountains
Date of Report:	April 2015
Report Author and Contact Information	Pascal Abdallah and Bassima Khatib

CEPF Region: MEDITERRANEAN BASIN BIODIVERSITY HOTSPOT

Strategic Direction: Strategic Direction 3: Improve the conservation and protection status of 44 priority key biodiversity areas

Grant Amount:

Project Dates: **1** March 2013 – 28 February 2015

Implementation Partners for this Project (please explain the level of involvement for each partner):
The implementation partners of SPNL for this project are:

- **The municipality of el-Fekha** (two different mayors: Me. Antoine el-Khoury and Dr. Nabil Mehiyyeddine, but same municipal board). The municipality of el-Fekha adopted the project on the long term and facilitated all its activities in all its phases. It has first issued a municipal decree declaring all the public lands of el-Fekha as Hima. It made the field and social assessments tasks easy on the experts by assigning a municipal police representative to accompany them on the field. It adopted and assisted to most of the meetings, training sessions and events during all the life of the project. It has adopted the grazing management plan and is trying to take some decisions with regards to the COOP's demand for grazing control and organization over el-Fekha lands.

- **The Ministry of Agriculture**, it is the public authority which regulates the work of agriculture cooperatives, such as the COOP of the Small Ruminants Shepherds of el-Fekha, which has been founded by SPNL under this CEPF KBA Hima project. The ministry accompanied all our foundation phases in a close way.

- **CREADEL, a local association** represented by Dr. Akram Succaria and Mrs. Bissane Succaria, which deals with ecological and cultural development aspects with focus on women and youth groups.

They helped in disseminating the awareness among the local population and helped in some training sessions and events coordination.

- **Individuals:** Mr. Tony Nasr, a local activist and volunteer played the role of a local coordinator for the project. Eliyya Nasr, a local farmer volunteered in assisting Tony Nasr. They have helped in daily details of coordination between SPNL and the local community, in organizing training sessions and meetings and activities implementation.

- Cooperative for small ruminants established within the project who adopted the grazing & management plan, and advocating towards its implementation.
- Lastly, the local community targeted through awareness campaigns & open event; and with special concentration on shepherds as the target for this project.

Conservation Impacts

Please explain/describe how your project has contributed to the implementation of the CEPF ecosystem profile.

The Hima el-Fekha project's activities are in line with the CEPF strategic direction number 3 which is "to improve the conservation and protection status of 44 priority key biodiversity areas". The project has contributed to the fulfillment of these objectives by first making the elected municipal board of el-Fakiha and a considerable number of the local population aware of the need to adopt a bottom-up sustainable management approach of their natural resources through the Hima community based approach; where the Hima conservation approach is a suitable approach that provides this link between livelihood and sustainability through participatory approaches, by including the socioeconomic context in biodiversity conservation with activities targeting poverty reduction, governance, enhancing development plans through mainstreaming KBA conservation into development plans and sustainable use of natural resources.

and secondly by founding a Shepherds Cooperative, which is stressing on the municipality to implement the zonation plan, to support the grazing management plan, and act towards the traditional violations of their grazing lands by the shepherds of the neighboring villages.

Hima is a traditional approach for the conservation of natural resources that has been prevalent in the Arabian Peninsula for more than 1500 years. It started with the tribal system and the need to secure their livelihood in harsh environment. The Hima approach evolved with the Islamic culture that added to it values such as equity, common good, equal opportunity, common decision making,…

Since 2004, SPNL is promoting the "Hima" community based approach for the conservation of these key biodiversity sites in collaboration with municipalities-local authorities. This approach concentrates on the involvement of local communities in decision making, promotes sustainable use of natural resources, and supports poverty alleviation through providing alternatives for income generation.
Since 2004, SPNL has re-established 16 Himas, in key biodiversity areas; where SPNL is merging the traditions and values of the Hima approach with the modern scientific techniques, such as identification of ecological sites, stakeholder analysis, and using participatory approaches for involving the local communities throughout the visioning, planning, and implementation.
Hima projects concentrates on scientific research (social & ecological), situation analysis, and developing management plan for the Hima sites that takes into consideration poverty alleviation & providing alternative ecologically friendly job opportunities for the local communities that raises their livelihood and quality of life (such as ecotourism, Bed & breakfast facilities, visitor centers, guiding in nature, cultural artisana and food,….).
SPNL has been advocating for the promotion of the Hima concept on national, regional, and international basis. It is adopted by the Ministry of Environment within the national draft decree for protected area management in Lebanon, and adopted by BirdLife International, IUCN, MedWet, WANA Forum,...Also SPNL was the leader for the establishment of the "Hima Fund" in Qatar for the conservation of Hima and Globally Threatened Species. Another achievement was the adoption of Motion 122, for promoting and supporting community based resource management and conservation (including Al Hima), by the IUCN during its 5th World Conservation Congress in Jeju- South Korea during September 2012, which was co-presented by SPNL and the Ministry of Agriculture, Forestry, Environment and Water in Austria. SPNL was awarded in June 2013 the BirdLife Partnership Award for the revival of the Hima approach and contributing to improving hunting management in Lebanon, in addition

to the Best Practices Award from the UN-Habitat and Dubai Municipality for preserving the Qolieleh Marine Hima.
The Hima system has proved to be the best solution for sustainable use of natural resources and for the conservation of culture and traditions.

Please summarize the overall results/impact of your project.

We have in Hima el-Fekha after two years of the beginning of the project the following successes and achievements:

- Municipal decree, declaring all the lands of the village of el-Fekha as Hima protected area.
- First serious scientific field assessments (Flora, Grazing management, Birds, socio-economic)
- Management Plan with Zonation map
- Ecotourism Strategy with thematic hiking trails and signage
- organization of 2 open community events related to ecotourism and local natural and cultural resources
- 30 women trained on hand made traditional carpet making techniques with equipment and material distributed to the participants through a parallel project.
- Marketing study for traditional carpets of el-Fekha
- Participation to 3 national and 2 international exhibition with the carpet carftswomen of el-Fekha
- Women empowerment via 2 training programs (3 sessions on Women rights and her role in the society; and 7 sessions on “starting her own business) through project funded by UN Women Fund for Gender Equality.
- 8 sessions training program for the shepherds on COOP foundation and management
- 2 trainings for the shepherds on health and hygiene of the farm and the herd
- Many vaccination sessions with veterinarians
- Small ruminants Shepherds COOP of el-Fekha with 10 members, established and recognized officially by the government
- COOP board and elected director representative, with 1 year salary contract.
- COOP Milk Center rented and equipped by LACTIMED project, with standards formulated by students of the American University of Beirut (AUB) at the faculty of agriculture.
- Brochures about the Carpet of el-Fekha, and Souq el-Hima market, and a booklet of Hima el-Fekha, and a field guide (300pages) of the semi-arid region of el-Fekha flowers and shrubs.
- Development of a short film on shepherds’ livelihood & linkage with nature conservation.

All this has resulted with success stories and positive impact on the local population who became a lot more aware about the sustainable conservation approach of SPNL’s the Hima concept, and they are asking for more projects that enhance the conservation in parallel to socio-economic aspect, such as tackling the revival of the carpet craft along with other local handicrafts such as needle work, and food production especially which is related to Kishk (Fermented milk powder) and Apricots and Anise which is typical to Northern Beqaa region.
The impact is huge, because it is reflected as well by the demand made by the ministry of agriculture to replicate the experience of the COOP foundation in a participatory way to other regions of the Beqaa. It happens to be the first COOP of its kind in the Beqaa Valley for shepherds as testified by the Ministry of Agriculture.
Even at the level of the municipality, there is continuous demand towards SPNL to find solutions and funding for projects mainly related to water issues and to organizing hunting and to youth support in addition to complementary support to the established shepherds coop.

Planned Long-term Impacts - 3+ years (as stated in the approved proposal):

To improve the conservation status of key biodiversity areas in Lebanon.

Actual Progress toward Long-term Impacts at Completion:

The project activities and positive results provide a **model for sustainable management of grazing land** and a **model for reviving traditional grazing practices**, replacing the un-sustainable practices of grazing that affect the Anti-Lebanon Mountains.
The ministry of agriculture is willing to work closely with SPNL to **advocate these practices on national level** and to be **adopted within the national policies**.
Because the municipality has adopted the Hima community based approach for sustainable grazing, it will be a **case study to be adopted for sustainable management on national basis**.

Further, the lessons learned from the project in **involving local communities and shepherds in Hima management would provide the resources for future replication**.

The creation of the Souq el-Hima Market is galvanizing the efforts of different Himas under one flag. This encourages the different communities in each Hima to support the global project at a national level.

Meetings are being held with the ministries of agriculture and environment to replicate the Hima el-Fekha experience in its different components (adoption of Hima community based approach in natural resource management, sustainable grazing management, revival of traditional grazing practices, ecotourism strategy)

Planned Short-term Impacts - 1 to 3 years (as stated in the approved proposal):

To reduce the grazing threatening activities in Anti-Lebanon Mountain KBA in Lebanon by end of the project through community based conservation and management.

Actual Progress Toward Short-term Impacts at Completion:

It is important to note that the municipal council are convinced about the importance of their ecosystem and the need for its conservation; this was materialized by the issuance of the Hima municipal decision declaring / 59137.795 Km2/ as Hima community based conservation area which is a great achievement for the project. Several studies (fauna, flora, grazing, socio-economic,…) has led to the development of management plan and zonation plan for the Hima proper management and sustainable use of resources (strict conservation area for identified threatened species, area for sustainable use of resources). Please see Hima zonation map.

The creation of the Shepherds COOP will create a synergy at the level of el-Fekha shepherds to act in solidarity to defend their rights in grazing on their lands. This will encourage their municipality to support them in implementing the zonation plan and the grazing lands control. The collision of the Fakiha shepherds in one institutional entity would help them raise their voice for the proper management of their land. They are convinced of the need for the grazing management plan and they endorse its application. They already started advocating towards the implementation of the grazing management plan with the municipality, which would reduce the grazing pressure on the ecosystem.

On the other hand, the carpet revival project is closely related to the shepherds livelihood improvement because the sheep provide the raw material for the handicraft, and this has already encouraged the shepherd's women to start again producing wool handicrafts other than the carpets.

The ecotourism strategy with its thematic water trail and wool trail link the shepherds in the eastern Anti-Lebanon to their village and to the arable lands to the west side of the village. The tourist experiences the authentic life of the shepherds, the farmers, and the craftswomen. Services of accommodation and food are available to complete the experience of the tourist, and allow him to extend his stay in the region and contribute positively to its local economy.

The grazing management plan & zonation are understood & adopted by the shepherds. They are advocating towards the municipality to support its implementation.

The COOP is now a reality. The Milk Center will start its activities by end of May 2015, supported by LACTIMED that provided them with equipment. So the impact on the Shepherds will be tangible, because this year they will start having better control over the milk market that was dictated by the milk traders. Also they will be able to start producing dairy products at a small scale this year too.

The carpet handicraft women will have the chance in May as well to participate to two major exhibitions in Beirut, one in the City Center of the capital Beirut, and the other in the yearly Garden Show exhibition in Beirut Horse course stadium.

It is important to highlight that socio-economic alternatives/benefits are highly important to be coupled with the conservation efforts, all within the Hima based approach for conservation. These socio-economic benefits linked to the Hima increases ownership by the community and their endorsement and adoption of the conservation efforts as it supports poverty alleviation for the local community; thus ensures sustainability for the future.

Please provide the following information where relevant:

Hectares Protected: The declared Hima area in Fakiha is around 59,138 Km2 **declared for sustainable use of resources.**

The Anti-Lebanon Mountain Range is part of the Grazing Management implementation. The lands that will be controlled by the municipality and the shepherds of el-Fekha are a small zone today as a pilot area, but will extend surely over the years, when the municipality will gain the experience and the courage to enforce the law over all its lands. This control will be translated into conservation after at least three years of continuous management.

Part of this area is the strict conservation zone which is located at the main water source of the region: the Rouss el-Aain or Nabaa el Fekha Spring. It is 1 Km2 Hectare wide. This is the strict conservation area within the Hima where threatened species were identified.

Species Conserved: Since the Anti-Lebanon Mountain range represents 65% of **endemic** species we can consider that the grazing management system will improve the status of the flora of the region, which is characterized by shrubs, short or scrubby vegetation , and relics of Juniper, wild almond, wild plum and hawthorn trees. Among the typical vegetation of this region that will directly benefit of the resources management are the following:
Eryngium desertorum (Desert button snake-root)
Centaurea onopordifolia (Cotton-thistle-leaved knapweed)
Astragalus baalbakensis (Baalbek milk-vetch) (restricted range species)
Astragalus cruentiflorus (Red-flowered milk-vetch)
Astragalus *trifoliolatus* (Three-leafleted milk-vetch) (site-restricted species)[88]

As for the two birds which allowed the site of Hima el-Fekha to be classified as a potential IBA site under category A1 (Globally threatened species) and which will benefit from the same management measures undertaken in the Anti-Lebanon mountain range, as mentioned in the bird's assessment, they are:

- The Cinereous bunting (*Emberiza cineracea*) (Near Threatened) and,
- The Saker falcon (*Falco cherrug*) (Endangered) that was spotted wintering in the Hima el-Fekha area. [89]

Further direct conservation efforts and projects should be conducted here to protect these species in parallel to the grazing management plan and the ecotourism strategy.

Corridors Created: Not Applicable.

Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives.

Successes:

The short term objectives are reached. Even though the project's life is relatively short, many achievements have been realized in Hima el-Fekha. The most important achievement is the adoption of the Hima sustainable development approach by the local community and the local authority represented by the municipality. Within the main component of the project which is grazing management, the creation of the COOP is considered the guarantee for pasture resources protection and rehabilitation of the grazing lands.
The carpet handicraft revival is another achievement. 12 women are ready today to produce the traditional natural wool carpet of el-Fekha.
The long term objectives are on the right track, but in order to implement the action plan described in the management plan and in the ecotourism strategy, many years are needed.
During the life time of the project, the local community has been supported economically because all the activities that has been conducted at Hima el-Fekha were outsourced from the local community; for example the weaving looms (30 wooden looms and 30 metal looms) and the equipment (wool spinning wheels) have been made by carpenters and smiths from el-Fekha, and the trainer on carpet weaving skills is a lady from the village too. In addition to all the food catering which was provided by local people of el-Fekha.

Challenges encountered:

- Security and safety situation in the Northern Beqaa region that affected implementation of project activities especially field surveys.
- Change in the mayor of the municipality which delayed implementation a little bit until an overview of the project was explained (3 years rotation between the community main groups Christians/Muslims)

Were there any unexpected impacts (positive or negative)?

The impact of the CEPF – Hima el-Fekha project has no negative impacts. The impact was very unexpectedly positive, because the region was in critical need for protecting its natural resources and in finding economic alternatives for the inhabitants without depleting the natural resources which are already suffering of over usage. The adoption of the grazing management by both the local community of the shepherds and the municipality made positive impact.

[88] Status according to article "Important Plant Areas of the South and East Mediterranean Region: Priority Sites for Conservation.", published by IUCN.
[89] Status according to IUCN Red List website.

The revival of the carpet handicraft made positive impact. The women who produce other handicrafts and food provisions are very keen to improve the quality of their product and to find marketing channels.
The planning for a responsible hunting area (RHA) in el-Fekha is very well accepted and the local population has high expectations.
Definitely these successful achievement needs further follow up targeting shepherds coop, grazing management plan, ecotourism development, developing marketing possibilities for shepherds and craftswomen, and tackling the hunting threat in the region.

Example: One of the most important aspects of Hima el-Fekha is that it stretches from the Anti-Lebanon mountain range in the eastern part of the Beqaa Valley to the eastern part of Mount Lebanon mountain range, via the valley bottom where the village settlement and the irrigated lands are located too. And by implementing a zonation plan and a grazing management plan that extends over lands in the both sides, trails will be created. Some trails follow the topography of the flood bed; other trails follow the water canals. These trails are used in the ecotourism strategy as well as thematic trails that drain economic benefits to the local community after they provide adequate service to the visitor, and by respecting the rules and regulation of responsible tourism.
Other trails between Himas, KBAs, and IBAs are projected by SPNL. For example a northern trails will link Hima el-Fekha with Hima Aanjar/KfarZabad. This connection between the biodiversity protected areas serves the migratory soaring birds that use the Beqaa Valley flyway when they travel between Africa and Europe.
Another type of trails would Link Hima el-Fekha to Hima Upper Aakkar located in Northern Mount Lebanon (Aakkar) and in Central Mount Lebanon (Afqa, Sannine, Kneisseh). These are the transhumance practice revival where traditional trails of seasonal movement are.

Project Components

Project Components: *Please report on results by project component. Reporting should reference specific products/deliverables from the approved project design and other relevant information.*

Component 1 Planned: Adoption of community based Hima approach for sustainable grazing in Anti-Lebanon KBA by the first quarter of project implementation:

Component 1 Actual at Completion:
The ecological values have been highlighted by doing the preliminary assessments on the natural resources, and the local authorities, represented by the municipality strongly encouraged their dissemination within the local community. This new approach has been largely adopted by the local community; and the Hima municipal decree has been declared by the municipality board for sustainable use of natural resources.

Component 2 Planned: Develop a zonation plan for sustainable grazing, and conservation of Important Plant Area:

Component 2 Actual at Completion:
Health and disease status of herds have been identified by veterinarian, and training on health and hygiene of the farm and the small ruminants has been done with veterinarian at all farm spots, and all together in another training at the Jabbouleh center of the ministry of agriculture. Traditional grazing practices have been identified and a grazing management plan has been developed by expert. Vaccination sessions have been organized in parallel with the Jabbouleh center related to the ministry of agriculture.

Vegetation cover assessment has been conducted by expert resulting with a report and a book about the plants of the semi-arid region of el-Fekha. Important Plant Areas (IPAs) has been identified according to the percentage of endemic species and of the endangered species and to the level of degradation.

Many meetings have been conducted with the mayor at the municipality for the selection of land types according to the official papers and tables existing at the archive of the municipality. Many field visits has been conducted with the mayor and with board members to identify the different lands and their actual usage. As a result, a Landownership map has been developed for the Hima site.

Based on the scientific assessments (fauna, flora, grazing and socio-economic), a zonation map highlighting strict conservation region for the threatened species, and zone for promoting sustainable use including grazing management). The zonation map was presented and explained to the shepherds and to the municipal

council where both endorsed the plan and adopted its implementation for the benefit of nature and people. The actual implementation of the zonation plan and the Hima management plan needs funding and years of implementation in order to assess and identify positive impact; thus decreasing grazing threat on the ecosystem.

Component 3 Planned: Develop a Hima management plan for the site ensuring the protection of globally threatened species, conservation of natural habitat remnants and sustainable use of resources within the participatory approaches of the Hima

Component 3 Actual at Completion:
A series of Community meetings and stakeholders meetings has been conducted to raise the awareness of the community towards protection of the natural resources and towards the adoption of Hima concept.
Trainings on Hima management plan process has been conducted with key persons and active persons.
A local action group has been identified but needs further strengthening and empowerment. It has been delayed because of difficulties related to the mandate of the municipality mayor shift rotation (3 years for Christians and 3 years for Muslims).
Several assessments has been done for the Hima area (fauna, flora, grazing management, and socio-economic), Based on their results, the management plan has been developed including an action plan has been detailed with the agreement of the local actors highlighting current threats and suggested actions of mitigation). The Hima management plan has been presented and discussed with the municipal council and the local community, who endorsed its implementation. The actual implementation of the management plan needs funding and several years in order to show impact and positive change.

Component 4 Planned: Develop shepherd income generation plan based on the revival of traditional grazing practices

Component 4 Actual at Completion:
An ecotourism strategy has been developed, based on the traditional grazing and cultural practices found in el-Fekha. This was based on the traditional grazing transhumance seasonal movement, and in parallel it was based on the farming settlements that replaces the transhumance practices due to the change in resources availability.
Hiking trails of different difficulty levels have been delineated linking the grazing lands to the village and to the carpet handicrafts. Theme trails have been identified: “Water Trail” based on the water network that starts at the Rouss el-Aain main spring of el-Fekha, and on the irrigated lands in the Nahr region. Another part of the water trail traces the line of the nahr region river side, and another part of the historical water canal called el-Qana. “Wool Trail” based on the continuity that exist between the sheep of the shepherds and the carpet makers who use the sheep natural wool.
Different activities were highlighted as well; they are related to the shepherds’ daily life: coffee preparation, “Zarb” craft making for tents separation or decoration; or related to the seasonal farming: land ploughing, crops harvesting, kishk or apricot jam making… Other activities were identified such as a day with a “Responsible Hunter” was developed too, in order to raise awareness on responsible hunting practices among youth and to support the local hunters economically.
Training sessions for youth were conducted for hiking skills, local guide skills, and for local families on local guesthouse hosting skills and responsible tourism attitude skills. Another training on hunting practices and responsible attitude has been conducted by experts to local shepherds; raising their awareness on the importance of birds and their role to protect them.
Training sessions (30 sessions of 1 month duration) on Carpet making were conducted to 30 women and 30 complete equipment sets (wooden loom, metal loom, wool spinning wheel, scissors, natural sheep wool stock of 70 kg…) were distributed to them.
Brochure about the carpets of el-Fekha has been developed. It traces its history in the region and its typical designs and making process.
A booklet about Hima el-Fekha has been developed too. It traces besides the Hima concept and principals the historical and natural features of the region, and the activities and services that helps a visitor better discover the region.
A book (300 pages) about the flora of the semi-arid region of el-Fekha has been developed as well. It is considered as the only and first direct reference about the semi-arid plants of Anti-Lebanon Mountain Range.
Indicative, directional, and interpretive panels have been developed and partially installed. It helps the visitor locate and receive minimum information about sites and activities possible in the Hima el-Fekha.
Coop involving shepherds, agricultural engineers, and craftswomen was established for small ruminants in Fakiha, 8 participatory sessions were conducted on coop establishment & management, elections of board

and director for the coop, initiation of milk collection and processing center, mobilization of equipment from LACTIMED. All these achievements help towards sustainable cooperation between shepherds and sustainable management of resources.

Component 5 Planned: **Raise awareness among stakeholders**

Component 5 Actual at Completion:
Awareness levels has been raised among the municipality board and among other key persons of the region and among the youth of the village, in parallel to training sessions that targeted the shepherds (grazing systems, hygiene and health of the herd), the shepherds wives (dairy products development, crafts development), the women of the village (woman rights, and role in the society, women emancipation; how to start your own business).
Events has been conducted to raise awareness of the importance of the natural resources of el-Fekha and on the uniqueness of these resources, in parallel to the cultural assets that should be protected. An event called "A day with the Shepherd" has been organized; and Arak making and degustation competition has been organized and a day with the Responsible Hunter has been organized. It was designed to target both the tourist (visitor) and the inhabitant (local community) of the Hima area. Awareness towards the birds' importance in the ecosystems and to the difference between local birds and migrant birds has been raised.

The women of el-Fekha have participated to tourism, or crafts exhibitions in Beirut, Byblos, Geneve and France where they were very proud of their products.

Were any components unrealized? If so, how has this affected the overall impact of the project?
All activities described in the proposal of the project have been realized.

Please describe and submit (electronically if possible) any tools, products, or methodologies that resulted from this project or contributed to the results.
List:

- Municipal decree copy
- Management plan
- Ecotourism strategy
- Grazing assessment
- zonation map
- Fauna assessment report
- Flora assessment report
- Socio-economic report
- Veterinarian report
- Brochure of carpet
- Carpet brief marketing study
- COOP legal papers
- Fakiha brochure
- Film on gazing
- Fakiha Flora Field Guide

Lessons Learned

Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community.

Project Design Process: (aspects of the project design that contributed to its success/shortcomings)
The project is very well designed. It has logical phases that help in the realization of the objectives from the awareness at the local community levels to the conservation of the natural resources and the economic result benefitting the local community, and finally the level of satisfaction the visitor has after experiencing the activities.
It is important to highlight that SPNL stresses on synergy between its projects in order to produce and ensure maximum impact for nature and people.

Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)
The Hima community based approach of conservation stresses on the involvement of the local community in the decision making process for the management of natural resources (in all stages from assessment, planning, implementation, and evaluation). Further, the Hima approach concentrates on local community empowerment, poverty alleviation in parallel with conservation which ensures ownership and sustainability. The implementation of the different activities of the projects was very smooth; only one aspect may alter its progress, the security level. But even with a lack of relative security the project continued and no components have been left apart.

Other lessons learned relevant to conservation community:
The work with local communities is not easy but it definitely can reach its objectives if well designed, planned and conducted. The most important lessons learned is to be transparent with the local community and have faith in them and accompany them to take important decisions. This process takes time, because it is very much diverse and has many ramifications. Such projects need longer periods for implementation in order to reach sustainability and durable adoption by the local community, facing the threat of changes in decision-making leaders at the level of local community.

Additional Funding

Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of the CEPF investment in this project.

Donor	Type of Funding*	Amount	Notes
OTI USAID	*Grantee and Partner leveraging*		For training women on carpet weaving
LACTIMED	*Grantee and Partner leveraging*		For equipment in the coop milk center
Contribution from UN Women FGE & EU	*Project co-financing*		For national & regional events

***Additional funding should be reported using the following categories:**

A *Project co-financing (Other donors or your organization contribute to the direct costs of this project)*

B *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF funded project.)*

C *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

Sustainability/Replicability

Summarize the success or challenge in achieving planned sustainability or replicability of project components or results.
It is important to note that the Hima community based approach for conservation of natural resources adopted by SPNL stresses on the empowerment of the local community, involvement in the decision making process for managing natural resources through participatory approaches, building / strengthening institutional setups for sustainability, promoting alternative socio-economic income generating activities in parallel with conservation. All this leads to ownership and adoption by the local community due to empowerment and linkage with their livelihood and contribution to poverty alleviation.
Below is a list of achievements in this CEPF project that helps in ensuring sustainability and safeguarding natural resources sustainable management:

- Hima el-Fekha Municipal Decree (achieved)

- National Strategy for Ecotourism in Lebanon (ongoing, it helps safeguard the natural resources in all the country and in Hima el-Fekha specifically, and generating economic benefit without depleting the natural resources)
- Hima concept adopted by the ministry of environment (ongoing, it helps in confirming the Hima concept and its approach that involves the sustainable use of natural resources by and for the local communities surrounding the Hima and stresses on the involvement of the local community in the decision making process for the site management; it is beneficial as well for linking the Hima sites together)
- COOP legal foundation (it safeguards the sustainability of the grazing chain, natural, and socio-economic; and advocating for implementation of Hima grazing and management plans)
- Interest of Ministry of Environment in replicating the success story of the coop establishment and empowerment through participatory approaches and institutional development.

All the components of the project have been developed and reached their objectives as planned. But in order to maintain their sustainability the project should benefit of phase 2 or extension over many years, because the local population needs continuous support (moral, ecological, cultural, and economic) to reach satisfactory results in protection of their resources and transforming them into ecotouristic and economic assets without depleting them. This is a very long process. The basement is solid enough though.
Example 1: the zonation and grazing management plan needs 5 years to show the results in changes on the level of natural resources.
Example 2: the carpet handicraft needs 3 years to show some economic results, and 8 years to reach economic sustainability
Example 3: ecotourism strategy needs 6 years to be able to support the Hima heroes economically.
Example 4: Changes in environment positive enhancement cannot be testified before 10 to 15 years.

Summarize any unplanned sustainability or replicability achieved.
As explained above, the ministry of agriculture is interested in the success of participatory approaches used in the establishment of the coop, and interested in cooperation with SPNL for its replicability & upgrade on national level.
Support from LACTIMED towards the mobilization of equipment for the milk center of the coop was unplanned, but mobilized through continuous efforts built on the success of the project.

This lesson learned will encourage the municipality to tackle the issue of hunting by creating the Responsible Hunting Area as a second pilot project after the Grazing Management project as illegal hunting is the second main threat in the region.

Safeguard Policy Assessment

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.
Regarding our project, it has no need for any safeguard policy assessment or measures. The whole project aims towards decreasing the grazing threat on the Hima Fakiha ecosystem thus ensuring environmental benefits in addition to parallel institutional and socio-economic benefits for the local community.

Additional Comments/Recommendations

Information Sharing and CEPF Policy

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, www.cepf.net, and publicized in our newsletter and other communications.

Performance Tracking Report Addendum

CEPF Global Targets

(Enter Grant Term)

Provide a numerical amount and brief description of the results achieved by your grant.

Please respond to only those questions that are relevant to your project.				
Project Results	**Is this question relevant?**	**If yes, provide your numerical response for results achieved during the annual period.**	**Provide your numerical response for project from inception of CEPF support to date.**	**Describe the principal results achieved from July 1, 2013 to May 30, 2014. (Attach annexes if necessary)**
1. Did your project strengthen management of a protected area guided by a sustainable management plan? Please indicate number of hectares improved.	yes	Declared Hima (59,138 Km2)	Declared Hima (59,138 km2) see comment above on area-hectars protected	Please also include name of the protected area(s). If more than one, please include the number of hectares strengthened for each one. Hima el-Fakiha
2. How many hectares of new and/or expanded protected areas did your project help establish through a legal declaration or community agreement?	yes	Declared Hima (59,138 Km2)	Declared Hima (59,138 km2)	Please also include name of the protected area. If more than one, please include the number of hectares strengthened for each one. Hima el-Fakiha
3. Did your project strengthen biodiversity conservation and/or natural resources management inside a key biodiversity area identified in the CEPF ecosystem profile? If so, please indicate how many hectares.	yes	Declared Hima (59,138 km2)	Declared Hima (59,138 km2)	
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	No			
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1below.	yes			Time is needed in order to be able to estimate tangible socio-economic benefits. Direct beneficiaries= 20 shepherds and their families Carpet women= 20 women & their families Indirect benefit= local community of Fakiha of /12,000 people/.

SPNL is definitely interested to collaborate with UNDP within your new project that concentrates on rangelands (3 – 5 years). Aakoura suffers mainly from illegal killing of birds & unsustainable grazing, and urgent action is needed to address these issues.

Annex 18: Analysis of land cover / land use data for study areas of Akkar and Mount-Lebanon

Project Name: GEF PPG for the Preparation of a Project on: Land degradation neutrality of mountain landscapes in Lebanon (ref. 0005837)

Submitted on: 28-8-2017

Reference contact: geotri101@hotmail.com

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List of Acronyms

EVI	Enhanced vegetation Index
GEOBIA	Geographic Object-Based Image Analysis
GPP	Gross Primary Productivity
LAI	Leaf Area Index
MR	Maintenance Respiration
NDVI	Normalized Differenced Vegetation Index
NPP	Net Primary Productivity
PSN	Net Photosynthesis
SOC	Soil Organic Carbon
UNDP	United Nations Development Programme
UTM	Universal Transverse Mercator

Scope of work

The scope of this work is to determine baseline conditions in the mountain areas of Mount-Lebanon (Jbeil region) and Akkar Governorates. The following data needs will be addressed:

- A map showing the different types of land cover – forest, grasslands, agricultural, scrub, “urban sprawl”, and other will be produced for each of Akkar and Jbeil localities. Spatial distributions of the various types of landcover/land use will be presented.
- Net Primary Productivity (NPP) at a 10 m resolution will be assessed. Additional maps reflecting land productivity will be produced.
- Soil organic carbon in current forest land, cropland and grassland will be mapped for each of Akkar and Jbeil localities.
- Maps showing soil organic content in Mount-Lebanon and Akkar Governorates will be also produced.

Study areas

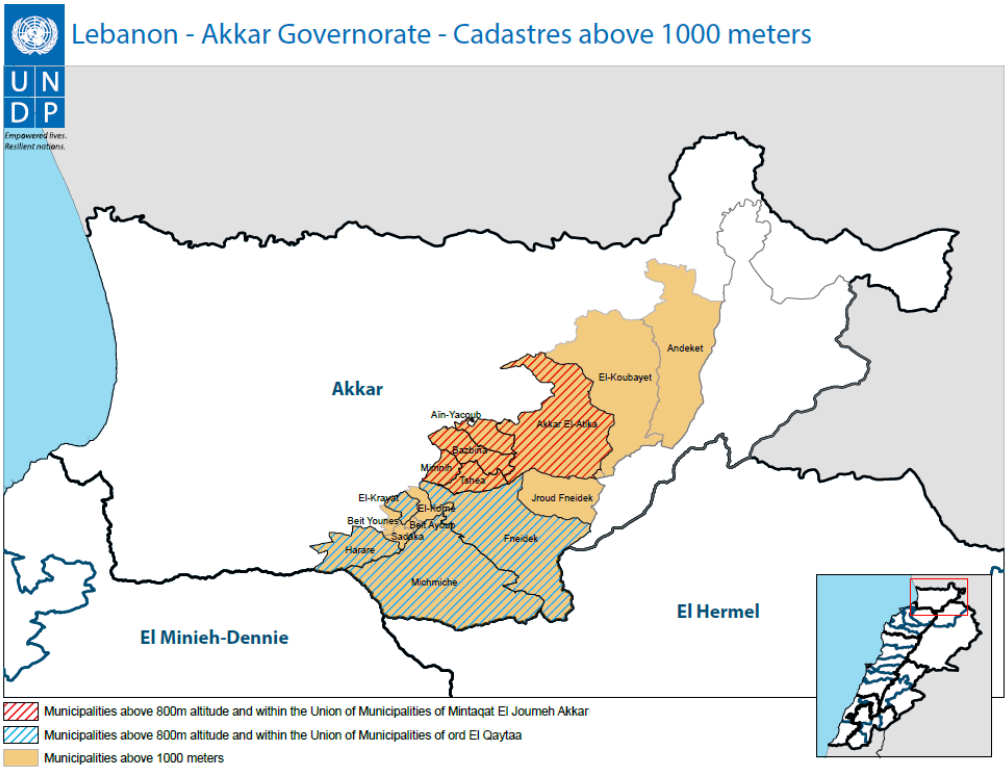
The study areas of this work were previously determined by UNDP-Lebanon. These included one study area in the Akkar Governorate and another one in Mount-Lebanon Governorate (**Figure 1**).

The Akkar study area has an approximate total area of 19,365 ha and comprises the villages/municipalities of:

Aakkar el Aatiqa, Aandqet, Ain Yacoub, Beit, Yacoub, Beit Younes, Bezbina, El Qorne, El Qraiyat, Fnaideq, Hrar, Jabal el Qattara, Jouret ej Jaaile, Memnaa, Mishmish, Qbaiyat, and Tashea.

The Mount-Lebanon study area has an approximate total area of 28,019 ha and comprises the villages/municipalities of:

Aalmat, Arasta, Afqa, Ain el bared, Ain el Ghouaybe, Ayoun el Aalaq, Bolhos, Deir Mar Sarkis, Ehmej, El Aaqoura, El Ghabet, El Hdaini, El Mejdel, El Moghiri, El Mzarib, El Qottara, Frat, Hema El Rehbani, Hosna, Jabal Homsaiya, Jaj, Janne, Lassa, Lehfed, Maaden, Maifouq, Ma Maroun Aannaya, Mazraat es Siyad, Mechmech, Qamaz, Qorquaye, Qortaba, Saqi Rechmaiya, Seraiita, Tadmor, Tartej, and Yanouh.



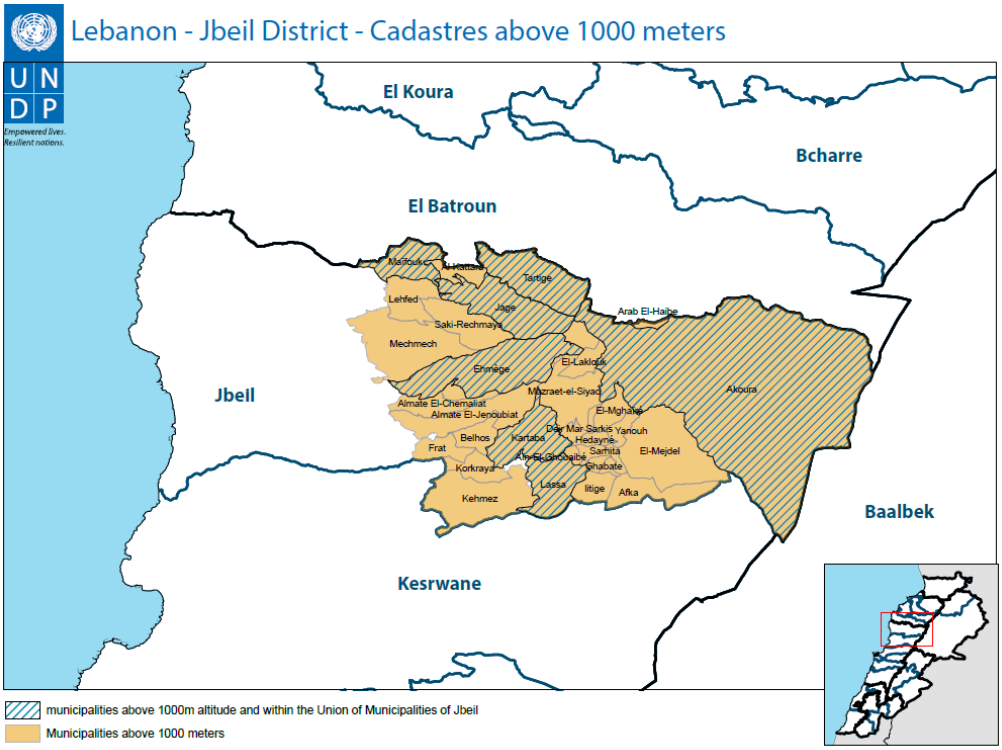


Figure 1. Location of the study areas in the Akkar (upper) and Mount-Lebanon (lower) – Source: UNDP-Lebanon

Dataset description

This work comprised the use of one sentinel-2A satellite imagery acquired on 3-10-2016. More specifically, the physical bands 2 (i.e., central wavelength at 490 nm), 3 (i.e., central wavelength at 560 nm), 4 (i.e., central wavelength at 664.5 nm), and 8 (i.e., central wavelength at 835.1 nm) with a spatial resolution of 10x10 m were employed.

Available and most recent Modis data (MOD17A3H Version 6 product) of 2014 provided information about annual (yearly) Net Primary Production (NPP) at 500 meter pixel resolution (Running et al, 2015).

The soil map was extracted from ISRIC's (ISRIC – World Soil Information. http://www.isric.org/) SoilGrids250m (Hengl et al., 2016). Whilst SoilGrids 250 m was not made to represent the state of Soil Organic Carbon (SOC) in soils (ton/ha) in the year 2000 it is globally consistent. This map was used due its high spatial resolution. It is important to note however, that global estimates of soil organic carbon have been produced in the past to support the calculation of potential emissions of CO_2 from the soil under scenarios of change land use/cover and climatic conditions (IPCC, 2006).

In addition, the administrative map of Lebanon (delineating the cadastral units across the country) and the most recent landcover/land-use map of Lebanon (produced in 2017 by the National Council of Scientific Research for the Council of Development and Reconstruction using data of 2013) were employed.

All geodatasets were projected to the Universal Transverse Mercator (UTM) coordinate system WGS 84.

Methodological notes

Annual NPP (kg C/m2) was derived from the sum of the 45, 8-day Net Photosynthesis (PSN) products from the given year. The PSN value is the difference of the Gross Primary Productivity (GPP) and the Maintenance Respiration (MR) (GPP-MR). These data were used to re-scale NPP at the 10 m spatial resolution in function of generated Normalized Differenced Vegetation Index (NDVI) values from the employed Sentinel 2A imagery. The final output was normalized to a valid maximum value of 3270 kg C/m2 in reference to the original data layer characteristics. Negative NPP values are considered as 0 kg C/m2.

Products of SOC percentage, bulk density, gravel fraction and depth to bedrock were used to calculate a predicted SOC stock for 0 – 30 cm (i.e. topsoil).

Vegetation indices were produced using the spectral bands of Sentinel 2A imagery. These included the NDVI and the Enhanced vegetation Index (EVI).

The NDVI was produced as follows:

NDVI= (B08 - B04) / (B08 + B04) Equation 1

This most known and used vegetation index (VI) is a simple, but effective VI for quantifying green vegetation. It normalizes green leaf scattering in the Near Infra-red wavelength and chlorophyll absorption in the red wavelength. The value range of an NDVI is -1 to 1. Negative values of NDVI (values approaching -1) correspond to water. Values close to zero (-0.1 to 0.1) generally correspond to barren areas of rock, sand, or snow. Low, positive values represent shrub and grassland (approximately 0.2 to 0.4); while high values indicate dense green forests (values approaching 1).

In areas of dense canopy where the leaf area index (LAI) is high, the NDVI values can be improved by leveraging information in the blue wavelength. Information in this portion of the spectrum can help correct for soil background signals and atmospheric influences. Accordingly, the EVI was produced for both study areas as follows:

EVI= 2.5*(B08 - B04) / (B08 + 6*B04 - 7.5*B02 + 1) Equation 2

The range of values for the EVI is -1 to 1, where healthy vegetation generally falls between values of 0.20 to 0.80.

Geographic Object-Based Image Analysis (GEOBIA) was employed in this work (Gitas et al., 2012). This allowed the segmentation and classification of data using of multiple-source and multiple resolution imagery. All results were produced at a spatial resolution of 10x10 m (geodataset produced in form of a shapefile).

Mapping results

A summary table of the main results obtained for both study areas is given below (Table 1).

Table 1. Summary table of main results obtained

	Akkar study area	**Jbeil study area**
Area (ha)	19365.61	28019.1
Average SOC (t/ha)	84.53	85.59
Average forest/shrubland SOC (t/ha)	86.296	89.82
Average cropland SOC (t/ha)	82.648	88.9
Average grassland SOC (t/ha)	87.65	87.87
Total SOC based on average (t)	1636975.013	2398154.76
Total forest/shruband SOC based on average (t)	978777.86	752454.4
Total cropland SOC based on average (t)	444217.29	276123.4
Total grassland SOC based on average (t)	43193.92	81534.5
Average NPP (kg C/m2)	771.31	278.95
Average forest/shrubland NPP (Kg C/m2)	812.5	350.27
Average cropland NPP (Kg C/m2)	765.79	327.31
Average grassland NPP (Kg C/m2)	590.14	224.32
Average NDVI	0.291	0.239
Average EVI	0.205	0.189

Akkar study area

A total of 514,987 homogeneous objects (with an average size of 0.0472 ha) were generated for the study area in Akkar. Each image objects was characterized by the following: area (ha), NDVI, EVI, NPPrescaled, SOC, landcover/land-use, state of road (if any), and its administrative area (Figure 2 - Figure 9).

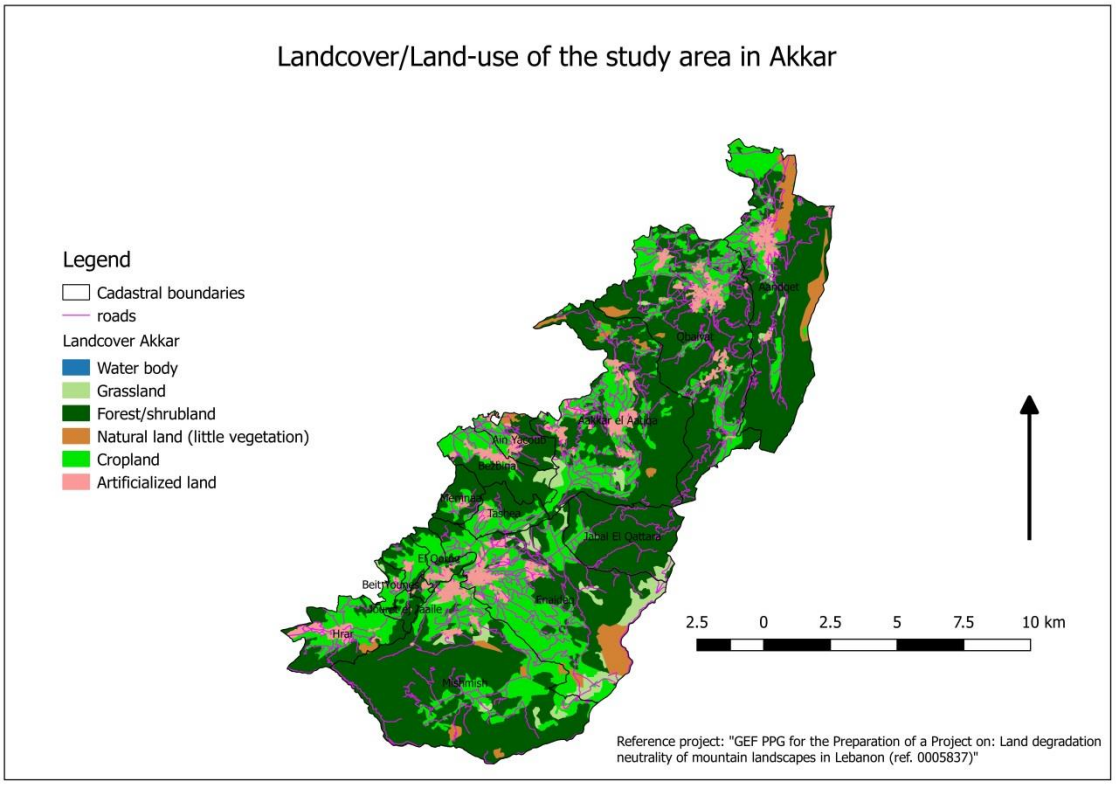


Figure 2. Landcover/land-use of the study area in Akkar

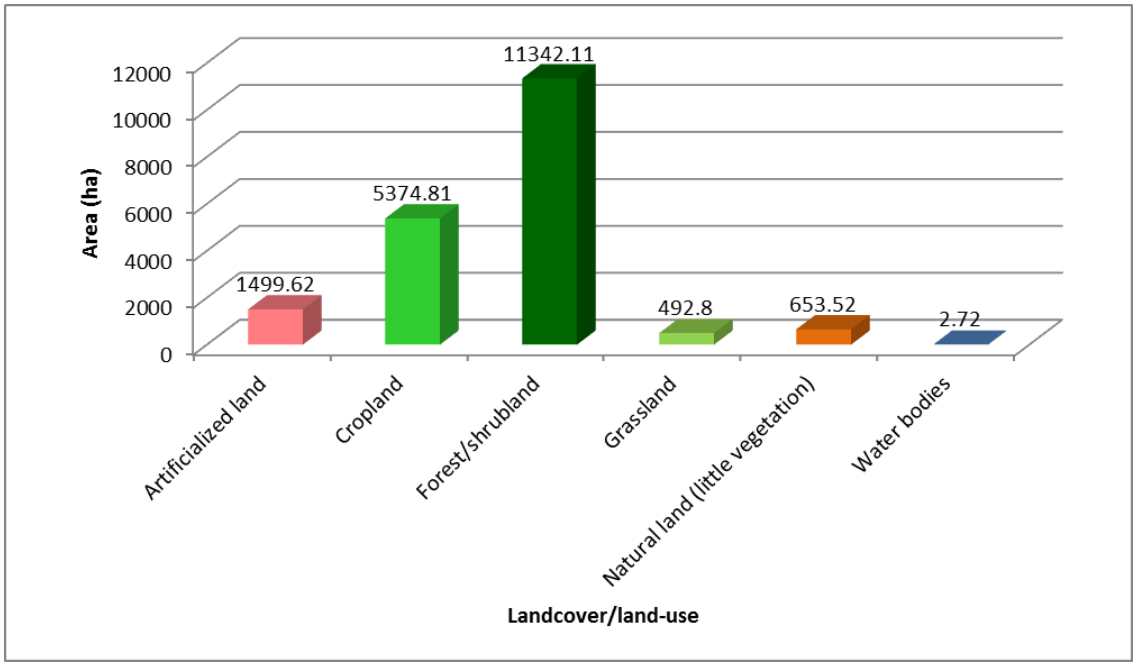


Figure 3. Extent of each landcover/land-use type of the study area in Akkar

The spatial distribution of landcover/land-use per village in the study area of Akkar is presented in the following table (

Table 2).

Table 2. Distribution of landcover/land-use per village in the study area of Akkar

Distribution of landcover/land-use per village	Area (ha)
Aakkar el Aatiqa	**2878.5**
Artificialized land	242.75
Cropland	796.62
Forest/shrubland	1715.52
Grassland	64.49
Natural land (little vegetation)	56.73
Water bodies	2.39
Aandqet	**2710.99**
Artificialized land	185.31
Cropland	527.94
Forest/shrubland	1713.5
Grassland	18.94
Natural land (little vegetation)	264.97
Water bodies	0.33
Ain Yacoub	**376.2**
Artificialized land	51.71
Cropland	89.95
Forest/shrubland	206.32
Grassland	6.7
Natural land (little vegetation)	21.52
Beit Ayoub	**47.14**
Artificialized land	9.87
Cropland	15.28
Forest/shrubland	21.99
Beit Younes	**116.55**
Artificialized land	10.72
Cropland	71.5
Forest/shrubland	30.1
Grassland	4.23
Bezbina	**577.43**
Artificialized land	52.73
Cropland	201.16
Forest/shrubland	293.42
Grassland	30.12
El Qorne	**222.2**
Artificialized land	35.47
Cropland	134.41
Forest/shrubland	51.11
Grassland	1.21
El Qraiyat	**196.47**
Artificialized land	14.11
Cropland	121.67
Forest/shrubland	60.69

Fnaideq	**2908.12**
Artificialized land	252.71
Cropland	1148.42
Forest/shrubland	1064.75
Grassland	251.39
Natural land (little vegetation)	190.85
Hrar	**768.82**
Artificialized land	100.89
Cropland	371.84
Forest/shrubland	279.13
Natural land (little vegetation)	16.96
Jabal El Qattara	**1035.61**
Artificialized land	28.91
Cropland	56.72
Forest/shrubland	922.85
Grassland	27.13
Jouret ej Jaaile	**113.84**
Artificialized land	3.06
Cropland	43.58
Forest/shrubland	67.2
Memnaa	**253.52**
Artificialized land	14.82
Cropland	49.45
Forest/shrubland	189.25
Mishmish	**3666.88**
Artificialized land	161.68
Cropland	848.48
Forest/shrubland	2513.31
Grassland	81.96
Natural land (little vegetation)	61.45
Qbaiyat	**3111.99**
Artificialized land	300.75
Cropland	728.75
Forest/shrubland	2037.72
Grassland	3.72
Natural land (little vegetation)	41.05
Tashea	**381.22**
Artificialized land	34.09
Cropland	168.99
Forest/shrubland	175.22
Grassland	2.92
Other (undefined)	**0.13**

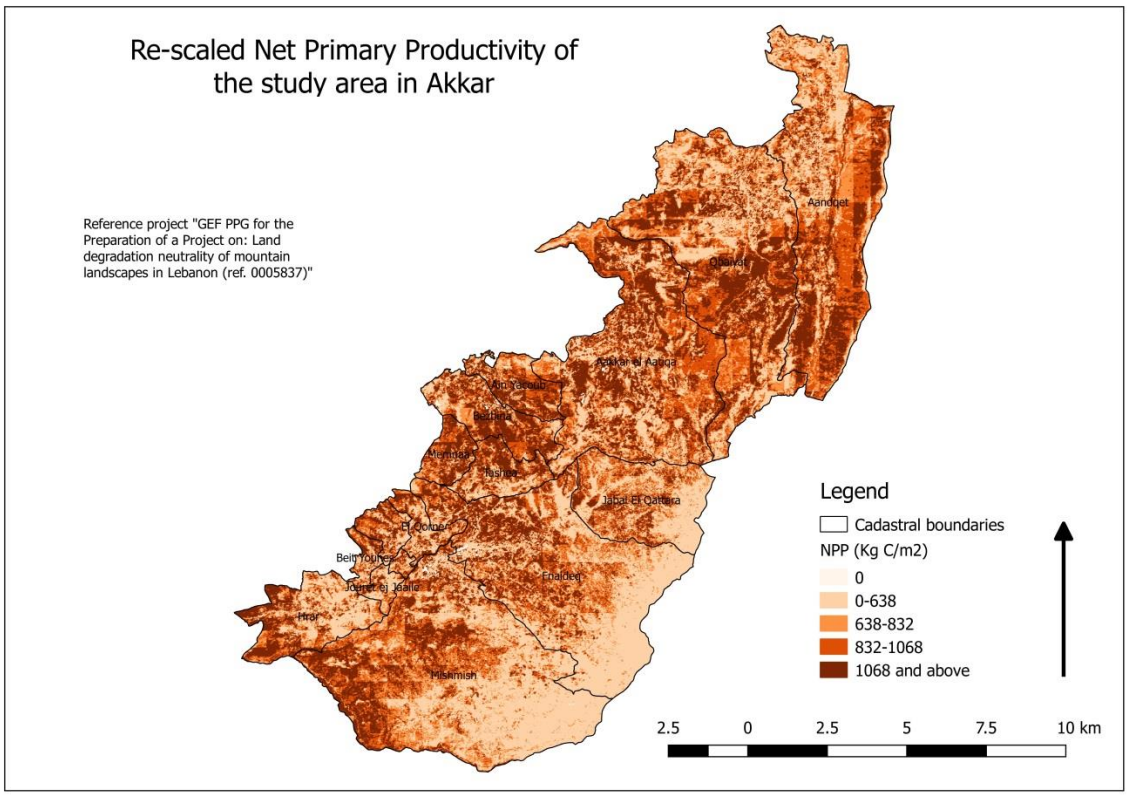


Figure 4. Re-scaled Net Primary Productivity of the study area in Akkar

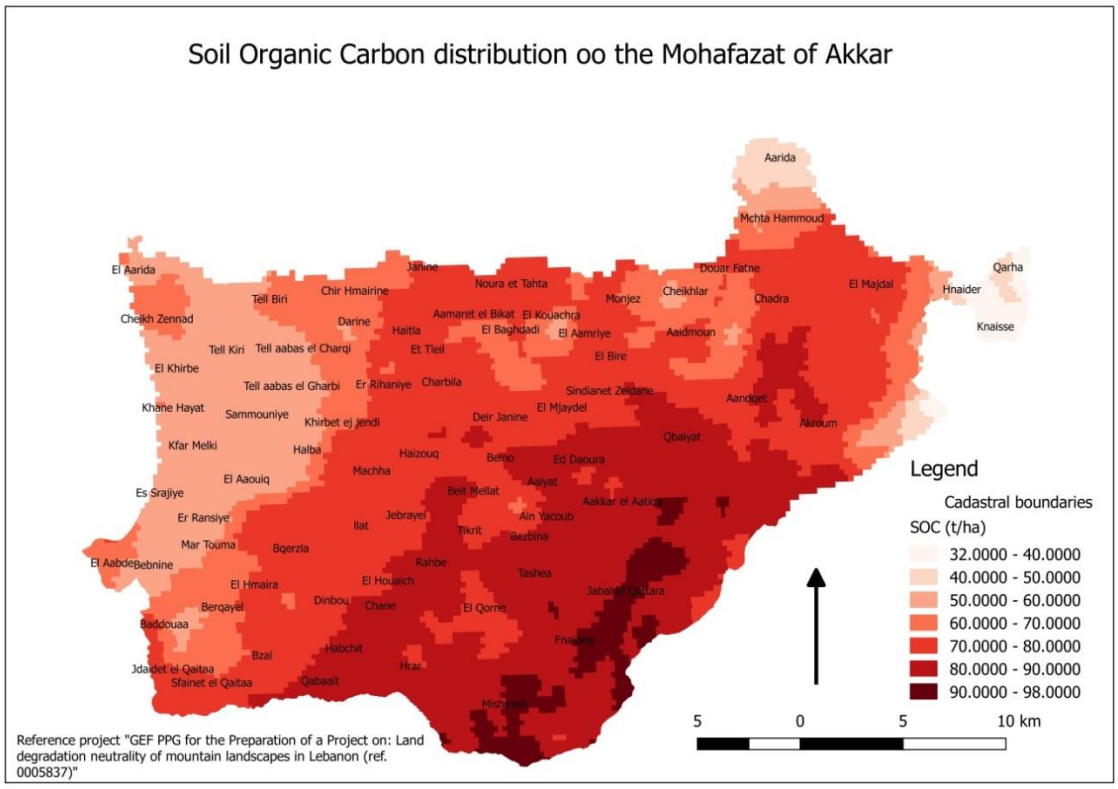


Figure 5. Soil Organic Carbon within the Mohafazat of Akkar

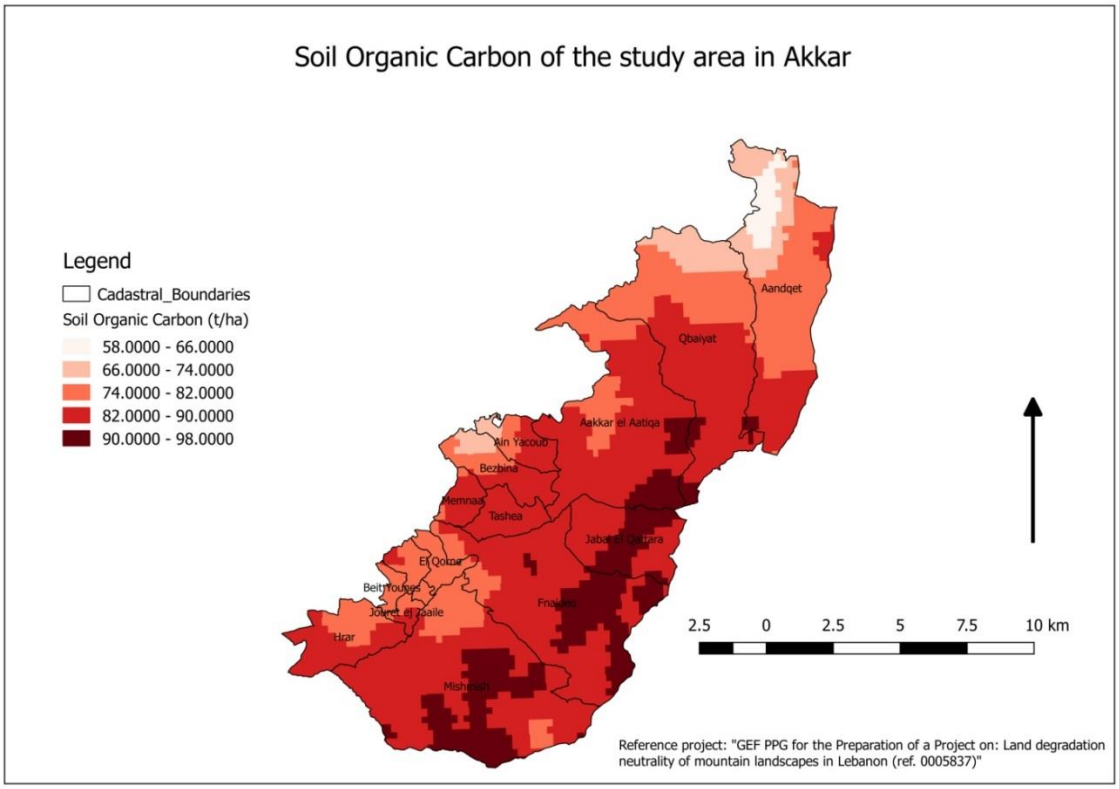


Figure 6. Soil Organic Carbon with the study area in Akkar

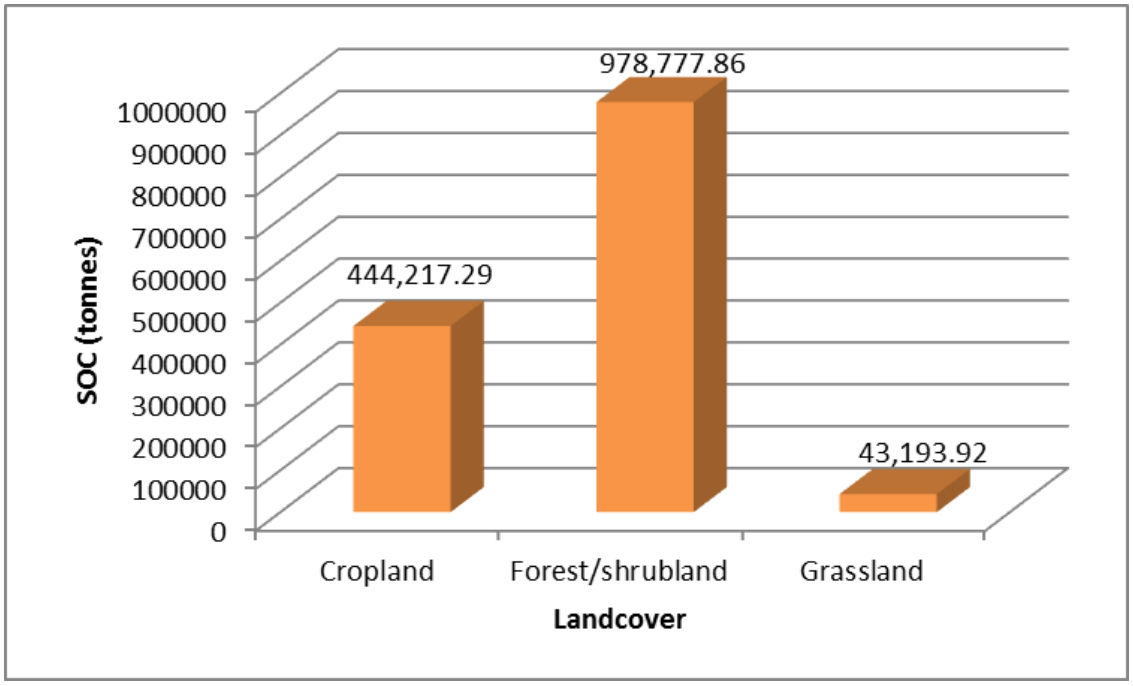


Figure 7. Distribution of Soil Organic Carbon within the main landcover categories of the study area in Akkar

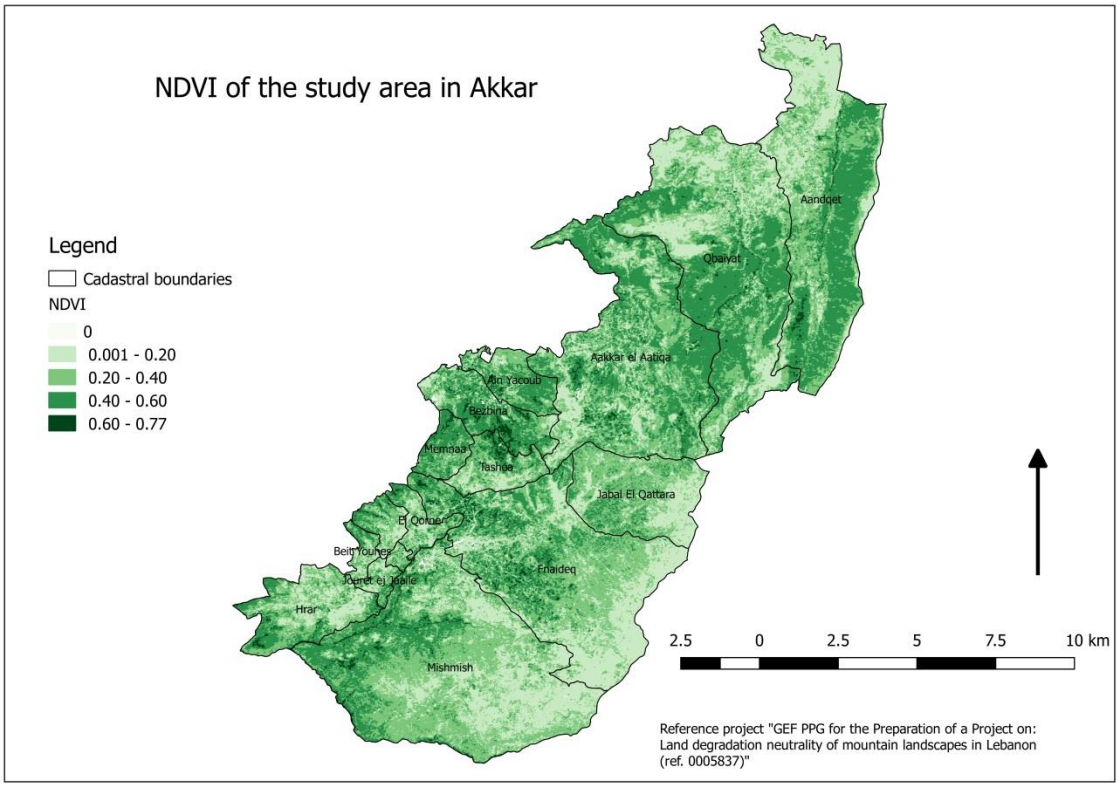


Figure 8. NDVI spatial distribution in the study area of Akkar

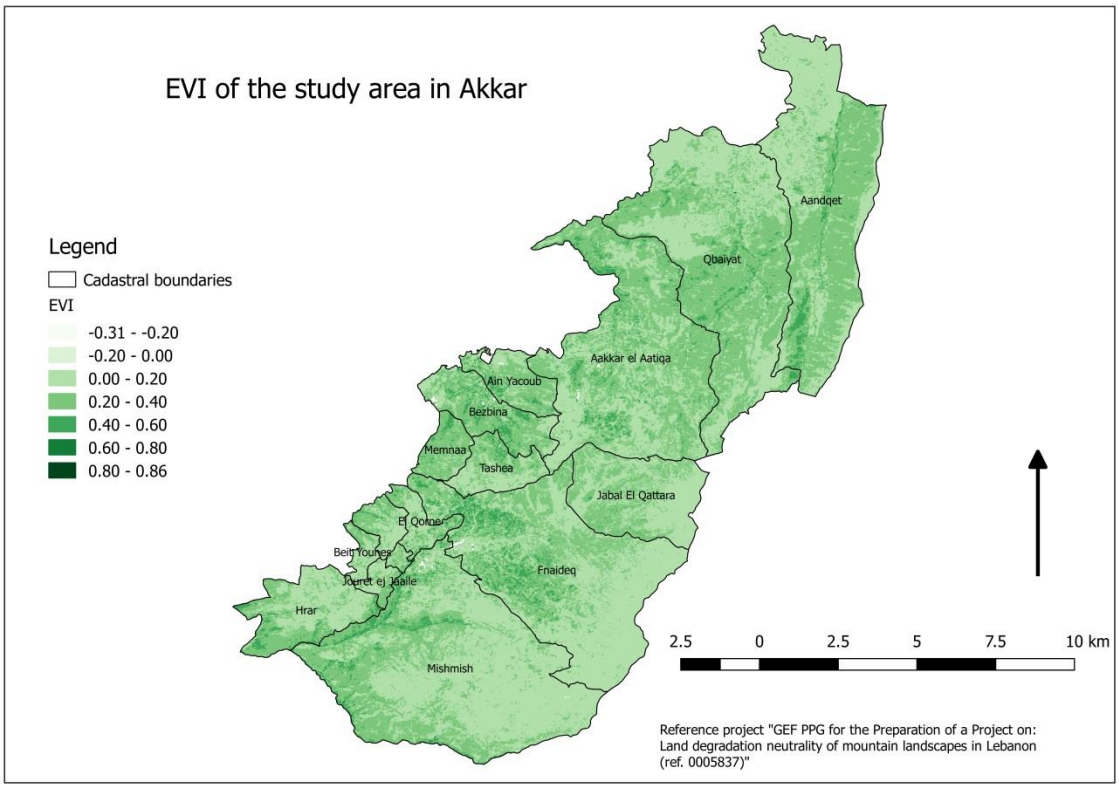


Figure 9. EVI spatial distribution within the study area of Akkar

Jbeil study area

A total of 832,311 homogeneous objects (with an average size of 0.0427 ha) were generated for the study area in Akkar. Each image objects was characterized by the following: area (ha), NDVI, EVI, NPPrescaled, SOC, landcover/land-use, state of road (if any), and its administrative area (Figure 10 - Figure 17).

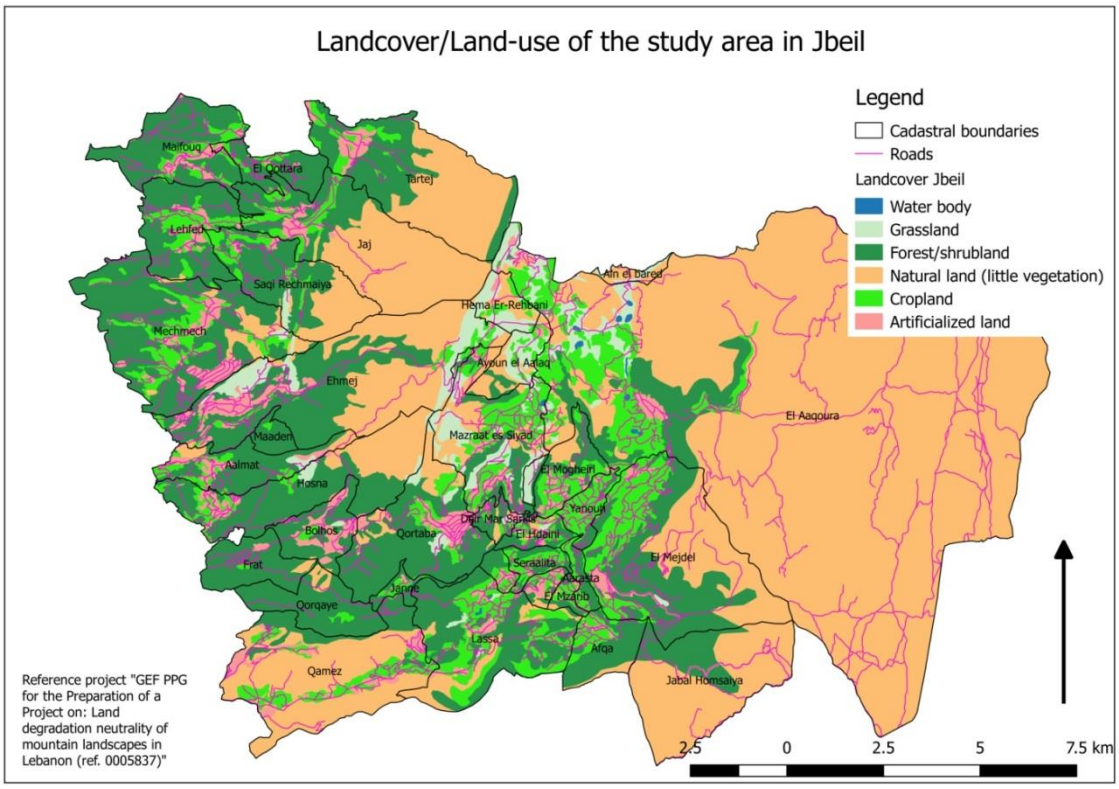


Figure 10. Landcover/land-use of the study area in Jbeil

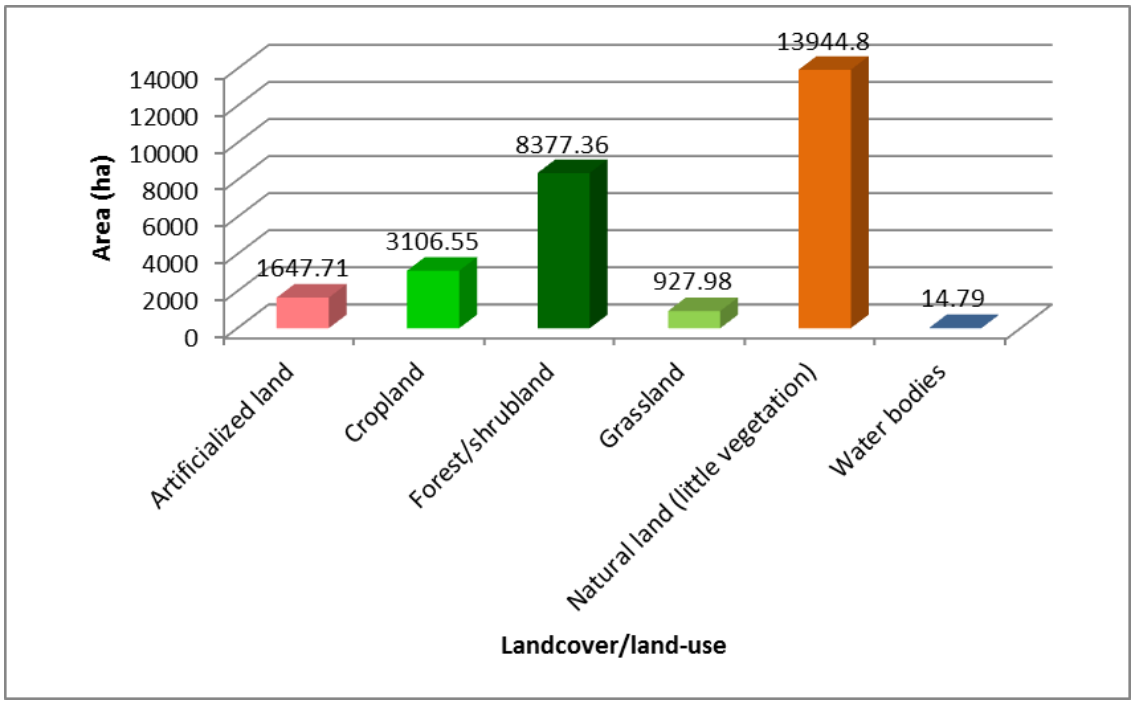


Figure 11. Extent of each landcover/land-use type of the study area in Jbeil

The spatial distribution of landcover/land-use per village in the study area of Jbeil is presented in the following table (**Table 3**).

Table 3. Distribution of landcover/land-use per village in the study area of Jbeil

Distribution of landcover/land-use per village	Area (ha)
Aalmat	**388.47**
Artificialized land	54.01
Cropland	60.39
Forest/shrubland	224.44
Grassland	11.15
Natural land (little vegetation)	38.48
Aarasta	**75.49**
Artificialized land	4.86
Cropland	28.04
Forest/shrubland	42.59
Afqa	**278.34**
Artificialized land	13.89
Cropland	68.98
Forest/shrubland	176.96
Natural land (little vegetation)	18.51
Ain el bared	**62.23**
Artificialized land	2.14
Cropland	0.35
Grassland	20.21
Natural land (little vegetation)	39.53
Ain El-Ghouaybe	**64.11**
Artificialized land	9.05
Cropland	23.8
Forest/shrubland	29.01
Natural land (little vegetation)	2.25
Ayoun el Aalaq	**210.79**
Artificialized land	6.82
Cropland	23.65
Forest/shrubland	22.54
Grassland	84.26
Natural land (little vegetation)	73.52
Bolhos	**287.86**
Artificialized land	93.3
Cropland	15.54
Forest/shrubland	173.13
Grassland	2.61
Natural land (little vegetation)	3.28
Deir Mar Sarkis	**94.8**
Artificialized land	12.53
Cropland	16.27
Forest/shrubland	47.37

Grassland	4.29
Natural land (little vegetation)	14.34
Ehmej	**1729.57**
Artificialized land	152.51
Cropland	55.86
Forest/shrubland	680.76
Grassland	186.04
Natural land (little vegetation)	654.4
El Aaqoura	**10036.72**
Artificialized land	240.09
Cropland	563.01
Forest/shrubland	385.54
Grassland	267.51
Natural land (little vegetation)	8568.5
Water bodies	12.07
El Ghabat	**70.47**
Artificialized land	19.01
Cropland	23.13
Forest/shrubland	15.59
Natural land (little vegetation)	12.74
El Hdaini	**113.58**
Artificialized land	13.34
Cropland	46.93
Forest/shrubland	37.8
Grassland	5.65
Natural land (little vegetation)	9.86
El Mejdel	**1568.77**
Artificialized land	106.8
Cropland	296.45
Forest/shrubland	619.81
Grassland	3.79
Natural land (little vegetation)	541.92
El Mogheiri	**261.02**
Artificialized land	31.25
Cropland	91.36
Forest/shrubland	96.11
Natural land (little vegetation)	42.3
El Mzarib	**54.06**
Artificialized land	6.16
Cropland	25.93
Forest/shrubland	17.86
Natural land (little vegetation)	4.11
El Qottara	**221.68**
Artificialized land	18.55
Cropland	27.52
Forest/shrubland	175.61

Frat	**298.18**
Artificialized land	16.27
Cropland	3.46
Forest/shrubland	267.83
Natural land (little vegetation)	10.62
Hema Er-Rehbani	**171.09**
Artificialized land	7.18
Cropland	22.52
Grassland	75.23
Natural land (little vegetation)	66.16
Hosna	**896.89**
Artificialized land	50.59
Cropland	65.09
Forest/shrubland	491.64
Grassland	22.79
Natural land (little vegetation)	266.78
Jabal Homsaiya	**982.58**
Artificialized land	31.15
Cropland	0.59
Forest/shrubland	217.7
Natural land (little vegetation)	733.14
Jaj	**1187.4**
Artificialized land	61.5
Cropland	109.21
Forest/shrubland	296.4
Grassland	0.07
Natural land (little vegetation)	720.22
Janne	**65.54**
Artificialized land	3.85
Cropland	16.61
Forest/shrubland	45.08
Lassa	**1008.45**
Artificialized land	59.4
Cropland	315.27
Forest/shrubland	496.63
Grassland	8.86
Natural land (little vegetation)	126.64
Water bodies	1.65
Lehfed	**537.62**
Artificialized land	50.46
Cropland	111.24
Forest/shrubland	373.27
Natural land (little vegetation)	2.65
Maaden	**87.59**
Artificialized land	0.04
Cropland	2.75

Forest/shrubland	84.8
Maifouq	**584.75**
Artificialized land	57.63
Cropland	82.53
Forest/shrubland	444.59
Mar Maroun Aannaya	**15.14**
Artificialized land	1.79
Cropland	5.45
Forest/shrubland	2.45
Grassland	5.45
Mazraat es Siyad	**778.99**
Artificialized land	78.26
Cropland	241.91
Forest/shrubland	145.21
Grassland	145.71
Natural land (little vegetation)	166.83
Water bodies	1.07
Mechmech	**1374.68**
Artificialized land	149.5
Cropland	215.9
Forest/shrubland	876.35
Grassland	11.89
Natural land (little vegetation)	121.04
Qamez	**1231.98**
Artificialized land	111.01
Cropland	164.12
Forest/shrubland	169.8
Natural land (little vegetation)	787.05
Qorqaye	**370.46**
Artificialized land	6.24
Cropland	9.3
Forest/shrubland	334.36
Natural land (little vegetation)	20.56
Qortaba	**830.51**
Artificialized land	81.57
Cropland	69.86
Forest/shrubland	539.78
Grassland	33.65
Natural land (little vegetation)	105.65
Saqi Rechmaiya	**666.87**
Artificialized land	24.24
Cropland	82.73
Forest/shrubland	338
Grassland	13.76
Natural land (little vegetation)	208.14
Seraaiita	**110.1**

Artificialized land	10.31
Cropland	55.54
Forest/shrubland	43.74
Natural land (little vegetation)	0.51
Tadmor	**39.61**
Artificialized land	1.22
Forest/shrubland	13.3
Grassland	24.65
Natural land (little vegetation)	0.44
Tartej	**1122.85**
Artificialized land	42.66
Cropland	73.33
Forest/shrubland	422.86
Grassland	0.27
Natural land (little vegetation)	583.73
Yanouh	**138.57**
Artificialized land	18.47
Cropland	91.38
Forest/shrubland	27.92
Natural land (little vegetation)	0.8
Other (undefined)	**1.38**

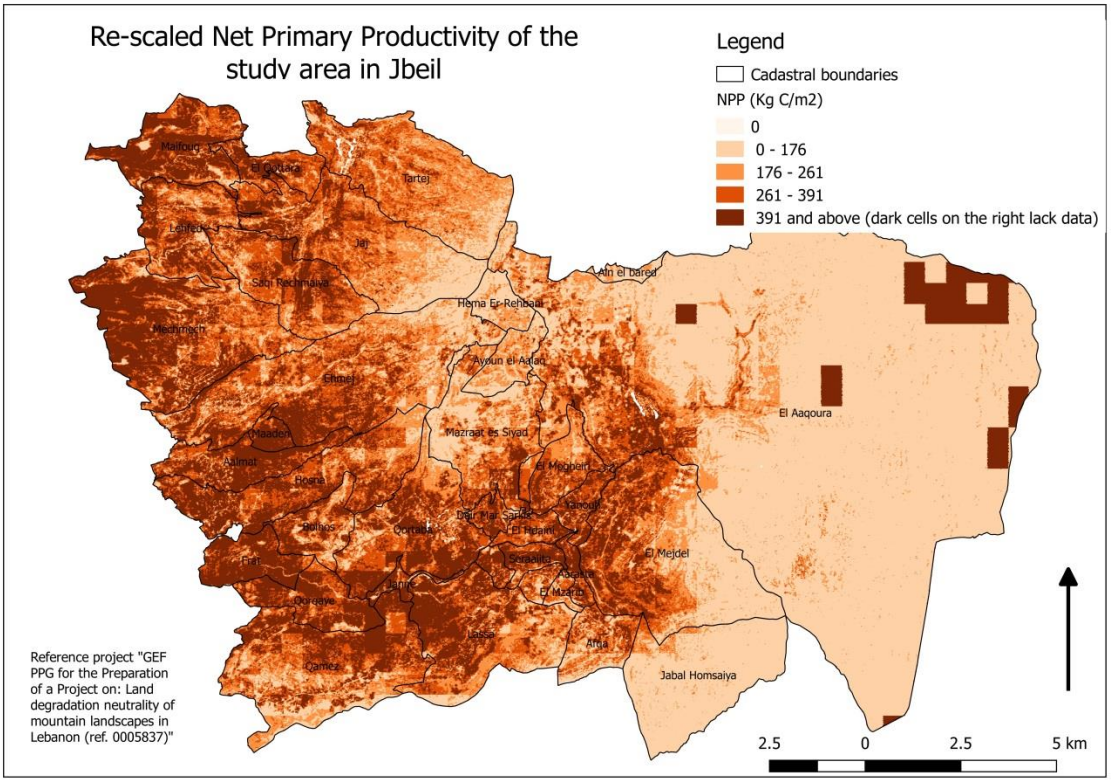


Figure 12. Re-scaled Net Primary Productivity of the study area in Jbeil

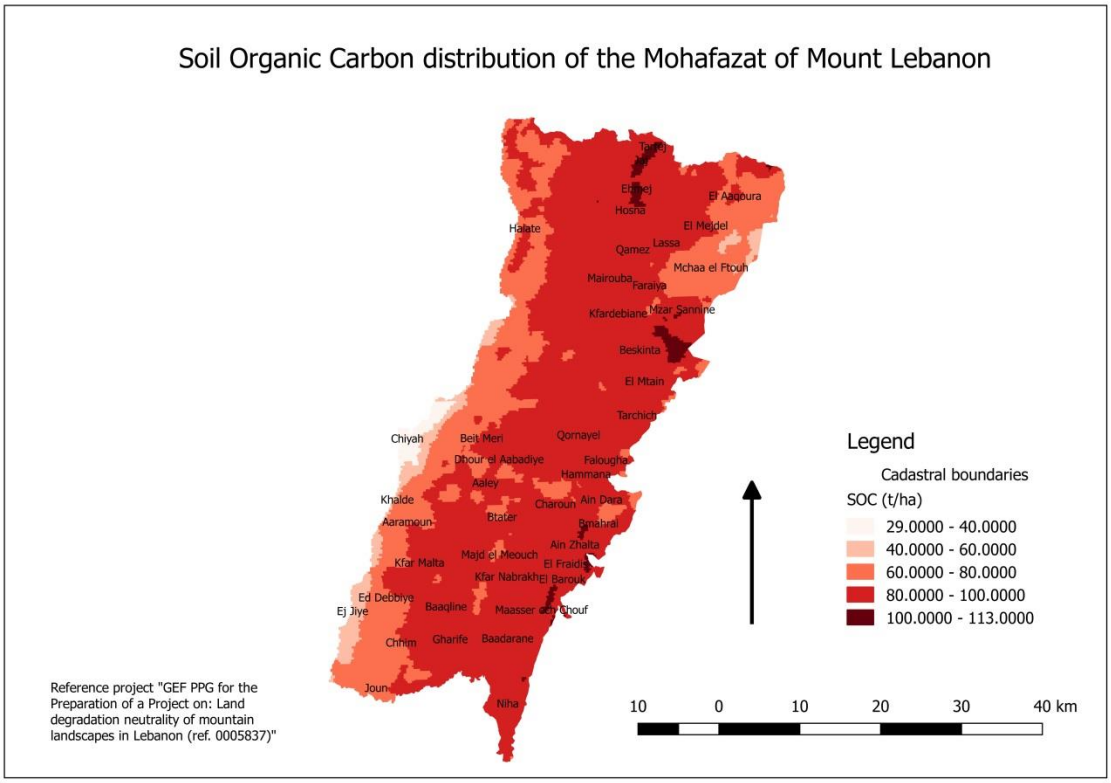


Figure 13. Soil Organic Carbon within the Mohafazat of Mount-Lebanon

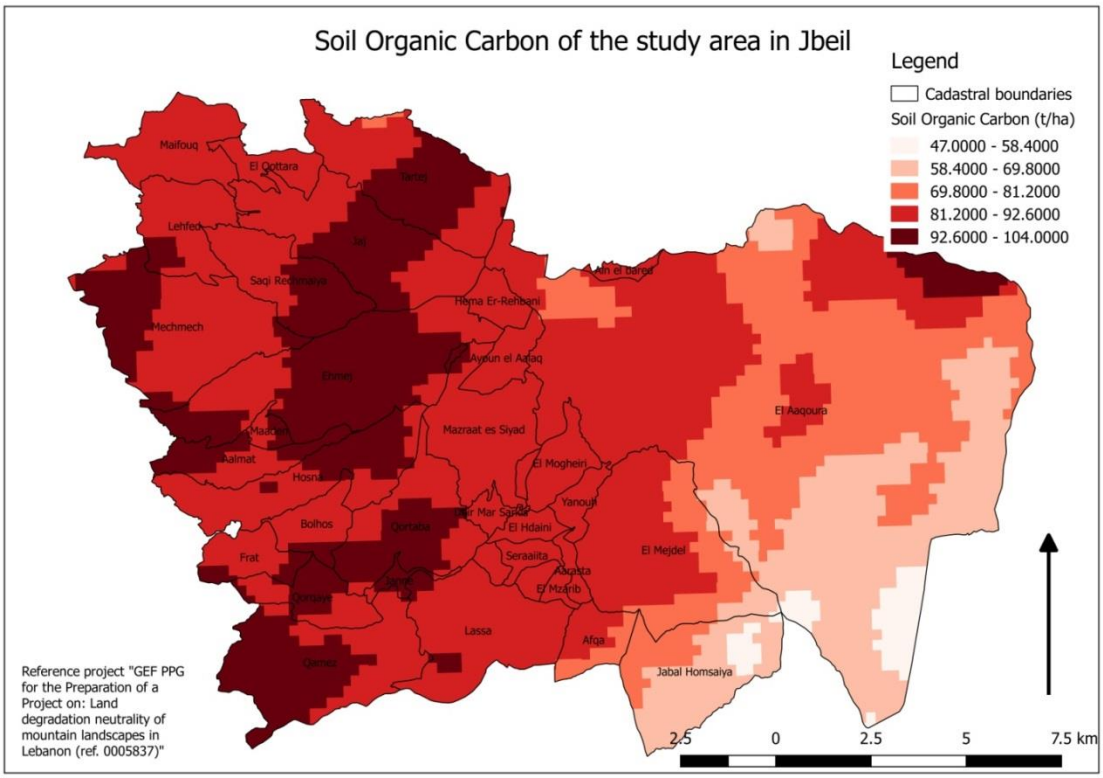


Figure 14. Soil Organic Carbon with the study area in Jbeil

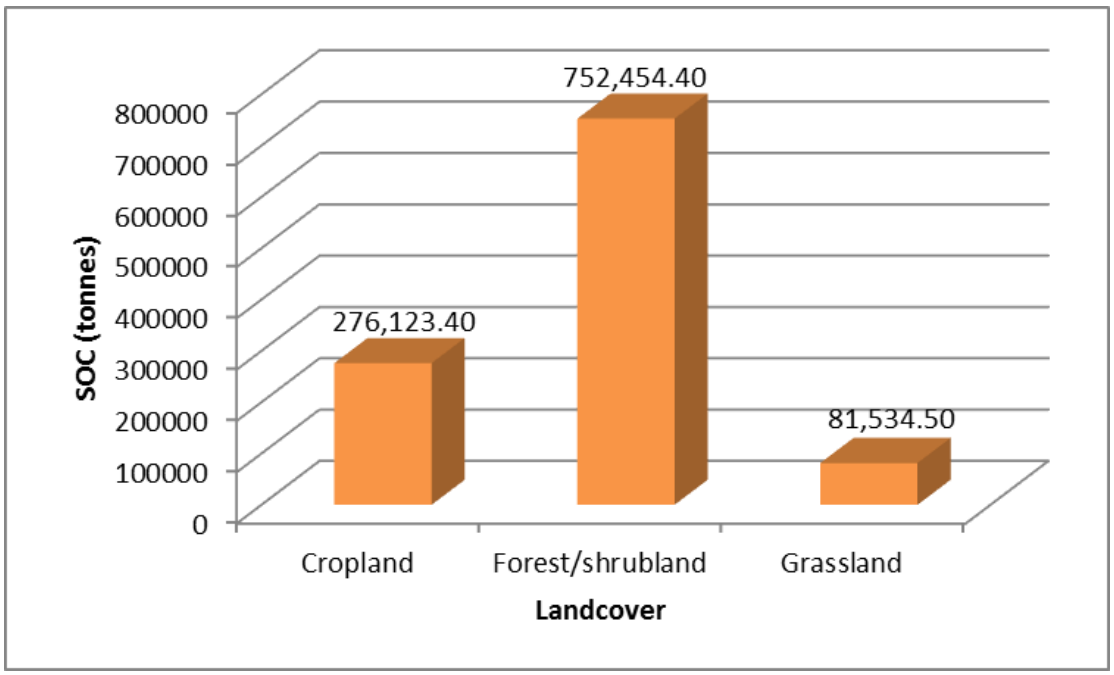


Figure 15. Distribution of Soil Organic Carbon within the main landcover categories of the study area in Jbeil

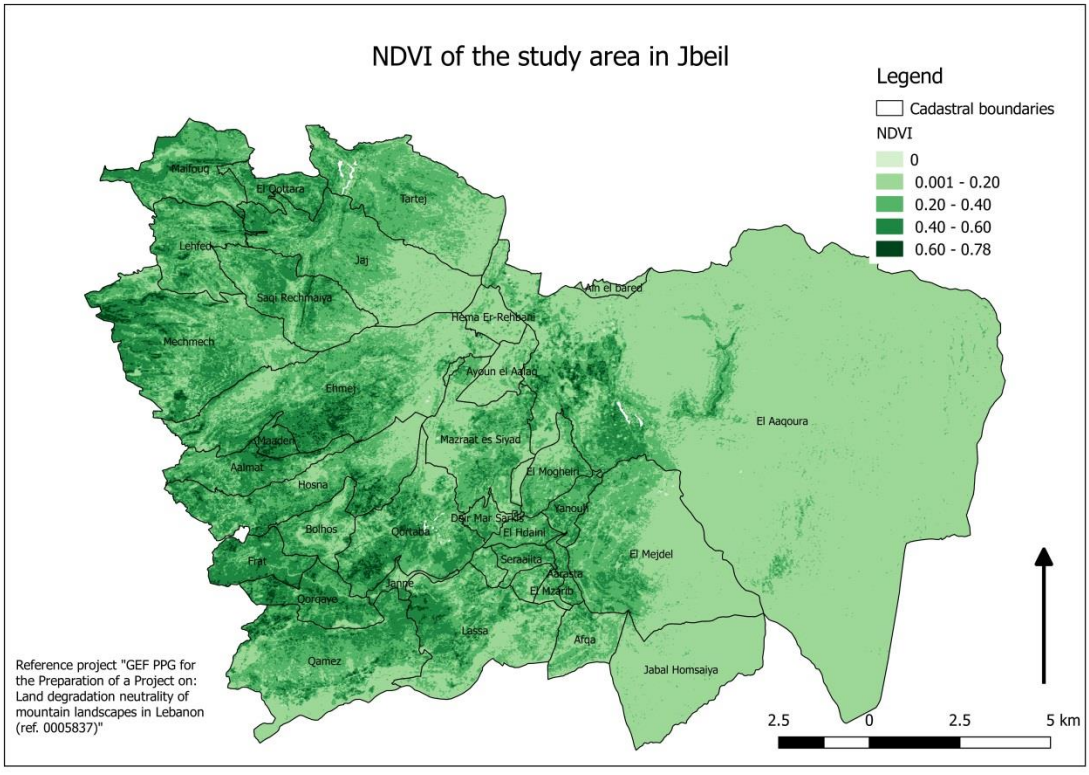


Figure 16. NDVI spatial distribution in the study area of Jbeil

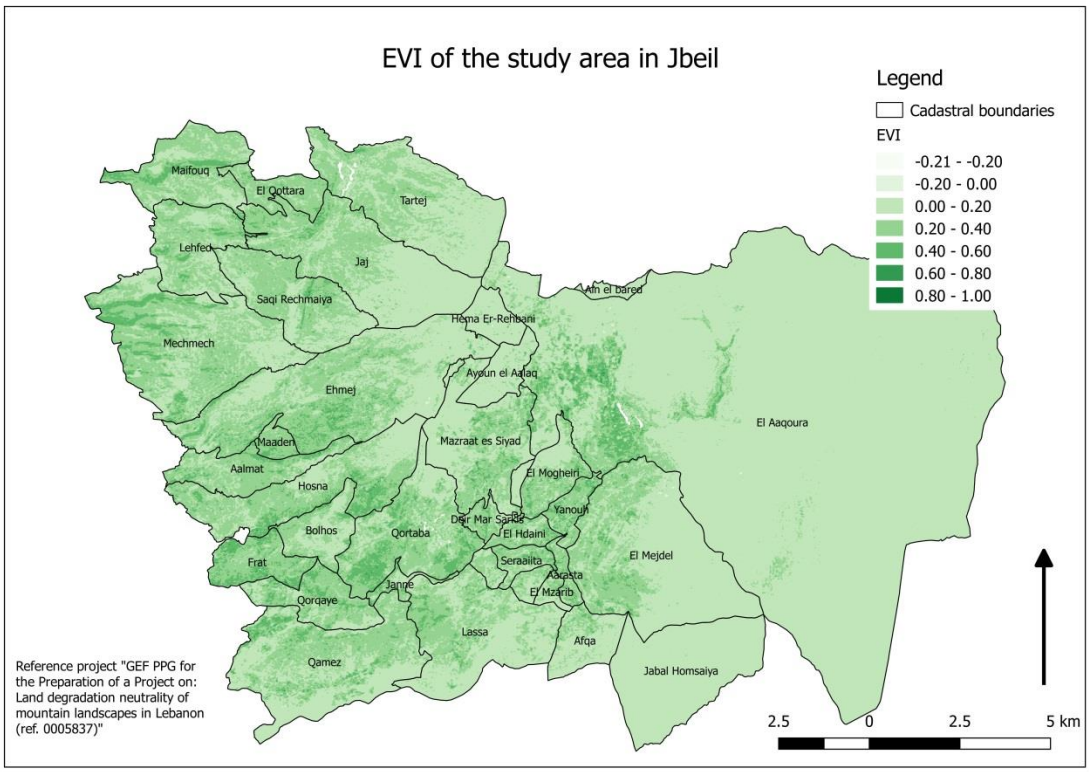


Figure 17. EVI spatial distribution with the study area of Jbeil

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Annex 19: Communication and Knowledge Management Strategy

This is the draft LDN Project Knowledge Management Strategy outlining the guiding principles, KM framework and priorities for implementation. The strategy is designed to guide and support the KM efforts of the project during implementation, and is based on the relevant Outcome and Outputs in the Project Document.

The Inception Workshop and the Project Board are invited to review and endorse the KM Strategy and consider the needs of this activity of the project.

1 Overview

The project seeks land degradation neutrality in mountain lands by rehabilitating degraded land and preventing further degradation. It will do this initially at the pilot scale to gain the necessary skills and know-how as well as confidence, before it can be up-scaled and replicated post-project comprehensively.

Rehabilitation practices will be tested for technical effectiveness, cost-effectiveness and benefits in the agriculture and forestry sectors, the quarrying sector, and the eco-tourism and outdoor recreation sectors. Prevention will be achieved through comprehensive land use planning, the EIA process for specific development proposals, and the monitoring for compliance with set conditions and their enforcement.

There will be clarification of roles and enhancement of capacities particularly at local government level. The institutional and regulatory context will be reviewed, updated and strengthened so as to prevent new degradation of forests and agricultural lands. The project will aim for a robust, comprehensive and appropriate legal framework which will assess biodiversity and key ecosystem goods and services to inform permitting decisions.

Finally the project will develop effective financing mechanisms based on international best practice and a knowledge management platform to facilitate sustainability, replication and up-scaling of the new practices leading to land degradation neutrality.

The project's Outcome 3, in particular Output 3.2 is of direct relevance to this Knowledge Management Strategy –

Project Outcome 3 *Project monitoring and evaluation, communication, knowledge management and financial mechanisms for the dissemination and replication of the results of the project in place with the aim of achieving land degradation neutrality*

Output 3.2 *Communication and Knowledge Management Strategy implemented*

2 Rationale

Knowledge Management (KM) is the process of capturing (and distilling), creating, storing, sharing, and effectively using knowledge. KM refers to a multi-disciplinary approach to achieving organizational objectives by consolidating, creating, storing, sharing and use of knowledge. One of the core outcomes of the Lebanon LDN project focuses on the establishment of a system for knowledge and information management and sharing of best practices and lessons learned in LDN. Central to this is the creation of a Knowledge Management Platform including key knowledge tools and products for effective sharing of LDN information, knowledge and experiences – developing a stronger KM modality. KM will play a key role in facilitating planning and policy processes to

facilitate the adoption of LDN practices supporting sustainable livelihoods and climate resilience among communities living and working in the Lebanon mountain environment. Applying a gender-responsive approach (e.g. through consultations with both women and men and the collection of sex-disaggregated data where applicable), the project aims to capture both tacit and explicit knowledge from grassroot communities to leaders in regional and national governments.

The strategy builds on the results-based approach to project planning and management. It will establish national and regional platforms for managing information and sharing of best practices and lessons learned in the rehabilitation and restoration of degraded land and in the prevention of land degradation.

3 Guiding Principles

The Strategy will be guided by 3 key principles:

1 Knowledge Management needs to be **people-centred** and **demand-driven** which will ensure the project is providing gender-responsive, relevant and useful knowledge products for stakeholders

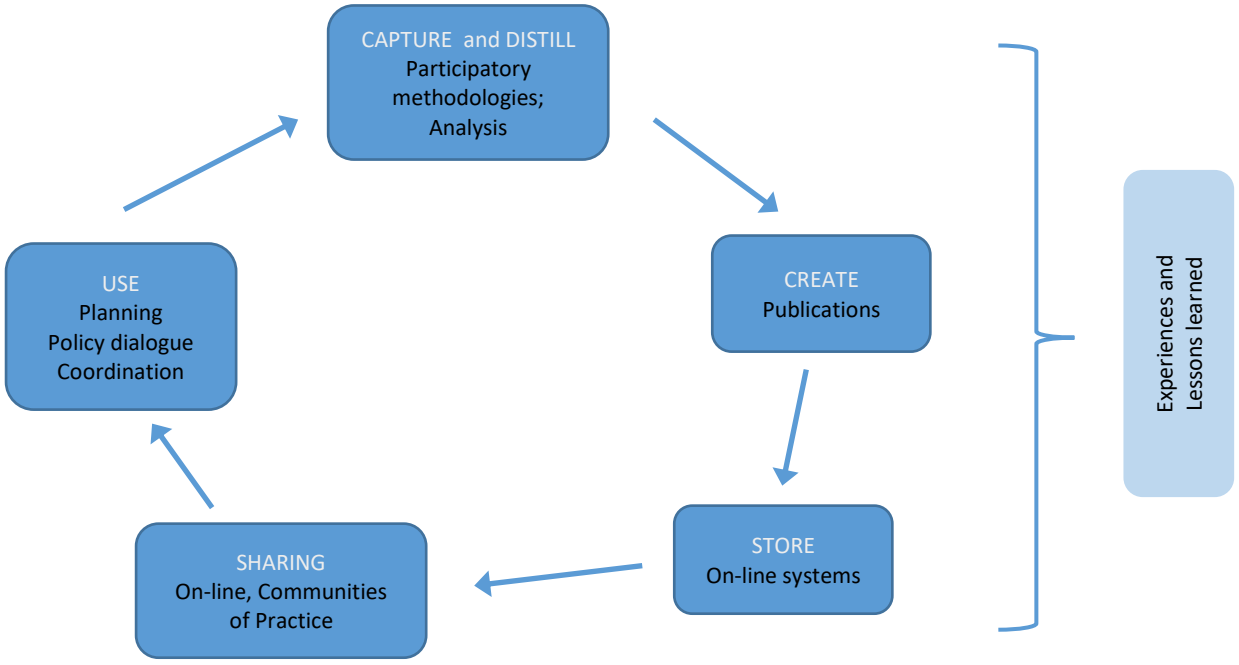
2 Transfer of knowledge needs to be **context specific** with technology and process playing appropriate and enabling functions

3 Knowledge Management is **measureable** and, where appropriate, **attributable**

4 Knowledge Management Framework

4.1. Purpose

To strengthen the capture, creation, storage, dissemination and use of knowledge to support Land Degradation Neutrality in the mountain environment of Lebanon and beyond into the region and globally.



Knowledge management cuts across all areas of project activity, and to realize it, collaboration is essential. KM cuts across research, planning, practice, and learning. It supports organizational objectives through capacity development, and depends on the project for information in order to keep the KM cycle active and strengthened, ultimately helping stakeholders make more informed decisions. The KM cycle, if resourced adequately, is reinforcing.

4.2. Objective of the KM strategy

To strengthen access to information and knowledge to support and influence local, national, regional and global policy dialogues on approaches to LDN for adoption.

4.3. Defining KM Strategy

Identification and Prioritization – Operating across two Districts with a number of pilot scale projects in each and a diversity of stakeholders, there is a need to assess what their on-going knowledge needs are to determine targeted KM support. Identification and prioritization will be carried out by the PMU led by the Project Manager in close consultation with key stakeholders.

Engagement – Across the two Districts with a diversity of stakeholders from grassroot communities to local government, engagement will need to be targeted to specific groups to assess KM effectiveness. Strategic considerations will include:

- Incentivising use of knowledge management systems and products;
- Incentivising the generation of knowledge sharing and products by stakeholders.

Working S.M.A.R.T – Data quality will depend on getting the right data and ensuring that the data is accurate. A robust monitoring and evaluation plan will support this work.

Less is more – Development of a harmonized results reporting framework to improve the reporting capacity of our stakeholders.

4.4 To achieve its objective, the project's KM Strategy will focus on 4 key areas

4.4.1 LDN Community of Practice

To enhance capacity building through knowledge generation and sharing, the LDN **Online Community of Practice** will be developed and promoted. The network will help strengthen information and knowledge sharing on LDN technologies, practices and lessons learned, and policies in the context of sustainable development.

4.4.2 Knowledge Products

Developing demand-driven knowledge products to support information and knowledge sharing, will include flagship products for the project:

- GIS database for land use planning
- District and regional Diagnostic Reports
- National State of the Mountain Environment Reports
- Lessons learned and Best Practice
- Peer-reviewed journal publications
- Experience Notes

These knowledge products will also capture the gender dimensions of LDN and present data in sex-disaggregated format wherever applicable.

Importantly, collaborations and partnerships will play a significant role in effectively operationalizing the KM strategy, and to maintain quality standards. Collaborations and partnerships will be defined in thematic areas by the PMU and subject matter specialists.

For quality assurance, the project's Technical Team, Planning Team and other personnel will receive training on:

- Documenting lessons learned, best practice and success stories
- Research methodologies and M&E including capturing tacit and explicit knowledge, interviews, producing multi-media resources as determined by their on-going needs, and how to ensure gender is reflected in any knowledge products.

4.4.3 Capacity Development

To improve the formulation of policies, strategies, and interventions in a sustainable manner, efforts will be made for the development of institutional capacity to generate knowledge solutions through a strategic use of technical assistance resources. Where there is limited local capacity in providing knowledge solutions the project will engage, whenever appropriate and feasible, local institutions for knowledge management activities to build their institutional capacity. They will include not only government agencies, but also research institutions, academics, civil society organizations, and other key stakeholders. Capacity building in terms of embedding comprehensive monitoring and evaluation plans for activities will be critical to guide information capture and analysis in the development of knowledge and knowledge products – experience notes, lessons learned and best practices.

4.4.5 Knowledge Events

Opportunities for enhancing knowledge dissemination, sharing and application will be actively explored through the conduct of and participation in meetings, workshops, conferences and similar events. Innovative pilot projects, lessons learned and best practices will be showcased at these learning events to facilitate knowledge sharing. Engagement and information and knowledge sharing opportunities will include:

- Facilitating a programme of periodic planning and coordination workshops for District project teams;
- Community and Local Government round-table meetings;
- Knowledge fairs, road-shows, competitions, learning events;
- Development and dissemination of news and publications.

5 Knowledge Management implementation priorities

Priority 1: KM Strategy refined and endorsed by the Inception Workshop and approved by the Project Board**.** Recruitment of Database Administrator and Communications and Knowledge Management Specialist

Priority 2: KM System development: People, Processes and Platforms

- **2.1** Development of research and analytical frameworks to guide and inform strategies of data, information and knowledge capture/analysis, and monitoring and evaluation for implementation at project localities initially. This will include the identification of thematic knowledge areas, and consistently, the skills thematic areas for networks database;

- **2.2** Development of the LDN Network/Online Community of Practice and information and knowledge sharing forum to include the set-up of social media accounts;

- **2.3** GIS and skills database (practitioners and experts) to support networks and partnerships. The Database Administrator to be assigned to continually update the database as new information is received, manually updating profiles as competencies and job functions change, as required.

Priority 3: Content Management: Identification and assignment of knowledge management activities to project staff, local and central government officials, private sector, NGOs and community level stakeholders. The value of editorial/creative content management cannot be overemphasized, since knowledge management will not succeed if there are no workers and managers whose primary duties involve gathering, editing and re/packaging knowledge.

Priority 4: Development of a KM monitoring and evaluation framework. Any amendments to the framework will be managed by the Communications and Knowledge Management Specialist.

6 Risk management

Knowledge Management activities are an integral part of the LDN project and will be supported through ongoing and pipelined technical advisory support. Closer coordination will also be made with local and central government and the Community of Practice to assess knowledge needs and mobilize project expertise, collaboration or partnerships to respond to District needs for knowledge solutions.

RISKS	RISK MITIGATION
1 Dis-incentivisation of knowledge sharing – information monopolies for competitive advantage	Incorporate into work plan and partnerships
2 Under-resourcing: - Operational costs for data and information collection, publications, storage and dissemination; - Pipelined costs for technical assistance for capacity building in information capture and analysis for the development of knowledge products, publications, storage, dissemination and measuring for impact.	Develop a costed annual Communications and KM work plan
3 No specific identification and accountabilities towards content developers/development	Incorporate into TORs and work plans
4 Not sufficiently incentivised	Explore cost effective incentives and/or knowledge partnerships
5 Lack of measuring impact	Develop a performance indicator framework for KM
6 Behaviour change	Behaviour change strategy and monitoring and evaluation plan developed

7 Monitoring and evaluation

The project will develop a system for capturing and measuring KM access, sharing and use. Measurement data and analysis should be used to inform and calibrate the strategy as an indication of performance. The progress of implementation of Knowledge Management activities may be monitored closely through the following indicators.

Key Performance Indicator	Indicators	Measureable Indicators	Impact Indicators
KPI 1 – Capture of data, information and knowledge products	Functionality, effective operation and use of MLD. Knowledge and product capture.	Data capture - Development and use of MLD. Knowledge and products capture.	Increased awareness and knowledge of the programme

KPI 2 – KM technical systems developed and integrated for optimal performance	Number of websites, webpages, online discussion forums, databases and repositories developed	1 overarching website 2 District webpages 1 Online information and knowledge sharing forum MLD including GIS Database 1 multi-media repository (publications, video, photographs)	Increased knowledge on LDN key approaches and practices
KPI 3 – KM activities are monitored for overall effectiveness	Measuring sharing, access and feedback	Dissemination, Subscriptions, and Downloads Off/Online enquiries Social Media monitoring and analytics Feedback	

Annex 20: SLM and SFM financing sources and mechanisms

Land degradation neutrality of mountain landscapes in Lebanon

Financial and Economic Analysis report

March 27, 2018

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1 Background

The World Bank estimated the annual damage (2000) cost of environmental degradation in Lebanon at 2.8 - 4.0 percent of GDP with a mean estimate of 3.4 percent of GDP; in current terms this would be close to USD 2,9 billon per year. Out of this total, degradation of land resources and wildlife mainly limited to areas in Mount Lebanon account for 0.5-0.7 percent of GDP (soil erosion/terrace degradation 0,45%, mount Lebanon quarries 0,10% and Mount Lebanon nature 0,05%); this means between USD 400 to 600 million every year. It is important to consider that by the year 2010, Mount Lebanon represented 19% of the total agricultural participation of the country (Investment Development Authority of Lebanon, 2017).

The agricultural sector is the major driver of land degradation due to intense cropping systems and excessive pumping, monocultures and successive cropping, improper irrigation practices, and excessive fertilizer use. The use of non-certified planting material and the import of hybrid varieties may lead to further degradation. It is estimated that in 2007 13% of the total territory was forest, while almost double (24%) of the territory was destined to cultivated area.

Other factors that have contributed to the degradation of the land are associated with livestock production inappropriate practices; contamination associate to the discharge of domestic and industrial wastewaters, haphazard dumping of domestic solid wastes and toxic wastes, and excessive use of agrochemicals, also, the socio-economic situation is a root cause of many of Lebanon's environmental problems, including desertification (Ministry of Agriculture, 2007a).

The cost of natural resource degradation is predominantly from losses in recreational, tourism, ecological and non-use values associated with coastal zone degradation, and agricultural soil/terrace degradation. These estimates present a strong evidence for the urgent need to build a sound business and economic case to address land degradation. An integral approach towards LDN must incorporate a solid financial and economic strategy to address key drivers of LD with specific measures and targeted approaches.

This GEF project offers the opportunity to generate an in-depth understanding of the economics of LDN at a relatively manageable scale, providing a methodological framework and associated capacities for sustainability and scaling up. This comprehensive understanding of the economics of LD will provide the base for designing a portfolio of financial and economic tools, addressing the specific stakeholders and opportunities for LDN financial sustainability.

The lack of adequate resources is one of the most important barriers to achieve LDN in Lebanon. One financial mechanism or source of funding alone, will not have the expected impact. The approach suggested is not about building a general basket or super fund to allocate resources for LDN. It is about building a portfolio of diverse sources of funding for very specific LDN interventions, which could be easily measured and whose results should be continuously communicated to further leverage political support, adjust policy and expand these mechanisms to other areas. Mechanisms should adapt to the nature and specific needs of the LDN intervention and will be designed to fill the financial gaps which are current barriers to avoid, reduce and reverse LD. This means that the economic and financial aspects of LDN will be mainstreamed across all project components and specific interventions, pursuing a coordinated approach with the different experts and teams that will be mobilized by the project.

It is important to consider that the design and implementation of financial and economic tools is a multidisciplinary and multisector challenge. Achieving the funding targets is the final prize to a complex process that involves accurate economic and financial data, political engagement, institutional capacities, public support, strategic communications, and technical expertise. The project will need to create the enabling environment to present evidence, build strategic scenarios and mobilize the public and private sectors into win-win solutions and agreements.

The project document considers several alternatives of financing mechanisms that have been identified as conventional funding sources (e.g., national budgetary allocations, taxes, overseas development assistance, the LDN Fund, the National Council for Environment Fund, the planned National Reforestation Fund) and innovative funding sources (e.g., economic incentives, payments for ecosystem services, trust funds and green taxes, concessions, tariffs, compensation schemes). Other mechanisms that can be considered include fees on tourism and other resource uses, raising funds from new markets (such as carbon offsets, water, or other payments for ecosystem services), finding new donors (such as large corporations, private philanthropists, other government agencies or tax revenue-sharing), sharing costs and benefits with local stakeholders (e.g., private landholders and local communities), employing new financial tools (such as business planning), improving wider policy and market conditions (such as reforming environmentally-harmful subsidies and creating positive incentives), and devolving funding and management responsibilities (for example to NGOs, local communities, individuals or businesses).

2 Purpose and scope of the work

The purpose of this document is to give support or guidance for the achievement of Output 3.3 "Effective sustainable financing mechanisms identified and developed". It is expected that through this means the main guidelines will be given to carry out the necessary activities to select the adequate financing mechanisms to fill the financial gaps to avoid, reduce and reverse Land Degradation.

The project will develop a financial needs assessment to clarify the current financial baseline and the cost associated to implementing a set of different strategies and technologies to achieve land degradation neutrality. This information provides the financial targets for decision makers at local and national level, international cooperation, business sector and public in general. This financial approach will be later complemented with an economic valuation assessment, directed to understand and quantify who benefits from environmental services, and who is responsible for land degradation in the project area.

This comprehensive understanding of the economics of LD will provide the base for designing a portfolio of financial and economic tools, addressing the specific stakeholders to fill the financial gaps to avoid, reduce and reverse LD. The comprehensive list of potential mechanisms and opportunities must be further assessed and prioritized based on its legal, political, financial and technical feasibility. Out of this list, few mechanisms with the greatest potential to offer short term success will be further designed and implemented at the project´s scale of intervention. All other mechanisms and tools will build the base for a nation´s wide financial strategy to be implemented in the mid and short terms based on the results and lessons learned out of this pilot exercise.

This document presents an initial discussion about possible methodologies and approaches towards achieving the project´s end; it introduces the potential sources of funding and mechanisms to mobilize resources. It will look at international best practices and mechanisms that offer lessons for building the Lebanon´s case.

3 Methodology

The methodology proposed below is based on the three key phases that are proposed in the Prodoc: i) Preparation of the financial needs assessment to assess the financial targets for LDN interventions within the project area; ii) Economic valuation of LD using a targeted sector approach; iii) Selection and design of economic and financial mechanisms to be implemented by the project. This is not intended to be an in-depth methodological discussion, but rather a description of what can be done in practical terms considering international best practice and reasonable use of existing resources.

The preparation of **the LDN Financial Needs Assessment** (FNA) presented below is based on the BIOFIN Manual (2016). Although the manual is addressed to the subject of biodiversity, adapting it to land degradation responds adequately to the needs analysis of this focal area. The FNA aims to make a comprehensive estimate of the financial resources needed to achieve national and sub-national land degradation targets. It compares

these financial needs to expected land degradation expenditures over a medium- to long-term planning horizon. At the end of the construction of the FNA, a well-documented and argued, prioritized, fully costed budget for achieving the LDN targets in the project´s area will be obtained.

The construction process of the FNA combines a solid methodological approach in the budget preparation process, and work at the right time, with the right partners, to present a plan in the appropriate format. Next, and according to the Biofin Workbook (2016), the steps to be followed to elaborate the FNA are summarized:

1. Preparation. Establish a team with appropriate skills and capacity to conduct the FNA, define key stakeholders and roles, establish a consultation plan, and begin consultations on methodology;
2. Scoping and clarifying the National Land Degradation Strategies and Action Plan (LDSAP) results, strategies and actions. Translate the LDSAP results to a logical framework that converts the land degradation results and indicators identified like “costable actions”; make initial prioritization of land degradation results and strategies;
3. Desktop study and initial costing tables. Identify unit costs; review existing detailed budgets, budgeting exercises, and budgeting processes; research unit costs for common budget items (salaries, vehicles, etc.); build initial budget tables and models;
4. Refining costs with expert input. Refine cost estimates and the results of the costing using individual expert consultations and then a workshop; validate and elaborate quantitative details of costable actions, results, indicators; conduct tagging exercise; refine initial models and assumptions;
5. Analyse Costing Results. Prepare a multi-annual direct cost statement, subdivided by strategies, targets, sectors and actors etc. depending on stakeholder needs; compare costs to land degradation priorities;
6. Estimate the Finance Gap. Compare the detailed costing statements with the projected future expenditures; analyse the gap by national strategy or targets, etc;

Once this stage is completed, the next step consists on generating economic evidence about the causes and impacts of LD to specific economic sectors, for whom we may generate specific mechanisms later during the third phase. For this purpose, the Targeted Scenario Analysis (TSA) methodology developed by UNDP can be used. The TSA is an innovative analytical approach that captures and presents the value of ecosystem services within decision making, to help make the business case for sustainable policy and investment choices. The TSA can generate, and present data related to the management of ecosystems in a way that is more relevant to the choices facing a decision maker. The product of a TSA is a balanced presentation of evidence, for a decision maker, that weighs up the pros and cons of continuing with business as usual (BAU) or following a sustainable development path in which ecosystems are more effectively managed. This alternate path is termed sustainable ecosystem management (SEM) (Aplizar and Bovarnick, 2013).

1. Define the purpose and scope of analysis: this process includes identification of the key decision maker who will be the audience for the analysis and understanding his or her objectives for the TSA. Together with this decision maker, the analyst then refines the focus of the policy question, to be sure that it is appropriate for a TSA, defines the scope of the analysis, and assesses and verifies available data to ensure that the TSA, as framed, will be feasible.
2. Defining the BAU Baseline and the SEM Intervention: for the BAU, should be determine the mix of policies, actions and technologies that makes up the current status quo, and then identify the observed impacts of this state of affairs, as well as the technical, non-ecosystem-based strategies that are being used by relevant actors to address those impacts. For the SEM, should be identify the mix of policies, actions and technologies that could be used to change the status quo and reduce or reverse the effects of BAU on the relevant ecosystem, and then determine the potential consequences of this course of action, as well as the investment and maintenance costs required to implement it.
3. Selecting Criterial and Indicators: this process is about the choosing criteria and indicators for assessing and comparing the results of the BAU and SEM interventions. The criteria will be determined by the focus of the policy question and original objective of the TSA, as identified in Step 1. The indicators, which should be specific, measurable, achievable, relevant and time-bound, will be used to show

changes over time in the chosen criteria resulting from BAU and SEM. Importantly, the same criteria and indicators should be used to evaluate both the BAU and the SEM.

4. Constructing the BAU and SEM Scenarios: the process of constructing scenarios for both the BAU and SEM interventions allows to predict the expected outcomes of implementing the interventions over a specific period of time. These outcomes are measured by changes to the chosen indicators. The process of constructing the scenarios involves estimating how ecosystem services will be affected by the BAU and SEM interventions, considering the functional linkages between changes in ecosystem services and the chosen indicators, and finally, projecting changes in the chosen indicators.
5. Making an Informed Policy or Management Recommendation: once a policy analyst understands the causal relationship between the policy interventions and outcomes, has calculated the magnitude of the outcomes that may result from each of the policy interventions, and has assessed these outcomes in terms of the criteria selected, the next task is to present this information to assist decision makers in choosing among the policy interventions (Aplizar and Bovarnick, 2013).

Finally, once there is an analysis of financing needs and economic valuation, that is, with a strong technical base, it will be possible to select or **design the financing mechanisms** that respond most effectively to land degradation.

For this last phase, it is proposed to use the methodology proposed in the Biofin Workbook (2016). This methodology distinguishes between finance mechanisms (i.e. the individual financial, fiscal or regulatory instruments used) and finance solutions (multifaceted approach that includes one or more finance mechanisms, the financing source(s), lead agent or intermediary(ies), and the desired finance result. The steps to determine the appropriate financing mechanisms are described below:

1. Preparation: involves defining the scope of the work, identifying key stakeholders, and reviewing the BIOFIN assessments under Chapters 4-6.
2. Description of existing and potential finance solutions: includes an initial listing and description of the finance solutions already implemented in the country, as well as “scanning the horizon” by using the finance solutions catalogue to start thinking about the design and introduction of new finance solutions and strategies.
3. Assessment and prioritization of the finance solutions: begins with a rapid screening process of all identified finance solutions, followed by a more detailed screening exercise to derive prioritized solutions. The selection should be based on evidence and participatory engagement of local experts and stakeholders.
4. Design of prioritized mechanisms must consider assessing the necessary legal and institutional frameworks to define if changes to legislation are needed; market and economic assessments are also needed to justify the amounts to be charged, prepare cash flows, define the operational arrangements and maximize transaction costs; capacity needs must also be assessed, to define if sufficient technical and institutional capacities are in place or if they should be build during implementation period. Strategic communication and political support is also part of the equation, to ensure that parties are aware and accept the new mechanisms, understand the destination of funds, and acknowledge them as a mutual benefit investment.

In any case, it is suggested that the mechanisms and tools have a clear sense of purpose, and that always each mechanism is clearly linked to providing resources to a specific LDN initiative. Mechanisms and tools should be designed to avoid land degradation; in case land degradation is taking place, they should be directed to mitigate these effects; and finally some of this tools should seek to repair land degradation.

4 Findings

4.1 Sources of Financing of SLM and SFM in Lebanon

In 2007 the country has developed the Resource Mobilization Strategy; this document provides valuable information to understand the baseline and contexts of financial sustainability for LDN. It highlights the weaknesses of the political framework and national policies and presents the National Action Program to Combat Desertification (NAP) developed in 2003 by the Ministry of Agriculture, as the guiding framework for UNCCD implementation. Institutions suffer from internal procedural weaknesses deriving from a combination of poorly trained staff, albeit often highly skilled, and impeding bureaucratic procedures governed by outdated laws (Ministry of Agriculture, 2007b). By year 2007, there was no dedicated financing mechanism for combating desertification or for SLM; during the past 10 years, Lebanon has developed some distinctly local mechanisms such as national budgetary allocations, overseas development assistance, the LDN Fund, the National Council for Environment Fund, and the planned National Reforestation Fund. However, no data has been found to quantify the actual amount invested annually and the activities and projects financed. There are other mechanisms that do not refer directly to fighting desertification projects but potentially could mobilize funding to carry out activities to combat these problems.

Government Budget Allocation: Internal financial resources are in-country resources originating primarily from the public budget, but they also include funds from private corporations and non-profit institutions within the country. Between the years 2000 and 2004, the total budget allocated to the MoA varied from 0.3 % to 0.6 % of the total national budget. The average budget allocation was fairly constant over the years, at about 0.4 % of the total budget of LBP 39 billion.

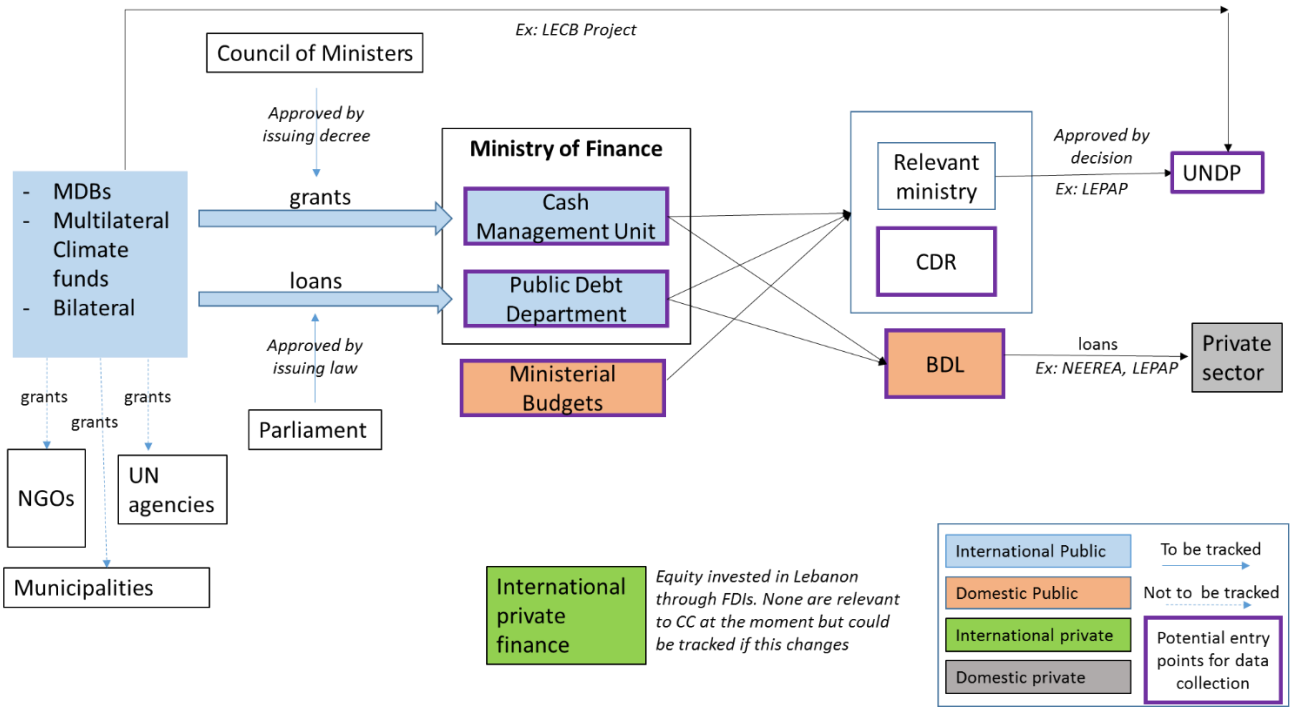
This budget was predominantly dedicated to part I (current expenditures), accounting for about 90 % of the total. The remaining 10 % is allocated to part II (investment expenditures). With this background, several actions can be taken to generate an increase in revenues and therefore in the budget allocation to Land Degradation, among which are mentioned:

- Promote Better Planning of Programme Laws: Programme laws can be considered an intelligent source of direct or indirect money and can be used as entry points to a public source of funding if they are targeted by ministers and backed-up by well-developed plans (Ministry of Agricultural, 2007).
- Optimize Fund Allocation: The disparity between allocated funds and actual spent funds is significant.
- Reform the Laws Governing the Public Budget Process
- Increase the Budget Dedicated to LD: In the four ministries related to Land Degradation activities.
- Increase the Political Lobby for LD: Environmental issues do not feature as a priority. It is important to bring these issues out of obscurity.
- Investigate Other Internal Sources of Funding
- Strengthen Human Capacities

While inventorying the legal texts concerning the desertification issue, it became noticeable that each text provided a specific financial framework to facilitate implementation of the obligations set. These financial mechanisms do not refer directly to fighting desertification projects, however, and instead consist mainly of fines, sanctions or guarantees. Although most of the legal texts set a range of financial measures, these measures are not always accompanied by concrete proceedings to be applied, or by a monitoring system that allows the verification and enforcement.

More recently, in 2018 a MRV framework has been assessed for Lebanon. It provides a comprehensive description of the flow of sources of funding for environment and climate change. Although it is a descriptive exercise and does not provide figures, it presents an interesting description of the flow of environmental support to Lebanon.

Figure 18: Overview of key support flows in Lebanon. Source: Report for the ClimaSouth project 2018. Lebanon – Formulating an MRV framework for support received.



4.2 Global best practice for SLM and SFM financing sources and mechanisms

Broadly speaking, LDN financing mechanisms can be ranged on a spectrum from those which rely on grants to PAs from external sources (which may come with or without conditions) to those which are based on charges for goods and services provided by the LDN initiatives itself.

In general, the provision of grant funds is motivated by broader social or personal policies, goals or principles which place a value on the conservation of PAs – for example for their public good attributes, intrinsic values, development or conservation significance, or as areas of cultural or natural heritage. In contrast, revenues derived from fees and charges are linked to the use or provision of particular products and services (for example tourist gate fees, resource extraction licences or payments for ecosystem services). Between these extremes, there are a wide variety of PA financing mechanisms which combine aspects of private and public, grant and commercial funding. Within this spectrum, it is possible to group LDN financing mechanisms into three categories, according to the way in which funds are raised and used:

• Financing mechanisms which are concerned with attracting and administering external flows include government and donor budgets, NGO grants and private and voluntary donations, from both international and domestic sources.

• Cost-sharing and benefit-sharing, investment and enterprise funds, fiscal instruments and arrangements for private or community management of LDN, resources and facilities are primarily mechanisms for generating funding to encourage conservation activities among the groups who use or impact on LD.

• Resource-use fees, tourism charges and payments for ecosystem services all make market-based charges for environmental goods and services, in an attempt to capture some of the willingness-to-pay of beneficiaries.

Within this framework, several mechanisms could be derived. A checklist of potential financing mechanisms for LDN could be as follows:

Mostly Public Sources:

- Public budget funding for LDN;

- Earmarking for LDN a percentage of one or more general taxes collected at national, state or local level;
- Special laws delivering extra- budgetary financial support to particular social groups, geographical areas or activities;

Tax breaks or subsidies for LDN;

- Earmarking for LDN financing a percentage of one or more selective taxes collected at national, state or local level (e.g. taxes on energy, airports, cruise ships, hotel and resort charges and others);
- Earmarking for LDN financing a percentage of one or more charges, fees, fines and penalties related to the use (or abuse) of natural resources (e.g. water charges, ground water charges, stumpage fees and other natural resources extraction fees, entrance and users fees, charges on emissions and feed stock, release or dumping of fertilizers, pesticides, charges to solid wastes, and environmental fines and penalties etc.);

National, state and local development bank's loans;

- Debt-for-nature swaps;
- Environmental funds (endowments, sinking and revolving funds);
- Multilateral aid and development agencies;
- International development bank's loans;
- Bilateral aid and development agencies.

Mostly private for non-profit sources:

- Community self-support groups and other forms of social capital;
- Secular and faith based charities;
- Special fund-raising campaigns (e.g. save panda, friends of national park etc);
- Merchandising and good cause marketing;
- Lotteries;
- Social and environmental NGOs;
- Foundations.

Mostly private for –profit sources

- Community based enterprises, formal and informal;
- Private investment by local business;
- Commercial bank loans;
- Direct investment by non-local investors (e.g. ecotourism);
- Private public partnerships;
- Private community partnership;
- Venture capital;
- Portfolio investors (green funds).

Mostly payments for environmental products

- Markets for organic agriculture products;
- Markets for sustainbly harvested non timber forest products;
- Markets for certified forest products;
- Markets for certified fishery products;
- Resource extraction charges.

Mostly payments for environmental services

- Markets for biodiversity conservation and bioprospecting;
- Markets for carbon offsets;
- Markets for watershed protection;

- Markets for landscape beauty, including eco-tourism and tourism;
- Markets for development rights and conservation easements;
- Quasi-markets and non-market systems of payments for environmental services;
- Use fees and entry fees;- Funds for LDN associated with international treaties;
- GEF payments for the global commons;
- Earmarking for LDN, part of one or more international taxes.

Mostly reducing the need for additional financing

- Freeing up existing public resources (e.g., redirecting money from harmful public subsidies to protected area);
- Encouraging the mobilization of private resources (e.g. securing tenure, promotion, regulation streamlining).

Within the private sector, there is a wide diversity of stakeholders with links or dependencies on natural resources that operate across different scales and intensities of operations. Given the growing consensus on added values and enhanced returns on investments, it is increasingly important to highlight these opportunities and options for the private sector to engage in cooperation with other stakeholder groups, and to transform production and sourcing more sustainably. The private sector can participate through several ways such as:

- Innovative markets: companies can provide new products, e.g., technologies and products that reduce erosion or use less water, cropping systems that avoid land degradation, innovative ways for invasive plants to become revenue generating crops, etc., and new services that reduce land degradation and increase restoration and rehabilitation, e.g., land management or restoration services and education, training, or consulting services.
- Improvements in existing markets: techniques and approaches can improve or increase access to revenue in existing markets. This can be through recapturing potential production losses through rehabilitation, accessing subsidies and incentives available through policy benefits for managing degraded land (e.g., tree planting), or participating (more fully) in them.

In compensation to the private sector for adopting actions such as those mentioned above, the incentives that can be provided contemplate:

- Tax incentives and subsidies – Tax breaks or credits can reduce barriers to investing in improved management practices. Incentives include reduced property, estate, and inheritance taxes, more favorable tax credits, deductions, capital gains, and more cost-sharing of management expenses.
- Intermediary support loans – Small businesses can benefit greatly from business loans that target sustainable practices and reduce potentially higher capital and operating costs.
- Public or private grants – Non-repayable funds received through an application or ‘grant writing’ procedure can benefit small and medium sized businesses.
- Public-private partnerships – Collaborations between a local government or agency and a private business for the purposes of developing
- Public infrastructure or other land uses can provide benefits to both.
- Forest industry programmes – These programmes involve securing public or private funds for the preservation of forests or natural habitats. These types of programmes account for a large portion of financial incentives offered by private entities, although programmes by land trusts or conservation organizations are also common (Cornell, Weier, Stewart, Spurgeon, Etter, Thomas, Favretto, Chilombo, van Duivenbooden, van Beek, and de Ponti, 2016).

Incentive and marked based mechanisms

When land degrades, it sets off a series of impacts that go beyond its geographical location and the costs are borne by society in general. In order to avoid these costs, it is necessary for society to provide incentives for

land user to implementing measures to prevent land degradation. Market based mechanisms can be used to facilitate such incentives and compensations and payments and have been recognized as promising incentive systems to encourage the restoration of degraded land (United Nations Convention to Combat Desertification, N/D). The most promising market based mechanisms for SLM rely on public payments, open trading under regulation, self organised private deals, ecolabeling and certification schemes.

Forestry-based Carbon Offsets

The protocol also provides for the use of three "flexibility mechanisms" designed to facilitate the attainment of these commitments, principally (in theory) by reducing the implementation costs of the GHG reduction targets. These mechanisms are:

- QELRO trading – the international transfer of national allotments of emission rights or Quantified Emission Limitation and Reduction Obligations (QELROs);
- Joint Implementation – the creation of emissions reduction credits through transnational investments between Annex 1 industrial countries and/or companies;
- The CDM – a new mechanism resembling joint implementation that allows for the creation of Certified Emission Reduction credits in developing countries, regulated by a newly formed central authority (Moura, Salmi, Simula and Wilson, 1999).

To finalize this chapter, four different successful cases are presented as a mean to provide further evidence of the practical application of financial and economic tools for LDN.

Case Costa Rica: A country ranked in the high human development index (HDI) group in 2014 (UNDP 2014) is a success story on restoration of deforested lands (Salazar and Chacón. 2011). Its political constitution and the 1996 Forestry Act provide the framework for rewarding land users who provide off-farm ecosystem services through certified forest conservation. Revenues for financing such payments for ecosystem services are collected from fossil fuel taxes, water fees, and from donors. The land users also enjoy tax breaks and carbon trading payments from local and international buyers. The country has also invested significantly in environmental awareness, which has led to changes in people's perceptions on ecosystem services. All this has led to a successful restoration of deforested lands and other sustainable natural resource management[90].

Case Niger: A country with the lowest HDI in 2014, passed its Rural Code in 1993 that gave tree tenure to land users who planted or protected trees on their farms (Toulmin and Quan 2000). The Rural Code also increased the mandate of local institutions to manage natural resources using customary institutions and local governments. This increased incentive for land users to protect and plant trees, enhanced the regreening of the Sahel (Anyamba et al. 2014), and provided the institutional structure required for sustainable natural resource management. Deforestation rates fell from 12% in 1990-2000 to 1% in 2000-10 (FAO 2012). This shows the key role that incentives and local institutions can play[91].

Case Germany: Collective private sector investments in SLM practices: BioBoden. Competition for usable agricultural land is increasing worldwide: while the world's population is growing, more and more fertile land is being lost. In Germany, demand for land is growing rapidly, as reflected in the massive price increase for purchasing or renting agricultural property. Additionally, an increasing numbers of sites with comparatively low yields are just being taken out of production, instead of investing in them to increase fertility; thus, areas under cultivation are growing scarcer and being placed under increasing pressure, while prices increase. This attracts external investments: investors have increasingly been buying up agricultural land or enterprises as capital investments. It is estimated that between 20 and 35 per cent of all property is taken out of production and converted into capital assets this way.

[90] ZEF Policy Brief No. 24, 2015. Economics of Land Degradation and Improvement. A Global Assessment for Sustainable Development by Ephraim Nkonya, Alisher Mirzabaev and Joachim von Braun.

[91] Idem

Formerly federal land is increasingly being privatized and sold to the highest bidder, especially in east Germany, where land is managed by a government-founded company. Organic farmers in particular, find it difficult to retain or expand their land because of this rise and comparatively higher premiums of their goods.

As a result, the BioBodenGesellschaft was established. This group secured the land with money from 600 investors. The organisation re-manifested as BioBoden in 2015, working to secure more land for environmentally friendly agriculture. It now acquires land and enterprises up for sale and leases them to organic farmers on a long-term basis at affordable prices. As BioBoden has shown, SLM agricultural investments can open up new opportunities to enhance productivity and provide market access for farmers, always provided that the land rights of small farmers are respected and the land is used in a way that conserves resources.

Case Fertile Grounds Initiative (FGI); Valuing ecosystem services to optimise available resources: Fertile Grounds Initiative (FGI) is a multi-scale, multi stakeholder approach linking the supply and demand of nutrients and organic matter within a specific area, with the intention to optimize resource use, supplemented with external imports. FGI is based on eight activities that can be executed concurrently:

1. Inventory: Farmers and nutrient suppliers express their nutrient and organic matter requirements and productive capacity
2. Processing and product formulation: Conversion of organic resources, often from 'waste' streams, into valuable fertiliser products, including mineral enrichment
3. Brokering: Nutrients are valued and a (financial) agreement is arranged between supply and demand
4. Recommendation: Site-specific fertiliser recommendations are developed based on soil and crop response data
5. Trade and logistics: Business case design and the required nutrients are transported to the elds
6. Capacity building: Farmers and extension workers are trained on best (nutrient) practices.
7. Institution building: Cooperatives, micro- credits, and insurance companies are involved
8. Enabling environment: Policy alignment – evaluation and adaptation of policies regarding nutrient availability and specific demands from market parties

The FGI adopts a resource brokerage approach, based on matching supply side with demand of the farming system and the ambitions (targets) of the farmer. Using a participatory bottom-up approach, FGI advocates for the integration of soil and water management practices that allows development of sustainable agricultural enterprises. One opportunity for providing / maintaining ecosystem services is in improved allocation of funds, i.e., changing from linear resource management models to circular ones. FGI seeks to accomplish this in the following way:

Traditionally, funds from government sources allocated for waste disposal and sanitation systems are invested in linear models; waste is either dumped or burned at a cost to society with virtually no economic or ecosystem service benefits. Following the eight-step approach, funds can be allocated to circular waste and sanitation systems. Resulting nutrient and organic matter products can be sold to farmers at a price lower than production costs, since part of it is covered by government budgets. The threshold for farmers to invest in soil fertility maintenance, and thus in the prevention of land degradation and maintenance of ecosystem services, is lowered. Due to lower transportation costs, this approach is most promising in peri-urban environments.

With more nutrients and organic matter available, soil fertility can be better maintained when coupled with SLM. This will lead to higher water, nutrient and labor use efficiencies, and subsequently lower inputs from external sources, resulting in reduced costs per unit of produce. Thus, valuing nutrients and organic matter fully and including them in coherent business model shows how ecosystem services can be maintained, while incomes are increased and land degradation is halted. In this context, the FGI model can serve as a crucial network, playing an important role as a facilitator for join stakeholder actions.

5 Conclusions and Recommendation

The lack of adequate resources is one of the most important barriers to achieve LDN in Lebanon. The economic and financial aspects of LDN must be mainstreamed across all project components and specific interventions, pursuing a coordinated approach with the different experts and teams that will be mobilized by the project. There is increasing need for 'connectivity" amongst strategies, interventions and actors, which requires stimulates and incentives from both public and private sectors.

One financial mechanism or source of funding alone, will not have the expected impact. The approach suggested is about building a portfolio of diverse sources of funding for very specific LDN interventions. Each LDN initiative and intervention should be easily measured and results should be continuously communicated to further leverage political support, adjust policy and expand these mechanisms to other areas.

Financial and economic tools should be targeted to public and private sources of funding. Cost benefit analysis and return of investment assessments are key tools to increase public funding, while creative design of financial mechanisms should provide incentives and opportunities to mobilize private sources of funding. The project should manage strategic communication tools to create a political momentum, that will trigger decision making and allow the implementation of mechanism with public support.

The project will need to create the enabling environment to present evidence, build strategic scenarios and mobilize the public and private sectors into win-win solutions and agreements. This demands accuracy in data collection and estimates, a reasonable level of stakeholder participation and a flexible and adaptive capacity for implementation.

As presented in this document, there is a relatively large amount of financial mechanisms and economic tools to achieve LDN. The project must generate the capacities and facilitate multi sectoral dialogue to prioritize the most promising mechanisms. This exercise could consider multi-criteria analysis, to assess the political, legal, institutional, financial and technical feasibility of each potential mechanisms. I consider mandatory to the project´s success to land some of the top priorities into implementation.

The private sector plays a crucial role in addressing the growing global issue of land degradation and desertification. They can participate in the dialogue to form policies and pathways to action, and should identify their needs and priorities for the project to develop a holistic plan. Through a careful analysis of their impact and dependence upon land, as well as risks and opportunities, businesses can identify entry points for SLM investment and adapt their strategies accordingly.

Having the prescience to proactively understand and identify the benefits of investing into SLM will provide a competitive edge while creating a positive image, enhancing relations with civil society, and furthering environmental sustainability for the world and generations to come. This calls for a shift from perverse incentives and practices that only focus on short term high gains, to the consideration of sustainable, long-term benefits. The project should support these investments through the on-going provision of economic tools, knowledge transfer, networks, and other mechanisms and approaches as needed.

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