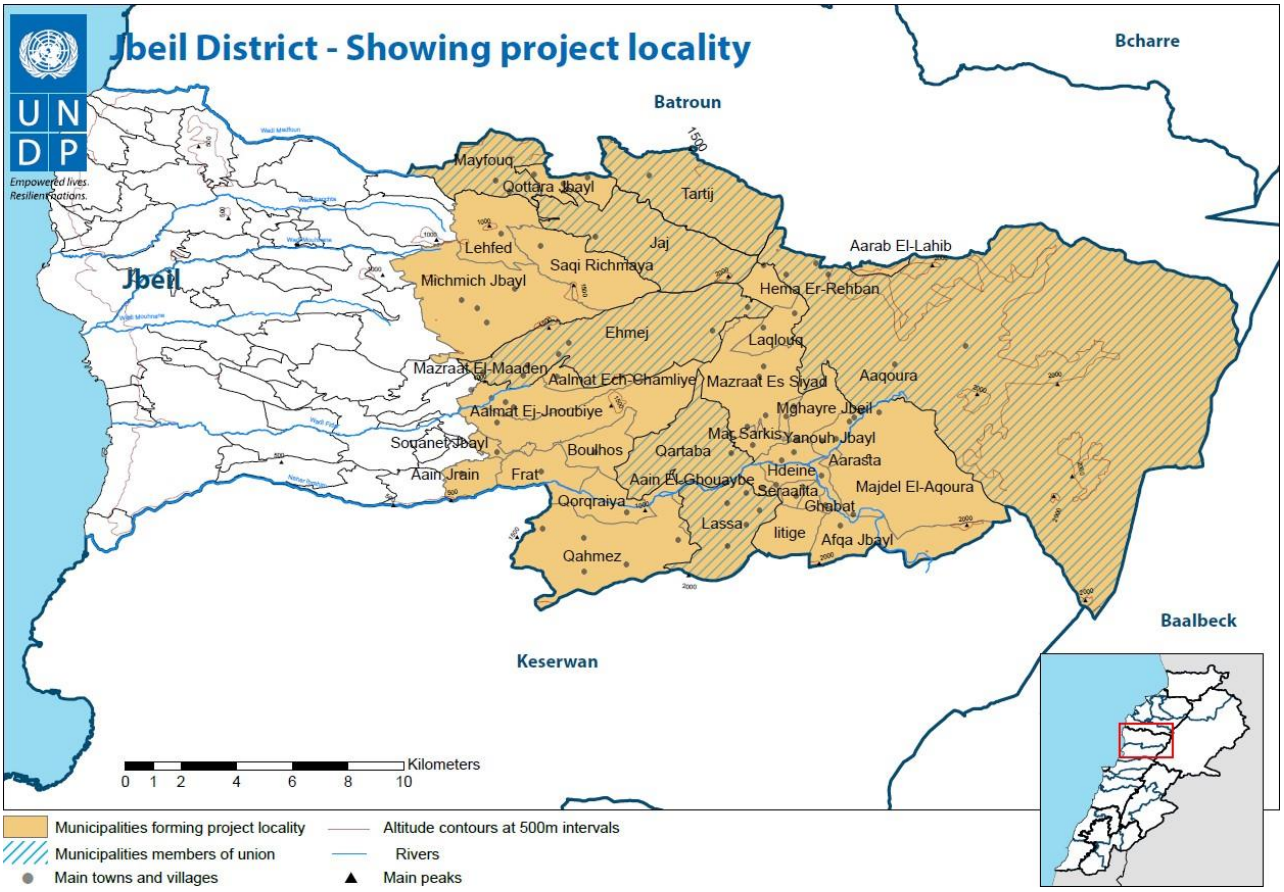
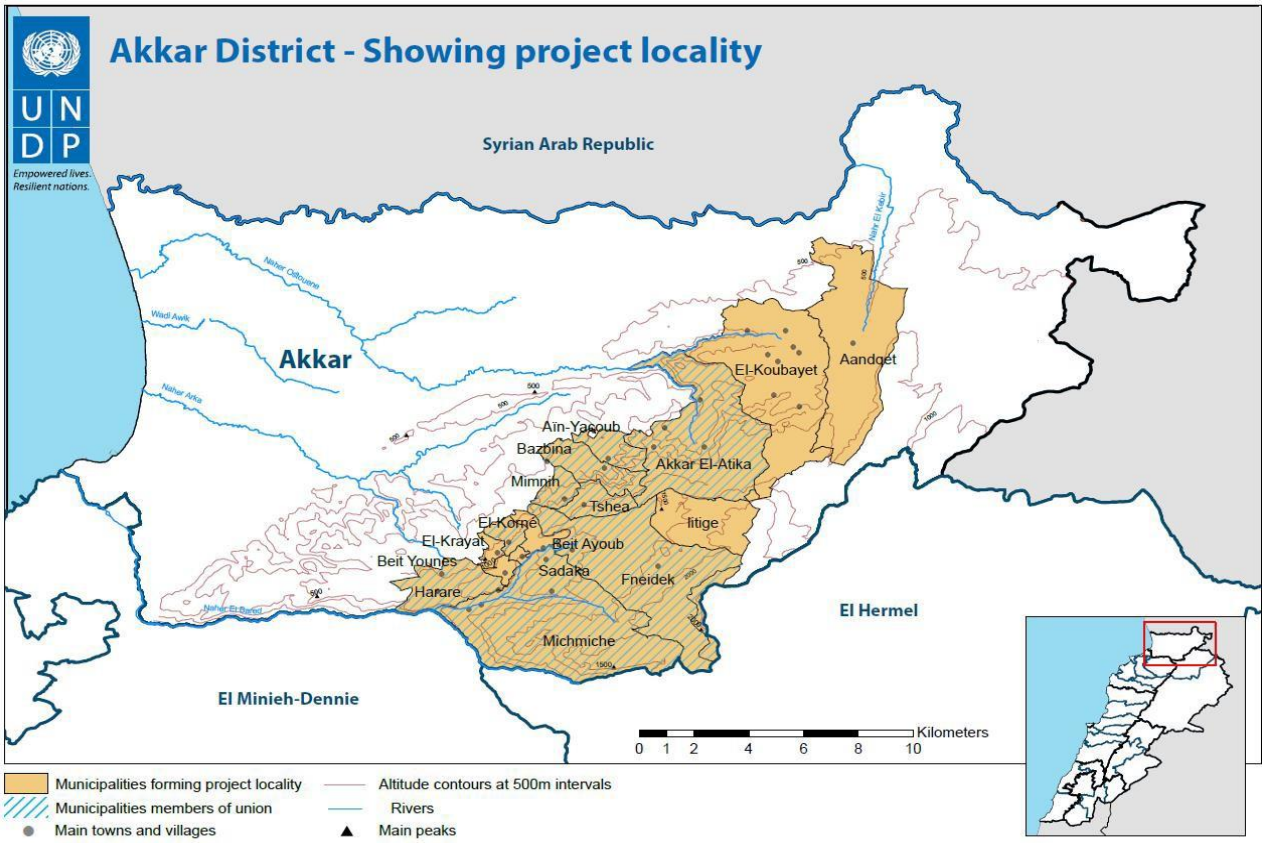

Jbeil District - Showing project locality
Bcharre
Batroun
Mayfouq
Qottara Jbayl
Tartij
Lehfed
Jaj
Saqi Richmaya
Aarab El-Lahib
Jbeil
Michmich Jbayl
Hema Er-Rehban
Ehmej
Laqlouq
Mazraat El-Maaden
Aalmat Ech-Chamliye
Mazraat Es Siyad
Aaqoura
Aalmat Ej-Jnoubiye
Mghayre Jbeil
Mar Sarkis Yanouh Jbayl
Souanet Jbayl
Boulhos
Qartaba
Aarasta
Aain Jrain
Frat
Aain El-Ghouaybe
Hdeine
Majdel El-Aqoura
Qorqraiya
Seraafita
Ghabat
Lassa
litige
Afqa Jbayl
Qahmez
Baalbeck
Keserwan
Kilometers
0 1 2 4 6 8 10
Municipalities forming project locality
Municipalities members of union
Main towns and villages
Altitude contours at 500m intervals
Rivers
Main peaks


Akkar District - Showing project locality
Syrian Arab Republic
Akkar
El-Koubayet
Aandqet
Ain-Yaqoub
Bazbina
Akkar El-Atika
Mimnih
Tshea
litige
El-Korne
El-Krayat
Beit Ayoub
Beit Younes
Sadaka
Fneidek
Harare
El Hermel
Michmiche
El Minieh-Dennie
Kilometers
0 1 2 4 6 8 10
Municipalities forming project locality
Municipalities members of union
Main towns and villages
Altitude contours at 500m intervals
Rivers
Main peaks

Final Draft

Submitted on January 26th, 2022
by Ingrid Hartmann

Table of Content

List of Abbreviations

AgriCAL	Climate Smart Agriculture: Enhancing Adaptive Capacity of the Rural Communities in Lebanon
APR	Annual Project Review
CDR	Council for Development and Reconstruction
CoM	Council of Ministers
DGUP	Directorate General of Urban Planning
DLDD	Land Degradation and Drought
FAO	Food and Agriculture Organization
FDA	Foreign Development Aid
FLRM	Forest and Landscape Restoration Mechanism
GEF	Global Environment Facility
GoL	Government of Lebanon
IFAD	International Fund for Agricultural Development
ILUMPs	Integrated Land Use Management Plans
LANE	Lebanese Advocacy Network for the Environment
LARI	Lebanese Agricultural Research Institute
LDN	Land Degradation Neutrality
LUIMS	Land Use Information Management System
MDG	Millennium Development Goals
M&E	Monitoring and Evaluation
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MoEW	Ministry of Energy and Water
MoI	Ministry of Industry
MoIM	Ministry of Interior and Municipalities
MoPH	Ministry of Public Health
MTR	Midterm-Review
NARP	National Afforestation and Reforestation Plan
NCSR	National Council for Scientific Research
NGO	non-governmental organization
NIM	National Implementation Modality
NPMPLT	National Physical Master Plan for the Lebanese Territory
PIR	Project Implementation Reports
PMAT	Portfolio Monitoring and Assessment Tool

PMU	Project Management Unit
SDG	Sustainable Development Goals
SFM	Sustainable Forest Management
SLM	Sustainable Land Management
SLMQ	Sustainable Land Management in the Qaraoun Catchment
SLWM	Sustainable Land and Water Management
ToR	Terms of Reference
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Program me

Acknowledgement: I would like to thank UNDP Lebanon for contracting me for this assignment. I also would like to thank each and everybody from the team as well as the different community members and experts visited for guiding me through the project and sharing with me their time and their knowledge. May their good spirit continue and may these times of crises soon be overcome. I hope that this project will be a success!

I. Summary

- The project is among the pioneers in raising awareness and addressing environmental degradation in Lebanon.
- After a long delay in the beginning, which was caused by crises which went over the issues a project can normally tackle, the project gave a dynamic start, which is likely to continue.
- The project has conducted valuable partnerships with line ministries which provide support and the legal framework. It has also made for all outcomes the necessary partnerships with executing firms or NGOs.
- The project has designed almost all necessary baseline studies, some with excellent quality, with high technical background knowlege and practical pertinance. .. .
- The project has furthermore started or prepared the activities on rehabilitation of six sectors and also started preparations for their future sustainable management, which are the sectors agriculture, rangelands, forestry, tourism, quarry management, urban planning including adaptive management through including a post-fire risk assessment and a subsequent online post-fire management training combined with high technical and practical excellence.
- To compensate for the delay in the beginning due to the emerging crisis, it is suggested to extend the foreseen project period about 1 or 2 years.
- Given the problems the project had to overcome, it is suggested to rate the project moderately satisfactory.

Evaluation Ratings Table

Monitoring & Evaluation (M&E) Rating)	Rating
M&E design at entry	5 - Satisfactory (S)
M&E Plan Implementation	5 - Satisfactory (S)
Overall Quality of M&E	4 - Moderately Satisfactory (MSI
Implementing Agency (IA) and Executing Agency	**Rating**
Execution Rating Quality of UNDP	5 - Satisfactory (S)
Implementation/Oversight	4 - Moderately Satisfactory (MS)
Quality of Implementing Partner Execution	5- Satisfactory (S)
Overall quality of Implementation/Execution	5- Satisfactory (S)
Assessment of Outcomes	**Rating**
Relevance	5 - Satisfactory (S)
Effectiveness	4 – Moderately Satisfactory (MS)
Efficiency	4 – Moderately Satisfactory (MS)
Overall Project Outcome Rating	5 - Satisfactory (S)
Sustainability	4 - Likely (L)
Rating Financial Sustainability	4 - Likely (L)
Socio-Political Sustainability	0 - Unassessable (AU)
Institutional Framework and Governance Sustainability	3 - Moderately Likely (ML)
Environmental Sustainability	4 - Likely (L)

Overall Likelihood of Sustainability	**4- Likely (L)**

II. Recommendations

According to the ToR, at least fifteen recommendations must be provided at the end of this report. These recommendations, which are listed here, present both the view of stakeholders interviewed as well as the opinion of the evaluator which emerged after conducting the evaluation, to put the current successes of the project forward.

Effectiveness

i) The project has taken a fast pace in implementation and is moving forward into a proper direction, which is a pathway that is recommended to be continued.

- Responsible Entities: UNDP
- Timeline: Second project period

ii) The project should in general provide more opportunities to generate incomes for the poor, for instance, by establishing their own enterprises along value chains, as for instance supporting the establishments of nurseries, processing factories for fruits and legumines, establishing facilities for packaging, supporting marketing etc. as foreseen on the sustainable forest management documents for Jbeil and Akkar.

- Responsible Entities: UNDP
- Timeline: Second project period

Efficiency

iii) It seems to be recommendable to provide guidelines for tenderers on aspects which have to be highlighted in their proposals particular with regard to incomes of the poorer segments of society, such as costs versus activities, costs versus beneficiary groups, material cost categories and in particular water use efficiency calculations, calculations of the effectiveness of irrigation, and the economic benefits per beneficiary group. Furthermore, the guideline by UNDP should be followed, as shown in the following figure, which could be addressed in the Inception meeting:

- Responsible Entities: UNDP, tenderers
- Timeline: Immediately

Project Design

iv) The Project Objective should include a sub-objective related to poverty reduction and a related indicator. Also other indicators should be adjusted according to suggestions made in Chapter 4.

- Responsible Entities: UNDP
- Timeline: Immediately

Effectiveness

Rangeland Management:

v) Conduct reseeding actions to promote palatable and high nutritious species in addition to melliferous, commonly wild harvested, medicinal/herbal, endangered and endemic species considering their multi-functional characteristics and conduct trials for instance with Medicago; Vicia; Trigonella; Lathyrus; Astragalus for instance in collaboration with the Lebanese Agriculture Research

- Responsible Entities: UNDP, American University of Beirut
- Timeline: Within the second project period

vi) Include degradation scoring into the current rangeland management plans to be used by communities

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

Agriculture and SLM:

vii) The strategy for agriculture and SLWM should be further elaborated by focussing particular on those SLWM techniques, which enhance yields most effectively, which is in particular a more advanced irrigation system. Given the scarcity of available water sources, it is important, to use irrigation in the most effective way wherever feasible, which is also confirmed in the Physical Master Plan by CDR. It would also be important to calculate future incomes for the time after the implementation of SLWM measures.

- Responsible Entities: UNDP, MoA, Municipalities
- Timeline: Within the second project period

viii) In abiding principles and practices of SLM, future SLM activities should include especially the intercropping of legumes and grasses to improve fertility of agricultural lands and in grazing areas while reducing pressures of overgrazing on natural rangelands.

- Responsible Entities: UNDP, Municipalities, MoA
- Timeline: Within the second project period

ix) Monitor regularly sodicity and salinity with conductivity meters in improved irrigation systems, apply leaching when necessary

- Responsible Entities: UNDP, Municipalities, MoA
- Timeline: Within the second project period

Forestry, Poverty Reduction, and Income Generation

x) To enhance effectiveness through diversification of incomes, it might be worth in addition to the foreseen activities to identify marketing mechanisms for the **environmental services** the project creates. Above all for carbon sequestration, for which the appropriate market mechanisms has to be identified, but also water services, biodiversity services etc. as also suggested in the ProDoc, Annex 20. This might also require to employ a consultant for the assessment of ecosystem services.

- Responsible Entities: UNDP, MoA
- Timeline: Within the second project period

xi) Follow the recommendation to focus on **management rather than on reforestation** (maybe reforestation more feasible in plains than on mountain tops), while attaining to issues of cost effectiveness.

- Responsible Entities: UNDP, MoA
- Timeline: Within the second project period

xii) Encourage local stakeholders to form user groups for different items in the forest use plans to be developed, such as user groups for herbs, beekeeping, fuel woods, and provide trainings and training materials for them for sustainable harvesting

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

xiii) For further income diversification, 1 – 3 value chains could be developed within the framework of SFM, which could be for instance pyrolysis as an energy source, new NTFP products etc.. herbs or spices.

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

xiv) **Some areas appear to be so fragile, that reforestation for their stabilization might take too long and not feasible, regarding the fact, that restoration has to follow the order social measures < biological measures < physical measures. One might therefore also consider wires, meshes, stone and earth bunds to protect against erosion, falling rocks and stones or even landslides.**It might require a consultant to assess the vulnerablility of mountain areas, particularly in Afqa. To apply the HIMA approach for restoration is highly recommendable,

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

Forest Fire Management

xv) The law not to conduct thinning changed with respect to pinus bruttia with regard to fire management, which the MoA is trying to change now should be accompanied by guidelines and advocacy by UNDP.

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

Tourism

xvi) In certain cases it might be more economically efficient, to support the establishment or improvement of local sustainable tourist accomodations, and integrate them systematically into other tourism activities, such as the Lebanon Mountain Trail than the planting of cedar trees. However, one might further take into account, that tourist numbers will rather decline in future, due to climate change considerations, pandemic etc.. It might therefore be recommendable to calculate different scnearios

- Responsible Entities: UNDP, Research Institution or Consultant, Ministry of Tourism
- Timeline: Within the second project period

Quarry Management

xvii) Put reasonble, but as little resources as possible into quarry rehabilitation. It is meant as a model for the private sector to imititate, who created quarries on private land and should cover the costs.

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

Knowledge management

xviii) It might be recommendable to offer after the completion of the online trainings of GIS on-the-job trainings or visits on demand, as per experience major gaps in skills are only discovered during application and can be easily filled, if somebody is ready to assist, but training skills will get lost soon, if this assistance is not available.

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

General:

xix) The project goes in a very good direction and should continue to move into this direction. It is therefore recommended, to extend project duration about 1 or 2 years.

- Responsible Entity: GEF
- Timeline: Within the second project period

1. Introduction

The 5-year project to be evaluated is titled "Land Degradation Neutrality of Mountain Landscapes in Lebanon" or "LDN" has started on the 9th of March 2020. It is in its second year of implementation and is financed by the Global Environment Facility (GEF) and is nationally implemented by the Ministry of Environment (MoE) of the Government of Lebanon (GoL) and by the United Nations Development Programme (UNDP) under the Support to National Implementation Modality. The project seeks land degradation neutrality (LDN) in mountain lands by rehabilitating degraded land and preventing further degradation. The pilot areas will be the mountain ranges in the of Jbeil and Akkar districts.
The project is hosted by the Ministry of Environment in close coordination with the Ministry of Agriculture, Ministry of Public Works & Transport & DGUP, Council of Development and Reconstruction (CDR), Ministry of Tourism, Municipalities and Unions of Municipalities, NGOs, Food and Agriculture Organization (FAO), and other relevant authorities and organizations.
In line with the UNDP-GEF Guidance on MTRs, the MTR process was initiated immediately after the submission of the second Project Implementation Report (PIR) according to schedule. The MTR processes follows the guidance outlined in the document Guidance For Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects.(http://web.undp.org/evaluation/documents/guidance/GEF/mid1term/Guidance_Midterm%20Review%20_EN_2014.pdf)

It has been the aim of the MTR to conduct it at pilot scale to gain the necessary skills and know-how as well as confidence to scale it up later and replicate follow-up measures accordingly.

1.1. Background Information on the Situation in Lebanon

The MTR has been conducted at a time, when the population of Lebanon had increased from 2.1 million in 1990 to 6.8 million in 2020 according to official data, it might even reach 8 million due to the overflow of the Syrian refugee crisis. Other crises exacerbated the situation, which were the:

- COVID 19 outbreak
- The blast at the port of the Beirut
- The resignment of the government and the following economic crisis, devaluing money about 95% in comparison to the Dollar
- Overall ongoing and increasing climate change.

These multiple and each other enforcing crises had severe impacts on wealth and well-being of the people in Lebanon. While Lebanon had been considered a high middle-income country in 1990, where about 37% were considered as poor, it is nowadays more than 75% of the population who live below the poverty line.
Accordingly, resources received from FDA are now about 20 times higher than in the 90es. Due to the structure of the country, in particularly its land scarcity, high urbanization and land encroachment, and its rocky landscapes, imports of food items are about 20 times higher than exports, which places the country also with regard to food security into a very vulnerable situation. Nevertheless, the devaluation of local currency did not affect the value of most of the raw materials and equipment. The living expenses increased however by more than 100%.

1.2. On the Project Sites

In order to address the causes of land degradation and help Lebanese mountain ecosystems move towards land degradation neutrality, the project aims at counterbalancing anticipated losses with measures to achieve equivalent gains through Rehabilitation, Prevention, and - finally – through Replication to other regions and habitats.

The sites, where these approaches could best be tested with regard to rehabilitation and prevention should include different ecosystems such as forests, grasslands, agricultural land, orchards, abandoned and/or operational

quarries, and tourism and outdoor recreation developments. Following consultations with stakeholders, the districts of Akkar and Jbeil were found to satisfy most of these conditions and were therefore selected as the project localities. Other criteria for the selection of these sites were the degradation potential of each site, the type and the cost of the intervention, the available budget, the absence of intervention by other entities, and the impact of the intervention on the livelihoods of the local communitiesThe two targeted districts have something in common, such as the mountain landscape,but also differences are very pronounced:

Akkar is very poor, actually 95% of the stakeholders consider themselves as poor, while Jbeil is one of the wealthiest districts of Lebanon, where about 50% consider themselves as poor. Major ecological damages stem from high fertilizer and pesticide uses in agriculture, which also affects water resources in both districts. Jbeil is apparently richer in natural assets, attracting lots of tourists. Attractive sites include ancient cedar trees in Jaj, and the first protected areas of Lebanon in the village Bentael, while the village of Lagloug hosts a major ski resort. This has also its downside, as the number of tourists leads to high ecological destruction. The district hosts also a lot of refugees. Nevertheless, a lot of towns in Jbeil are on the way of being abandoned. In both districts a rather paternalistic view on women is prevalent, particularly with respect to income generation activities of women. According to this and the difference in poverty rates, also women's employment rate is lower in Akkar (around 10%) while reaching more than 30% in Jbeil. (Source: Socio-economic Baseline Study 2020).

Also the country itself will benefit from project activities. For instance, 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.

The selected sites in Akkar and Jbeil – although both are mountain landscapes – differ in several aspects substantially.

1.3. Evaluation Purpose

The purpose of the Midterm Review (MTR) is to assess the achievement of project results against what was expected to be achieved, to check of the project is on track, and to give further recommendations. The major milestones of the MTR are the assessment of progress towards the achievement of the project objectives and outcomes and the assessment of early signs of project success or failure with the goal of identifying the necessary changes to be made to set the project on-track to achieve its intended results. The MTR will also review the project's strategy and its risks to sustainability. The MTR is also conducted to report on accountability and transparency and assesses the extent of project accomplishments.
The MTR report will also assess the delivery of the project's results as initially planned and will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. It will provide recommendations for future adaptation and the follow-up activities until the end of the project.
The MTR evaluation will attain to the major principles required for an evaluation: all stakeholders who contributed to the evaluation will be kept strictly anonymous; all information provided will be kept confidential. Information knowledge and data gathered during the evaluation will be solely used for the evaluation and not for other uses, except permission is given by UNDP and partners. The MTR will attain to gender equity in consultations and on the principle of leaving no one behind.
The MTR evaluator will furthermore follow a collaborative and participatory approach ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), the UNDP Country Office(s), UNDP-GEF Regional Technical Advisers, and other key stakeholders.

1.4. Scope of the evaluation

The MTR evaluated the results according to the criteria established in the "GUIDANCE FOR CONDUCTING MIDTERM REVIEWS OF UNDP-SUPPORTED, GEF-FINANCED PROJECTS". It involved the Project Management Unit, major actors mentioned in ProDOC. Also site visits to the project sites were conducted.

The exercise covered the design, execution and results of the project focusing, therefore, on the following three categories:

- **Project Design/Formulation** including the following sub-categories: Analysis of Results Framework: project logic and strategy: Indicators; Assumptions and Risks; Lessons from other relevant projects incorporated into project design; Planned stakeholder participation; and Linkages between project and other interventions within the sector.

- **Project Implementation including the following sub-categories**: Adaptive management (changes to the project design and project outputs during implementation); Actual stakeholder participation and partnership arrangements; Project Finance and Co-finance; Monitoring & Evaluation: design at entry, implementation, and overall assessment; UNDP implementation/oversight and Implementing Partner execution, overall project implementation/execution, coordination, and operational issues; and Risk Management, including Social and Environmental Standards (Safeguards).

- **Project Results and Impacts including the following sub-categories**:Progress towards objective and expected outcomes; Relevance; Effectiveness; Efficiency; Overall outcome; Sustainability (financial, socio-political, institutional framework and governance, environmental, and overall likelihood of sustainability); Country ownership; Gender quality and women's empowerment; Cross-cutting Issues; GEF Additionality; Catalytic/Replication Effect; and Progress to Impact. Based upon findings, the MTR exercise exposes conclusions, recommendations and lessons learned.

1.5. Methodology

A result-based approach was used for the MTR. A more detailed elaboration of the methodology is provided in the Annex 3.

.

1.6. Data Collection

As planned in the inception report, the research design of the evaluation exercise has used the following primary and secondary data collection methods:

Primary data were obtained from desk reviews and semistructured interviews with groups and individuals.

Different methodological approaches to data analysis were applied to identify key findings from the collected data as well as to draw conclusions, identify lessons learned, and make recommendations. These approaches included: contribution analysis, trend analysis: To understand how activities and output contribute to common objectives over time; and comparative analysis. The MTR Evaluation Matrix is included in the Annex 1.

1.7. Ethics

The evaluation was conducted in accordance with the principles outlined in the United Nations Evaluation Group (UNEG) "Ethical Guidelines for Evaluations".

1.8. Limitations

Due to heavy storms, the Airport in Istanbul had been closed during the expected time of arrival, so that the consultant arrived one day later than expected in Beirut. The PMU tried to reschedule the meetings and compensate for the time loss, nevertheless, the time allocated for the evaluation was rather short. Furthermore, some stakeholders could not be reached or could be reached only remotely due to the COVID19 pandemic.

1.9. Schedule for Deliverables

The inception report of the MTR was written in November 2021, the field trip to place during the first week of December 2021, the first draft of the evaluation report was submitted on December 29th, 2021, an online discussion

on the draft took place on Monday 10, 2022, and the final version was submitted by the Consultant on January 26th, 2022.

1.10. Structure of the MTR report

The MTR report consists of three core sections: Project Description and Background Context The section briefly describes the project and the context in which it was designed and implemented. Findings This section provides answers to the three categories of Project Design/Formulation, Project Implementation and Project Results and Impacts. Main Finding, Conclusions, Recommendations, and Lessons Learned The section includes the main findings, evidence-based conclusions, recommendations and lessons learned.

2. Project description

<table>
<tr><td colspan="3">Project title: Land degradation neutrality of mountain landscapes in Lebanon</td></tr>
<tr><td>Country:
LEBANON</td><td>Implementing Partner:
Ministry of Environment</td><td>Management Arrangements:
Supportto National Implementation Modality (NIM)</td></tr>
<tr><td colspan="3">UNDAF/Country Programme Outcome: Outcome 3.3. Lebanon has adopted measures to improve environmental governance</td></tr>
<tr><td colspan="3">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</td></tr>
<tr><td colspan="2">UNDP Social and Environmental ScreeningCategory: Moderate</td><td>UNDP Gender Marker: 2</td></tr>
<tr><td colspan="2">Atlas Project ID/Award ID number: 00098955</td><td>Atlas Output ID/Project ID number: 00102170</td></tr>
<tr><td colspan="2">UNDP-GEF PIMS ID number: 5837</td><td>GEF ID number: 9388</td></tr>
<tr><td colspan="2">Planned start date: 01 June 2019</td><td>Planned end date: 31 May 2024</td></tr>
</table>

2.1. Project Start and Duration

The planned start date of the project was June first of 2019 as per the project document. However, as it had been difficult to hire an appropriate project manager so the LDN Project could effectively only commence on March 9, 2020, once the project manager had been hired and could start working on the project implementation. The duration of the project is scheduled for 48 months, however, faced many delays due to the difficult political situation in Lebanon and the lockdowns due to COVID19, which is further described in the Section “Time Efficiency”.

2.2. Development Context

The LDN project is financed by the Global Environmental Facility (GEF) and is nationally implemented by the Ministry of Environment (MoE) of the Government of Lebanon (GoL) and the United Nationals Development Programme (UNDP).

Land degradation is common in mountain areas and a significant problem in the Akkar and Jbeil districts of Lebanon, up to the point, that erosion is widespread, and even landslides are common, which has negative impacts on incomes in the agricultural, pastoral and forestry sector, and even on tourism due to the loss of scenic values of landscapes.
To reverse these problems, the project sought to establish land degradation neutrality in mountain lands by rehabilitating degraded land and preventing it from further degradation. It is aiming to 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. The objectives of the LDN project are aligned with the NAP, i.e. development should be promoted, but not at the expense of the environment. Indeed, the Millennium Ecosystem Assessment (2004) has even shown how to

produce synergies among environmental and development targets. For this purpose, the project tests rehabilitation practices 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. SLM practices have been identified as the main tools to align agriculture, rangeland, and forest practices to this idea. Prevention will be achieved through comprehensive land use planning and the monitoring for compliance with set conditions and their enforcement.

Furthermore, the enhancement of capacities particularly at local government level is foreseen. The institutional and regulatory context are under review, to be updated and strengthened to prevent new degradation of forests, rangelands and agricultural lands. 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.

2.3. Problems the Project Seeks to Address

The project seeks to address the problem of unsustainable land use and land management practices in Lebanon, which continue to erode the country's natural resource basis. While traditional laws and practices (HIMA for instance) helped to protect the land, abandoning of land, population growth, the continued loss of arable land and biodiversity due to urban sprawl and increasingly unsustainable land management practices, eroded the land, leading to severe land degradation particularly in mountain areas. A soil assessment showed that over 90% of the central Lebanese mountain areas have moderate to high erosion rates, exacerbated 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.

About 216,643 people (family and non-family) work full-time on farms with seasonal family labour reaching 239,007 people. However, farmers are considered to be among the most vulnerable Lebanese. 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.**

The Millennium Ecosystem (2004) has shown, that through land degradation many ecosystem services are also degraded, which impedes human well-being and economic prosperity. The UNCCD pursues therefore the twofold goal of combatting land degradation AND combatting poverty. The linkages between land degradation, desertification and drought are manifold, in particular with regard to climate change adaptation and mitigation, biodiversity protection, furthermore also to pollution, as pollution is also considered as a chemical degradation of land and water resources. Forests themselves protect soils against degradation and sequester carbon, but apparently in Lebanon they have the additional impact also of stabilizing slopes and avoiding landslides.
Hence the project is appropriate to make Land Degradation Neutrality its major target, which at least tries to keep degradation within a country in balance.

The ProDoc identified the following root causes for land degradation, which the project would attempt to address:

- 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

Apart from this, the institutional lack of an effective Integrated Land Use Management plan led also to urban encroachment into land, so that in the project site according to the landscape survey about 10% of land was finally sealed, and no more available for the delivery of ecosystem services which might also to relate to low levels of law enforcement and technical capacities.

The three major impacts of land degradation according to the Project document are:

- Loss of biodiversity and habitat
- Reduced ecosystem services
- Loss of income and poverty.

Indeed, these impacts are interlinked, as land degradation "is undermining ecosystem functions and services and there has also been a decline in productivity in terms of crop cultivation, recreational opportunities and tourism, ecological values, and in land and property values.», as the ProDoc highlights.

These interlinkages are illustrated in Table 1.

Table 1: Problems, Underlying Reasons, Root Causes and Barriers

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" ofdegradation • Limited experience in the implementation ofGood Agricultural Practices • Limited know-how and experience in assessingthe 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 andMoA to oversee and critically review and monitor reclamation and rehabilitation • Lack of guidelines for rehabilitation of degradedsites by the private sector	**1 No concept of Sustainable Land Management or Land Degradation Neutrality in the Land Use Planningprocess** **2 Lack of monitoring, low level of compliance, andlack of enforcement** **3 Lack of information andknow-how for rehabilitation** **4 Lack of resources for replication and long-term**	**OUTCOME 1: REHABILITATION** Degraded mountain land in selected mountain districts of northern Lebanonidentified, 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 existinglegal framework • Lack of experience, resources and know-howfor monitoring and enforcement • Limited know-how in the development ofstrategic 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 environmentalguidelines for land management • Weak role and capacity of local authorities inmonitoring and enforcement of laws, regulations, and environmental guidelines		**OUTCOME 2: PREVENTION** Mountain lands managed sustainablyto prevent degradation • Improved land use planning • Enhanced capacity at central andlocal levels • Review of policies and procedures • Technical guidance for SEA and EIA • Strengthen compliance andenforcement capacity • Instil LDN into Quarries Master Planbeing reviewed • Assist development of Master Planfor 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 ofpublic lands • Absence of clear procedural and regulatory provisions for utilizing bonds and guarantees • Lack of incentives for the private sector toincorporate SLM in land development • Limited financial incentives for the promotion ofthe agricultural sector and for the rehabilitation of lands for agricultural production • No incentive for forest management as a sourceof income	**planning**	**OUTCOME 3: REPLICATION** Project monitoring and evaluation, communication, knowledge management, and financial mechanisms for the dissemination andreplication of the results of the project with the aim of achieving land degradation neutrality • Learning from project monitoring andevaluation • Communication and KnowledgeManagement • Effective sustainable financingmechanisms developed

Source: ProDoc

2.4. Immediate and Development Objectives

All this is aligned with the development context of the project such as the

- 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.
- The Lebanon SDG report، which has a particular focus on the goals of eradicating poverty, ensuring food security, protecting the environment and using natural resources sustainably.
- The United Nations Strategic Framework (UNSF) for Lebanon for the period 2017-2020, particularly its *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.

2.5. Project Locations and Project Targets

The land area targeted by the project is 19,365 ha in Akkar and 28,019 ha in Jbeil, for a total 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, rangelands 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 of the Project Document; in Akkar, there are 11,342 ha of forests and shrubland, 5,375 ha of cropland and 493 ha of grasslands; in Jbeil, there are 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. 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.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 20 villages/towns altogether.

2.6. Expected Results

The Rationale of the project is illustrated in its logframe, which consists of of 3 Outcomes, with related activities.

These are

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

- Landscape-scale survey of mountain lands and high country areas in Akkar and Jbeil Districts
- Degraded forests restored at selected project sites and sustainable forest management applied
- Sustainable rangeland management practices for selected sites in high country grasslands
- Degraded quarries rehabilitated
- Sustainable agricultural practices in degraded farmland in selected sites.
- Enabling environment established for responsible tourism and minimum impact outdoor

Outcome 2: Mountain lands managed sustainably to prevent degradation

- Improved land use planning through strengthened frameworks and capacity at central and local levels
- LDN capacity enhanced and LDN mainstreamed into land use planning and key policies targeting mountain lands
- GIS platform established for land use planning and related monitoring

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 project is monitored and evaluated on a continuing basis according to the adopted M&E Plan
- Communication and Knowledge Management Strategy implemented
- Effective sustainable financing mechanisms identified and developed

Major Causes of Land Degradation

These outcomes address therefore four leading fundamental causes of land degradation, which are

- 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

2.7. Total Resources

The total resources allocated to the project at CEO endorsement of the ProDoc are presented in the Table 2 below. All resources apart from the ones by UNDP are non-monetary.

Table 2: Project budget plan

Institution	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Total
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**

Source: Budget Report 2021

2.8. Main Stakeholders and Partnerships

The ProDoc lists a number of stakeholders the project has working relationships with in Table 3 . Among them, the major stakeholders who collaborate with UNDP until MTR are the MoA, the MoA, MoT, the CDR, LRI and the rural municipalities and communities. Their mandate, roles and responsibilities are well described as the Table illustrates, and stakeholders are also very well aware about this. Their relationship with the project is well defined and based on mutual collaboration and appreciation.

Table 3. 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

Lebanese Reforestation Initiative (LRI)	LRI's strategic goals include 1) Improve the management and conservation of forests across Lebanon, and 2) Contribute to the LDNnational 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'sforest 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 productssuch 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 increasedawareness 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 oneof its strategic objectives is to improve and enforce conservation and protection of the environmental, cultural, historical, agricultural heritage ofrural areas.	The MoT will work with the project towards primarily Output 1.6, butalso 2.1-2.3.
Private Sector	Both private sector land owners and/or operators are stakeholders in theproject 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 Statefor 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 enhancetheir 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 OMSWAas 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 andreforestation, 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 theirarea 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 theirterritory. 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 throughthe 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 indirecttaxes). 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 aGIS Land Database; while the purpose of this GIS system cannotbe linked to land use planning, project collaboration (Outputs

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 useplanning, 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 suchas under Output 2.1
Ministry of National Defense (MoND)	The Ministry of National Defense through the Directorate of GeographicAffairs 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 responsibledepartment 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 improvementof the legislation but also due to increasing awareness. The Order can bebrought 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

Source: ProDoc

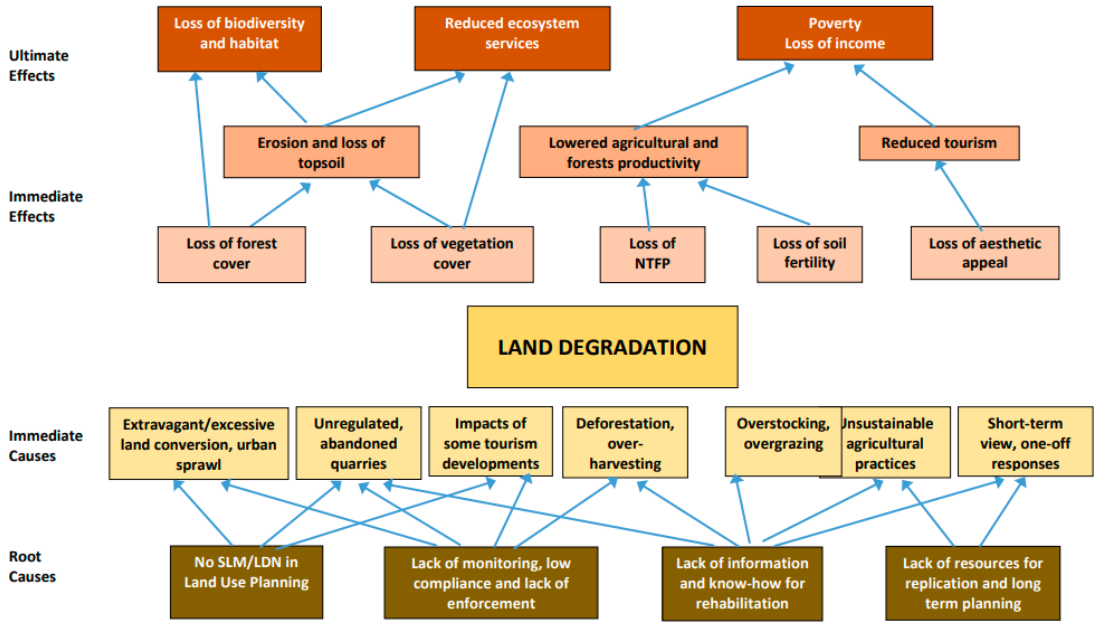
Besides these ones, the project undertook also valuable partnerships with relevant NGOs, which besides LRI were also AFDC,RMF, LMTA, Akkar Trail, etc). Focal points from MoA and MoT were assigned, and in general the coordination with all government sakeholders went well, also without nomination of official focal points.

2.9. Theory of Change

The project has set up a theory of change which is illustrated in Fig.1 below and is reflecting the Logframe in a reverse logic. It is seeing the root causes for land degradation in an absence of Land Use Planning, which is considered as the major cuase for urban sprawl, excessive land conservation, unregulate abandoned quairies and on negative environmental impacts of tourism. The lack of monitoring, and low compliance with laws and legislation and their low enforcement are furthermore perceived as contributing to these phenomena, and would lead to deforestation and over-harvesting as well. The lack of know-how for rehabilitation is also seen as a root cause for all kinds of overuse of land, through qurries, deforstation, overharvesting, overstocking, overgrazing, and unsustanainable agricultural practicies. The lad of resources for replacing would thereforore lead to short-horizon responses, which do not take the long-term consequences into account,and are considered also as the cause for unsustainable agricultural practices. All this will then lead to land degradation, manifested in loss of forest and vegetation, of soil and scenic valies, which then on the long run will have also the economic consequences of reduced incomes from agriculture, forestry, pastoralism, and tourism.

Figure 1: Causal Chain for Land Degradation within selected sites in Lebanon

Causal Chain for Land Degradation within the selected sites in Lebanon



3. Findings

3.1. Project Design / Formulation

4.1.1. Analysis of Project Logic and Strategy

Expected results are appropriately linked to the achievement of the Project outcomes, and activities are logically sequenced to achieving many of the expected results. As already mentioned in section“3.8. Description of the project’s Theory of Change”, the causal chain analysis for land degradation is well formulated and corresponds, if visualized as a backward path, to the Theory of Change of the LDN.

The project hypothesis is that rehabilitation is offsetting earlier degradation of land and will therefore meet the goal of land degradation neutrality. The project logic is robust and consistent. The Outcomes are related to the overall goal of the project and separated into different sectors: Forestry, Agriculture, Pastoralism, Quarry Management and Tourism, which are to be rehabilitated, where these sectors have led to the degradation in Outcome 1, and once rehabilitated, sustainable use has to be introduced at long term to maintain the new status quo through Outcome 2 This will be supported through different monitoring and evaluation methods and legal and institutional framework through Outcome 3, which on the long run, even after project end would lead to replication of this approach. . These Outcomes relate therefore very well to the Design of Rehabilitation (Outcome 1), Prevention (Outcome 2), and Replication (Outcome 3), although the mission of Replication is a little bit masked in the formulation of Activities in Outcome 3.

The strategy set up by the LDN project in order to achieve the expected results is well formulated, and robust. Outcomes and activities are well aligned, and Outcomes well-embedded in a temporal sequence. The project involved a huge amount of villages and their municipalities, it collaborated with appropriate partners and with Balamand University as an outstandingly excellent partner.

4.1.2. Analysis of the Logframe

The outcomes are well designed to address the major causes of land degradation appropriately. The sequence and order of the logframe is appropriate and activities are well related to the different Outcomes.

The first outcome aims at identifying, rehabilitating and restoring the different ecosystems, such as degraded forest, rangeland management, degraded quarries and is addressing sustainable agriculture and sustainable forest management. All this is relying on the landscape survey of mountain land in Akkar and Jbeil district as a first acitivty which provides the overall plan from which also other documents for the mentioned activities have been derived.

Outcome 2 seeks to manage the land sustainably and prevent from degradation, which is also appropriately sequenced, as of course sustainable land management and prevention from degradation can only be conducted, after degradation has been addresed. The activites of improved land use planning and of capacity building at central and local levels are the necessary activities indeed to sustain the achievements made in Outcome 2, as well as LDN capacity bilding and LDN maintreaming into land use planning and key policies, which will indeed ensure long-term sustainabiity.

Outcome 3 relates to the necessary accompanying and supervision activities, which include monitoring and evaluation, communication and knowledge maangement, as well as sustainable financing.

One could have also chosen another way of structuring the logframe by dividing the Outcomes vertically along the activities for susainable forest management, rangeland management, tourist management, agricultural practicies and quarry rehabilitation and assigning the activites wich are listed in Outcome 2 under each of these outcomes seperately and in more detail, but indeed the current framework is the more elegant and concise one.

While therefore Outcomes and Activities are well-related, however, the overall project objective is considering land degradation neutrality only, without mentioning a sub-objective or a project purpose related to poverty reduction, which the original UNCCD framework takes into account. To integrate poverty reduction into environmental protection and improvement is important to overcome the point of view that environment would be a concern of the rich of society and not an issue of the poorer segments of society, and it will also protect against resource waste in environmental work, such as using helicopters for irrigation etc., as it also happened before.

4.1.3. Analysis of Indicators

As a general remark, all indicators should express a change, which is currently not the case. Therefore, the term "is enhanced" should be added to almost all indicators, as is shown now in Table 7. The initial indicators established by the UNCCD to measure land degradation, and as subindicators Land Cover, Net Productivity, and Carbon Storage in soils, are in principle feasible, but also – apart from land cover, difficult to measure, and if so, rather for an untouched landscape under grassland or forest. Furthermore, these parameters are influenced not only by land use, but even more by weather conditions, and for agriculture also by the crops which are annually grown. It would therefore rather make sense, to measure these parameters only every 5 years to state progress, as it is for instance foreseen in the framework for the Great Green Wall, the flagship project of the UNCCD. As these are temporal intervals which cannot be kept within a project which has to be continuously monitored and has a duration of 5 years in total only. Apart from this, these indicators are also part of the GEF tracking tool annexed, therefore, there is actually no need to record them twice. Even more difficult to measure is the influence of weather on these parameters. Indeed, to use these indicators correctly, it would rather need a precise soil-vegetation-climate model, which can predict the development of these indicators, respectively trace ex-post, how they would look under perfect land restoration conditions. This could then be compared with the actual conditions of the project. While currently the activities conducted so far cannot have had any influence on the change of these parameters, these remarks are not valid for the first phase of project implementation anyway, which is also the reason, why the GEF tracking tool cannot yet be filled.

In Indicator 5 and 6, there is a double measurement of agriculture, both in indicator 5, as well through the measurement of improved yields in indicator 6. It is therefore better, to replace the reference to sustainable agriculture by sustainable forestry, which is only taken into account on the project level indicator, not in the outcome indicators.

For the other indicators, there might be the need for change, particularly for the ones, which rely on the finalization of local land use plans, which is not give. These changes are described below. Otherwise it might be advisable to use also the indicators from the SLMQ project for project level and Outcome 1, compare Table 4 below. It would also be important to use poverty indicators, such as that the increase of the incomes in the segments of the 3 lowest income percentiles would increase about 10% higher than average, as well as to add one indicator on soil and site stability, to ensure that the appropriate measures to stabilize sites have been undertaken.

Table 4: Indicator Framework of the project including suggestions by Evaluator and from SLQM project

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	Project Indicators	Evaluation Comment	Suggested Indicators
Project Objective: To achieve land degradation neutrality of mountain landscapes in	Indicator 1: Total land/vegetative cover in the project localities in Akkar and Jbeil	Feasible	For Land Degradation: Total land area under restoration or sustainable management in the localities of Akkar and Jbeil
	Indicator 2: Forest cover in the project	Feasible	

Lebanon through integrated landscape management Project Purpose: Poverty Reduction of the 4 poorest percentiles of the population enhanced.	localities in Akkar and Jbeil		
	Indicator 3: Income increase of poorest segments of society in comparison to average changes in incomes	Project Purpose newly introduced and new indicator	**Poverty: introduce newly!** Five new economic opportunities introduced into communities or old ones strengthened, leading to income increase about 10% at least on average, and about 20% among the poorest segments of society targeted by and directly benefiting the project interventions
	Former Indicator 3, now Indicator 4:: Net Primary Productivity in kg C/m2 in the project localities in Akkar and Jbeil	Varies with weather conditions. Use samples for measurements and put them into a soil-climate vegetation model to ensure that measurements are on track.	(Leave)
	Former Indicator 4, now Indicator 5:: Soil organic carbon in tC/ha in productive lands of Jbeil and Akkar enhanced	To be kept, but high variations of measurements. Otherwise, using the EXACT tool as an ex-ante tool at final evaluation	(Leave)
Outcome 1: Degraded mountain land in selected mountain districts of northern Lebanon identified, rehabilitated and restored	Former Indicator 5, now Indicator 6: Percentage of land area in target sites in which sustainable agricultural **forestry** or rangeland practices are being applied	Feasible	**Include :** 5a). Rehabilitation of degraded forest to improve forest patch connectivity, measured by: For areas with direct assisted restoration activities (on 205 ha): # of seedlings planted with >50% survival rate; For areas left to natural regeneration (on 655 ha): # of emerging seedlings/ha in sample plots
	Former Indicator 6, now Indicator 7: Yields of three most commonly grown crops **improved above a certain percentage (10%)**	Compare remarks on Indicator 3 and 8	**Indicator to be maintained, but income indicator could be added such as: yields from three most commonly grown crops improved about at**

			least 10% for the farmers targeted by the project,
	Former Indicator 7, now Indicator 8: Number of quarries in which rehabilitation techniques are applied	Indicator is not timebound. Use progress of rehabilitation based on a scorecard which measures progress instead	
	Former Indicator 8, now Indicator 9 Annual household livelihoods/ income levels in selected mountain communities in Akkar and Jbeil (disaggregated by genders)	Feasible, but Indicator 6 is included	
	Former Indicator 9, now Indicator 10: Women participating in and benefiting from project interventions **equally as men**	Feasible	
Outcome 2: Mountain lands managed sustainably to prevent degradation	Former Indicator 10, now Indicator 11: LDN capacity of key government stakeholders as per adapted Capacity Development Scorecard	Feasible, but subjective	
	Former Indicator 11, now Indicator 12: LDN reflected in LUP at district municality level of Jbeil/Akkar	Indicator based on the implementation of another activity, which is usually not favourable, if that activity is in delay. Suggested new Indicator: Degradation not enhanced in comparison to Indicators in Outcome 1	
	Former Indicator 12, now Indicator 13: LD and LDN mainstreamed I 1) Master Plan for the protection of	Compare remark on Indicator 11	

	Mountain Plateaus, Natural Areas, Beaches, Green Areas and Agricultural Places; Quarries Master Plan		
	Former Indicator 13, now Indicator 14: Existence and use of appropriate GIS system/platform for LUP in productive and natural ecosystem	Indicator is feasible	
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	Former Indicator 14, now Indicator 15: Recommendations from M&E (regular, PIRs, MTR) integrated into project design and management	Indicator is feasible	
	Former Indicator 15, now Indicator 16: Reach of Communication and Knowledge Management	Should be completed by a phrase such as "and initiates change of attitudes or actions" etc..	
	Former Indicator 16, now Indicator 17: Identification and operationalisation of new financing mechanism s for SLM/ SFM/ LDN	The indicator does not reflect the progress to be made in identification of new finance mechanisms. Maybe to be accompanied by a scorecard which distinguishes phases into first brainstorming, discussing, testing, deciding.	

4.1.4. Analysis of Assumptions and Risks

The assumptions made in the logframe for the project objective and certain outcomes were in line with the expectations from the project and those outcomes, therefore they will not be a need to discuss them.

Risks addressed in the Logframe of the ProDoc are illustrated in the Matrix Table 4. It can be confirmed, that the risks formulated are mostly relevant, and properly addressed by the project. The first risks formulated about political instability cannot be avoided in its root causes by the project, only its impact on project staff and stakeholders can

be moderated. Risks 2 to 4 have to do with the reluctance of stakeholders with project activities and with taking over responsibility for environmental damages caused by themselves. In response the project tries to apply participatory approaches to take everybody on board, and to showcase the economic advantages of not damaging the environment. While all these are certainly good and effective approaches, at the end it would also need appropriate legislation and its enforcement in line with the Global Environmental Conventions, which is also one of the activities foreseen by the project, though not mentioned here. Risk 4 and 5 are related to fears of the governments and individuals of losing access to incomes through attainment to environmental targets, which the project for Risk 4 will also approach through a decision support system, and Risk 5 through bridging resources, which indeed seems to be highly appropriate. In particular for Risk 5 it is necessary to bridge incomes of beneficiaries particularly in the beginning. It is hoped, that the final sustainable finance mechanism will be sufficient to finance upscaling. Risk 6, negative climate change impacts on outcomes should actually be avoided through the proper design of climate-resilient solutions.

Table 5: Risks assumed by the ProDoc and Evaluation comments.

Risk	Project Responses	Evaluation Comments
Risk 1: Insecurity and political unrest may result in considerable delays and postponement of project implementation	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 deploymen	The Risk is still substantial, the actions the project foresees are appropriate to protect the project team in Beirut and in the field. However, of course this will not address the underlying reasons, which are beyond the influence of the project
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	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	Indeed, the risk formulated is appropriate and relevant. The mitigation actions are appropriate, yet can also only contribute to solutions to avert some of the risks, as it is also beyond the capacity of the project, to influence the underlying causes. Participatory approaches and dialogues may help stakeholders to take responsibility, but one might also improve and

	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	enforce legislation in alignment with the global conventions, such as appling “the polluter pays” principle.
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	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	The risk is relevant and well formulated, and the project might indeed provide good examples for rehabilitating and safeguarding ecosystems, supported by its communication strategy.
Risk 4: Future Government Administrations may be reluctant to increase areas designated for conservation for fear of losing state revenues	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	The risk is well formulated and relevant, but the project should make it clear from the beginning, that conservation and environmental protection will pay off in the long run, and maybe bridge some of the necessary resources in the short-term.
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	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 upscaling post-project hence its work towards effective	The risk is well formulated and relevant, however should be prevented from the start, as stakeholders from the beginning should not be brought in a situation where they might lose income, instead, the project should showcase,

	sustainable financing mechanisms under Output 3.3	how environmental rehabilitation could enhance incomes and access to natural resources, even if that would mean bridging incomes or resources (for instance) for a certain period. For upscaling it is hoped, that the financial mechanisms to be developed at the end might help.
Risk 6: Impacts from climate change	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	The risk is well formulated and relevant. However, the project should avoid as much as possible any outcomes that might be vulnerable to climate change, but should seek to find climate resilient solutions in all outcomes

4.1.5. Lessons Taken up from other Projects

The project is in touch with all other finalized or ongoing projects of related thematic by UNDP and other organizations but is particularly aligned with the SLQM project. The SLQM project has taken a very successful approach to address land degradation and developed many effective and even innovative activities which had also been successfully implemented. The PM of the LDN project is therefore continuously in touch with the former PM of the SLQM project to take up lessons learned from SLQM project and also to replicate – as far as landscape conditions are comparable, the activities conducted there. It also took the design into consideration. Therefore, the indicators, targets and the logframe as well as the budget of the LDN project had taken all the knowledge acquired by the SLMQ project before into consideration.

4.1.6. Planned stakeholder participation

The participation of stakeholders had already been envisaged in the ProDoc. The evaluation could confirm, that indeed, a lively collaboration with all stakeholders listed in Table. 3 has been started.
And indeed, already in the beginning, after the project manager had been hired, she took a dedicated approach to visit all municipalities which have been characterized in the landscape survey as degraded, according to the location of their villages, to spread first information about the project and conduct first needs assessments. In the second phase, it is planned to work closely with these beneficiaries in implementation.
The project is also to take up the HIMA approach in particular with regard to rangeland restoration, which however is only the stage of early beginning and will have to be elaborated within the further implementation phase.

4.1.7. Gender Issues

The ProDoc stresses the importance for UNDP to commit to gender equality and women's empowerment not only as human rights, but also, as the ProDoc illustrates, because women have a paramount role in agriculture and are therefore one of the major beneficiary groups. Concern is nevertheless raised about the patriarchal structures within rural areas, and indicators require therefore a minimum number of women contributing to their activities. While this number can be provided through the project, the number of women involved does nevertheless not say anything about their real benefits / or on the contrary – drudgery, the projects provides, respectively causes to them, as the project does not define their roles specific enough. For instance, most women, who are involved into the project, will provide a lot of manual labour to the project, but nothing is defined about the income they might receive, if the work they take over is the most tedious or physical difficult one, and if family incomes, which are mainly made to men, are equally shared with women, or if current power relations in family would disadvantage women. While this indeed, in particular when it comes to power relations in families, would to a great part exceed also the mandate of the project, nevertheless it would have been worthy to define at least the benefits and workloads of women in the project more specifically, to ensure that their participation is based on equity and equality.

This is pertinent also to the indicator, which equally targets the incomes of men and women, as in most cases in agricultural work it is total households who create incomes, which benefits both men and women, but if this equally distributed or controlled, cannot be influenced by this project.

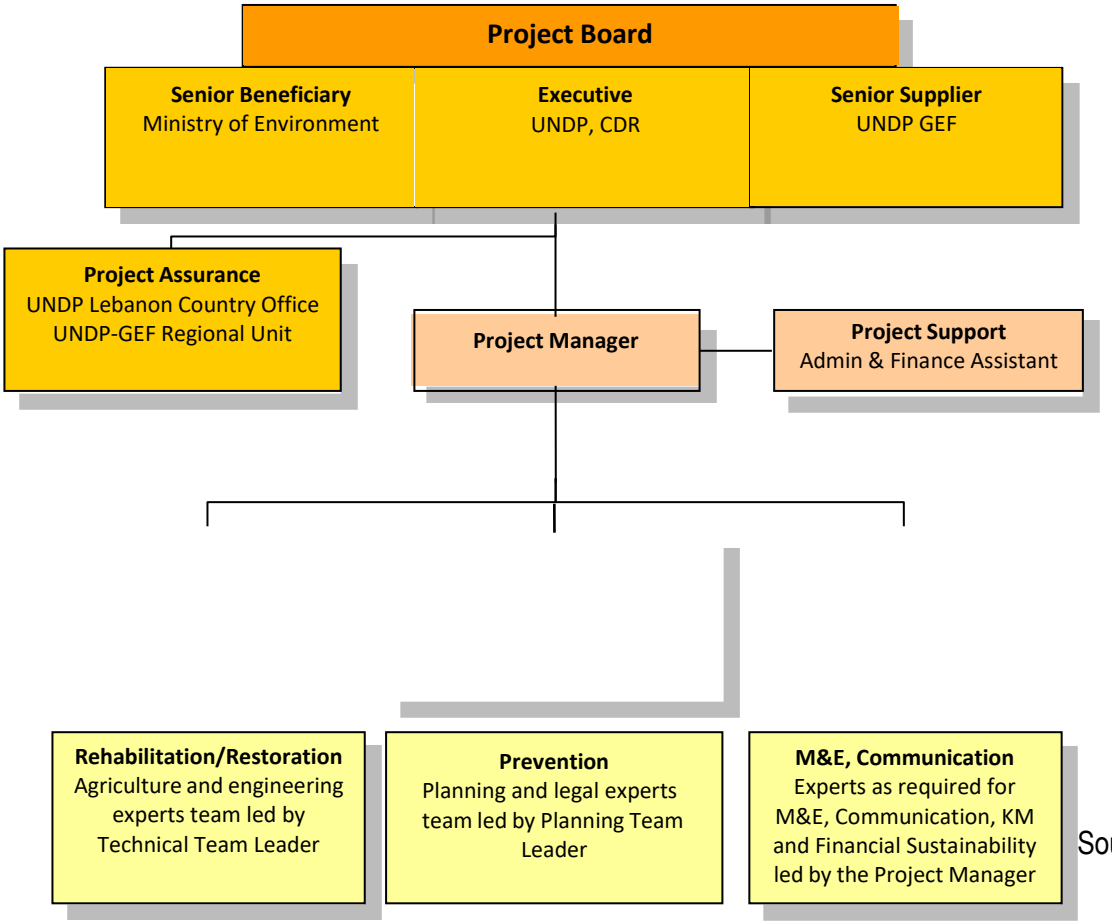
On the other hand, on the more intellectual levels, women are well represented, and appear even to be dominant, so that one – female – interviewee described it in a way that "women do the intellectual work, while men conduct the manual one…".

3.2. Management Arrangement

The project has a management arrangement which is common for technical projects like this, and roles and responsibilities of everyone are very well defined.

The project organization structure is depicted in Table 6:

Table 6: Project Management Structure



Source: ProDoc

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

As the consultant could observe, the collaboration among all these units is well and characterized by high concern, friendship and solidarity among each other and on all levels. Due to the COVID crisis, the staff members of UNDP visit offices in shifts, in many cases also home-based.

The project staff itself is considered as appropriately educated for the tasks they have taken over, and staff members on all levels are perceived by stakeholders as “very committed”, “nice” or “hard working.”

3.3. Project Results and Impacts

4.3.1. Project Approach

The LDN Operational Approach **„Avoid, Reduce, Reverse**“ is well targeted to UNDP objectives and to country goals as well as the UNCCD with its two major objectives:

- Combatting land degradation (DLDD)
- Combatting poverty

The project takes therefore dedicated efforts to link environmental goals with the ones of development, in particular or eradicating porverty and food insecurity, which is ensured through the following linkages:

Table 7: Land Degradation issues related to Development Issues and Human Well Being

Land Degradation Issues which are addressed	Development Issues which are addressed
Tourism, which is believed to increase if scenic values of the landscapes, which are restored and maintained by the project, while at the same time mitigating negative impacts	It is hoped, to enhance number of tourists through improving the scenic value of the landscape, and enhancing local incomes
Restoration of agriculture, including SLWM with a focus on higher efficiency of irrigation systems	The activity will address food security issues and incomes in the agricultural sector
Sustainable forest management will enhance biodiversity and biomass of vegetation as well as increase carbon sequestration of vegetation and soils, therefore be the key to address climate mitigation as well as adaptation. It enhances the scenic values of landscapes and will attract local and foreign tourists,	The activity will enhance available energy sources for HHs and income through various value chains for instance for herbs, spices, medicine
Improved use of rangelands for pastoralists is targeted through optimization of rangeland use	It is expected that total meat, milk, wool production and products derived from this will be enhanced, and so will food security and farmers' incomes
Stopping land sealing: The activity is supposed to be implemented with the Ministry of Urban Developed and has not yet really started, but will indeed be necessary to provide at least the minimum of landscapes which are still left to provide any of the ecosystem services mentioned above.	The activity will at least maintain the status quo.
Providing examples for quarry rehabilitation	The activity is a little bit different from the ones mentioned above, as the environmental damage is not caused by overuse, but by ending use by private companies, leaving the damage behind. The benefits of rehabilitation can rather be seen in getting the land back nearly in a stage as it had been before.

The project approach is therefore effective in addressing both the targets of environmental rehabilitation and income generation, which are both very urgent issues, the first ones due to substantial neglect of environmental issues in the past, the second one due to the recent crises, which led to high impoverishment in the country. In this way the project approach is feasible in harnessing both targets – addressing land degradation and poverty reduction simultaneously, as as increased incomes or improvements of well-being are expected from diversified resources.

4.3.2. Progress towards objective and expected outcomes

The achievement of project targets through the different activities is not yet very high, as the project had about 1 year delay (compare Section on Time Effectiveness). The idea of the project is to circumvent the lack of indicator measurement for the project indicators 1 – 4 as well as for indicator 6 and 8 at the time of MTR; by conducting a second land-scape survey to assess those indicators internally, which is also welcomed by the MTR evaluator. But to avoid the repetition of the whole landscape survey, it will be sufficient only to relate to the 3 LDN indicators: Land cover, Net Primary Productivity, Carbon content of soils, and derive from that the overall land degradation indicator. Furthermore it is suggested, to conduct this repeat survey not earlier than 2 years after the MTR.

Table 8: Project Objectives and Targets

	Indicator	Mid-Term Target	Rating
Project Objective: To achieve land degradation neutrality of mountain landscapes in Lebanon through integrated landscape management	Indicator 1: Total land/vegetative cover in the project localities in Akkar and Jbeil enhanced	No net loss in the project localities in Akkar and Jbeil	Not assessible, as activities have not started yet. Therefore, even if no net loss happened, this cannot be attributed to project activities
	Indicator 2: Forest cover in the project localities in Akkar and Jbeil enhanced	No net loss in the project localities in Akkar and Jbeil	Not assessible, as activities have not started yet. Therefore, even if no net loss happened, this cannot be attributed to project activities
	Indicator 3: Net Primary Productivy in kg C/m2 in the project localities in Akkar and Jbeil enhanced	An average improvement of 5% in NPP.	Not assessible, as activities have not started yet. Therefore, even if NPP improvement had happened, this cannot be attributed to project activities
	Indicator 4: Soil organic carbon in tC/ha in productive lands of Jbeil and Akkar enhanced	No net loss in the project localities in Akkar and Jbeil	Not assessible, as activities have not started yet. Therefore, even if no net loss happened, this cannot be attributed to project activities
The achievement of the Project Objective cannot yet be evaluated, as due to the initial delay of the project start because of the several crises, not any activity could be conducted so far, that would allow these indicators to be confirmed.			
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 enhanced	Farmers/ herders/ producers, male and female, applying sustainable agricultural or rangeland practices in up to 5% of land in project localities	First assessment and promotion of sustainable agricultural or rangeland practices has been conducted, but will only be finalized in March 2022. It is only then, that the project will start to apply these practices
	Indicator 6: Yields of three most commonly grown crops enhanced	10% increase in yields over baseline value	Not yet assessable, as activities not yet started
	Indicator 7: Number of quarries in which rehabilitation techniques are applied	One abandoned or operational quarry applying rehabilitation techniques	It is even two quarries, which have been selected, where rehabilitation techniques and their final use is currently been discussed
	Indicator 8: Annual household livelihoods/ income levels in selected mountain communities in Akkar and Jbeil (disaggregated by genders) enhanced	Repeat survey showing up to 5% improvement (disaggregated male and female) in parameters identified by experts for the survey under Output 1.1	Not yet assessable, as repeat survey has not yet been conducted, and activities to improve incomes not yet implemented.
	Indicator 9: Women participating in and benefiting from project interventions	5000 to be confirmed at project star	Indeed, it can be confirmed, that there are many more than 5000 women, who will participate in the project and benefit from its intervention.
For the activities, which could already be assessed, Outcome 1 is rated as moderately satisfactory			

Outcome 2: Mountain lands managed sustainably to prevent degradation	Indicator 10: LDN capacity of key government stakeholders as per adapted Capacity Development Scorecard enhanced	Score 50	The actual Score was rated 43, equivalent of 51,1% of a total maximum of 84 points. The reason for not reaching a Score of 50 is also related to the late project start and the COVID 19 pandemics
	Indicator 11: LDN reflected in LUP at district municality level of Jbeil/Akkar	Progress in mainstreaming principles	Not yet assessable, as LUP not yet established, but communication about that with CDR is going on.
	Indicator 12: LD and LDN mainstreamed in Master Plan for the protection of Mountain Plateaus, Natural Areas, Beaches, Green Areas and Agricultural Places; Quarries Master Plan	Strategies under Review	Not yet assessable, as Regional and Local Masterplans not yet established, but communication about that with CDR is going on.
	Indicator 13: Existence and use of appropriate GIS system/platform for LUP in productive and natural ecosystem	GIS system/ platform for LUP established at national level	GIS platform established at national level and available and accessed by project stakeholders also on district level in Jbeil and Akkar
For the activity which could be assessed during MTR, the achievements in Outcome 2 are assessed to be moderately unsatisfactory			
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	Project-specific M&E system operational and its recommendations and those from PIRs enacted by project	The project integrates all recommendations from M&E regularly
	Indicator 15: Reach of Communication and Knowledge Management	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	A communication strategy and its products are available and ready to be disseminated and are also ready to be used. Although some changes might be necessary in the text, The PM has a clear and feasible vision how to implement it.
	Indicator 16: Identification and operationalisation of new financing mechanisms for SLM/ SFM/ LDN	Suitable new financing mechanisms for SLM/ SFM/ LDN identified, assessed and plans confirmed to operationalise at least one	Different suitable new financing mechanism have been identified, discussed and are ready to be operationalized during project end.
Achievements in Outcome 3 are assessed as satisfactory			

Up to now, the evaluation exercise considers about half of the objective and its outcomes, why not more could be realized is caused by the initial time delays due to the multitude of crises (compare Section Efficiency).

Out of the activities which had been started, Achievements in Outcome 1 was considered as achieved to a moderately unsatisfactory, Outcome 2 as moderately satisfactory, Outcome 3 as satisfactorily achieved according to the current indicator system.

4.4. Project Progress According to DAC Criteria

4.4.1. Relevance

The LDN project is fully aligned with the GEF-5 Land Degradation (LD) Focal Area Strategy of improving provision of agro-ecosystem and forest ecosystem goods and services and reducing vulnerability of agro-ecosystems, pastoral and forest ecosystems as well as quarries to climate change and other human-induced impacts.
The project targets are also in line with the 10-year strategic plan of the UNCCD at country level through

- Improving the living conditions of affected populations;
- Improving the condition of affected ecosystems; and
- Generating global benefits through improving climate, soil and biodiversity services.

The project is therefore also fully relevant to the LDN Strategy of the UNCCD it is aligned to and the National Action Plan to Combat Desertification, which seeks to
- restore forest landscapes through reforestation and sustainable forest management,
- restore rangeland landscapes through sustainable grazing and animal production
- promote sustainable agricultural practices, climate smart agriculture and conservation agriculture and
- improve soil organic carbon in croplands and bare lands through sustainable agriculture and afforestation and its related targets.

Project targets were considered also as very relevant to the needs of stakeholders, who expect from the project solutions to the ongoing – frequently illegal deforestation – of the country, and overuse of natural resources and following degradation of land and water resources, even up to a destabilization of landscapes through the occurrence of frequent landslides, a further attraction to tourists through an improved scenic value of landscapes despite the threats of the current pandemic, which however should go hand in hand with reducing negative impacts of tourism on the environment, the rehabilitation of quarries which present a further factor for destabilizing landscapes, and above all, improving incomes and energy access through sustainable agriculture and rehabilitated irrigation schemes and restoration of forests and pastures.

The targeted prevention of irrigation schemes from upstream pollution as targeted by the project in one area, is furthermore a major concern of the GoL.

In this way it is also relevant to the National Physical Master Plan for the Lebanese Territory (NPMPLT) which targets principles of development for various regions as the basis for land use for all areas. 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 emphasizes the need for natural and cultural heritage conservation in high mountain plateaus, cedar corridors, mountain horticulture, connection areas of forests, valleys and other natural sites and highlights the problem that up to now LUPs for 84% of the Lebanese territory are missing and that planning should address holistic considerations of 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.

The project is also relevant to the Sustainable Regional Development Plan for the Governorate of Akkar (2014) which foresees the sustainable use of land resources reflecting the area's potential for agriculture, eco-tourism, forest resources, while controlling environmental degradation.

The project implements also the National Strategy for the Protection of Mountain plateaus, natural areas, beaches, green areas, and agricultural areas contributes to the MoA strategy for 2015-2019 which committed to good governance and sustainable management of land, rangelands, and forest resources in line with previous strategies, which is aligned also with the FAO Country Programming Framework for 2012-2015.

The approach to work on three levels: at policy/level, by contribution to the regional masterplan on forestry and agriculture to be established in collaboration with CDR, the work on technical levels and the establishment of LUPs which is planned also in collaboration with CDR, ensures that the needs of local stakeholders are well addressed and embedded into a holistic framework. Furthermore, all different products/outputs responded to the needs of the relevant stakeholders: the project equipped institutions and individuals with proper instruments, which filled gaps identified through a joint participatory exercise.

The project was deemed therefore very relevant by all stakeholders, who emphasized this mainly because of the following reasons: the necessary ad-hoc support the project had provided through trainings when forest fires broke out in Akkar, which had never been experienced before, the forest management plan which will provided soon to address the urgent need of halting and reversing reforestation in the country, the need to improve the carrying capacities of rangeland which the project addresses, and above all, the increasing economic needs to be satisfied through sustainable agriculture and tourism, and in any other way. The implementation of the SLWM activities of the project, in particular the rehabilitation or improvement of irrigation systems which still has not yet been started, is also urgently awaited to enhance incomes in rural areas.

The relevance of the project is rated satisfactorily.

4.4.2. Effectiveness

Without any doubt, the project has made substantial and fast progress, both in establishing baseline studies, contacting partners and beneficiaries and starting an effective collaboration with them.
In the following, the effectiveness of activities related to outcomes is reviewed.

a) Activities implemented in regard to Outcomes to be realized

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

Activity 1.1.: Landscape-scale survey of mountain lands and high country areas in Akkar and Jbeil Districts
The project contracted the University of Balamand to conduct the landscape survey of mountain lands and high country areas in Akkar and Jbeil Districts. The baseline socio economic study started in November 2020, and the final baseline assessment report was submitted on May 4 2021. At the time of the MTR Review this survey had therefore already been finalized in really excellent quality and high resolution, featuring many details also on forest species, even baselines on carbon contents etc.. It was used as a basis for designing all other activities by the project staff and will also be the used as the most valuable document until project end.

Activity 1.2.: Degraded forests restored at selected project sites and sustainable forest management applied
The development of strategic management plans for the forests in Akkar district and its surrounding, and for the Jbeil district started in April 2021. The project had selected project sites to restore degraded forest areas and to apply sustainable management. One of the sites selected for restoration was the Jaj reserve and Afqa in Jbeil District totalling 220 ha. One method used for rehabilitation was afforestation, but in most areas RNA techniques will be used, as it had recommended to the PM by several experts. Actually, sites selected in Akkar (860 ha) had

originally also been foreseen to be restored through reforestation, however, due to the emergence of forest fires in summer 2021, this plan was changed, so that only 15 ha were left fo afforestation. For the rest, a fire assessment had been conducted by and Individual Consultant based on Sentinel data, again in excellent quality, both with regard to theoretical and practical aspects, post-fire management online trainings were given to communities. It was concluded, that immediate reforestation would not be the appropriate intervention to deal with the damage, and alternative plans were established. At the same time, in collaboration with the forest expert in the Ministry of Agriculture related laws were reviewed, and in particular it was discussed to change the law with regard to *Pinus bruttia* which up to now prohibited thinning, at least to allow this, as the expansive growth of the species provided a lot of fuel material in case of fires.
Individual forest management plans for the sites in Akkar and Jbeil were under preparation during the MTR, and ready to be provided to communities very soon. 4 Trainings for the adoption of the strategic forest management plans by local authorities addressed principally to local authorities and actors including mainly forest rangers, municipalities, and other relevant stakeholders are also in preparation.

Activity 1.3: Sustainable rangeland management practices for selected sites in high country grasslands
The activity is implemented in collaboration with the MoA as well. The baseline of this activity had been, that in a total of 9,000 ha of rangelands (19% of total land area), minimal sustainable land practices were occurring by local municipalities, who are organizing the grazing without knowledge of the carrying capacity of the land. It is therefore not clear, if the land is over- or underused. The project started coordinating with these municipalities and others in the project area to update the General Rangeland Management Plan for rangelands outside forests in Akar and Jbeil districts. The development of management plans for rangelands outside forests (RMP) in the high mountains of Akkar and Jbeil districts started in May 2021.
Detailed management plans for each identified type of rangelands will be developed in 2022. During the time of the MTR also an activity had beenen started to assess the carrying capacity of rangelands, and secondly, to match future rangeland management with the carrying capacity investigated, to optimize the use of rangeland resources. To achieve this, as an initial activity, the installation of 78 enclosure cages had been conducted through an excellent collaboration with the rangeland management expert at the MoE in order to assess the biomass potential of rangeland at different sites. The research set-up is to harvest grass from different plots within rangelands, which are currently excluded from grazing through these cages. With the help of different experts, these results will finally inform about the carrying capacities in these areas. The knowledge of the carrying capacity will then allow to decide, if livestock numbers can be upscaled or will have to be reduced or can remain as they are. Currently however, this concept does not include options for improvement of pastures through better water management or reseeding grasses or herbs yet. Mature forests are open for pastoralists to graze in, which apply for a forest proportion of about 20%. Furthermore, 4 trainings on rangeland management targeting municipalities, government stakeholders, herders, farmers, local communities are under preparation. A rangeland expert as part of the private company KARTECO has been hired by the project to develop the rangeland management plans
Furthermore, the project is building up on the coordination with academic/research bodies, which the SLMQ project had put at the disposal of the American University of Beirut and the University of Balamand with regard to the establishment of collars for small ruminants procured through the project for routing assessments in the Bekaa. This will allow the LDN project to build on the results of the SLMQ project and improve data collection through time series across seasonality and allow for correlation of degradation status with movement of the herds within the management units. It is intended to translate the outcomes of their work into practical solutions for the herders and publications.

Activity 1.4.: Degraded quarries rehabilitated
Degraded quarry sites on public land for rehabilitation had been selected at the time of the MTR. The goal of this activity is to provide examples how to rehabilitate quarries in an effective way.
Apparently, it had taken some efforts for the PMU to select these sites, as most of the quarry sites are located on private land, which UNDP is not permitted to work on, but at the end, the project was able to target two quarries on public land.

The project has also selected some examples how to design the final use of the rehabilitated quarry land and it currently two options how to use the land after rehabilitation are under debate with municipalities. One option is, either to use it further as public land, for instance as a playground for kids, or as an orchard to be used by individuals or the general public. Still conditions, ownership rights and use rights, eventually also financial benefits for the municipality, such as entrance fees for playgrounds etc. have further to be discussed. Furthermore, the filling material for the quarry has to be identified. Initially it had been targeted to use relicts from the blast at the port as filling materials, but transport costs were considered as too high.
While normally the "polluter pays" principle should be applied, to hold the quarry owner responsible for paying for quarry rehabilitation, this will not be possible for the quarries selected by the LDN project, as these quarries are publicly owned and no longer operational. It is not possible to identify the entities who operated them, as this was done during the 1975 – 1990 war period in Lebanon. UNDP has taken over this task now to show feasible and reasonable solutions for quarry rehabilitation.

Activity 1.5. Sustainable agricultural practices in degraded farmland in selected sites.
Pilot sites for the implementation of sustainable agricultural practices were identified and the procurement of services for implementation and training activities had started. Baseline data on yields and site degradation have been collected. The activities foreseen are: 2 ha in Akkar for a pilot site for drip and sprinkler irrigation, training on good agricultural practices covering 60 ha of cropland in total in Akkar andJjbeil, 2 ha of rehabilitation of abandoned terraces, construction and/or rehabilitation of irrigation canals from which 50 ha of agricultural land in Jbeil will benefit. Sustainable agricultural practices for different sites had been identified during the time of the MTR, but final decisions on sites, beneficiaries and practices to be introduced will not be made before March 2022. One focus will be put on rehabilitation of irrigation schemes, furthermore on protection irrigation schemes from upstream pollution, which emerged due to new constructions upstream. Other options will be to change management plans and implementation towards replacing commonly used species, such as apples, by species which would be batter adapted to a changing climate, such as persimons. training material on sustainable agriculture practices is also in preparation.

Activity 1.6. Enabling environment established for responsible tourism and minimum impact outdoor
Activity 1.6.: The preparation of the national sustainable mountain tourism strategy started in May 2021 and is planned to be finalized in February 2022, and the impact assessment of tourism activities on natural resources in Akkar and Jbeil also started in May 2021. While sustainable tourism and minimum outdoor impact had been foreseen as one of the project activities, tourism had rather been undermined by the COVID19 crisis, which had severely reduced tourist numbers in Lebanon and their impacts. So far, the awareness about negative environmental impacts of tourism seemed to be rather low among the stakeholders visited during the field trip, as also illustrated very well in the different documents on tourism that the project had assigned. The higher was however the economic impact felt through the declining number of tourists who visited the country side. For instance, the municipality of Jaj. had expected 16,000 tourists, however, received 1000 visitors in total only, each one leaving on an average 3 USD only to the community, and the municipality expected increased visits of tourists through afforestation of the reserve.

Outcome 2: Mountain lands managed sustainably to prevent degradation

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

Indeed, the project has also already made initial contacts with CDR, who had finalized already the national wide Masterplan on land use planning in excellent quality, to scale this Masterplan down for agriculture and forestry on regional level, as well as to mutually establish local land use plans. The process of preparing LUP for Akkar and Jbeil will be launched soon. The landscape survey, along with the socio economic survey, the strategic regional forest management plans and the general rangeland management plans for Akkar and Jbeil, the assessment of the impact of tourism activities on natural resources (to be finalized by the end of July), and the upcoming tourism master plans for high mountains of Akkar and Jbeil will be mainstreamed in the upcoming LUP for Akkar and Jbeil

high mountains. These activities are currently in the stage of initial contacting and planning only and have not yet reached the stage of concrete implementation. However, as is elaborated further in the Chapter Effectiveness, it is the opinion of the consultant, that the activity of estalishing an LUP is at this stage starts to late to be implemented in a way that can be useful for the project

The LDN project will also support CDR in elaborating the draft law for the protection of Mountains and coastal areas, and will coordinate with all work related to the elaboration of Master Plans by providing guidance and technical support for drafting the TORs for said plans, and elaborating those related to the project target areas..

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

So far, the project has already assigned a consultant to draft the communication stategy, which will also general attention to LDN and the causes of and responses to land degradation. There are also dialogues going on with the Line Minisitries to review policies, but these activities are just in an initial stage. With regard to mainstreaming LDN into land use planning, the project is coordinating with the Directorate General of Urban Planning for the identification of the possible actions and steps that should be taken in order to mainstream the principles of land degradation neutrality in land use planning, especially in new decisions and master plans that are being prepared.

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

A GIS database has been designed and data from the landscape survey has been integrated. All upcoming data from the various ongoing and planned studies and activities will be integrated in this database. The LDN project database (maps/layers/indicators) will also be linked to the national SPIMS(Sustainable Planning Information Management System) established at the Ministry of Environment by the SLMQ project.

The project has already started with a GIS training composed of 7 units to municipality members, out of which two were interviewed. Also, one staff member of the UNDP participates in this training. All interviewed persons participated with high motivation, great appreciation and interest. The user satisfaction of this training is therefore high.

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

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

Since the project manager was hired, the project has been monitored and evaluated continuously and with high commitment according to the M&E plan.

Activity 3.2.: Communication and Knowledge Management Strategy implemented

A communication and knowledge management strategy has been established and is also being applied in the way the progress of the project justifies it with clear messages about the economic advantages of land rehabilitation. It set up a social media strategy and a lobbying strategy. While the formulation of the strategy is quite overladen and should be restricted to its main messages to be communicated, communication senders, receivers and communication channels for the different purposes and phases, the project management has indeed a very clear vision how to carry the communication strategy further over the implementation period of the project. The implementation of the communication strategy is expected in the next reporting period. A launching webinar had been held in May 2021 and most of the stakeholders were present. the event was a success, and the feedback received from several parties was extremely positive and encouraging. Apart from the mission to communicate on project progress, the communication strategy should also aim at enhancing solidarity and connectivity among all members of the society in these difficult times.

Activity 3.3: Effective sustainable financing mechanisms identified and developed
Although most activities are still in their beginnings, the project management has already identified sustainable financing mechanisms which will also be easy to be implemented, such as charging entrance fees for protected sites.. etc.

b) Achievements with regard to LDN implementation

The project approach aims to achieve land degradation by rehabilitating degraded areas. This is well addressed by all of the activities and it is assumed, that fast progress will be made, if the project maintains its pace. Based on the assessment of the landscape survey, this target will not only be achieved, but even overachieved by the project, as according to this survey, already during the start of the MTR, land areas which are recovering from degradation are substantially higher than the ones which are still degrading. The project will further contribute to achieve this goal in any case through its objective and all its activities,.

Nevertheless, with regard to the activities in these degraded areas, some of the them which are on the way of being implemented, seem to be not very well specified, as a full analysis of measure to be undertaken has not taken place, according to the order: social measures < biological measures < physical measures according to Figure 2, based on the IUCN Document on Restoration (IUCN 2019).

Fig. 2.: Conceptual Model for Ecosystem Degradation and Restoration

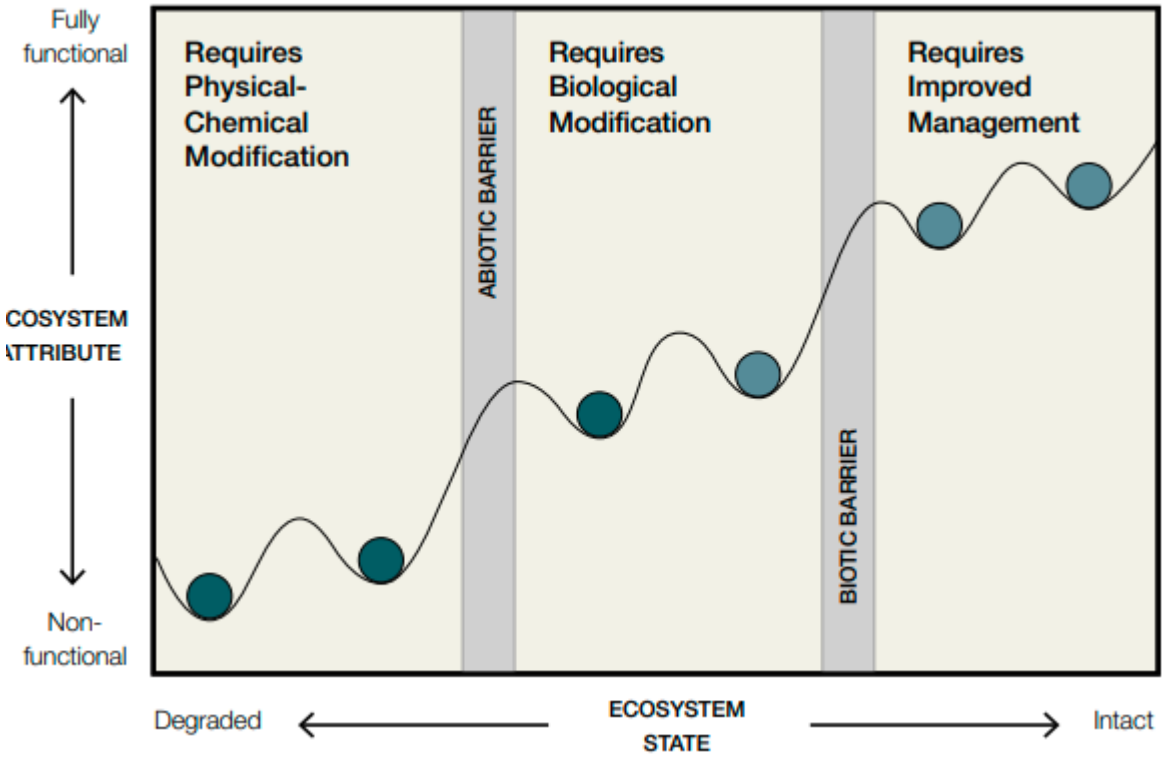


Figure 2: Simplified conceptual model for ecosystem degradation and restoration (Parks Canada and the Canadian Parks Council, 2008; adapted from Whisenant, 1999 and Hobbs & Harris, 2001). The numbered balls represent alternative ecosystem states, with the resilience of the system being represented by the width and depth of the 'cup'. Disturbance and stress cause transitions towards increasingly degraded states, with 6 being the most degraded. Barriers, or thresholds may also exist between some ecosystem states (e.g., between states 2 and 3) that prevent the system from returning to a less degraded state without management intervention. Restoration attempts to move the ecosystem back towards a more structurally 'intact', well functioning state, (i.e., towards state 1). See Parks Canada and The Canadian Parks Council (2008) for additional details

As restoration activities on forest management are all outsourced, it seems, that in some areas, for instance in Aqfa which seems to be particularly fragile, also physical restoration activities should have been considered, for instance

by stabilizing slopes by wires and meshes, protecting against erosion with soil or earth bunds or terracing. While HIMA approaches are even considered in the ProDoc, in particular for pastoral ares, which would include these measures, up to now they do not seem to have entered the implementation plans yet. Therefore, the call for proposals for reforestation for Aqfa and Jaj might have overlooked the needs also for physical measures. And while the proposal by LRI foresees a lot of feedback meetings with communities, who might want to include this, it would be better to prepare space for physical restoration measures already in the proposal.

Mainly in tourist areas, stakeholders see the major significance of reforestation in its potential to attract tourists. Some representatives of municipalities expressed this also as the innate desires of Lebanese people, to be surrounded by cedars, as it had been in pre-Phoenician times. However, with regard to attracting tourists, up to now no studies have been conducted, if their numbers really depend on the coverage by cedars, as the area seemed also to be attractive to the consultant as rocky as it had been, secondly, it is unfeasible to restore scenarios which date back about 2000 years. It seems therefore rather to be recommendable, to base reforestation rationales on efficiency considerations, as described in the following section on efficiency.

Nevertheless, particular in the sustainable forest management documents for Jbeil and Akkar, potential income generation activites are mentioned through multiplication, sustainable harvesting, value chain development as income generation options, such as value chains from O. syriacum and zaatar mixes, which are to be cultivated form wild collections, established through a MoA incentive programme, combined with production standards etc., which should be put in place. As also mentioned in these documents, forest user groups could be created would receive permissions to harvest certain quantities of wood, herbs, honey etc.. on sustainable levels, after the necessary regrowth for sustainable harvesting will have been achieved.

The main issue, which is still not yet clear, - although addressed as a risk within the ProDoc – is how the poor will deal with the the transitional period towards sustainable forestry management, as the the poor up to now were using the forests mainly through (illegal) activities of extracting trees for energy purposes or to collect herbs and spices. While the project is rather targeting to even enforce this legislation, this would mean, that poor people would even lose their current benefits, while new forest use plans – such as building user groups for fuel wood, for taking out sataar and other herbs and providing them in the meantime with alternative energy sources - are still pending, so that it could not yet been evaluated, if this was foreseen and feasible. It has already been foreseen, that briquettes might be a viable alternative to charcoal, but also the briquette production has to be conducted sustainable, and so far no data are provided on project level, how many person days the briquette production would suffice.

The same applies for agriculture: while it is very likely, that SLWM activities will substantially raise incomes for the poor, currently no calculations are available to illustrate the impact of this.

The effectiveness of the project, in achieving activities versus targets, and with regard to the initial delays, is rated moderately satisfactory,

4.4.3. Efficiency

a) Time Efficiency

Time efficiency is difficult to evaluate, as the project experienced considerable delays in its initiation which were then aggravated by the worsening political a nd security situation in Lebanon followed by the COVID pandemic.

To begin with, the project was approved in May 2018 however it took a little over a year for the Government of Lebanon to issue the grant approval decree that would enable the Minister of Environment to sign the project document with UNDP. Once that was secured, it took about 8 months to hire the Project Manager and to ensure the logistical needs of the project are provided within the Ministry. This delay was mainly due to the very turbulent security and political situation in Lebanon at the time with the uprising of October 2019 that resulted in numerous

road closures, political uncertainty and the ultimate resignation of the cabinet. Immediately after that phase, the COVID pandemic hit the country in early 2020 which resulted in several national lockdowns and closure of government offices for weeks on end followed by the Port of Beirut explosion in August of 2020 which left the country paralyzed for the rest of the year.
This overarching political situation and ambiguity facing the country affected the ability of the Ministry of Environment to provide the needed support and timely approvals. Therefore, in comparison to the workplan and the activities which should have been conducted at the time of MTR (yellow column Fig. 3) , the project is about 3 quarters behind schedule (green column Fig 3) , which could indicate a rather medium to poor time efficiency. With respect to the crises, the project had to overcome, and the impact these crises had on the delay of other projects as well, these 3 quarters do not look much, as indeed, other projects needed a project extension of about 1 to 1.5 years due to the impact of crises. In comparison to that, the project has emerged even faster. And indeed, considering the initial development of the project it can be confirmed, that despite these initial delays, which had been even exacerbated by the fact, that also no appropriate project manager was found to be hired for a long time, as also qualified staff had left the country, the project took pace very quickly once it was possible to take action at all, and many of the activities to be conducted in the first phase were indeed accomplished in a relatively short time starting in the previous 6 months. (Compare Section on Effectiveness). Also, additional staff could be hired since summer 2021, immediately working with high enthusiasm and dedication, as it can also be confirmed for the staff which had already been in place from project start.

In so far, given the conditions under which the project had to be implemented, the time efficiency of the project is rated as satisfactory. However, to reach all its targets, it would probably also need an extension of one year to compensate for the delays caused by the different crises, the country had gone through, and probably another additional year to monitor appropriately the implemented interventions, especially those related to forestry and agriculture.

Fig 3: Multi-year Workplan

GEF Outcome	Task	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: *Degraded mountain land in the Governorates of North Lebanon and Mount Lebanon identified,*	1.1 Landscape-scale survey of mountain lands and high country areas in Akkar and Jbeil																				
	1.2 Degraded forests restored at selected project sites and sustainable forest management applied																				
	1.3 Sustainable rangeland management practices for selected sites in high country grasslands																				
	1.4 Degraded quarries rehabilitated																				

rehabilitated and restored	1.5 Sustainable agricultural practices in degraded farmland in selected sites	
	1.6 Enabling environment established for responsible tourism and minimum impact outdoor recreation	
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	
	2.2: LDN capacity enhanced and LDN mainstreamed into land use planning and key policies targeting mountain lands	
	2.3: GIS platform established for land use planning and related monitoring	
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	
	3.2: Communication and Knowledge Management Strategy implemented	
	3.3: Effective sustainable financing mechanisms identified and developed	

Source: ProDoc

Achievements, which have actually been made at the point of the MTR

Achievements which should have been made at the point of the MTR, if crises had not happened

b) Technical Efficiency, in particular Water Use efficiency

Irrigation is only then economically feasible, if the additional returns which are to be achieved through irrigation, are higher than the costs of additional irrigation. Companies providing irrigation should preferably therefore first provide economic feasibility studies, before high investments into seedlings and irrigation are started, at best in comparison to other uses of water, for instance for agriculture, considering the high and increasing scarcity of water in the country.

Irrigation should further take into the account the potential impact on triggering landslides.[1]

c) Adaptive Management

Adaptive management is a systematic approach for improving resource management by learning from management outcomes. Within times of crises, adaptive management has had indeed a paramount role to enhance technical efficiency within a scenario, where major parameter, which steered the initial implementation plan, had changed. Adaptive management requires the participation of stakeholders. Stakeholders should be involved early in the adaptive management cycle, to help assess the problem and design activities to solve it, as actual and expected results can differ for many reasons, particularly in the time of crises, where underlying assumptions might change or actions can be poorly executed. The project presented an important example, how to adapt to changing environmental background conditions in response to the huge fire which broke out in Akkar, where the project replaced its original plans for afforestation through a dedicated fire management training and plan. This also required to replace its original targets of afforestation or reforestation of 200 ha in Akkar by implementing it on 15 ha only, while the remaining areas, which was burned down by fires, are going to receive forest fire management actions. This is a very good example for the technical flexibility of the project, how fast it could adapt actions and how much needed the concept of adapted management actually is.

While this phase of adaptive management was able to take emerging fires on board, in the meantime also further devaluation of the Lebanon Lira took place, which might also require the revision and adaptation of budget allocation.

d) Financial Efficiency

The project had hardly any expenses in 2019, except about 1000 USD for projct services, and not even 100,000 USD in 2020. This amount increased in 2021, so at the end almost 600,000 USD were spent, which is about 12% of the GEF budget. The low amount of expenses underlines what has been said about time efficiency – that due to external problems, the project had faced a delay, which also affected the expenditures.

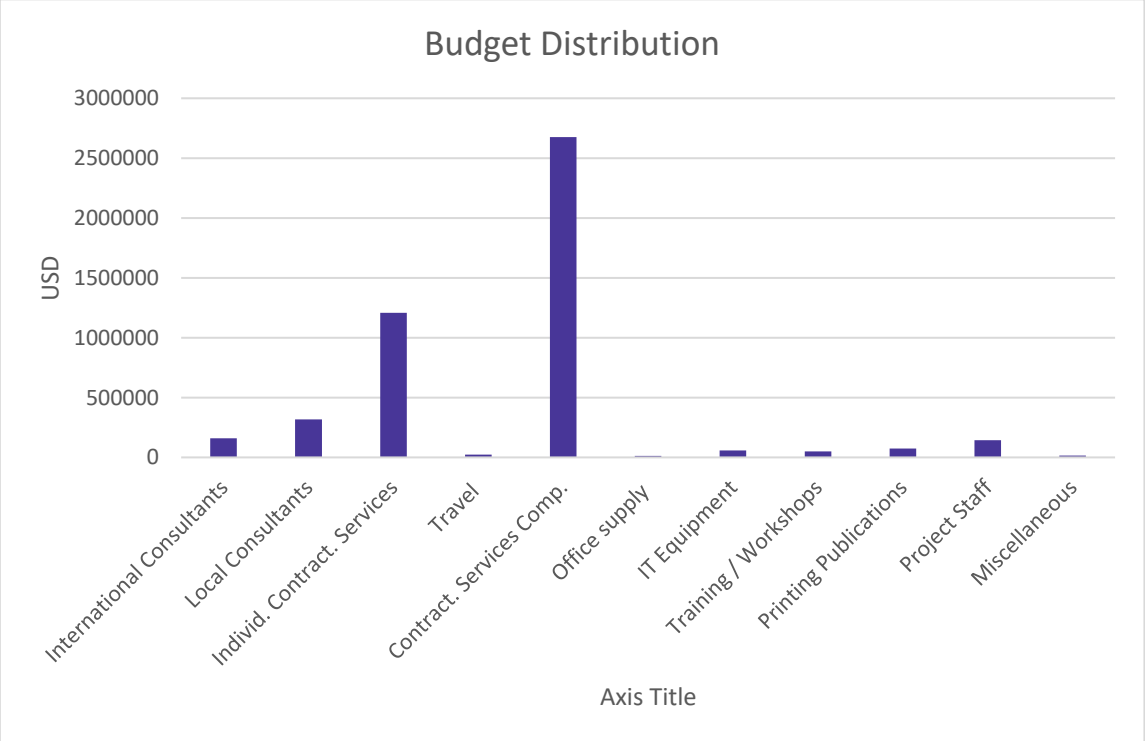
Table 9: Excerpt from Budget Report 2021 (PIMS; GEF only)

[1] Ali Fawaz, Sarah Abdullah, Elias Farah, Fadi Hagechehade. Analysis and Remedies for Landslides Including Vegetation: A Case Study in Lebanon. American Journal of Civil Engineering. Vol. 5, No. 6, 2017, pp. 320-330. doi: 10.11648/j.ajce.20170506.12

Activity ID		G = Approved Total Budget (as per ProDoc)	H = GL Expenses as per CDR (until the end of 2020)	S = Delivery Rate (including Commitments)	H = GL Expenses as per CDR (until the end of 20219
Unit		USD	USD	%	USD
ACTIVITY1	Rehabilitation of pilot sites	2,787,000.00	36,263.01	13.9	389,035.1
ACTIVITY2	Sustainable management	883,700.00	21,575.83	9.9	87,729.12
ACTIVITY3	Dissemination and Replication	730,805.00	29,277.18	9.6	69,898.72
ACTIVITY4	Project Management	219,500.00	8,202.93	19.9	43,589.01
Project Total		**4,621,005.00**	**95,318.95**	**12.7%**	**590,256.35**

Fig. 4 depicts the budget distribution of the project, which shows, that project staff costs are indeed rather low to moderate. According to their tasks, while contracts with individual consultants are very high – amounting to more than on million, while contracts with service companies are higher than 2,5 Million USD. While indeed, this budget allocation is common for UNDP projects, this still has to adequately reflected in appropriate income opportunities for beneficiaries.

Fig. 4: Budget Distribution in the Project



Source: Project Document

While this budget allocation is in line with the ATLAS positions, in particular with regard to contractual services with companies it is the view of the evaluator, that the work of communities should be better taken into account and also

be better remunerated regarding the fact, that the country has gone rapidly impoverished and income inequalities have also exacerbated the current socio-political tensions.

While the PM staff mentioned, that poverty reduction is considered in a two-fold way by the project, in which only one way is considered by hirign the poor for certain assignments which contribute to a minor percentage only in the current project design to about 8% (which is only available for LRI at the time of MTR), the other, and more important aspect would be, to enhance livelihoods of the targeted 20,000 men and women about 600 USD, which would lead to an increase of incomes of about 12 Million USD. This view is not fully shared by the evaluator, as during the times of crisis it does not seem to be appropriate to allocate the bulk of funds to individuals (compare Fig. 4), for several reasons:

- High discrepancies of incomes – which are created here through the high differences of remunerations of individuals and communities – will NOT trickle down to the poorer segments of socieity, but instead cement their poverty, which on the other hand would enhance the severe socio-political tensions ongoing in the country. This finding coincides with studes on incom distribution of the private sector in Lebanon and should not be taken forward by the project.[2]
- Secondly, according to experience in other countries, beneficiaries are usually only willing to collaborate with the project, if financial flows are starting to continue already from the beginning of project implementation. An income discrepancy which would still allow upward mobility of the poorest segments would be maximally 1:10.
- Thirdly, under the new Agenda 2030, which has taken the concept of blended finance on board, it is foreseen that the public sector should take over the more risky finances not to put the burden on the private sector, which is not the case in the current finance allocation
- Fourthly, the UNCCD, which created the LDN approach, values traditional knowledge as equally important as modern science, which should also be visible in the LDN project, but acknowledging the HIMA approach to restoration as much as modern science inputs, which is currently not visible in the remuneraion plan, actually the HIMA approach is at the time of the MTR hardly taken into consideration, and if so, only by contracted companies, but not as own-standing restoration efforts by communities themselves.

Furthermore, and most importantly, the project document fails to explain, why and how the activities of the project could be replicated by individuals, if these high input costs will be required to be successful for the pilot areas targeted already, with higher input costs than expected outputs.

It would therefore be necessary to work on reducing income inequalities through the project and on upper levels, to meet the major targets set by UNDP for eradicating poverty, reducing inequalities and exclusion and building resilience, so that countries can sustain progress and achieve the Sustainable Development Goals.

Effiency of the project is rated as moderately satisfactory.

4.4.4. Sustainability

Environmental Sustainability is very likely to be enhanced by the project, as it is strengthened by all project activities and their combination, which enforce each other and lead to catalytic effects, for instances supporting activities in sustainable land and forest management through the respective legal frameworks.

Institutional sustainability is very weak at the time of the MTR review, and while it might go beyond the influence of the project to strengthen this fully, it is very likely to assume, that institutional sustainability will be strengthened through the project activities.

An exception will be the control of proliferated construction activities, which the project pioneered to make it one of its targets, but to succeed in this will probably require a whole transformation of livelihoods, which will need to tackle

[2] Assessing Labor Income Inequality in Lebanon's Private Sector Findings, Comparative Analysis of Determinants, and Recommendations February 2017 UNDP Fiscal Policy Advisory and Reform Project at the Lebanese Ministry of Finance Edwin Saliba, email: edwins@finance.gov.lb Walid Sayegh, email: walidsa@finance.gov.lb Talal F. Salman, email: talal.salman@finance.gov.l

the whole society. The same applies for climate change: while the project contributes to climate adaptation and mitigation, this will need a worldwide transformation to reach sustainability

Political sustainability: The political sustainability of the country is damaged through so many crises which are above the head of the project, that it can hardly be expected that the project can enhance this to a substantial degree. But it will contribute to it, as far as it is its mandate and as long its capacities will reach, as project activities are aiming to provide incentives for people to mitigate or reducing triggers of conflicts, However, this is also not in the hand of the project alone and can therefore not be assessed.

Financial Sustainability is likely to be achieved, as it is rather likely, that income generation can be substantial, if the project achieves the first yields, and also it is quite likely that the project will identify sustainable financial mechanism.

The sustainability of the project is rated as Likely to be achieved.

4.5. Conclusions

- The project is among the pioneers in raising awareness and addressing environmental degradation in Lebanon.
- After a long delay in the beginning, which was caused by crises which went over the issues, a project can normally tackle, the project gave a dynamic start, which is likely to continue.
- The project has conducted valuable partnerships with line ministries which provide support and the legal framework. It has also made for all outcomes the necessary partnerships with executing firms or NGOs.
- The project has designed almost all necessary baseline studies, some with excellent quality.
- The project has furthermore started or prepared the activities on rehabilitation of six sectors and also started preparations for their future sustainable management, which are the sectors agriculture, pastoralism, forestry, tourism, quarry management, urban planning.
- **To compensate for the delay in the beginning due to the emerging crisis, it is suggested to extend the foreseen project period about 1 or 2 years.**
- **Given the problems the project had to overcome, it is suggested to rate the project moderately satisfactory.**

Evaluation Ratings Table

Monitoring & Evaluation (M&E) Rating)	Rating
M&E design at entry	5 - Satisfactory (S)
M&E Plan Implementation	5 - Satisfactory (S)
Overall Quality of M&E	4 - Moderately Satisfactory (MSI
Implementing Agency (IA) and Executing Agency	**Rating**
Execution Rating Quality of UNDP	5 - Satisfactory (S)
Implementation/Oversight	4 - Moderately Satisfactory (MS)
Quality of Implementing Partner Execution	5- Satisfactory (S)
Overall quality of Implementation/Execution	5- Satisfactory (S)
Assessment of Outcomes	**Rating**
Relevance	5 - Satisfactory (S)
Effectiveness	4 – Moderately Satisfactory (MS)
Efficiency	4 – Moderately Satisfactory (MS)
Overall Project Outcome Rating	5 - Satisfactory (S)
Sustainability	4 - Likely (L)
Rating Financial Sustainability	4 - Likely (L)
Socio-Political Sustainability	0 - Unassessable (AU)
Institutional Framework and Governance Sustainability	3 - Moderately Likely (ML)
Environmental Sustainability	4 - Likely (L)
Overall Likelihood of Sustainability	4- Likely (L)

4.6. Recommendations

According to the ToR, at least fifteen recommendations must be provided at the end of this report. These recommendations, which are listed here, present both the view of stakeholders interviewed as well as the opinion of the evaluator which emerged after conducting the evaluation, to put the current successes of the project forward.

Effectiveness

i) The project has taken a fast pace in implementation and is moving forward into a proper direction, which is a pathway that is recommended to be continued.

- Responsible Entities: UNDP
- Timeline: Second project period

ii) The project should in general provide more opportunities to generate incomes for the poor, for instance, by establishing their own enterprises along value chains, as for instance supporting the establishments of nurseries, processing factories for fruits and legumines, establishing facilities for packaging, supporting marketing etc. as foreseen on the sustainable forest management documents for Jbeil and Akkar.

- Responsible Entities: UNDP
- Timeline: Second project period

Efficiency

iii) It seems to be recommendable to provide guidelines for tenderers on aspects which have to be highlighted in their proposals particular with regard to incomes of the poorer segments of society, such as costs versus activities, costs versus beneficiary groups, material cost categories and in particular water use efficiency calculations, calculations of the effectiveness of irrigation, and the economic benefits per beneficiary group.

- Responsible Entities: UNDP, tenderers
- Timeline: Immediately

Project Design

iv) The Project Objective should include a sub-objective related to poverty reduction and a related indicator. Also other indicators should be adjusted according to suggestions made in Chapter 4.

- Responsible Entities: UNDP
- Timeline: Immediately

Effectiveness

Rangeland Management:

v) Conduct reseeding actions to promote palatable and high nutritious species in addition to melliferous, commonly wild harvested, medicinal/herbal, endangered and endemic species considering their multi-functional characteristics and conduct trials for instance with Medicago; Vicia; Trigonella; Lathyrus; Astragalus for instance in collaboration with the Lebanese Agriculture Research

- Responsible Entities: UNDP, American University of Beirut

- Timeline: Within the second project period

vi) Include degradation scoring into the current rangeland management plans to be used by communities

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

Agriculture and SLM:

vii) The strategy for agriculture and SLWM should be further elaborated by focussing particular on those SLWM techniques, which enhance yields most effectively, which is in particular a more advanced irrigation system. Given the scarcity of available water sources, it is important, to use irrigation in the most effective way wherever feasible, which is also confirmed in the Physical Master Plan by CDR. It would also be important to calculate future incomes for the time after the implementation of SLWM measures.

- Responsible Entities: UNDP, MoA, Municipalities
- Timeline: Within the second project period

viii) In abiding principles and practices of SLM, future SLM activities should include especially the intercropping of legumes and grasses to improve fertility of agricultural lands and in grazing areas while reducing pressures of overgrazing on natural rangelands.

- Responsible Entities: UNDP, Municipalities, MoA
- Timeline: Within the second project period

ix) Monitor regularly sodicity and salinity with conductivity meters in improved irrigation systems, apply leaching when necessary

- Responsible Entities: UNDP, Municipalities, MoA
- Timeline: Within the second project period

Forestry, Poverty Reduction, and Income Generation

x) To enhance effectiveness through diversification of incomes, it might be worth in addition to the foreseen activities to identify marketing mechanisms for the **environmental services** the project creates. Above all for carbon sequestration, for which the appropriate market mechanisms has to be identified, but also water services, biodiversity services etc. as also suggested in the ProDoc, Annex 20. This might also require to employ a consultant for the assessment of ecosystem services.

- Responsible Entities: UNDP, MoA
- Timeline: Within the second project period

xi) Follow the recommendation to focus on **management rather than on reforestation** (maybe reforestation more feasible in plains than on mountain tops), while attaining to issues of cost effectiveness.

- Responsible Entities: UNDP, MoA

- Timeline: Within the second project period

xii) Encourage local stakeholders to form user groups for different items in the forest use plans to be developed, such as user groups for herbs, beekeeping, fuel woods, and provide trainings and training materials for them for sustainable harvesting

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

xiii) For further income diversification, 1 – 3 value chains could be developed within the framework of SFM, which could be for instance pyrolysis as an energy source, new NTFP products etc.. herbs or spices.

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

xiv) **Some areas appear to be so fragile, that reforestation for their stabilization might take too long and not feasible, regarding the fact, that restoration has to follow the order social measures < biological measures < physical measures. One might therefore also consider wires, meshes, stone and earth bunds to protect against erosion, falling rocks and stones or even landslides.**It might require a consultant to assess the vulnerablility of mountain areas, particularly in Afqa. To apply the HIMA approach for restoration is highly recommendable,

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

Forest Fire Management

xv) The law not to conduct thinning changed with respect to pinus bruttia with regard to fire management, which the MoA is trying to change now should be accompanied by guidelines and advocacy by UNDP.

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

Tourism

xvi) In certain cases it might be more economically efficient, to support the establishment or improvement of local sustainable tourist accomodations, and integrate them systematically into other tourism activities, such as the Lebanon Mountain Trail than the planting of cedar trees. However, one might further take into account, that tourist numbers will rather decline in future, due to climate change considerations, pandemic etc.. It might therefore be recommendable to calculate different scnearios

- Responsible Entities: UNDP, Research Institution or Consultant, Ministry of Tourism
- Timeline: Within the second project period

Quarry Management

xvii) Put reasonble, but as little resources as possible into quarry rehabilitation. It is meant as a model for the private sector to imititate, who created quarries on private land and should cover the costs.

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

Knowledge management

xviii) It might be recommendable to offer after the completion of the online trainings of GIS on-the-job trainings or visits on demand, as per experience major gaps in skills are only discovered during application and can be easily filled, if somebody is ready to assist, but training skills will get lost soon, if this assistance is not available.

- Responsible Entities: UNDP, Municipalities
- Timeline: Within the second project period

General:

xix) The project goes in a very good direction and should continue to move into this direction. It is therefore recommended, to extend project duration about 1 or 2 years.

- Responsible Entity: GEF
- Timeline: Within the second project period

Annex 1: Evaluation Matrix

(Tentative and subject to change during Evaluation)

Evaluative Questions	Indicators	Sources	Methodology
Project Strategy: To what extent is the project strategy relevant to country priorities, country ownership, and the best route towards expected results?			
(include evaluative question(s))	(i.e. relationships established, level of coherence between project design and implementation approach, specific activities conducted, quality of risk mitigation strategies, etc.)	(i.e. project documents, national policies or strategies, websites, project staff, project partners, data collected throughout the MTR mission, etc.)	(i.e. document analysis, data analysis, interviews with project staff, interviews with stakeholders, etc.)
Which are the major country priorities with respect to LDN	Coherence between strategies described in documents with strategies reported by Project reports, Project staff and stakeholders	Project Document National LDN Policy Board Meeting Reports Interviews wih Line Ministries	Document analysis Analysis of codified Interviews with Line Ministries and project staff
How consultative was process of project development and how was ownership arranged	Stakeholder involvement in project development Partnerships and User Groups, policy frameworks which incorporate project objectives and outcomes	Project Document Inception Repor Interviews with Project Staff and Focus group interviews with stakeholders	Document Analysis Analysis of Interviews with Project Staff and Focus group interviews
Which barriers have been identified to implement LDN have strategies been appropriate to overcome these barriers	Generic assessment of coherence between strategies undertaken and barriers addressed	Project Reports Interviews with Stakeholders	Document analysis Focus Group Interviews Coherence analysis between identified barriers with strategies undertaken (Outcome analysis
Have risks been appropriately addressed	Sustainability analysis Risk analysis	Project Document Project Reports	Comparison of risk and sustainability analysis in documents with outcomes from Expert and Focus Group Interviews
Outcome analysis: Progress towards Results – To which extent have the expected outcome and objectives of the project been achieved so far? (Compare more detailed description in Section 2.2. above)			

Which are the major outcomes and objectives of the project? How SMART are indicators used?	Indicators used as highlighted in logframe	Project Progress Report Logframe M&E Framework	Analysis of Logframe Analysis of M&E Framework Focus Group Interviews Indicator Analysis
How much of outcomes and objectives have been realized so far?	As above	Project Progress Report Logframe M&E Framework Workplan Results from Focus Group and Expert Interviews	Comparison of reported targets and outcomes with achieved ones from project documents triangulated with outcomes from Expert Interviews Field Observations
Which is the percentage of what has been achieved in comparison what has to be achieved at the end	%	Project Progress Reports	Calculation of the outcomes of the above outputs
Project Implementation and Adaptive management			
Has the project been implemented efficiently, cost-effectively	Outputs / financial inputs	Financial project report	Financial Analysis, generic comparison with output/input in similar projects
Has the Project been able to adapt to any changing conditions thus far	List of changing conditions Number and type of adaptation measures by the project	Project Reports, Project Staff and stakeholder interviews	Comparison of project reports with results from interviews
To what extent are project-level monitoring and evaluation systems, reporting, and project communications supporting the project's implementation?	Coherence of M&E framework and communication with Project's implementation	M&E Framework, stakeholder interviews on communication, observations, analysis of project communication samples	Coherence analysis
Feasibility, Effectiveness and Sustainability: To what extent are there financial, institutional, socio-economic, and/or environmental improvements feasible, effective and will sustaining long-term project results?			
Will stakeholders have the capacity to accrue the financial resources to achieve outcomes after the end of the project	Financial resources commited already now General financial commitment of stakeholders now Assessed financial resources	Stakeholder interviews Project staff interviews Project annual reports Project Progress Reports	Document Analysis Analysis of Interviews

	generated during project lifetime	Field surveys	
Will measures of land rehabilitation be strengthened in a way that they will not lose their capacities after the end of the project	Rehabilitation measures with regard to agricultural, forestry , quarrying, ecotourism etc, strengthened by the project Expected status of environmental health, stocks and flows at the end of the project	Review of legislative and institutional framewors comparing baseline versus MTR	Analysis of indicators which measure improvement of rehabilitation measures based on state and transition approach
Do institutions have made the sufficient changes / adaptations to be able and willing to maintain project outcomes	Willingness and capacities of institutions at the stage of the MTR Commitment of Institutions to maintain or improve status quo at MTR Status of mainstreamed LDN goals into legislation, local and national frameworks		Capacity analysis of institutions, analysis of commitments based on indicators, number and type of policies mainstreamed into frameworks and legislation
Are there social or political risks which would endanger sustainability	Status of external threats to social sustainability		SWOT Analysis of project interventions with respect to social sustainability Analysis of external risks in the perception of stakeholders
Compare and analyse the GEF Tracking Tool at the Baseline with the one completed right before the Midterm Review.	Incremental Progress	GEF Tracking tool	Document Review, interview with PMU
Identify remaining barriers to achieving the project objective in the remainder of the project. By reviewing the aspects of the project that have already been successful, identify ways in which	Remaining Barriers Potential Incremental benefits in future	Barrier Analysis Quarterlyand Annual Reports	Interviews with PMUs, Line Ministries, local stakeholders Interviews with PMUs Line Ministries, local

the project can further expand these benefits.			satkeholders, Document Review
Project Implementation and Adaptive Management / Management Arrangement			
Review overall effectiveness of project management as outlined in the Project Document	Effectiveness of Project management	PRODOC	Analyis of effectiveness, Document Analysis, Interviews with PMU, Line Ministry, local municipalities
Have changes been made and are they effective?	Adaptive management changes	Quarterly and Annual reports,	Analyis of effectiveness, Document Analysis, Interviews with PMU, Line Ministry, local municipalities
Are responsibilities and reporting lines clear?	Clear responsibilities	Responsibilities listed in ProDoc compared with actual responsibilities	Interviews with project staff
Is decision-making transparent and undertaken in a timely manner?	Transparency and timeliness of decision making	Interviews	Interviews with all stakeholders
Recommended Areas for Improvement			
Review the quality of execution of the Executing Agency/Implementing Partner(s) and recommend areas for improvement	Quality of execution	Interviews with PMU, document of feedbacks by GEF	Interview with all stakeholders, Effectiveness and efficiency analysis, quality and gap analysis
Review the quality of reporting provided by the GEF Partner Agency (UNDP) and recommend areas for improvement	Quality of support	Reports to GEF, Interviews with PMU, documents of feedbacks by GEF	Interviews with all stakeholders Quality and Gap analysis
Work Planning			
Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved.	Delays with regard to workplan and underlying factors	Workplan in comparison to progress reports	Efficiency analysis, interviews with stakeholders
Are work-planning processes results-based? If not, suggest ways to re-orientate work planning to focus on results?	Result-basedness of workplans	Workplan, progress reports	Document review, interviews with PMU

Examine the use of the project's results framework/ logframe as a management tool and review any changes made to it since project start	Use of Logframe and changes made	Logframe in ProDoc, Progress reports	Interviews with PMus
Finance and Cofinance			
Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.	Cost Effectiveness	Budget Plan in Prodoc and annual Budget Reports	Document Reviews, Cost benefit analysis, comparison of expenses and cost-benefit ratios in comparable projects
Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions	Cost Efficiency	Annual budget reports	Interviews, Cost benefit analysis, comparison of expenses and cost-benefit ratios in comparable projects
Does the project have the appropriate financial controls, including reporting and planning, that allow management to make informed decisions regarding the budget and allow for timely flow of funds?	Financial control	Analysis of responsibilities with regard to financial regulation and financial flows	Interviews with PM and financial department, stakeholder interviews
Informed by the co-financing monitoring table to be filled out, provide commentary on co-financing: is co-financing being used strategically to help the objectives of the project?	Strategic use of co-financing	Co-financing plan in Budget and its uses reported in annual budget plans	Document Analysis, interviews with co-financing partners and financial department of PMU
Is the Project Team meeting with all co-financing partners regularly in order to align financing priorities and annual work plans	Regular alignments of co-financing priorities	Interviews, annual and quarterly reports	Document reviews, interviews with PMU and co-financing partners
Project-level Monitoring and Evaluation Systems			
Do monitoring tools provide the	Relevance of information	Review the monitoring tools currently being used as described in ProDoc	Logframe analysis, evaluation of SMARTness of

necessary information?	collected through monitoring tools	and used in quarterly reports and PIR (LOGrame / Indicators, monitoring reports)	indicators, relevance analysis of information tools provide
Do they involve key partners?	Involvement of key partners	ProDoc, progress reports	Stakeholder analysis
Are they aligned or mainstreamed with national systems? Do they use existing information	Coherence of monitoring systems with national systems?	ProDoc, monitoring reports, national monitoring systems	Interviews with PMU / UNDP
Are they efficient? Are they cost-effective?	Costs of monitoring	Budget Report analysis	CBA Analysis
Are additional tools required? How could they be made more participatory and inclusive?	Gaps in current tools	Interviews with PMU	Gap analysis
Are sufficient resources being allocated to monitoring and evaluation? Are these resources being allocated effectively?	Financial gaps	Examine the financial management of the project monitoring and evaluation budget from Budget Plan in ProDoc and annual Budget Reports .:	Analysis of financial gaps
Project Management			
Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders	Catalytic effects of partnerships	Prgress reports, interviews with PMU	Effectiveness analysis, generic analysis of interviews
Participation and Country driven Processes			
Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decisionmaking that supports efficient and effective project implementation?	Attitude of national and local stakeholders towards project objectives positive Effective role in decision making	Interviews, progress reports	Interviews with PMU, Line Ministries and local stakeholders, generic analysis
Participation and Public Awareness			
To what extent has stakeholder involvement and public awareness	Stakeholder involvement and public awareness as catalysators for	Interviews, progress reports	Causal effect and impact aalysis

contributed to the progress towards achievement of project objectives?	achievement of project objectives		
Reporting			
Assess how adaptive management changes have been reported by the project management and shared with the Project Board.	Reporting aon adaptive management changes and information sharing	Progress reports, interviews	Document reviews, interviews with PMU and key stakeholders
• Assess how well the Project Team and partners undertake and fulfil GEF reporting requirements (i.e. how have they addressed poorly-rated PIRs, if applicable?)	Quality of GEF reporting	Analysis of reports to GEF, feedback and its application, interviews	Review of documents and related correspondence, interviews with PMU
• Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.	Documenting and implementing of lessons learned	Annual and quarterly progress reports, interviews	Document Analysis, interviews with PMU
Communication with Stakeholders			
Is communication regular and effective?	Regularity and effectiveness of communication	Interviews with regard to communication channels, messages and receipt of communication	Interviews with all stakeholders
Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and	Effectiveness and efficiency of communication	Review external project communication, stakeholder interviews	Communication analysis, interviews with all stakeholders

investment in the sustainability of project results?			
: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?) • For reporting purposes,		write one half-page paragraph that summarizes the project's progress towards results in terms of contribution to sustainable development benefits, as well as global environmental benefits	
Sustainability			
Are the risks identified in the Project Document, Annual Project Review/PIRs and the ATLAS Risk Management Module are the most important ones?	Comparison of risks in those documents with the ones reported by PMU and (local) stakeholders	Project Document, Annual Project Review/PIRs and the ATLAS Risk Management Module	Document Review / Stakeholder Intervews
Are risk ratings applied appropriate and up to date. If not, explain why	Appropriateness of risk rating	Risk Rating by PMU	Interview with PMU, Review risk Rating
Which financial risks to sustainability exist and why, how could they be avoided / mitigated?	Lists of Financial risks to sustainability and potential mitigation	Interviews	Interview with PMU and Line Miistries, looking for mitigation options if existing also externally
What is the likelihood of financial and economic resources not being available once the GEF assistance ends (consider potential resources can be from multiple sources, such as the public and private	List of economic risks to sustainability	Interviews	Interviews with all stakeholders

sectors, income generating activities, and other funding that will be adequate financial resources for sustaining project's outcomes)?			
Socio-economic risks to sustainability:			
Are there any social or political risks that may jeopardize sustainability of project outcomes?	Lists of actual and potential social and political risks to sustainability	Interviews	Interviews with all stakeholders
What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained?	Sustainability risks with regard to levels of ownership assessed by scorecard	Interviews	Interviews with local municipalities and PMU
Do the various key stakeholders see that it is in their interest that the project benefits continue to flow?	Awareness of benefits to key stakeholders	Interviews	Interviews with Line Ministries and Local Municipalities on potential and actual benefits they have received / will most likely receive from the project
Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?	Public awareness on long-term objectives of project	Project Document	Conducting interviews with Linke Ministries and Local Municipalities
Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future	Documentation and Sharing lessons learned	Quarterly and Annual Progress Reports, Interviews	Document Review, Interviews with all stakeholders
Institutional Framework and Governance risks to sustainability			

• Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits?	Legal and political sustainability	Legal frameworks, policies, governance structures, processes	Document Analysis, Interviews with Ministries, PMU
While assessing this parameter, are the required systems/ mechanisms for accountability, transparency, and technical knowledge transfer in place.	Required systems and mechanisms for accountability, transparency, and technical knowledge transfer formulated abd applied	Legal frameworks, policies, governance structures, processes	Document Analysis, Interviews with Ministries
Environmental Risks to Sustainability			
• Are there any environmental risks that may jeopardize sustenance of project outcomes?	Environmental Sustainability Risks	Risks listed in ProDocs Stakeholder Interviews	Document Review Semi-structured interviews with all stakeholders

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Annex 2: Risks and Environmental Safeguards

Risk 1: Access to resources to marginalized individuals or groups could be restricted (through grazing management practices). Principle 1 on Human Rights, question 3	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	So far, the Hima approach has no yet been started, currently the project has just established enclosure cages to assess the carrying capacity
Risk 2:Project activities (most notably tourism activities) proposed within or adjacent to critical habitats and/or	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	Unfortunately, tourist numbers declined substantially during the previous project period due to COVID19 and other crises, and so far these impacts have only been assessed through the baseline study

environmentally sensitive areas could negatively affect them, if good practice is not followed.	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.	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.	The activity has not yet started, but it is trusted that the project will implement activities as outlined foreseen in the Comment. To avoid further import of invasive species would also require to work strictly with local materials only.
Risk 4: Project outcomes could be vulnerable to climate change.	Climate change adaptive measures have been included in all project activities, especially agricultural practices, as documented in the ProDoc	No measures have been implemented yet, but current plans do not show any signs, that climate change will have negative impacts on the intended measures, on the contrary, it is expected that these will help to mitigate or adapt to climate change.
. Risk 5: Women face discrimination at various levels, and their involvement in certain domains, such as decision-making processes, is restricted	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. 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.	The project indeed addresses it, however, it is beyond the outreach of the project, to reduce inequalities within families.
Risk 6: Rehabilitation activities, particularly in quarries, could present safety risks to works and communities.	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	The activity has only started by initial discussions with municipalities about the design of the rehabilitated quarry. So far it is too early to confirm the attainment to safety measures.

Standard 3 on Community Health, Safety and Working Conditions, questions 3.1 and 3.7	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	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.	ditoAnnex

Annex 3: Data collection and methodology used

The MTR process followed the guidance outlined in the document 'Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects: (http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf).

The methodology involved a mixed methods approach for the review design, data collection and analysis in order to conduct a comprehensive MTR. Mixed methodologies were also employed to enhance the integrity of findings through triangulation. The combined use of qualitative and quantitative methodological approaches included document reviews and semi-structured interviews with actors and beneficiaries The major tool for data collection used was the evaluation matrix, which is presented in Annex 1, which made use of the different tools and methods listed in Section 3.1..

Feasibility Analysis
Effectiveness analysis
b) SWOT analysis to analyse strengths, weaknesses, opportunities and threats of project achievements. It can be used for many purposes, for instance for user satisfaction analysis as well as to assess the progress of implementation and feasibility of the taken approach.
c) Site Surveys and field observation in the mountain ranges in the Cazas of Jbeil and Akka will have a key role in the evaluation. This will be based on FAO field survey guidelines to assess the feasibility and effectiveness of the rehabilitation practices in mountain pastures and forestry sectors, the quarrying sector, and the eco-tourism and outdoor recreation sectors using the state-and-transition approach developed by Herrick et al. (2017). It will also have the purpose to meet with local communities and assess their satisfaction through SWOT analysis. The feasibility of achievements of prevention will be assessed by the quality assessment of the conducted land use planning and the monitoring for compliance with set conditions and their enforcement.
d) Scenario and GIS Analysis to assess the likelihoods of targets for agricultural yields and restoration. The scenario analysis will theoretical assess, if actions are likely to achieve LDN at the end. Scenarios will be built on the baseline situation described and future development will be assessed for 10 key sites decribed in Annex 5 of the landscape analysis report with tools such as as AQUACROP. It will be theoretically analysed in triangulation to former method, if the pathway chosen will be instrumental in achieving LDN at project end.

e) Gap and barrier analyses to identify gaps and barriers which might hinder successful implementation of project activities on the long run mainly with regard to the strengthening of frameworks, so that recommendations can be given how to remove them.

f) Gender analysis will follow the guidelines by UNDP to prove, that no one is left behind because of gender related issues. It will also include to analyze the gender strategy of the project with regard of removing gender disparities, in particular with regard to iImproved equity to access to all project activities and improved equity with regard to access to all project benefits.

g) Risk analysis assesses, if risks and underlying assumptions were properly anticipated will be simply assessed through a backward analysis, by comparing if those events assumed to happen did occur or did not occur. The risk analysis will relate to the question, if underlying assumptions were justified, and if not, how unrealistic assumptions respectively risks were mitigated with respect to the issues listed in the Project Document. Furthermore, the project will be assessed against the version of UNDP's safeguards policy that was in effect at the time of the project's approval. Risks will be labelled d with both the UNDP SES Principles and Standards, and the GEF's "types of risks and potential impacts": Climate Change and Disaster; Disadvantaged or Vulnerable Individuals or Groups; Disability Inclusion; Adverse Gender-Related impact, including Gender-based Violence and Sexual Exploitation; Biodiversity Conservation and the Sustainable Management of Living Natural Resources; Restrictions on Land Use and Involuntary Resettlement; Indigenous Peoples; Cultural Heritage; Resource Efficiency and Pollution Prevention; Labor and Working Conditions; Community Health, Safety and Security.

h) Integration of Stakeholders: Key Questions: How much have stakeholders been integrated into the planning process? Do they agree with the suggested SLWM activities, do they think that they will benefit from it and in which way? Would they have alternative suggestions to implement the planned activities and which ones – if they have?

i) User Satisfaction: Are local users satisfied with the project? Have they been appropriately involved into the project? Did the project create new jobs or income opportunities for stakeholders or is it likely to create these until project end? Which has been the additional increment of income for the stakeholders, and for which stakeholders? Was there sufficient emphasis on the involvement of women? Has been work that has been conducted adequate, was it not too hard? Was there no bias of workload on specific groups, and of project gains for others?

j) Effectiveness of Training (Kirkpatrick model): The Kirkpatrick model will be applied for the analysis of training, on the following four levels:

- Reaction: The degree to which participants find the training favourable, engaging and relevant to their jobs
- Learning: The degree to which participants acquire the intended knowledge, skills, attitude, confidence and commitment based on their participation in the training
- Behaviour: The degree to which participants apply what they learned during training in
- Results: The degree to which targeted outcomes occur as a result of the training

III. Efficiency analysis will compare plans with actual progress made, such as in workplans. It will also investigate the underlying reasons for delays, of favourable factors which support timely delivery. Also the analysis of budgets and proper expenses will be part of the efficiency analysis. It will also analyse the feasibility and efficiency of budget plans, and the expenses in the project with regard to expenses, taking into account the various obstacles which have occurred during project start. The major tool to be used to assess cost effectiveness will be the cost benefit analysis. With regard to the assessment of future values, also an ecological and economic analysis will be conducted. Other questions are: Have actions been conducted timely according to workplan, have there been favourable conditions, which led to an acceleration of planned activities beyond the schedule of the workplan? Or have there been conditions, which hindered the timely execution of the workplan, such as COVID 19, detonation, changes in government etc.. ? Is suggested budget sufficient, or will it be necessary to access additional funding resources, for instance of irrigation?

Hence, the efficiency analysis will play the major role in assessing workplans and budget reports.

IV: Sustainability Assessment

For the sustainability criterion, the following components will be assessed:

> Environmental, technical, economic / financial, social, institutional viability;

> Social support and governmental commitment;
> Ownership;
> Sustainability risks;
> Remedial measures.

In addition, a special focus will be given to the questions regarding how sustainability issues have been already addressed in project design and budget.

3.3. Strengths and Limitations of the Methodology

Methodological strengths include the mixed-methods design which allows for a blending of data which can provide a more in-depth understanding of the MTR objectives and questions explored. Furthermore, the mixed-methods approach allows for data triangulation which enhances the integrity of findings and methodological rigor. Additionally, interviews will be conducted with different stakeholders or different groups of stakeholders which will provide a holistic overview on the actions and principles applied and implemented in the two key sites and if policies have been altered accordingly.

Available time in the field might be a limiting factor for the depth and breadth of the review. Time constraints may also be intensified by challenges set forth by the current COVID-19 pandemic in scheduling and conducting interviews with stakeholders.

The major data collection instruments were document review and semi-structured interviews with key informants and local stakeholders, within Beirut and within local municipalities within the districts of Akkar and Jbeil, which were conducted during the field trip. With regard to beneficiaries, in particular user satisfaction was investigated. Due to time constraints it had been possible only to conduct one site visit within the Jaj reserve. The documents reviewed served different purposes within different contexts, such as PRODOC, progress reports, budget plans, Requests for Proposals, proposals, etc… The document review within the evaluation served the initial purpose of answering different evaluation questions.

Annex 4 : Documents Reviewed

Project Reports

GEF 2017: PPG for the Preparation of a Project on: Land degradation neutrality of mountain landscapes in Lebanon (ref. 0005837); Analysis of landcover/land-use data for study areas of Akkar and Mount-Lebanon

UNDP/GEF/Republic of Lebanon_Ministry of Environment 2019: Project Document: Land Degradation Neutrality of mountain landscapes in Lebanon

Inception Report 2020: Land Degradation Neutrality of mountain landscapes in Lebanon

Consultancy Reports and Baseline Studies with Annexes:

- University of Balamand 20219: Project Reference LBN/CO/RFP/110/20. Provision of consultancy services to conduct a landscape-scale survey of mountain lands and high-country areas in Akkar and Jbeil districts, to UNDP in conformity with the requirements defined in the RFP dated 27-JUL-2020

with

o Annex 5 (10 selected areas)
o Annex 6 (Description of Polygons)
o Annex 9: Herders' Survey Results

Jad Abou Arrage (August 2021) ; Assessment of On-Going tourism and Outdoor Recreation Operations in Akkar and Jbeil "Consolidated Report

laceco – Architects and engineers Fnaideck – Site Assessment Reports –

UNDP: Land Degradation Neutrality of Montain Landscapes: (Socio-Economic) Baseline Report

KartEC: Draft General Rangelands Management Plans Project Title: Land Degradation Neutrality of Mountain Landscapes in Lebanon (LDN) Development of Management Plans for Rangelands Outside Forests (RMP) in the High Mountains of Akkar and Jbeil Districts. Development of Management Plans for Rangelands Outside Forests (RMP) in the High Mountains of Akkar and Jbeil Districts.

UNDP in collaboration with George Mitri: The Sub-National Plan for Strategic Forest Management Planning of the Akkar region 2021-2041. UNDP in Collaboration with George Mitri

Annual Budget Reports
- Budget Report 2020
- Budget Report 2021

Annual Work Plans
- Annual Work Plan 2019
- Annual Work Plan 2020
- Annual Work Plan 2021

Minutes
- Minutes of Annual Project Board Meeting for Year 2020 Land Degradation Neutrality of Mountain Landscapes in Lebanon- LDN Project ID: 00102170

PIR
- PIR 2020
- PIR 2021

Quarterly Reports
- Reports Q4 2019 – Q1 2021

Additional Documents Consulted:
- Global Mechanism 2018: Final National Report on Land Degradation Neutrality Target Setting Programme LEBANON February 2018
- Ministry of Agriculture Lebanon 2003: National Action Plan to Combat Desertification
- FAO: LEBANON PLAN OF ACTION FOR RESILIENT LIVELIHOODS Food Security Response and Stabilization of Rural Livelihoods Addressing the Impacts of the Syria Crisis 2014 - 2018
- National Physical Master Plan of the Lebanese Territory Final Report 2005
- UNDP 2013: Discussion Paper: Innovations in Monitoring & Evaluating Results
- UNDP 2014: GUIDANCE FOR CONDUCTING MIDTERM REVIEWS OF UNDP-SUPPORTED, GEF-FINANCED PROJECTS
- UNHCR Lebanon Fact Sheet, January 2002
- Survey on Perceptions of Syrian Refugees in Lebanon FULL REPORT Carole Alsharabati (carole.alsharabati@usj.edu.lb) Jihad Nammour (jihad.nammour@usj.edu.lb) INSTITUT DES SCIENCES POLITIQUES – USJ (V.1.0)

CDR Documents 2020 and 2021

<u>Call for Proposals</u>:
UNDP : Call for Proposals from NGOs LBN-CO-CFP-253-21 INSTRUCTIONS FOR PROPOSERS Engaging a National NGO for the Provision of Services for Ecological Afforestation and Reforestation Activities and Forest Management Planning in Akkar District, Lebanon”
UNDP Call for Proposals from NGOs LBN-CO-CFP-280-21 INSTRUCTIONS FOR PROPOSERS Re-Advertise : Engaging a National NGO for the Provision of Services for Ecological Afforestation and Reforestation Activities and Forest Management Planning in Jbeil District,Lebanon”
kartECO November 2021: Draft General Rangelands Management Plans Project Title: Land Degradation Neutrality of Mountain Landscapes in Lebanon (LDN) Development of Management Plans for Rangelands Outside Forests (RMP) in the High Mountains of Akkar and Jbeil Districts
UOB_CN_Technical Proposal Envelope
BOQ_CFP Restoration - Jbeil
Workplan Jbeil-LDN

<u>Proposal Documents</u>

AFDC_profile-updated_final (2021)
AFDC List of Projects
Proposal AFDC
Proposal LRI
PROPOSAL George Mitri

Proposal Fnaidec
AFDC PROFILE ESTABLISHED IN 1994, REGISTRATION #425/AD AMENDMENT #32/A
AFDC After-Forestation Monitoring Tool
Final Draft National Guidelines
GEF-6 PMA Tracking tool mideterm LDN
RFP – Rangelands Management Plan
Title of consultancy: Preparation of Regional Management plans for Forests in the High Mountain Areas in Akkar & Jbeil District

Other documents
Hussen A. Amer: Irrigation Planning in Lebanon: Challenges and Opportunities Hussein A. Amer

FAO 2010: GLOBAL FOREST RESOURCES ASSESSMENT 2010 COUNTRY REPORT LEBANON
FAO 2014-2018 LEBANON PLAN OF ACTION FOR RESILIENT LIVELIHOODS Food Security Response and Stabilization of Rural Livelihoods Addressing the Impacts of the Syria Crisis
UNDP 2017: Assessing Labor Income Inequality in Lebanon's Private Sector Findings, Comparative Analysis of Determinants, and Recommendations February 2017
UNDP / GEF 2020: National Guidelines for the Management of Rangelands Outside Forests Sustainable Land Management in the Qaraoun Catchment (SLMQ) Project

Methodologies

GEF / UNDP : GUIDANCE FOR CONDUCTING MIDTERM REVIEWS OF UNDP-SUPPORTED, GEF-FINANCED PROJECTS
UNDP Discussion Paper (2013): Innovations in Monitoring & Evaluating Results 05 November 2013
UNDP Evaluation Guidelines 2021: Section 6 - EVALUATION QUALITY ASSESSMENT
Government of Lebanon / Global Mechanism : Final National Report on Land Degradation Neutrality Target Setting Programme LEBANON February 2018
Ministry of Agriculture-Lebanon 2003/UNCCD: National Action Programme to Combat Desertification
National Physical Master Plan of the Lebanese Territory Final Report 2019: Uncontested Physical Features
UNDP/GEF 2017 : Project Document : Sustainable Land Management in the Quaraoun Catchment, Lebanon
UNDP/GEF 2021: Terminal Evaluation Report of the Project: Sustainable Land Management in the Quaraoun Catchment, Lebanon

Documents on Quarries
UNDP 2021: Letter to MoE-Screening Aakar Al Aatika
UNDP 2021: Aakar Attiqa site
UNDP 2021: Akkar Atika topography
UNDP 2021: Public participation Announcement – Akkar Al Aatika
UNDP 2021: Screening Report Aak-ar Al Atika

Annex 5 : LDN MTR: Mission Structure & Tentative Agenda

Time	Description	Persons	Location & Pickup	Status
Day 1 – Tuesday, November 30th, 2021				

0930 – 1030	Detailed Discussion of Project and Mission	- Jihan Seoud: UNDP Energy and Environment Programme Analyst	Ministry of Environment LDN Office room 8-13	confirmed
1100-1200	LDN Project Meeting - Project Staff Meeting Project Outputs and Status	- Lara Kallas, LDN Project Manager - Yves Chartouni, LDN Technical Coordinator - Ebtihaj Abou Chakra, LDN Project Assistant	Ministry of Environment LDN Office room 8-13	confirmed
1200 – 1330	Ministry of Environment Focal Points Meeting	- Adel Yacoub, LDN project focal point	Ministry of Environment LDN Office room 8-13	confirmed
1330 – 1430	Lunch Break			
1500-1630	Ministry of Agriculture Focal point meeting	Zeina Tamim, LDN focal point for rangelands	Ministry of Agriculture	Confirmed
Day 2: Wednesday, December 1st, 2021				
0900-1000	Council of Development and Reconstruction (CDR) - Focal points meeting	- Nancy Awad, CDR	CDR Office	confirmed
1015-1115	Ministry of Tourism - Focal point meeting	- Petra Obeid	Ministry of Tourism	confirmed
1130 – 1230	Ministry of Agriculture (MOA) - Focal points meeting	- Sylva Koteiche, LDN focal point for forestry	Ministry of Agriculture	confirmed
1300 – 1400	Lunch Break			
1400-1500	Direction general of Urban Planning	- Ali Ramadan, Focal point	DGUP Office	

	- Focal points meeting			
Day 3, Thursday, December 2nd, 2021				
0800	Departure from Beirut to Akkar			
1100	Meeting with municipalities of Bezbina and Akkar el Atiqa with site visits			
1300 – 1400	Lunch Break			
1430 – 1630	Meeting with municipality of Qobayat with site visit			
Day 4: Friday, December 3rd, 2021				
0900 – 1300	Meeting with municipality of Ehmej and Jaj with site visits			
1300 – 1400	Lunch Break			
1430 – 1630	Meeting with the municipality of Afqa with site visits			
Day 5, Monday 6th of December, 2021				
0930 – 1030	- Regional Technical Advisor	-Walid Ali	Online	
1230 - 1400	Mission debrief	Celine Moyroud, Res Rep Mohammed Saleh, DRR Jihan Seoud, E&E Programme Joelle Salameh, E&E Programme Lara Kallas, PM	UNDP CO	Confirmed
1400 – 1530	Lunch			

Annex 6: Scorecard

STRATEGI CAREA	ISSU E	SCORECARD	S C O R E		COMMENTS / OBSERVATIONS at Baseline Blue: Comments by MTR
1. Capacity to conceptuali ze and formulate policies, legislation, strategies and programme sto prevent land degradatio n	1.1 The "sustainableland 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 landmanagement agenda but they have little effect or influence; 2 -- There are a number of sustainable land management champions that drive thesustainable land management agenda, but more is needed; 3 -- There are an adequate number of able "champions" and "leaders" effectivelydriving forwards the sustainable land management agenda	**1**	2	The institutional set up for land use planningin Lebanon planning, i.e. regulating construction activities and delin Sustainability issues do not contribute directly to this pr Number has been improved compared to baseline
	1.2 There is a strongand 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 intoland use planning; 1 -- There is a partial legal framework for integration of sustainable land managementinto land use planning but it has many inadequacies; 2 – There is a reasonable legal framework for integration of sustainable landmanagement 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 landmanagement into land use planning	**1**	1	Article 38 of Law 444 for Environmental Protection addr and set forth a legal requirement for sustainable use of framework setting mandate, responsibilities and proced application of this article have not yet been developed.
	1.3 There is an institution or institutions responsible for landuse 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 toupdate 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, participatoryprepared, regularly updated land use plans	**1**	1	The institutional responsible for planning (urban) in Leb Urban Planning (DGUP). Its responsibility is to support governorates to develop masterplans for their areas.

STRATEGIC AREA	ISSUE	SCORECARD	SCORE		COMMENTS / OBSERVATIONS
					Due to lack of financial resources at the municipal level by DGUP in a top-down fashion. Due to lack of technical resources at DGUP, master plan or governorate level. Due to lack of financial resources at DGUP, these plansare no longer
	1.4 There is an institution or institutions responsible for the application of Environmental ImpactAssessment process	0 – There is no central and/or local government institutions responsible for applyingthe EIA Process; 1 – There is a government institution/s responsible for applying the EIA Process, but itis weak and ineffective; 2 – Central and/or local government institutions apply the EIA Process but it is notalways effective and often overridden for high profile projects 3 – Central and/or local government have an institution/s responsible for the EIAProcess which is applied fairly, effectively and in a participatory manner	**2**	2	
2. Capacity to monitor compliance and enforce land use plans and EIA conditions	2.1 There are adequate skills for land use planning andthe 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 landuse planning, monitoring and enforcement; 2 -- Necessary skills for effective land use planning, monitoring and enforcement doexist but are stretched and not easily available; 3 -- Adequate quantities of the full range of skills necessary for effective land useplanning, monitoring and enforcement are easily available	**2**	2	Land use planning and EIA skills are mostlyavailable at
	2.2 There is a fully transparent oversight for the implementationof 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 reviewbut 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**	2	DGUP has regional offices throughout Lebanon and co Forces to ensure that land use plans that are in place a infringements are noted.

	2.3 There is a fully transparent oversightfor 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 itlacks in transparency (e.g. is not independent, or is internalized); 3 -- There is a fully transparent oversight mechanism which ensures that EIAconditions are observed	**1**	1	Note: I would have selected 1 but I have an issue with t 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 littleguidance; 2 -- Some land use management institutions have reasonably strong leadership butthere is still need for improvement; 3 -- Land use management institutions are effectively led	**2**	2	CDR prepares land use plans at the national and regional level (depending on funding) while DGUP enforcing them at the local level. Both work with unions

STRATEGI CAREA	ISSU E	SCORECARD	S C O R E		COMMENTS / OBSERVATIONS
	institutions[69] are effectively led				
	2.5 Human resourcesfor 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 onlypoorly and in general unmotivated; 2 -- HR in general reasonably qualified, but many lack in motivation, or those that aremotivated are not sufficiently qualified; 3 -- Human resources are well qualified and motivated.	**1**	3	Land use planning activities in Lebanon are typically co consultants. Universities in Lebanon do not offer sustai thus the country reliesmore on Urban Architects to fill th So far, for instance the landscape survey can almost be used for land use planning and is of excellent quality. A old and new staff of PMU

	2.6 Land use management institutions are able toadequately mobilize sufficient funding, human and material resources to effectively implement their mandate	0 -- Land use management institutions typically are severely underfunded and haveno capacity to mobilize sufficient resources; 1 -- Land use management institutions have some funding and are able to mobilizesome human and material resources but not enough to effectively implement their mandate; 2 -- Land use management institutions have reasonable capacity to mobilize fundingor 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 sufficientquantity of funding, human and material resources to effectively implement theirmandate	**0**	0	DGUP has not had government funding forlocal land us use plans that are currently being prepared in Lebanon
	2.7 Land use management and EIAinstitutions are effectively managed, efficiently deploying their human, financial and other resourcesto the best effect	0 -- While the land use management and EIA institutions exist, they have nomanagement; 1 -- Institutional management is largely ineffective and does not deploy efficiently theresources at its disposal; 2 -- The institution(s) is (are) reasonably managed, but not always in a fully effectivemanner and at times does not deploy its resources in the most efficient way; 3 -- The land use management and EIA institutions are effectively managed, efficientlydeploying human, financial and other resources to the best effect	**2**	2	
	2.8 Land use management and EIAinstitutions are highly transparent, fully audited, and publicly accountable	0 -- Land use management and EIA institutions are totally untransparent, not beingheld accountable and not audited; 1 – Land use management and EIA institutions are not transparent but areoccasionally audited without being held publicly accountable; 2 -- Land use management and EIA institutions are regularly audited and there is afair degree of public accountability but the system is not fully transparent; 3 -- The land use management and EIA institutions are highly transparent, fullyaudited, and publicly accountable	**3**	3	The annual budgets of all government institutions in Leb Bureau once every year. In addition, all donor-funded p EIAs) are closely audited by the donor organization on a

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 acrossthe landscape.

STRATEGI CAREA	ISSUE	SCORECARD	SCORE		COMMENTS / OBSERVATIONS
	2.9 Legal mechanisms on sustainable land management exist forland use plan and EIAmonitoring and enforcement	0 -- No enforcement of land use plans or EIA provisions is taking place or no land useplans in place; 1 -- Some enforcement of land use plans and EIA provisions but largely ineffectiveand external threats remain active; 2 – Land use plans and EIA conditions are regularly enforced but are not fullyeffective and external threats are reduced but not eliminated; 3 – Land use plans and EIA provisions are highly effectively enforced and all externalthreats are negated	**1**	1	The main thrust of enforcement is on zoningof urban lar reserves. Outside city/town/village boundaries, little is d monitoring and enforcement.
	2.10 Individuals working in land use regulation, planning and enforcement, andEIA 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 managedtransparently; 2 -- Clear career tracks developed and training available; HR management howeverhas inadequate performance measurement system; 3 -- Individuals are able to advance and develop professionally	**1**	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 matchwith job requirement; 3 -- Individuals are appropriately skilled for their jobs	**2**	2	This applies to central government employees who are 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 EIAprocess	0 -- No mechanisms exist; 1 -- Some mechanisms exist but unable to develop enough and unable to provide thefull range of skills needed; 2 -- Mechanisms generally exist to develop skilled professionals, but either notenough of them or unable to cover the full range of skills required; 3 -- There are mechanisms for developing adequate numbers of the full range ofhighly skilled land use planning professionals	**1**	1	
3. Capacity to rehabilitate and/or restore degraded land, forests	3.1 There is recognition thatdegraded land can/should be rehabilitated orrestored	0 -- There is no recognition at all that degraded land needs to berehabilitated/restored; 1 -- There is some recognition, but not among the wider public and restricted tospecialized 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 ecosystemscan, and must, be rehabilitated/restored	**1**	2	

STRATEGI CAREA	**ISSU E**	**SCORECARD**	**S C O R E**		**COMMENTS / OBSERVATIONS**
and key ecosystem s	3.2 There are adequate legal provisions to requireowners of degradedland (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 torehabilitate/restore degraded land	**1**	1	The amounts required for quarry bonds aretoo little to c degraded land. In addition, the process to claim the bon time-consuming.

	3.3 Human resourcesfor 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 ownersbut most are not; 2 -- Many individuals are qualified and motivated but not all; 3 – Responsible officials and owners are highly qualified and motivated	**1**	1	
4. Capacity to engage and build consensus among all stakeholders	4.1 The integration ofbiodiversity conservation into landuse management has political commitment	0 -- There is no political will at all, or worse, the prevailing political will runs counter tothe 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 implementsustainable land management; 3 -- There are very high levels of political will to support sustainable land use.	**1**	2	Despite the priorities described in the National Biodivers government's national communication to the CBD, there mainstream biodiversityconservation in land use manag on economic development, poverty alleviation andurbanization
	4.2 The integration ofsustainable land management into landuse has the public support it requires	0 -- The public has little interest in conserving biodiversity in the wider landscapeoutside 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 landscapeoutside 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 inthe wider landscape outside protected areas	**1**	1	Some NGOs and private entities are activewith regards
	4.3 Land use management institutions can establish the partnerships neededto 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 achievelittle; 2 -- Many partnerships in place with a wide range of agencies, NGOs etc, but thereare 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**	1	The main partnership at the national level isthe Higher The HCUPare currently only concerned with approving

STRATEGIC AREA	ISSUE	SCORECARD	SCORE		COMMENTS / OBSERVATIONS
	within the wider landscape				At the local level, unions of municipalitiesexist and have planning. However, cooperationbetween municipalities been minimal with much political wrangling impeding th development.
5. Capacity to mobilize informatio nand knowledg e	5.1 Land use management institutions have the information they needto 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 verydifficult to access; 2 -- Much information is easily available and mostly of good quality, but there remainsome gaps in quality, coverage and availability; 3 -- Land use management institutions have the information they need to develop andmonitor land use plans for the conservation of biodiversity	1	2	Information obtained during preparation of the NLUMP used by both CDR and DGUP. However, this data is fro since. Other information sources are outdated, not avail reliable. I think the available information has been substantially Been improved through the project at the time of the M
	5.2 Institutions responsible for landuse 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 rarelyeffective and functional; 2 -- Institutions interact regularly and form teams, but this is not always fully effectiveor functional; 3 -- Institutions interact effectively and form functional teams	1	1	Most interactions are informal and on aproject or ad hoc This is mainly due to COVID, otherwise it would have be Achieved through the project
6. Capacity to monitor, evaluate, report and learn	6.1 Communities andsociety in general monitor the state of land, forests and biodiversity and have an avenue to communicate with responsible	0 -- There is no dialogue at all; 1 -- There is some dialogue going on, but not in the wider public and restricted tospecialized circles; 2 -- There is a reasonably open public dialogue going on but certain issues remaintaboo; 3 -- There is an open and transparent public dialogue about the state of land, forestsand biodiversity conservation in the country	1	1	

	parties				
	6.2 Land use management institutions are able torespond 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 orwith some delay; 3 -- Institutions are highly adaptive, responding effectively and immediately to change	**1**	1	
	6.3 Land use management institutions haveeffective internal mechanisms formonitoring,	0 -- There are no mechanisms for monitoring, evaluation, reporting or learning; 1 -- There are some mechanisms for monitoring, evaluation, reporting and learningbut they are limited and weak; 2 -- Reasonable mechanisms for monitoring, evaluation, reporting and learning are inplace but are not as strong or comprehensive as they could be; 3 -- Institutions have effective internal mechanisms for monitoring, evaluation,reporting and learning	**2**	2	CDR prepares an annual review of its activities, includir addition, the NLUMP has its own committee with repres institutions that is required to meet twice a year to follow up onits impleme

STRATEGIC AREA	ISSUE	SCORECARD		SCORE	COMMENTS / OBSERVATIONS
	evaluation, reporting and learning				
	6.4 Individuals at land use management institutions are able toevaluate 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 littleuse of feedback; 2 -- There is significant measurement of performance through monitoring and somefeedback but this is not as thorough or comprehensive as it might be; 3 -- Performance is effectively measured through monitoring and adaptive feedbackutilized effectively	1	**2**	
		TOTAL SCORE	**36**	**43**	
		OUT OF A MAXIMUM OF	**84**	**84**	
		Percent (%)	**43%**	**51%**	

Annex 7: GEF Tracking Tool

	PART II – GLOBAL ENVIRONMENTAL BENEFITS & DEVELOI			
3. Measurable global environmental benefits in the targeted project area (Targets relative to baseline at CEO endorsement stage; Actual values at MTR & TE)				**Midterm**
	a. Land cover			
	i. Vegetative cover (natural & cultivated cover such as forest, shrubs, herbaceous, incl. crops)	Of the 29,621 ha in project localities, 9,300 ha are considered degraded at baseline, however the actual total land cover across the targeted productive lands must still be determined The GOALS are i) No Net Loss over the 29,621 ha, ii) 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	Hectares	of the 29,621 ha in project localities, 2673 ha are considered degraded (moderate to high degradation based on the mehtodology used in the baseline landscape survey at the beginning of the project)
	b. Avoided emissions			
	i. Carbon stocks		Tons/Hectare	
	ii. Other GHG gases		Tons CO2 e/ Ha	
	c. Carbon sequestration			
	i. Above ground biomass		Tons CO2 e/ Ha	

	ii. Soil Carbon	82.65-89.82 tC/ha baseline + 2% by project end	tC/ha which is the LDN Soil Organic Carbon parameter -- changed from tons CO2e/ha	SOC baseline levels were confirmed in Akkar project locality – forest 86.30 (range between 58 and 158), cropland 82.65 (range between 56 and 140), grassland 87.65 (range between 55 and 158); in Jbeil project locality – forest 89.82 (range between 49 and 168), cropland 88.9 (range between 68 and 154), grassland 87.87 (range between 40 and 168).
4. Development benefits in the targeted project area (Baseline at CEO endorsement stage; Actual values at MTR & TE)				
	i. Average annual household income from crop and livestock production	$6000 average annual household income, to be confirmed at project start for the targeted localities, with targets of +5% by mid term and +10% by project end	US$	The socio economic survey results showed that 44% of households earn less than 10 million LBP/year, 30% earn 18-36 million LBP/year and 26% earn more than 36 million LBP/year Due to the economic crisis and the ongoing devaluation of the Lebanese pound, these numbers can be read as follows as per the market rate of USD vs LBP on November 24,2021: 44% of households earn less than 408 USD/year 30% of households earn 735-1470 USD/year 26% of households earn more than 1470 USD/year
	ii. Average annual household income from forest and tree products		US$	

	iii. Annual household income from PES schemes		US$	