MEDIUM-SIZED PROJECT PROPOSAL
REQUEST FOR GEF FUNDING

GEF

FINANCING PLAN (US$)	
GEF PROJECT/COMPONENT	
Project	980,000
PDF A	n/a
PDF B	n/a
Sub-Total GEF	*980,000*
CO-FINANCING*	
GEF Agency	–
Government	825,000
Multilateral: EU (DGIB)	450,000[1]
NGOs	–
Others	–
Sub-Total Co-financing:	*1,275,000*
Total Project Financing:	**2,255,000**

* Details provided in the Financing Section

AGENCY'S PROJECT ID: 3371
GEFSEC PROJECT ID:
COUNTRY: Lebanon
PROJECT TITLE: Safeguarding and Restoring Lebanon's Woodland Resources
GEF AGENCY: UNDP
OTHER EXECUTING AGENCY (IES): Ministry of Environment of the Government of Lebanon
DURATION: 5 years
GEF FOCAL AREA: Land Degradation
GEF OPERATIONAL PROGRAM: OP #15
GEF STRATEGIC PRIORITY: SLM-1 + SLM-2
ESTIMATED STARTING DATE: January 2006
IMPLEMENTING AGENCY FEE: 88,200

CONTRIBUTION TO KEY INDICATORS OF THE BUSINESS PLAN: The project will contribute to the programmatic target set for OP 15, by promoting and measuring success in capacity building and the implementation of innovative and indigenous SLM practices in a total of about 400 hectares, ultimately helping to improve sustainability of land management in an area of some 200,000 hectares.

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

Dr. Berj HATJIAN
Director General,
Ministry of Environment (Public and International Relations)   Date: 1 December 2004

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for a Medium-sized Project.

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Date: 6 December 2005

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[1]UN Official Exchange rate as of the date of signature of the letter of commitment i.e. 8 June 2005 is 0.797

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Annexes

Acronyms

CBO	Community-based Organisation
CCF	Country Co-operation Framework (UNDP)
CDR	Council for Development and Reconstruction
EA	(National) Executing Agency
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GEF	Global Environment Facility
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH
IA	Implementing Agency
ILUP	Integrated Land Use Planning
IPP	Investment Planning Project
LARI	Lebanese Agricultural Research Institute
MDG	Millennium Development Goal
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MSC-IPP	Management Support Consultant – Investment Planning Program Environment
MSP	Medium-sized Project
NAP	National Action Programme to Combat Desertification
NGO	Non-governmental Organisation
NRP	National Reforestation Programme
ONF	French National Office for Forestry (Office National des Forêts)
OP	Operational Programme
PMU	Project Management Unit
POC	Project Oversight Committee
RDNRD	Rural Development and Natural Resources Directorate of MOA
SLM	Sustainable Land Management
SLM-1	Sustainable Land Management Strategic Priority 1 (under GEF OP#15)
SLM-2	Sustainable Land Management Strategic Priority 2 (under GEF OP#15)
SOER	State of the Environment Report (issued by MOE)
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFF	United Nations Forum on Forests

A - SUMMARY

1. The forests of Lebanon are a unique feature in the arid environment of the eastern Mediterranean and they protect an important groundwater aquifer, which is the basis of life of millions of people. However, Lebanon's natural vegetation cover has suffered a lot from conversion, for purposes such as agriculture, animal husbandry, housing, industry, infrastructure, etc., and from insufficient forest management, based on a centralised approach. The loss of the natural vegetation has lead to increased soil erosion and decreased soil fertility, and imposes serious threats to ecosystem integrity, biological diversity, and the ability of the soil to function as water stores and the ability of forests to function as carbon stores. The ongoing degradation of the Lebanese forests finally leads to a gradually decreasing agricultural productivity. The process of desertification is a countrywide phenomenon, although it is more pronounced in the extreme north and south as well as in the eastern part of the country. These regions are also the poorest regions of Lebanon.

2. The project's long-term goal is to create an enabling environment and capacity for sustainable land management as a contribution to greater ecosystem stability, enhanced food security and improved rural livelihoods. The project aims at mainstreaming SLM principles into national policies and frameworks by using one sector as a vehicle which is forestry and *National Reforestation Programme* (NRP). The rationale is to remove the institutional, economic, technical barriers to SLM in this sector in order to enable NRP to meet its targets and up-scale forestry SLM models and approaches over 20 years at the national scale. The immediate objective is to develop a strategy for safeguarding and rehabilitating Lebanon's woodland resources and assist its implementation through capacity building and execution of appropriate SLM policies and practices. To this end, the project has three outcomes:

> Outcome 1: An appropriate management framework and management capacities for the safeguarding and restoration of degraded forest areas.
>
> Outcome 2: A set of innovative technologies and instruments for the rehabilitation of forests and woodlands, and their subsequent sustainable management, has been designed and validated in pilot areas.
>
> Outcome 3: Learning, evaluation, and adaptive management.

3. The project builds on the *National Reforestation Programme* (NRP), a significant long-term commitment by the Government of Lebanon, and will complement this baseline by addressing gaps related to capacity development, inter-agency coordination, conceptual development, mainstreaming of SLM, and development of sustainable financial mechanisms for implementation of SLM practices. The project will promote the development of participatory approaches, and activities to create stronger responsibility and public awareness for the function of the forest vegetation cover for soil and water conservation.

4. The global environment objectives of the project would include the generation of multiple and interconnected global environmental benefits by assisting the Government of Lebanon to make its efforts towards combating land degradation more sustainable, an assurance

that biodiversity values are conserved, and a contribution to the stabilization of climate and regional ground water systems. The project will help to stabilize and enhance ecosystem structures and services through restoring degraded ecosystems in the wider landscape, increasing carbon stocks, increasing diversity of biological resources in restored ecosystems and habitats, and reducing stress on trans-boundary water bodies from sedimentation and pollution from land management. Mediterranean forests are, according to the *Millennium Ecosystem Assessment* (MEA), one of the two by conversion (primarily to agriculture) most affected biomes of the world.

B - COUNTRY OWNERSHIP

1. Country Eligibility

5. Lebanon ratified the *United Nations Convention to Combat Desertification* (UNCCD) in 1996. The country is eligible for GEF funding; it is participating in the Restructured GEF since 1994. Lebanon is eligible to borrow from the *World Bank* and receives technical and financial assistance from the *United Nations Development Programme* (UNDP).

2. Country Drivenness

6. Lebanon has signed and ratified the UNCCD and is committed to combating land degradation and dealing with the root causes of the problem at the national and local levels. Most importantly, and to fulfil its obligations under the UNCCD, Lebanon has prepared a *National Action Programme* (NAP) to serve as an umbrella, a guiding framework for the long-term implementation of the UNCCD. The NAP, which was completed in 2003, was prepared with assistance by the German Government through GTZ, and followed a participatory, bottom-up approach involving communities of affected areas and concerned stakeholders. This builds on the decentralization efforts already initiated by the Lebanese Government. The NAP gives a country-wide assessment of desertification, and identifies geographic and thematic priority areas for intervention. Desertification is most severe in the extreme north and south of the country, as well as in the east. These are also the poorest regions of Lebanon. The NAP identified the degradation of forests and woodlands as one of the main factors for desertification. Much of the vegetation today consists of a mosaic of patches or remains of natural forests once covering the Lebanese Mountain chains and protecting them against erosion. The NAP gives high priority to the protection and rehabilitation of forest and woodland resources.

7. Land degradation has been identified by the Government of Lebanon as a major obstacle for development also on other occasions: A strategy for agricultural development prepared in 1996 by the *Lebanese Agriculture Research Institute* (LARI) included the protection and development of forests, and emphasised their role for land conservation. A subsequent study by LARI identified the problems and threats faced by the Lebanese forests. Also Lebanon's *Millennium Development Goals Report* (MDGR) issued in 2003 regards unsustainable practices

in agriculture as one of the major challenges, as they have already lead to deterioration in environmental conditions, particularly in poor regions of the country.

8. With the collaboration of the UNDP and GEF, the MoE developed in 1998 a *National Biodiversity Strategy and Action Plan* (NBSAP), which puts the protection and rehabilitation of terrestrial ecosystems at first place, as they have suffered severely from degradation.

9. The conservation of the forest land cover is a high national priority. In 1995, only a few years after the end of the war, the Government of Lebanon announced on the occasion of the *World Day to Combat Desertification* an ambitious five-year programme of reforestation. The Forest Code (Law 85 of 12/9/1991) was amended by the Parliament in 1996 (Law 558 of 24/7/96), and stipulates that all cedar, fir, cypress, juniper forests and "other forests" in Lebanon are protected *de facto*. Today, there are about 40 sites in Lebanon with various degrees of protection, and most of them are forest areas. Out of these, 7 are nature reserves authorized by law: The Palm Islands, Horsh Ehden, Al-Chouf Cedars, Tyre coast, Bentael, Tannourine Cedars Forest and Yammouni and more than 15 are protected by decree under the amended Forest Code; in addition to Karm Shbat, which is proclaimed by a ministerial decree. Recently, MoE declared by ministerial decree three natural sites: Kammouha, Dalhoun Forest and Wadi al Karakir.

10. In its efforts to combat land degradation, the Government of Lebanon has initiated several projects, including a large-scale reforestation programme, for which the Government has allocated approx. US$16 million over five years (2001-2006). It is also very active in fighting the root causes behind land degradation primarily by promoting the development of rural areas and reducing regional disparities. Several programmes aiming either directly or indirectly at rural development and poverty alleviation are financed through a mix of budgetary resources and donor agencies.

C – PROGRAM AND POLICY CONFORMITY

1. Programme Designation and Conformity

11. The project meets GEF eligibility criteria under Operational Program #15 "Sustainable Land Management" and is relevant to GEF's Strategic Priority 1 on "Targeted Capacity Building" (SLM-1) and Priority 2 on "Implementation of Innovative and Indigenous Sustainable Land Management Practices" (SLM-2). The project directly addresses issues of inappropriate land uses, specifically deforestation and forest degradation, which has occurred in Lebanon since historical times, but has accelerated during the last two decades. OP#15 describes these as key causes of land degradation. The project works both on the government and the community levels to lay the ground for preparing and launching a major national effort towards restoring damaged and degraded forests and woodlands.

12. In accordance with SLM-1, the project assists the Government of Lebanon to build capacities for combating forest degradation and for conducting large-scale reforestation measures. It will provide training to state officers to enhance their technical and managerial skills,

strengthens the private sector as service providers in the field of reforestation, enhance understanding of ecosystem restoration principles (including restoration of services and functions), and will design the institutional and organisational framework necessary for the future work. In parallel to these actions, the project will support reforestation activities on a pilot scale to develop and test innovative methods and processes for ecosystem restoration (SLM-2). The development and application of participatory approaches, which are still not widely used in Lebanon, are in the focus of these efforts. Public involvement is one of the principles of GEF-funded projects to enhance the recipient country's ownership, to address the social and economic needs of affected people, and to make use of skills, experiences, and knowledge, in particular, of non-governmental organisations (NGOs), community and local groups, and the private sector. Although there is a strong commitment of the Government of Lebanon to apply participatory approaches to combat land degradation (see e.g. NAP), experiences are still limited, and skills and methods still have to be further developed and adapted to local needs and traditions.

13. Other areas of the GEF Operational Strategy supported by the project include the promotion the conservation and sustainable use of biodiversity in arid and semi-arid zone ecosystems (OP-1), and forest ecosystems (OP-3), as well as integrated ecosystem management (OP-12).

14. The project aims at mainstreaming SLM principles into national policies and frameworks by using one sector as a vehicle which is forestry and NRP. The rationale is to remove the institutional, economic, technical barriers to SLM in this sector in order to enable NRP to meet its targets, address root causes of deforestation, and up-scale forestry SLM models and approaches over 20 years at the national scale.

15. A long-term goal of this project is to reduce soil erosion by a better vegetation cover, and thus to contribute to enhanced ecosystem integrity (health, stability and connectivity). Some of the concerned rivers are international waters: El Kebir River, which is a coastal river that traces the northern border of Lebanon with Syria; the Hasbani River, which crosses the southern border and forms one of the tributaries of the River Jordan; and El Assi (Orontes) River that flows northwards into Syria and further into Turkey, draining the northern Beka'a plain. As an indirect benefit, the project thus contributes to the GEF focal area of "international waters".

16. The global benefits to be captured by this project are thus synergistic, as it will not only combat land degradation, but will also help to restore/rehabilitate the biologically diverse composition of forest and woodland ecosystems, and will produce water quality and quantity benefits to various watersheds, including transboundary ones. Lebanon had not been in a position to give priority to these issues during the long years of civil war, but has now made in the frame of NAP development strong commitments towards this end; in the light of the enormous efforts still required for reconstruction of infrastructure and rebuilding the state, it would be difficult for the country to achieve global benefits without donor support.

2. Project Design (see Also Annex 4)

Context / Project Background

17. The mountain chains of Lebanon run parallel to the Mediterranean coast and rise to more than 3,000 m. In ancient times, the country was known for its rich, dense forests; forests have been the defining natural asset of Lebanon for millennia. The forest-covered mountains of Lebanon serve in the arid eastern Mediterranean as "water towers" which are crucial to the welfare of a large human population in Lebanon and beyond its boundaries. The preservation of the woodland vegetation cover is a key issue to preserve the aquifer, which is used for irrigation and provision of drinking water.

18. Mediterranean forests have been identified by the *Millennium Ecosystem Assessment* (MEA) as one of the world's most threatened terrestrial ecosystems: Mediterranean forests are one of the two 14 major biomes, of which more than two thirds of the area has been converted (primarily to agriculture), by 1990.

19. It is estimated that 74 percent of Lebanon's surface was covered by forests. The cedar forests (*Cedrus libani*) are part of the country's mythology and have been eulogised since biblical times. Cedars are a national symbol, which is e.g. displayed on the country's flag; or the political events in early 2005 are called "cedar revolution". The forests extended over approximately 36,000 ha in 2000, or 3.5 percent of the country's total area. The figure had been 37,000 ha in 1990, giving an annual deforestation rate of 0.4 percent. However, it must be stressed that data on forest resources are old and outdated, and precise information is usually not available. A *Forest Resources Assessment* (FRA) has been carried out recently, and the results are expected to become available in late 2005.

20. Brushland dominated by the oak *Quercus calliprinos* and Palestinian pistachio tree *Pistacea palaestina* is the most abundant woodland (see Annex 1 for details), and is found in some parts of the coastal strip and on the lower reaches of the Jebel Liban Mountains. A mixed forest of conifers, mostly *Pinus brutia* and *P. halepensis*, is also found in the west. Most cedars have been cleared and only small scattered stands are left today, such as the Arz Ar-Rab Forest near Bcharré. Lebanon has a small area of forest plantations, with *Eucalyptus* spp*., Pinus pinea* and *Cedrus libani* being the main species. The Mashgarah National Park is the largest protected area and a number of other forest reserves are scattered throughout the country.

21. Some 65 percent of Lebanon's woodland resources have been classified as degraded (see Annex 1). According to the NAP, desertification risk is high or very high in 59 percent of Lebanon's surface area. Baalbek, Rachaya and Marjayoum are those *mohafazas* (provinces) with the highest risk (see Annex 1 for details for all *mohafazas*, and Annex 10 for a comprehensive Land Use Map of Lebanon).

22. Despite the severe degradation of the vegetation cover caused by human activities, Lebanon's plant diversity is still regarded as very diverse, sheltering an estimated number of 4,200 plant species. This diversity is mostly the result of the physiogeography of the landscape and the country's location at the crossroad between continents.

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23. Today Lebanon's natural resources are rapidly becoming depleted. Problems of land degradation and deforestation do not date from the last few decades, but began more than a century ago and are still continuing. It is a long historical process of cutting down trees and not allowing regeneration, over-exploitation of wood, fires, grazing in cut areas and agricultural expansion. As long as forest resources have been abundant, it was always the cheapest way to cut the wood as fire wood or for construction, and to use the cleared land as rangeland or for settlements. However, this highly unsustainable process has finally led to a high degree of erosion and to a loss of productivity of the land.

24. The lack of control and appropriate legislation in the last few years, the growing needs of the population and ignorance of the negative impacts of poor natural resource management have resulted in the present alarming situation. Lowered water tables, soil erosion and changes in unique micro-climate are some of the consequences of this rapid deterioration. A recent study carried out by the World Bank (2004) came to the conclusion that the annual damage costs of soil erosion including terrace degradation is 0.45 percent of the GDP (US$ 60-90 million per year). The damage costs of forest and rangeland degradation in the Mount Lebanon district alone is estimated at 0.05 percent of GDP per year (US$ 4-14 million).

Sector Issues

Institutional and Legal Context

25. In the absence of a written forest policy in Lebanon, the *National Action Programme to Combat Desertification* (NAP) prepared by MoA with a major technical and financial assistance from the GTZ and the support of the Dry-Land Development Centre (DDC) of the UNDP provides the most important guiding document for land degradation in forest areas and brushland. The NAP was developed following a participatory approach involving communities of affected areas and concerned stakeholders. This builds on the decentralisation efforts already initiated by the Lebanese Government. The Government of Lebanon has put in place an institutional framework and is committed to strengthen it further to ensure the implementation the NAP and the mainstreaming of the UNCCD with the development policies of the various line ministries.

26. The responsibility for forests is mainly shared by the *Ministry of Agriculture* (MoA) and the *Ministry of Environment* (MoE). MoA is developing laws, regulations and projects in a certain framework, aiming at the conservation, promotion and management of the forest and tree resources and this ministry has the mandate to implement these provisions. MoE has developed and is implementing a national reforestation plan and is responsible for communal lands. Until 1993, when MoE was established, MoA was the unique body in charge of natural resources management, as well as of the preparation and implementation of all the related laws and legislation. During the 1960's and 1970's the MoA has undertaken major projects in various parts of the country. During the years of war, several sites were prepared, roads opened and terraces built. However, no major reforestation/afforestation activities were carried out, because of lack of budget, personnel and political stability. At the end of the war, the MoA's main concern was to restructure itself and build the capacities of the newly recruited guards and engineers. Very little was done in terms of reforestation/afforestation.

Within MoA, the *Rural Development and Natural Resources Directorate* (RDNRD) is in charge of the forestry sector, including rangelands and protected forests. The establishment of MoE in April 1993 marks a significant step forward in the management of the environment. In accordance with Environmental Law 444, MoE is in charge of the protected areas in general and of the management of public lands which are forested or afforested. In 2001 it was handed the responsibility to prepare and undertake the national reforestation programme. MoE has thus got the mandate and the financial means to carry out reforestation measures in all parts of the country.

27. There is no comprehensive environmental law yet, but land degradation and forestry issues are being addressed through laws and regulations which include the protection of natural, archaeological and tourist sites, drinking water, hunting, urban development, mining, food control, and housing. The first forest legislation of Lebanon was issued 1949, and has been amended subsequently. According to it, any forest exploitation is subject to a permit issued by MoA, even on private lands. All conifer forests and trees are protected by law, and their exploitation is banned, even if they are dead.

28. Lebanon is conducting its first *Forest Resources Assessment* (FRA), and the results are expected to become available in late 2005. Lebanon is only the fourth country to carry out such an elaborate project. The approach adopted is statistical in nature; the data was collected from a sample of 250+ plots scattered throughout the country. The output of this project will facilitate future work on, among others, international conventions such as the UNFCCC, CBD, and UNCCD. Another project that was initiated is the *Forestry Outlook Study*. The CDR has been invited to participate in an effort to integrate the work being done into the *Schema d'Amenagement du Territoire*.

29. Aiming at developing a National Forest Programme, steps have been undertaken to come to a collaborative partnership with other agencies, namely the FAO. It is envisaged to develop at first step a national forest policy/strategy which is still non-existent. As Lebanon was involved in the international FAO-led process on the criteria and indicators of sustainable forest management, these criteria and indicators could easily be adopted on the national level along with the concerned stakeholders.

Economic Benefits Derived from Forests

30. Lebanon produces modest amounts of wood, mainly for fuel. Only some 2,000 ha of forest plantations exist in Lebanon. These are mostly small stands, patchy distributed over the country. Although small amounts of plywood and paper are produced, there is no national forestry industry and the demand for saw wood, plywood and paper is met mainly through imports. The contribution of the forestry sector to the GDP is very low. Precise figures related to wood production do not exist as timber harvesting is illegal and wood quality is very low.

31. Although charcoal production was being banned until recently because of its destructive effect on forest and woodland resources, it has always been practiced throughout Lebanon, and some communities depend on this product. As it turned out that these illegal activities

can hardly be controlled, efforts are currently undertaken to establish a legalised system which requires permitting to get finally better control.

32. Non-wood forest products are important both locally and commercially. Large amounts of pine nuts from stone pines (*Pinus pinea*) are produced, and MoA has banned their importation in order to support local production. There is an estimated production of 900 tons pine nuts per year, equivalent to US$13.5 millions. A tax policy is being applied to encourage the production of pine nuts (or pinelets) and many villages in the central mountain region depend on this product for most of their income. Stone pine forests have the major advantage of adapting to a multipurpose management system. Most such forests are fairly open and even-aged, which means that they can be used for grazing or recreational activities, and their undergrowth can be harvested, thus reducing the fire risk. Carob (*Ceratonia siliqua*) production has been encouraged by authorizing owners to clean their forests and graft their carobs with more productive varieties. This allows them to increase their yields and obtain juicier carob pods from which manufacturers make better molasses. Carob seeds are exported and used by several industries.

33. Aromatic plants such as oregano (*Origanum* spp.), bay leaves (*Laurus nobilis*) and several wild leafy vegetables form part of most Lebanese people's daily diet. Crab apples (*Malus trilobata*) are eaten marinated in vinegar. There are 236 species of wild and cultivated medicinal plants in Lebanon. About 16 species are either rare or restricted to certain regions, while 29 are in danger of extinction. The claimed aphrodisiac and curative powers of *Ferrula hermonis* root, which grows on Mt Mekmel in the subalpine zone, has led to its overexploitation, and MoA has reacted by issuing a decree prohibiting the uprooting and harvesting of this commercially important plant.

34. Although ecotourism is growing in Lebanon, it does at present not yet contribute significant returns towards forest-dwelling communities.

Forest Estates and Land Tenure Issues

35. Several tenure systems are applied in the forests in Lebanon. However, cadastre is not always updated and surface areas and boundaries are not always clearly set. The different land tenure systems are the following:

- The ***Waqf*** (endowments) are usually lands owned by religious communities (often monasteries) or by extended families. They are managed by individuals assigned by the group of owners or by the community. Especially some monasteries owe some large forest areas in Lebanon.

- The ***Macha'a*** are communal lands owned by a municipality and managed by the municipal council. There is some responsibility of the MoE for macha'a.

- The ***Amiri*** are lands owned by the state, normally managed by the MoE, but sometimes their management is transferred to communities. All protected areas are amiri land.

- The ***Mulk*** are private lands, owned by individuals.

36. The users of the forest areas may not be the owners. Rentals, usufructs, customs and agreements are used to regulate this system. Forest workers, private rural companies or shepherds may be allowed to use the space under these usage systems.

Threats, Root Causes and Barriers to Forest Sustainable Land Management
(see also Annex 2 for Threats Matrix)

37. Whereas Lebanon has always been known as a forest-rich country, the process of deforestation and land degradation has already begun in ancient times and is still continuing. Today's forests, woodlands and maquis can be regarded as the remnant of a once much larger vegetation cover. Once an area has been deprived its natural forest cover (for whatever reason), it is rarely replanted, and usually becomes wasteland or rangeland. The lack of rehabilitation of degraded woodland results from a lack of stewardship. Control over the forest resources was weak in particular during the civil war and the years after, and the state begins only now to demonstrate a stronger responsibility.

Threats and Root Causes

38. There are two major groups of threats to the forest and woodland resources of Lebanon:

- Conversion of forests, woodlands and maquis to other land uses. Lebanon is a densely populated country with the bulk of the population living in the urban areas (the urbanisation rate is 90 percent). Large forest areas in Lebanon have been sacrificed for the rapid and often uncontrolled urban expansion, industrial development, and the construction of roads and other infrastructure. The establishment of quarries which cut deep scars into the forest and woodland landscape added further to these threats. Years of unregulated quarrying have left hundreds, probably over a thousand of abandoned quarries across the country. The conversion of forests has lead to a complete destruction of the natural and semi-natural vegetation cover in large areas of Lebanon, and thus to a loss of the forest functions. Increased soil erosion, a reduced ability of the soil for ground water retention, and a loss of the function of forests to absorb dust etc. are typical phenomena observed throughout the country.

- Insufficient forest management, which has lead to illegal timber extraction, grazing and over-grazing in forests and brushland, encroachment on woodland by agriculture (forest clearances, agrochemicals), intended and unintended forest fires (little prevention measures), uncontrolled charcoal production, and finally forest pests (promoted e.g. by the absence of non-commercial thinning). These factors have induced weak forest stands, a quick erosion of land after forest fires, poor natural regeneration, and a general reduction of forest functions.

39. Rapid and uncontrolled urban expansion has induced a severe reduction of the total forest cover. Uncontrolled urban expansion occurred in particular during the civil war, when many people wished to settle away from the urban centres for security reasons. During these years, land use planning (let alone ILUP) was hardly practiced and the construction of buildings and infrastructure followed a largely uncontrolled pattern; many houses and other buildings have

been erected in agricultural and forest land with the consequence of urban sprawl, and finally land degradation. Although the rehabilitation of state structures after the end of the war has made good progress, there are still serious deficiencies in sustainable land use planning and in putting into force available plans and policies.

40. Rural exodus started in Lebanon in the 1960s, with different movements during the war and completing in the last decade. It has had serious impacts on land, as abandoned agricultural lands are easily eroded. In particular many terraces in the mountainous areas of Lebanon are no longer maintained and give rise to land degradation and to a loss of cultural values. Many Lebanese villages today do not depend on classical "rural" activities for their incomes; the inhabitants have found work in the tertiary sector or depend on remittances. Most villages have fluctuating populations varying greatly from winter to summer period. The war situation, which prevailed in the country for some 15 years, has enhanced poverty, mainly in some remote rural areas, as well as causing serious degradation of many plant communities, habitats and landscapes, resulting in the loss of many species.

41. Lebanon, like many Middle Eastern countries, faces a challenging situation in managing their rangeland and pastures. Increasing herd sizes combine with dwindling rangeland areas to push formerly sustainably managed areas into long-term spirals of decline. Overgrazing is caused by a range of factors at the root of which lie property rights, population increase and poverty. Meanwhile, the ecological impacts of overgrazing are often severe; they include erosion and other forms of land degradation. The problems of overgrazing are stronger on the Eastern side of the Mount Lebanon Chain and in the Beka'a Valley, where the system of land tenure is dominated by "amiri", but where transhumance is becoming unregulated.

42. Forest fires add to the problems the ecosystems are facing. The frequency and intensity of these fires are a real threat to the sustainability of the forest ecosystems. They usually occur at the end of summer (between June and late October) and are followed a few weeks later by heavy showers of rain, which cause severe soil losses. Natural forest stands are further put into risk because of limited regeneration, especially in the dry areas and of the uncontrolled spread of damaging insects and diseases.

Barriers and Alternative Strategies

43. Annex 2 and Annex 3 give a detailed overview of the barriers to sustainable forest land management and alternative strategies and mitigating measures. Responsibility for forests, woodland and Mediterranean maquis is based in Lebanon on a centralised approach. Local communities and even private persons are not allowed to use their wood resources, even though the trees grow on their own land. Tree-felling is prohibited throughout the country. This ban has helped a lot in conserving the existing forest resources, but at the same time, it has also lead to a decreased interest in planting trees and conducting afforestation measures, or to adoption of a "prevention" ethic for forests, and thus represents a perverse incentive for sustainable forest management.

44. The barriers to sustainable forest land management include (see also the list given in Annex 2 and 3):

Economic barriers
- Present system of state-owned forests (amiri land) provides little or no benefits for local people;
- Legal restrictions avoid the economic utilisation of private forests (no incentives to afforest or to prevent deforestation);
- Insufficient financial resources of responsible state agencies;
- Maquis often private property and regarded as "unproductive land".

Social barriers
- Unclear land register records (mulk and waqf land);
- Land tenure system presents constraints to ensuring forest landscape connectivity (small plots of forests scattered over a large area);
- Illegal forest clearances insufficiently persecuted;
- Unregulated extensive transhumance system (grazing difficult to control).

Environmental barriers
- No consideration of environmental impacts of either government sponsored or privately initiated solutions, which often result in unintended negative environmental consequences.

- The different sectors (e.g. forestry, agriculture, grazing, water) either compete with each other, or have contradictory aims, thus leading to uncoordinated planning and actions

Knowledge / Technology barriers for ecosystem restoration
- No reliable statistics to allow careful planning and implementation;
- Only low number of technical forestry experts available in Lebanon (concepts of sustainable forestry and ecosystem services not taught at national universities);
- Shortage of nurseries which could provide autochthonous species for reforestation; lack of understanding of principles of ecosystem restoration;
- Private sector hardly able to deliver services in forest restoration.

Institutional / Policy barriers to both prevention and restoration of deforestation
- Insufficient capacities in government agencies (MoA, MoE, local governments and others);
- Deficiencies in cooperation among state agencies;
- Insufficient political ownership (stewardship) for forests and wood lands;
- Deficiencies in governance (including corruption);
- System of land use planning not effective (inability to cut across sectors; weak law enforcement);
- No control over development especially during civil war;
- Weak decentralised forest management structures (local forestry offices) that are normally taking care of "amiri" land;
- Weak capacities in central and local government agencies to control timber extraction;
- Legal constraints give little economic incentives for sustainable use of forests;
- Poor law enforcement (grazing in forests/woodland is prohibited by law).

45. Based on these barriers, a detailed list of alternative strategies and mitigating measures has been developed (see Annex 2). The project will build on the NRP as an entry point, and will focus on developing and strengthening an appropriate management framework and management capacities for the sustainable management of forest land, and the development of innovative technologies and instruments for the restoration of forests and woodland ecosystems. Relying on the NRP, the project will not directly support the large-scale rehabilitation of forest and woodland, but will conduct some pilot scale demonstration of environmentally sustainable alternative techniques. However, it will primarily concentrate on supporting the development of capacities and technologies necessary for the successful leveraging of the NRP towards SLM and thus generating global benefits from enhancing ecosystem integrity and preventing further degradation of globally significant forest and woodland ecosystems.

46. Considerable time has elapsed since the first serious attempts to combat forest land degradation in Lebanon (large-scale afforestation combined with rural development was initiated in the frame of the "Green Plan" in the 1960s and 1970s), but not much has survived in terms of organisation, infrastructure and human resources, onto which the government could build now. MoA and MoE, who share the main responsibility for forest and woodland management and for afforestation, are making efforts to build responsibility and to rebuild their capacities.

Problem Statement

47. The forests of Lebanon are a unique feature in the arid environment of the eastern Mediterranean, but they have suffered a lot from conversion to agricultural land and rangeland, housing, infrastructure and industry. The management of the woodland resources is insufficient, with little control of illegal timber extraction and charcoal production, and the restocking of trees is on an insufficient scale. Weak and scattered governmental capacities in combating forest degradation, centralised approaches with little rights and responsibilities of local communities and little public awareness for the function of the forest vegetation for soil and water conservation are important barriers which need to be addressed. The loss of the natural and semi-natural vegetation has lead to decreased ecosystem services and functions, through increased soil erosion and decreased soil fertility, and imposes serious threats to ecosystem integrity, biological diversity, and the ability of the soil to function as water stores and the ability of forests to function as carbon stores. The ongoing degradation of the Lebanese forests finally leads to lower agricultural productivity and other provisioning services, such as supply of medicinal plants.

Baseline Scenario

Lessons Learnt from Completed Projects and Programmes

48. Lebanon has undergone a series of experiences of soil conservation, forest conservation and afforestation, which was heavily influenced by the years of civil war.

49. In the 1960's, the Government of Lebanon put in place a "Project for the Improvement of the Lebanese Mountains", which focused on three major activities: land reclamation (e.g. terracing and construction of rural roads), irrigation (establishment of ponds and distribution

networks), and reforestation. This so-called "Green Plan" was implemented by a separate Authority under the Ministry of Agriculture. Under this umbrella, large-scale reforestation projects were initiated during the 1960's and 1970's, including the establishment of tree nurseries. For example, reforestation was undertaken to the cedar forests in the Chouf Mountains (e.g., Massaer el Chouf, Barouk, and Ain el Zhalta). Unfortunately, these activities were interrupted by the war, and could not followed-up adequately in the post-war period. Although the Green Plan does still exist as a government authority, it is no longer involved in the forestry sector.

50. Due to the lack of capacities in MoA, the Green Plan could not be revitalized after the end of the civil war in 1991. There are now very few reforestation activities throughout the country, with none of them being significant on a national level. Among the larger projects is a joint effort between Syria and Lebanon, which undertakes afforestation in the eastern (Anti-Lebanon) mountain chain close to the border with Syria. In addition to autochthonous wood species, fruit trees and trees relevant to biodiversity have been planted. Artificial water ponds were also built and hydrogel was also used to increase the moisture-retention capacity of the soil. Seedlings are brought from Syria. This seems to be a successful recent effort of afforestation, but from the perspective of cost-effectiveness, it can hardly be used as a model for the rest of the country.

51. In addition to the various efforts undertaken by the Government of Lebanon, NGOs and CBOs play an important role in the country's efforts to combat land degradation. NGOs and CBOs often work together with governmental agencies and with the support of local and international donors and sometimes even the private sector. Many afforestation campaigns were carried out throughout the country. While these efforts are significant socially and from the perspective of awareness-building, their impact on overall forest cover is almost negligible. Although there is no reliable information on the scale and impact of these campaigns, the success rate (survival rata of planted trees) is believed to oscillate between 10 and 40 percent, at best. One of the better-known examples of an afforestation project run by a NGO was launched in 1998 by the "Committee for the Friends of the Cedars", which secured seed money from the "Iles de France" and currently manages a tree nursery, which can produce up to 25,000 saplings per year. The cedars are planted on a 226 ha. large area in Bcharré, which was donated by the municipality. After planting, follow-up and maintenance is secured by a tree-adoption programme, and sponsors are encouraged to secure maintenance (watering, weeding, and protection) for an 18-years period.

52. The MoA executed between 1997 and 2000 a project aiming at controlling forest fires. It was implemented in cooperation with the French Forest Office (ONF) and comprised provision of equipment for early intervention as well as capacity building on the levels of both engineers and forest guards. A national committee for combating forest fires has been established subsequently, and it includes representatives from all concerned ministries. Another project supported by the European Union and implemented also in cooperation with ONF between 1996 and 1999 aimed at sustainable forest management through the establishment of three pilot projects in Beka'a, Northern Lebanon and Mount Lebanon. The project provided demonstration at different levels including production of seedlings, reforestation, grazing management, forest management and capacity building and training for engineers in the MoA.

53. Lebanon has received financial assistance from GEF for the protection and management of two forest nature reserves through a project entitled "Strengthening of national capacity and grassroots in-situ conservation for sustainable biodiversity protection". The project was implemented between 1996 and 2002 by UNDP and executed by MoE. Another GEF-supported project (MSP), called "Integrated Management of Cedar Forests in Lebanon in Cooperation with other Mediterranean Countries", started in 2003 and contributes to the management of cedar forests and their protection from infestation with insect pests. The primary focus of this project is on determining the causes of appearance of *Cephalcia tannourinensis* in the Tannourine-Hadath el-Jebbeh Cedars Forest and determining means to prevent its spread to other countries in the region. The project is implemented by UNEP and executed by the MoE together with the American University of Beirut. Both of these projects, however important, only address the biodiversity aspects of forest management and do not tackle the larger landscape-wide issues.

The National Reforestation Programme (NRP)

54. Whereas national reforestation campaigns were previously the sole responsibility of the MoA, the Government of Lebanon decided recently to share it between MoA and MoE: a yearly government allocation of LBP5 billion (about US$3.3 million) was transferred to the MoE in 2001, renewed annually for a period of five years. This budget allocation is significant in comparison with MoE's own budget (US$1.7 million in 2000). Recognizing the importance and complexity of reforestation, the MoE has developed an annual project implementation plan covering five years. In the short term (years 1 to 5), the MoE targets to rehabilitate 18,000 hectares of disused lands and hopes to set in place a framework for subsequent efforts, to ultimately achieve a forest cover of 200,000 hectares (20 percent of Lebanon's surface area) over the next 30-40 years. Reforestation campaigns are implemented through a bidding process. MoE experiences great difficulties in carrying out reforestation activities on the scale required: whereas a total of 18,000 hectares were expected to be reforested by the end of 2005 (3500 hectares per year), only 666.5 hectares were subcontracted by the end of 2004 (see map given in the Annex 9). The reforestation plots are scattered all over the country, many of them being only a few hectares large. The reasons for this slow implementation are diverse and include, according to an analysis undertaken by MoE:

- External political influence and bureaucracy;
- Lack of necessary equipment;
- Insufficient number of technical staff within MoE;
- Absence of MoE facilities in the mohafazas ("provinces");
- Site selection without previous field visits;
- Limited availability of local seedlings;
- Lack of capacities of the private sector to undertake afforestation work;
- Concentration of afforestation activities on small plots, often only a few hectares large;
- Little public understanding (no accompanying awareness building).

Effectiveness of the current baseline, gaps and additional needs

55. During the preparation of this proposal, a series of key constraints hampering the successful implementation of the National Reforestation Programme (NRP) were identified. The following lessons were learnt:

- There is an urgent need to create more ownership (stewardship) for the reforestation measures among the local population. The reforestation plots are usually proposed by local government structures (majors), but implementation is done exclusively by subcontractors working on behalf of MoE. Local administrations and the local population are not significantly involved in project execution and municipalities do not take responsibility.
- There is a need for more awareness building among the stakeholders. The municipalities, for example, often do not understand afforestation (and restoration) as a contribution towards greater ecosystem stability, enhanced food security and improved rural livelihoods, but only as a means to increase the esthetical and recreational value of the landscape.
- Economic incentives should be created for municipalities participating in afforestation projects. Local communities do not benefit from the afforested areas.
- The private afforestation sector needs to be strengthened. It could not develop so far, as there was no demand until NRP came into place. Prices for services are relatively high and quality of service delivery is poor.
- Sustainable afforestation projects need to be better designed on an individual basis by qualified experts. At present, there is a lack of human capacities in the field of afforestation in Lebanon with virtually only a handful of forest engineers available in all of the country. Most forest experts (working for the government or NGOs) are agricultural engineers who have trained themselves in the field of forestry. Forestry is not lectured at the Lebanese universities, and neither are concepts related to ecosystem functions and services.
- Large-scale afforestation requires combined forces and should include civic involvement. There are a few NGOs who have got some experiences in reforestation work. However, the public tendering process is open to private firms only. NGOs are excluded for administrative reasons.
- NRP should build more on existing structures. MoE is a relatively young ministry and afforestation came under their responsibility quite recently (2001). NRP does not make use of the capacities available in other ministries.
- More efforts need to be undertaken for M&E. Monitoring of NRP is purely output-oriented through random-sampling. The ultimate aim of monitoring is the control of the correct delivery of services by sub-contractors.

56. The NRP thus does not only show very modest achievements (Annex 9), but also has a very high risk in terms of sustainability. Although rates of seedling survival are known, little information exists on the wider impact of reforestation on ecosystem health and stability (which takes much longer to assess). The top-down and single-sector approach of the NRP and the omission of participatory approaches are regarded as major bottlenecks for achieving sustainability. Furthermore, large-scale reforestation programmes such as NRP need a broad

public basis and can be executed countrywide only with the broad participation of the local population.

GEF Alternate Scenario

57. The existing barriers which impede the implementation of large-scale measures to combat land degradation are listed in Annex 3, together with the measures proposed by the project how to lift these barriers. Based on the analysis of the threats and root causes that are leading to significant land degradation in forest areas of Lebanon, and an analysis of gaps left by the current baseline, both "Targeted Capacity Building" (SLM-1) and "Implementation of Innovative and Indigenous Sustainable Land Management Practices" (SLM-2) have been selected as the most effective framework for improving the situation. The project would support the Government of Lebanon to make its efforts for combating land degradation ecologically and economically sustainable, and to ensure that biodiversity values are conserved, and that these efforts contribute to stabilizing climate and regional ground water systems.

58. The project aims at mainstreaming SLM principles into national policies and frameworks by using one sector as a vehicle which is forestry and NRP. The rationale of the proposal is to remove the institutional, economic, technical barriers to SLM in this sector in order to enable NRP to meet its targets and up-scale forestry SLM models and approaches over 20 years at the national scale. This approach also acknowledges the role of the agriculture sector and builds in incentives for sustainable forest management. Moreover, afforestation is also an entry point to start an intersectoral dialogue between ministries and among sector stakeholders on Integrated Land Use Planning (ILUP) and forest management.

59. The GEF Alternative will complement the baseline, by addressing gaps related to capacity development, inter-agency coordination, conceptual development, mainstreaming of SLM, and development of sustainable financial mechanisms for implementation of SLM practices. The costs of the GEF Alternative are estimated at US$ 18,755,000, of which US$ 16,500,000 is considered as baseline financing from Government sources. The costs of the Increment will be shared between the Government, the GEF and the EU.

60. Putting one focus of the project to capacity building, many global benefits are expected to be indirect. The functions and services of afforested ecosystems support issues of global concern. Global benefits comprise the conservation and restoration of fragile forest ecosystems particularly in mountain areas that serve as regional "water towers" and are being affected by erosion, and provide habitats for species of global significance. Global benefits also include reduced stress from sedimentation and pollution on trans-boundary water bodies that discharge into the Mediterranean Sea and neighbouring countries, preservation of important landscapes important for biodiversity, establishment of corridors between protected areas, and increased carbon sequestration and adaptation to climate change. Local benefits comprise mainly sustained productivity of land in the forestry sector, and reduction of poverty. The MSP will primarily measure indicators related to direct benefits from ecosystem restoration.

Description of project objectives, outputs and activities (see also Annex 3 and Annex 4)

61. The overall long-term project goal is an enabling environment and capacity for sustainable forest management as a contribution to greater ecosystem stability, enhanced food security and improved rural livelihoods. The immediate objective of the project is:

> A strategy for safeguarding and rehabilitating Lebanon's woodland resources developed and under implementation through capacity building and execution of appropriate SLM policies and practices.

62. The project will be implemented by the Ministry of Environment (MoE), and will build on the experiences and lessons learnt from the current NRP. MoE has the mandate and the resources to deal with reforestation on a national scale, but still lacks a clear conceptual approach and the necessary capacities. The NRP will thus serve as a baseline, through which practical on-the-ground investments will be facilitated. The project has thus the opportunity to test and validate proposed actions on a wide scale.

63. The project will focus on the management and rehabilitation of degraded forests and woodlands, and tackles the main barriers identified in the problem analysis (see detailed overview in Annex 3). However, some issues such as forest pests, the establishment of an infrastructure for combating forest fires, minimising the negative effect of agrochemicals applied in and around forest land, etc., will remain unsolved. The project will only work on those issues which are considered as triggers for SLM. It would be far beyond the scope of this project to deal with all factors which have a negative effect on forest land. Following the recommendations by the *Millennium Ecosystem Assessment*, highly degraded land will also not be subject to project interventions due to reasons of cost-effectiveness. An all-inclusive comprehensive approach would require a multiple of efforts and resources, and would at present also exceed the absorption capacity of the country.

64. The project contains three main outcomes:

Outcome #1: An appropriate management framework and management capacities for the safeguarding and restoration of degraded forest areas.

65. The project will prepare a full inventory of the physical, human and institutional infrastructure needed to realise a significant management and restoration programme in Lebanon. On the basis of this information, major international funding can be sought and channelled to complement national funding in a broad and coherent institutional development and investment programme. To this end, the project will evaluate and improve the institutional and economic infrastructure underpinning present and future afforestation projects. The planned output is a comprehensive business plan which identifies a national institutional framework for executing a successful strategy and the investments required for a national large-scale forest restoration programme. An audit should provide an accurate picture of the state of affairs. This assessment of the current situation will include an analysis of the forest law issued in 1949 and its subsequent amendments, and the eventual elaboration of a revision. The project will describe the scale required for an efficient operation and the technical and human

capacity elements required. There is a need to study the feasibility of the establishment of a trusted long-term public financial framework (e.g. a fund) under which private investors would be willing to implement the required scale and quality of investment. The business plan will also examine the opportunities to achieve funding from the international carbon trade (although actual carbon financing will not be part of the current MSP).

66. An analysis of human and technical capacities is a key project deliverable. This will be followed by an assessment of the economic/contractual context required for the build up of a sustainable, large scale supply capacity in the country for reforestation. Local stewardship involves complex social and community relations, which is an important element in the institutional framework to be specified by the project. In order to achieve meaningful scale and secure institutional framework for reforestation, the outlines of the required national planning and supervision structure need to be specified. Options to be considered include a new agency e.g. under the tutelage of CDR, with a robust government structure assuring its effective functioning.

67. Specifically the project will:

- Review the legal instruments, identify gaps, and elaborate amendments;
- Design the institutional structure of a re-organised forest management authority, reflecting the cross-sectoral nature of land degradation;
- Strengthen the human capacities for the design, implementation and monitoring of afforestation measures and integration of principles of ecosystem services and functions at the landscape level ;
- Strengthen cross-sectoral integrated land use planning in the field of land degradation in woodland areas (and mainstreaming);
- Develop a business plan for SLM of forest areas, which would allow the Government to implement a full national forest restoration programme;

68. Based on the detailed specifications to be elaborated in the business plan, the project will focus on capacity building on various levels: the political (decision-maker) level, the local administration, the private sector and non-governmental organisations. Deficiencies on any of these levels may hamper the successful implementation of forest management and afforestation projects. Combating land degradation is in Lebanon often regarded as a pure technical issue, without taking the human dimension and its cross-sectoral nature into account.

69. The project will assist decision-makers and managers of afforestation projects to get better informed about methodological approaches used in other countries for ecosystem restoration. There is also a need to demonstrate the role and value of public participation in afforestation projects, to understand how important this is for the sustainability of such projects. Project activities will therefore include study tours for decision-makers and experts to other sustainable forest management projects in the region to exchange knowledge and experiences.

70. Capacity building on expert level will include training in participatory methods. It is envisaged to establish a small core team which is responsible to make the link between communities and local administration on the one side, and the central structures (MoE, Project

Oversight Committee) on the other. This team needs both good communication and negotiation skills. Training workshops will be conducted to introduce participatory community-based forest management to ministry staff.

71. As the private sector's capacities to provide goods and services for afforestation measures are at present weak, the support to the development of this sector is a challenging task. Many goods such as seedlings and saplings of autochthonous species could be provided by private firms, but they are at present practically not offered or imported from neighbouring countries by them due to the lack of such a demand. The project should encourage firms to undertake investments in these fields, and will support these efforts e.g. by a commitment to purchase at prices agreed beforehand for the demonstration/pilot sites.

72. Capacity building on government level includes the strengthening of the cooperation and coordination among the various ministries and state organisations. Land degradation is a multi-stakeholder issue with responsibilities in several state organisations, and which can properly tackled only through a joint effort by all stakeholders. MoE will invite all concerned parties to a Project Oversight Committee, which will be responsible to paving the ground for replication of sustainable forest management and afforestation on a large scale.

73. Capacity building will also comprise training at local and national levels for piloting carbon financing mechanisms. The project will build the capacity of the government, local institutions, and communities to participate in the global carbon market. It is envisaged to enable Lebanon to shape its national reforestation programme in a way that it will achieve a maximum of benefit also for the protection of the global climate. The project will enhance the ability of Lebanon to develop carbon financing proposals, measure baselines, and establish the administrative processes required to enter into carbon sequestration contracts. In particular the national carbon monitoring-evaluation and certification capacity will be enhanced by developing such capacity within MoE. This will constitute one form of financial sustainability for the project's actions.

Outcome #2: A set of innovative technologies and instruments for the rehabilitation of forests and woodlands, and their subsequent sustainable management, has been designed and validated in pilot areas.

74. The project will further develop and test methods and approaches which have been identified as necessary for conducting ecosystem restoration measures on a large national scale. To this end, the project will build on the on-the-ground investments initiated and conducted by the current NRP. NRP will thus serve as an important reference, and will provide the necessary infrastructure, whereas the GEF financed project will scale-up these activities to the ecosystem level, with the aim of achieving long-term sustainability and adding global benefits at the landscape level.

75. Specifically the project will:
- Design and demonstrate a set of innovative technologies and instruments for the restoration of forest lands;

- Create economic incentives to conduct forest and woodland rehabilitation and ecosystem restoration for local communities and for private persons;
- Demonstration how to implement afforestation measures on public land through participatory approaches;
- Delegate responsibilities and duties for forests to communal level (protocols), thus strengthening local stewardship and ability to monitor and enforce forest regulations;
- Strengthen the role of the private sector as provider of services and goods;

76. Getting local communities engaged in afforestation and ecosystem restoration measures is a foremost task of the project. Until now, state afforestation measures are initiated and funded exclusively by the central government. Local administrations - mostly municipalities - often provide land, but are otherwise not further involved. All costs for preparing the land, purchasing tree saplings, paying the wages of workers, maintenance, etc. are covered by the central government. The activities for establishing tree plantations are outsourced to private firms which are identified in a bidding process, thus creating little local stewardship. Many of the problems faced by forests (illegal grazing, tree-cutting, forest fires, etc.) thus continue to exist in tree plantations. The only way of getting out from this situation is delegating both responsibility and the right to benefit from these forest resources to local communities. For the project, this means the initiation of a process of negotiation with local communities with the aim of co-management of forest resources. Such ownership by local communities can also result in a more diverse "afforestation product", that reflects local needs such as timber, non-timber products, water storage, and other provisioning services from the forest ecosystem.

77. The strongest incentive for getting local communities involved in the conservation of forests and woodlands as well as in their rehabilitation is the delegation of user rights to them. Only if local communities have the right to make use of the restored forest land, will they be willing to make contributions to afforestation measures, such as financial contributions, provision of land, labour force, etc. Experiences show that this may take a long time to negotiate; therefore the project will assist this participatory process. Public participation is regarded as the main driving force to strengthen ownership for projects by local communities. All key stakeholders will be involved throughout design, implementation, and evaluation of practical measures. A stakeholder involvement plan is given in Annex 8. The project will demonstrate at a few pilot sites how public participation can be initiated, and thereby share lessons learnt and results through the Ministry with other regions.

78. In Lebanon, strong financial incentives are needed to persuade private land users to plant forests rather than other, land-uses that may have more short term gains. Incentives for private land owners may include:

- Afforestation grants by the Government. The plantation of forests to be subsidized by the state budget;
- Free or subsidized provision of goods and equipment (e.g. land, seedlings/saplings, machines);
- Facilitating the access to funds from the international carbon trade, supporting afforestation measures (Kyoto Protocol, Clean Development Mechanism);
- Financial return from the sale of wood, harvested according to a forest management plan (currently, timber extraction is illegal even on private land);

- Afforestation with fruit trees, stone pines and other economically important species (e.g. rose hip cultivation);
- Financial benefits from multiple-uses of forests (e.g. agroforestry, recreation, medicines);
- Utilization of non-wood forest products

- Water harvesting and secure water provisioning for rural communities.

79. The project will examine these options and promote the most promising ones. The project will initiate the establishment of plantations of autochthonous trees on private land with positive effects on biodiversity, soil and water conservation on the one hand, and economic benefits on the other. The ultimate goal is to set up forest management plans which allow the owner to benefit from afforestation, but which also ensure the full maintenance of the ecological forest functions.

80. The project will focus on forest land and productive land (agricultural land, rangeland). Severely degraded wasteland will only be treated by the baseline. They project will conduct a study to determine if it is cost-effective to restore such wastelands and whether it can show strong global benefits.

81. In Lebanon, there is still insufficient public understanding for the function of forests in conserving soil and water, and thus finally in securing food and ecosystem stability. Many afforestation measures (including those initiated by NGOs) are therefore conducted in the frame of landscape planning to increase the esthetical value of the landscape, without taking the ecological requirements seriously into account. Through an intensive public-awareness campaign, the project will show to the public the need of combating land degradation and of rehabilitating degraded land, for securing rural livelihood. There is a wide mis-perception in Lebanon that land degradation is to be combated through tree plantations. The Mediterranean maquis (brushland) is regarded as "useless", despite the fact that e.g. low Mediterranean maquis protects the soil and water much better than conifer stands. The project will tackle this issue by demonstrating the conservation effect of low vegetation on demonstration plots, accompanied by a public awareness campaign.

82. The project will promote the use on non-wood forest products. Some of these products are available in newly reforested areas, and may generate additional incentives for local people.

Outcome #3: Learning, evaluation, and adaptive management.

83. The project will be managed by a Project Management Unit (PMU) working with the MoE. It will be supervised by a Project Oversight Committee with representatives of other ministries, government agencies, and the civil society. An important task of the project is to further consensus-building among decision makers.

84. Specifically, the project will

- Promote the perception of the project by the government as national effort;

- Monitor and evaluate the project's performance;
- Disseminate project results and lessons learnt for replication;
- Increase awareness of decision-makers and the concerned communities for the importance of forest areas for sustainable livelihood.

85. The project will be governed by a continuous process of learning; it will be necessary to adapt the ultimate scale and quality of afforestation continuously according to the experiences and achievements of the project. The principle of "double-loop learning" will be applied.

86. As Lebanon still lacks an effective LD national M&E system, the project will support during its first year some work related to statistics and data collection in order to better quantify the baseline situation and to build a LD M&E framework that will help assess the deliverables of the project as well as those of the NRP over the 20 years of execution.

87. Monitoring and evaluation will be done according to the Monitoring and Evaluation Plan detailed in Annex 7.

Project Areas

88. The project will select approximately four pilot areas to work in, each of them being at least 75-100 ha. in the north, south and east of the country (reflecting the high NAP priority areas). These areas will represent different types of landscape, soil, and land tenure system; also selecting different ethnic/religious groups will be considered. In this way, the project will be able to develop, test, and validate various approaches under different conditions, resulting in a representative overall picture of the country. This will form a starting point for replication throughout the country.

3. Sustainability (including financial sustainability)

89. The project addresses the issue of sustainability through:

- Building on an ongoing programme (NRP) with the aim to leverage it for better global and national benefits;
- Preparing a national strategy and business plan for sustainable forest management and forest restoration which allows the Government of Lebanon to take action towards long term sustainability;
- Developing institutional structures and human capacities through provision of technical and management training;
- conducting awareness-building programmes for the population and for decision-makers;
- Integrating local communities, delegating responsibility to them, and creating incentives for their active participation.

90. The government structures for the management of forest land to be designed and developed by the project are expected to become stronger than the present structures are; an option to be considered is the establishment of an independent specialised government forest agency with an inter-sectoral coordinating role, which would be more efficient, have more power, and would get more attention by the government than the present structures. This fact, per se, will increase the sustainability of the forestland management practices.

91. The project will examine options to decentralise forest management, afforestation, and land management, which will give local communities more rights and responsibilities. This process will be accompanied by awareness-building. The increased local stewardship for forests and woodlands will strengthen the responsibility and will also lead to greater sustainability.

92. Continuation of the work after the end of the project is expected to be facilitated through the *National Reforestation Programme* (NRP) which will provide funds from the state budget on a regular long-term basis. As budget allocations are annually renewed political decisions, it is still too early to expect firm commitments. Additionally, the project will lay the foundation for donor funding by preparing the necessary capacities for investments. Furthermore, the feasibility for entering the international carbon trade will be examined.

4. Replicability

93. There is enormous potential for repeating the project lessons and transferring experience elsewhere. Lessons learnt from the project will be successfully disseminated and extrapolated to other woodland contexts, during the life of the project and beyond of it, through partnerships and networks. As the project's ultimate goal is the development of a model for combating land degradation in forest and woodland areas, replication throughout the country in the frame of a national reforestation programme is a foremost task. The project will develop and test methods for forest restoration on a pilot scale, and will then develop a strategy how to extend this approach throughout the country on a national scale. Creating models for replication throughout the country is thus the purpose of the project.

94. As Lebanon has an ongoing national reforestation programme, best practice and lessons learnt will be fed into the programme immediately. Experiences made in one of the pilot areas can thus also easily be exchanged with experiences gained in other regions of Lebanon. The project will organise regular meetings/roundtables with experts and the public to discuss the replication strategy. These meetings will be part of the development of a business plan for afforestation, and will guarantee a continuous process of learning and adaptation. The business plan will contain a specific Replication Strategy.

95. The project will establish a learning link to other projects on land degradation in the region, in order to gain from and contribute to the knowledge acquired by these projects. The project will thus build on existing knowledge, and will benefit from the experience gained by other projects. Finally, the project will utilise the occasion of the National Report to the UNCCD as a vehicle for disseminating lessons learnt from this project.

96. The project will facilitate direct replication by applying the following approach:

- Introduce stakeholders (forest managers, representatives of municipalities and NGOs/CBOs) to new ecosystem oriented management practices and approaches (e.g. multi-species afforestation, multi-purpose management, ecosystem friendly grazing, sustainable wood harvesting, etc.) through workshops and study tours;
- Demonstrate new ideas, practices and technologies on the ground in various parts of the country, taking into account the different ecological and socio-economic conditions;
- Identify and disseminate lessons learnt and best practices to project partner institutions through publications, meetings and workshops;
- Enable interested people (communities, municipalities) to access funds from the NRP to replicate the results of the project;
- Train individuals to expand the project's main approaches to other areas.

5. Stakeholder Involvement (see also Annex 8)

97. The project will be based on a close partnership of the *Ministry of Environment* (MoE) with other ministries and state organisations, municipalities and NGOs. Continued involvement of these groups is crucial for the success of the project. Whereas Outcome 1 aims at the development of capacities on central level (MoE and related organisations), Outcome 2, through the implementation of pilot measures, focuses on local stakeholders. The project will involve the following stakeholders (see the stakeholder involvement plan in the annex):

Ministry of Environment: MoE as the executing agency will have the overall responsibility for steering and managing the project. Involvement in all stages of project preparation and project execution.

Ministry of Agriculture: MoA is responsible for forest management and desertification issues, and thus for the implementation of NAP. MoA will be involved as part of the Project Oversight Committee, and experts trained by MoA will work for the project. A formal agreement with MoA as partner in project execution (e.g. usage of some facilities of MoA) has been initiated (see annex).

Other central state organisations (e.g. Council for Development and Reconstruction, other line ministries, Litani River Authority): Representatives will serve in the Project Oversight Committee and decisions on their further involvement will be taken together with them during project execution.

Municipalities: Municipalities are the key stakeholders for Outcome 2, the implementation of pilot on-the-ground investments. The mayors and their representatives will work closely together with MoE and PMU in order to test and validate measures for combating forest land degradation.

Research institutes: The research institutes such as LARI and universities will have an advisory function. Their input will be mainly in the form of technical expertise to guide and monitor the process.

Civic organisations: Representatives of the bigger NGOs and CBOs will become members of the Project Oversight Committee, and will thus have a complete insight into all aspects of project execution, and will have the opportunity to steer the process. It is envisaged to sub-contract certain measures to NGOs and CBOs, where they show against state organisations comparative advantages. Such measures may be particularly in the fields of participation and awareness-building. Lebanon has only a small community of forestry experts, and in addition to their work in state organisations and research institutions, most of them are engaged in NGOs. It will be avoided that members of the Project Oversight Committee will take decisions on issues into which they may be involved through such double-functions. The role of civic organisations will be mainly in the frame of Outcome 2, but certain inputs (such as for capacity building or certain monitoring tasks) are also expected for Outcome 1 & 3.

Local communities: Through participatory planning workshops in the pilot areas (Outcome 2), it will be ensured that the local population has the opportunity to directly influence the project. These workshops will have the mandate to take binding decisions on the respective pilot area. The project will thus, whenever possible, take the views of and work with the local population in a direct way, not only through representatives (such as the mayors) and NGOs and CBOs. It is envisaged to conduct a series of local workshops in potential pilot areas, and to make the final selection of the pilot areas on the basis of the results coming from and the commitments emerging from these workshops.

Private sector: Private companies which attempt to qualify themselves as service providers in the field of forest management and afforestation, e.g. through training and knowledge transfer (see output 2.4).

98. The project history, principles, and anticipated outcomes were presented to key stakeholders, and their ideas (especially tips for suitable pilot projects) were discussed and incorporated into the project document during:

- individual meetings with mayors of various municipalities throughout the country, focusing on those which applied for support within the frame of NRP;
- individual meetings with experts and decision-makers from state organisations, including the MoA and research organisations;
- individual meetings with representatives of various NGOs and CBOs.
- a meeting to develop a cooperation mechanism between the MoE and the MoA.

6. Monitoring and Evaluation

99. The monitoring and evaluation of the project will be done according to UNDP and UNDP/GEF rules and standards, and based on the verifiable indicators identified in the logical framework. All lessons learnt from the project will be disseminated at the national level, as well as through best-practice notes and electronic data sharing. A detailed M&E plan is given in the annex, listing the instruments, responsibilities and the time schedule.

100. Additionally to reporting and internal & external evaluations and audits, the project will document all major steps in a video film. This film will later also be used for educational purposes.

101.   A clear budget of $62,000 has been allocated for external M&E purposes. Considerable efforts will in addition be spent for internal monitoring and evaluation, to be funded out of the regular operational budget. It is therefore impossible to give the exact overall budget for M&E, but it is in the order of five percent of the total project budget.

7. Risk and Assumptions

102.   During the preparation of the MSP proposal, a number of possible risks were identified and discussed with stakeholders. Mitigation measures were considered and incorporated in the design of the project. These risks and mitigation measures include:

- Local populations are not interested in the realisation of community activities and global development objectives. – It is assumed that local needs for improving land management are so high that this is unlikely. Additionally, the project will conduct strong communication campaigns, regular awareness raising and information campaigns.

- The expectations of local stakeholders from the project and the state are too high, and communities are therefore not ready to make significant contributions. – The conditions of local contributions have been set at a reasonable and modest level and are comparable to those of similar projects in the region.

- Heavy administrative procedures, mainly related to expenditures modalities and processing. – The project will build on the experiences and modalities developed for other GEF projects in the country.

- Co-funding cannot not be realised in a timely manner. – Co-funding by the EU has already been secured and related activities have already begun.

- Political instability may focus the public interest to areas other than environmental issues. – Despite the fact that the country is situated in a difficult political situation, the newly elected government has reiterated the top priority of the project for the country and strong commitment has been given (see also government's letter in annex 12).

D - Financing

1. Financing Plan

103.   The total additional cost estimated for the project is US$ 2,255,000 of which GEF is expected to contribute US$ 980,000. Co-funding for the project is expected to come from the European Union (Directorate General Ib), through the MSC-IPP Environment Project, an Investment Planning Project (see Letter of Commitment in the Annex) and from the Government of Lebanon.

Incremental Cost of the Project (see details in Annex 5)

104.　　Baseline / Domestic funding. Lebanon is a country with an originally high forest cover, which has been lost during historical times. The Government of Lebanon gives high priority to stop and reverse this process of land degradation, and has provided to this end significant funds from the state budget amounting up to US$3.3 million per year, which is allocated to the NRP. These funds are directly relevant to the objectives of this project, but are at present not fully spent due to capacity problems and conceptual deficiencies. For a 5-years period, the funds of the NRP amount up to US$16.5 million. Activities funded by the NRP are distributed throughout the country, and they aim at both domestic and global benefits. As a very conservative estimate, is has been assumed that incremental activities during the project execution period will comprise five percent of the total NRP budget.

105.　　GEF Alternative. The GEF alternative adds a layer of global land degradation concerns to the current efforts to promote the forest areas of Lebanon. Specifically, the objective of the GEF project is to prepare a strategy which enables the Government of Lebanon to conduct afforestation and reforestation on a large scale, which also adds to the efforts to conserve watersheds, biodiversity, and climate. The costs of the GEF alternative (including the baseline) amount to US$18.7 million.

106.　　Incremental Cost of the Alternative. The difference between the GEF alternative and the baseline amounts to US$ 2,255,000 which represents the incremental cost of achieving sustainable global environmental benefits. Of this amount, the contribution from non-GEF sources amount to US$1,275,000, and the GEF will provide US$980,000.

107.　　Details of project financing are as follows (all amounts converted to US$):

Project outcomes	GEF	Co-financing EU	Co-financing Government (minimum)	Total
1. An appropriate management framework and management capacities for the rehabilitation of forest areas.	330,000	420,000	60,000	810,000
2. A set of innovative technologies and instruments for the rehabilitation of forests and woodlands, and their subsequent sustainable management, has been designed and validated in pilot areas.	380,000	–	700,000	1,080,000
4. Learning, evaluation, and adaptive management	270,000	30,000	65,000	365,000
TOTAL	**US$980,000**	**US$450,000**	**>US$825,000**	**>US$2,255,000**

2. Cost-Effectiveness

108.　　Several options were considered. It was finally decided not to design a stand-alone project, but to fully build on the National Reforestation Programme (NRP), and to scale

it up in a way that it will finally serve both domestic and global matters. The project will finance the development of concepts and strategies, and will test and validate them in the field under "real world conditions". Achievements will immediately be fed into the NRP in a highly dynamic process, resulting in synergies and a maximum of cost-effectiveness.

109.	Further elaboration made it clear that the MSP modality suited best, in light of its relatively fast delivery mechanisms: this is necessary both from the view of the urgency of the issues to be tackled, and for meeting the time schedule of EU co-funding. A heeled full-size project may carry the risk that it becomes dominant over the NRP, and thus finally weakens its impact.

110.	The availability of a solid baseline funding along with the general absorption capacity of the country (as has been shown by other donor-funded projects) lead to the decision to implement the project over a relatively long period (five-years).

111.	Cost effectiveness of the project is further assured by keeping the relative share of project administration to a minimum (not more than 25% of the GEF funding). Fiduciary controls following standard procedures of NEX projects with UNDP will be applied, and an independent mid-term and final evaluation as well as yearly audits will be carried out.

3. Co-financing

CO-FINANCING SOURCES				
Name of Co-financier (source)	Classification	Type	Amount (US$)	Status*
Ministry of Environment	Government	State budget (cash contribution)	825,000	Confirmed
European Union	Multilateral	grant (cash contribution)	450,000	Confirmed
Sub-Total Co-financing			**1,275,000**	

112.	The project builds on the National Reforestation Programme (NRP) which has an annual overall funding of US$3.3 million, to be renewed annually for a period of firstly five years. The amount given here is the estimated minimum to be spent from the NRF for global environmental concerns. This estimation is very conservative; the actual contribution to global environmental issues is probably higher.

113.	Co-financing by the EU will be secured through an addendum to the MSC-IPP Environment Project, an ongoing Investment Planning Project supported by the European Union (EU DGIB) and implemented by the Ministry of Environment. Funding has already been committed, but awaits final confirmation.

E - INSTITUTIONAL COORDINATION AND SUPPORT

1. Core Commitments and Linkages

114.	The proposed project represents an important Government priority and is therefore an important intervention for UNDP to support. The UNDP Country Programme in Lebanon supports the Government in achieving the goals of the MDGs. The second CCF (2002–2006) seeks to maximize developmental impact through a new generation of projects in line with identified pressing national socio-economic priorities. The outcomes of the Country Programme focus institution building support to policy- and decision-making, and empowerment at the local level. Environmental and natural resource management remains a key element of the policy advisory interventions and an increasingly integrated component of the area development approach.

115.	UNDP's Environment Management and Sustainable Development programme in Lebanon focuses on national capacity building in terms of policy advice, updating environmental legislation, promotion of national capacities through training of stakeholders and establishment of integrated systems. Sound environmental practices and policies are promoted through strategic pilot initiatives to follow up the Rio Conference and to implement international instruments – projects in the fields of desertification, biodiversity (including through protected areas), climate change, and ozone depletion have been initiated, with the support of GEF. These and other international instruments such as the Montreal Protocol and the European Union initiatives include the participation of municipalities, NGO'S, CBOs and the private sector. A national action plan for environmental education and increasing public awareness has also been initiated.

116.	The project can build on experiences made in Lebanon for example during the implementation of the GEF-funded project "Strengthening of National Capacity and Grassroots In-Situ Conservation for Sustainable Biodiversity Protection", and has the potential to develop significant synergies with other GEF-funded projects in the country and the region, e.g. the project "Conservation of Soaring Migratory Birds in the Eastern Sector of the Africa-Eurasia Flyway System".

2. Consultation, Coordination and Collaboration between and among Implementing Agencies, Executing Agencies, and the GEF Secretariat, if appropriate

117.	This proposal has been prepared on request of MoE by the EU-funded MSC-IPP Environment Project together with UNDP. Regular consultations were held among all these partners and joint field visits were conducted.

118.	UNDP can look back at a number of successful projects implemented together with MoE, including the GEF full-size project "Strengthening of National Capacity and Grassroots In-Situ Conservation for Sustainable Biodiversity Protection" and the GEF Enabling Activity "Biodiversity Strategy and Action Plan and Report to the CBD". UNDP and MoE could thus develop a relationship based on mutual trust.

3. Implementation and Execution Arrangements

119.   The project will be implemented over a period of five years. National Execution (NEX) is the management arrangement foreseen by UNDP. NEX has been chosen as there is adequate capacity in the Government of Lebanon to undertake the functions and activities of the project. The UNDP Country Office has ascertained the national capacities during the formulation stage of this project.

120.   *Government.* The Ministry of Environment (MoE) will be the executing agency responsible for project coordination at the national level. The MoE is the primary authority responsible for afforestation, management of communal lands, protected areas, and international environmental conventions. The Ministry of Agriculture (MoA) will play an important role as member of the Project Oversight Committee (POC).

121.   *Ministry of Environment and Project Oversight Committee.* MoE is accountable to UNDP for the government's participation in the project, and will facilitate project implementation and ensure that internal monitoring and review systems are in place. MoE will establish a Project Oversight Committee (POC) and will organise regular meetings. With input from POC members, MoE will provide overall guidance and support to implementation of all project activities. POC will be composed of representatives from various governmental organisations (MoA, other ministries), the UNCCD Focal Point, research institutions (LARI and university institutes), and non-governmental organisations. It will also include representatives from municipalities. The Minister of Environment will chair the POC. Any major changes in the project work plans (cf. Annex 6) will require approval from the POC in order to take effect. POC members will also facilitate the implementation of project activities in their respective organisations, ensure that cooperative activities are implemented in a timely manner, and facilitate the integration of project-inspired activities into existing programs and practices. MoE staff or appropriate experts will be utilized when needed in accordance with UNDP guidelines, and will facilitate interaction among relevant public organisations, research institutions and private organisations. To achieve project objectives and produce required outputs, MoE will establish partnerships with other organisations including NGOs.

122.   *Project Management Unit (PMU).* MoE will establish a PMU for the day-to-day management of project implementation, and for assisting Moe and other concerned stakeholders to run the project. The PMU, headed by a project manager, will be responsible for coordinating all the various inputs to the project. The project manager and an assistant will be based in the MoE offices at Beirut. He/she will be in charge of overseeing day-to-day project implementation and management of project activities, consultant input, and confirming the quality of the project's outputs. One of the most important responsibilities of the project manager will be working effectively with members of the POC to ensure that project-inspired activities proceed on schedule within each governmental partner and non-governmental organisation.

123.   *Local Steering Committees:* For each of the pilot areas, the project will establish a local steering committee. It will consist of representatives of the local government (mayor, agriculture, and forestry administration), land owners and other interested people. The *Local Steering Committees'* role will be to give a voice to the grassroots level, and will decide on

the kind and extent of interventions on site-level. The *Local Steering Committees* will work in close cooperation with the PMU. POC may invite *Local Steering Committees* to report on progress in project implementation and on difficulties faced during implementation.

124.　　*UNDP.* Working closely with the MoE, the UNDP Country Office will be responsible for overseeing project budgets and expenditures, recruiting and contracting project personnel and consultant services, procuring equipment, and project evaluation and reporting, result-based project monitoring, and organizing independent audits to ensure the proper use of UNDP/GEF funds. Financial transactions, auditing and reporting will be carried out in compliance with national regulations and UNDP procedures for national execution. The UNDP- Country Office will designate from among its staff a project officer who will dedicate approximately 15% of his/her time to the day-to-day management, coordination, and monitoring functions for which UNDP is responsible.

PART II – RESPONSE TO REVIEWS

A - CONVENTION SECRETARIAT

To be added later.

B - OTHER IAS AND RELEVANT EXAS

To be added later.

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Annex 1
Status of Desertification in Lebanon
*Source*: National Action Programme to Combat Desertification (NAP)

Estimated Forest Areas and Their Status in Lebanon

Type of communities	Good condition (ha)	Degraded surface (ha)	Total surface area (ha)
Oak underwood	14,000	26,000	40,000
Pinewoods on limestone (*Pinus brutia*)	5,600	3,400	9,000
Pinewoods on sandstone (*Pinus pinea*)	5,000	3,000	8,000
Cedar groves	1,500	700	2,200
Fir tree groves	–	1,000	1,000
Juniper groves	–	9,000	9,000
Cypress groves	200	300	500
Total	**26,300**	**43,400**	**69,700**

Desertification risk of the various cazas and the entire country (as % of total Caza)

	Urban/ unproductive	Very low	Low	Moderate	High	Very high
Zgharta	7.3	0.0	9.1	44.3	35.8	3.5
West Beka'a	5.8	0.0	2.8	31.0	59.4	1.0
Jezzine	7.3	0.0	13.3	60.5	18.3	0.6
Nabatieh	14.2	0.0	0.5	5.2	60.6	19.5
Beirut	99.8	0.0	0.0	0.0	0.1	0.1
Metn	25.1	0.0	18.8	46.5	7.9	1.7
Kesrouan	18.6	0.1	34.2	43.0	3.9	0.3
Jbeil	11.8	0.1	22.6	59.1	6.0	0.4
Batroun	12.9	0.0	17.2	59.7	9.6	0.6
Tripoli & Dannieh	13.3	0.0	12.6	48.8	21.9	3.4
Akkar	4.5	0.0	0.1	19.9	55.0	20.5
Hermel	3.4	0.0	0.5	19.0	60.6	16.5
Baalbek	3.9	0.0	0.1	5.7	67.5	22.8
Zahle	7.0	0.0	0.4	22.9	60.4	9.3
Rachaya	1.8	0.0	0.2	19.7	77.7	0.6
Marjayoun	7.0	0.0	0.1	6.7	75.5	10.7
Bint Jbeil	7.3	0.0	0.0	6.3	61.0	25.4
Sour	6.6	0.0	0.1	10.6	62.7	20.0
Saida	15.2	0.0	0.3	5.7	63.3	15.5
Chouf	12.8	0.0	8.8	52.8	23.8	1.6
Aley	19.8	0.0	11.4	55.2	12.4	1.2
Baabda	23.2	0.0	17.4	31.9	22.7	4.8
Koura	12.6	0.0	3.2	45.5	36.4	2.3
Bcharré	10.8	0.0	14.1	60.2	14.7	0.2
Hasbaya	2.0	0.0	2.7	34.1	60.7	0.5
LEBANON	**8.6**	**0.0**	**5.7**	**26.4**	**48.1**	**11.2**

Map of Desertification Prone Areas in Lebanon
Source: National Action Programme to Combat Desertification (NAP)
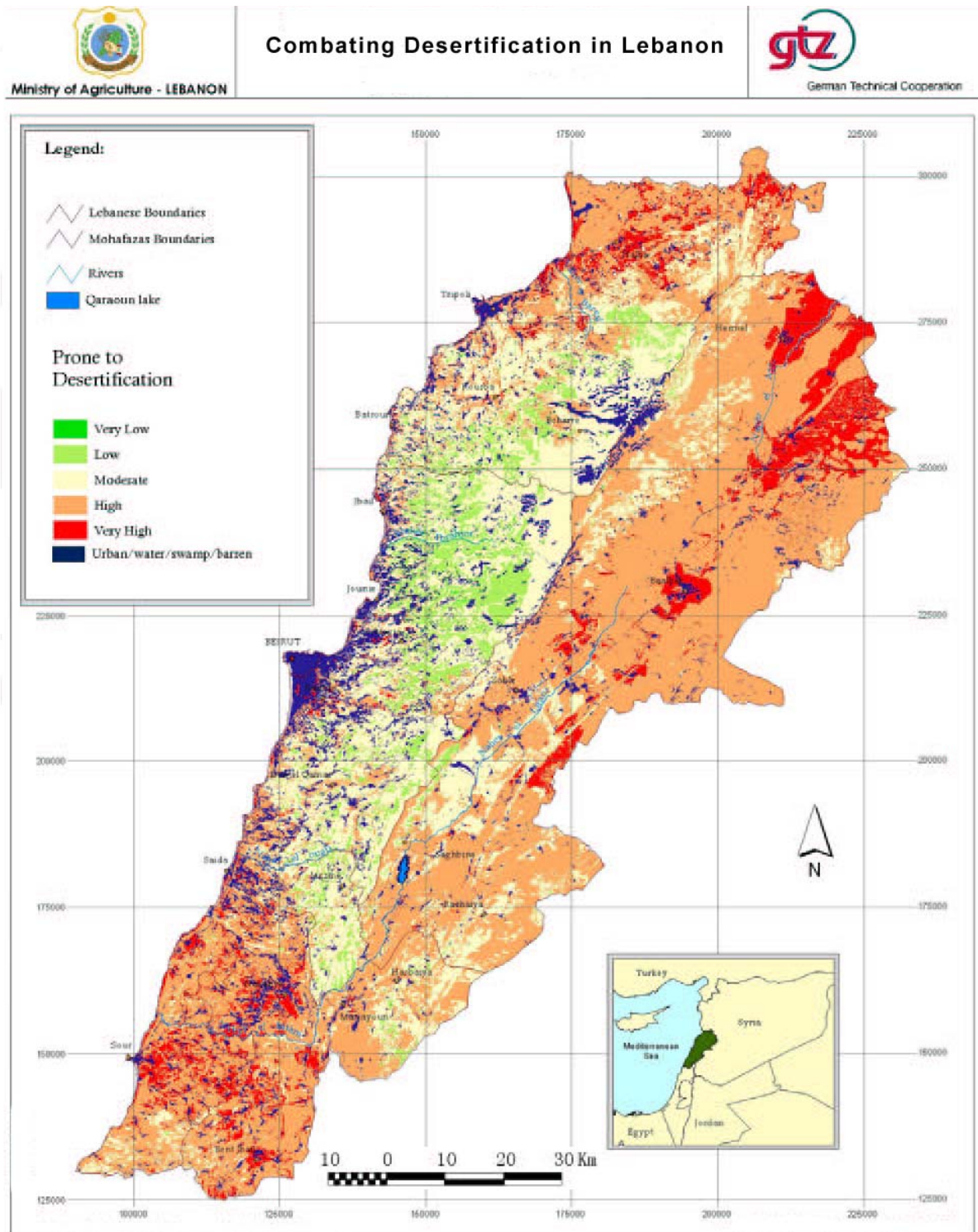
Annex 2
Threats Matrix of Threats, Impacts, Root Causes, and Alternatives for Lebanon's Woodland Ecosystems
The threats are arranged by order of today's importance. It should be noted that the threats are subject to a dynamic process:
some of them which had lead to unsustainable land use and finally even to the deforestation of large areas are today only of minor importance.

Threats	Bio-Physical Impacts	Root Causes	Barriers	Alternative Strategies and Mitigating Measures
Permanent conversion of woodland to other land-uses **(Urban expansion, industrial development, establishment of quarries, construction of roads and other infrastructure)**	Production • Loss of forests as a resource of wood (commercial and non-commercial) • Loss of resources of non-wood forest products Conservation • Change in composition of fauna and flora • Disturbance to wildlife • Loss of biodiversity • Fragmentation of woodland ecosystems • Decreased sequestration of carbon in the living biomass • Loss of woodland functions as a place of oxygen production • Loss of recreational areas Land Preservation • Increased soil erosion • Reduction of the ability of the soil for ground water retention • Increase of wasteland • Loss of the function of for-	• Population growth • High population density • Impossibility to control development during the civil war • Increasing prosperity (leading to new buildings etc.) • Need for quick reconstruction of the country in the post-war period • Insufficient awareness of the ecological value of woodland by local people and decision-makers • Maquis regarded as invaluable vegetation (function for protecting the soil rarely understood) • Little incentives for private landowners (mulk land) to invest in reforestation	Economic • Present system of state-owned forests (amiri land) provides little or no benefits for local people • Legal restrictions avoid the economic utilisation of private forests • Insufficient financial resources	Economic • Assess the possibilities which are offered by carbon trade (for all kinds of land ownership) • Introduce compensation measures (obligatory afforestation for necessary wood cutting)
			Social • Unclear land register records (mulk and waqf land) • Land tenure system often avoids large-scale reforestation • Illegal forest clearances insufficiently persecuted	Social • Afforest all land which has been cleared, as a disincentive for forest conversion • Lay down the woodland boundaries in a transparent way • Update cadastre records • Undertake development and testing of decentralised forest management models
			Environmental • No proper implementation of Environmental Impact Assessments (EIA's)	Environmental • Identify priority areas for woodland land rehabilitation • Enforce existing regulations which protect the forests' integrity • Create awareness among decision-makers for the biological importance for forests and brushland • Create public awareness for the value and integrity of woodland ecosystems to help to enforce relevant laws

	ests to absorb dust		**Knowledge / Technology** • Shortage of nurseries which could provide autochthonous species for reforestation • Only low number of technical forestry experts available in Lebanon • Private sector hardly able to deliver services in forestry • No reliable statistics	**Knowledge / Technology** • Mobilize national know-how in forestry and afforestation • Provide better training and better equipment to forest guards
			Institutional/Policy • Insufficient capacities in government agencies • Deficiencies in cooperation among state agencies • Insufficient political ownership (stewardship) for wood lands • Deficiencies in governance (including corruption) • System of land use planning not effective (weak law enforcement) • No control over development especially during civil war • Weak decentralised forest management structures (forestry offices)	**Institutional / Policy** • Introduce and strengthen integrated land use planning • Identify options to optimise the institutional structures for the forestry sector • Strengthen private sector service providers through guidance and creating demands • Strengthen the cooperation among the various responsible government organisations and join forces and capacities available in different government agencies • Pool central government structures responsible for woodland • Encourage and support decentralised models for woodland management and afforestation • Invest in education and training in forestry and land management • Adopt laws and regulations on forest protection
Illegal timber extraction	• Decrease of forest cover (decrease of forest surface cover, and decrease of quality of forest stands) • Loss of biodiversity • Decreased sequestration of carbon in the living biomass • Loss of ecosystem integrity and of ecological functions of the forest	• Insufficient guarding • Rural poverty, need for additional income for poor rural people • Traditional user rights (mainly regarding macha'a and amiri land) • Open access to forests (amiri land)	• Weak capacities in central and local government agencies to control timber extraction • Weak decentralised forest management structures (forestry offices) (for amiri land) • Legal constraints avoid sustainable use of forests (lack of economic incentive)	• Develop forest management plans which create responsibilities among local stakeholders and benefits to local land-users • Delegate rights and responsibilities to local communities (community-based management systems) • Undertake development and testing of decentralised forest management models (development of community-based management systems) • Create awareness for forest conservation among forest-dwelling people

			• Strengthen the cooperation among the various responsible government organisations
Grazing and over-grazing in forests and brushland	• Poor natural regeneration of forests (too old forest stands) • Loss of biodiversity (selection and promotion of certain plant species) • Soil compaction by livestock • Increased runoff rate	• Traditional user rights • Open access to forests on amiri land • Insufficient guarding • Rural poverty (livestock grazing essential for poor rural people) • Insufficient awareness of the ecological effects of overgrazing by local people • Insufficient knowledge of local herders on grazing rotation techniques and other soil and vegetation conserving measures	• Poor law enforcement (grazing in forests/woodland is prohibited by law) • Weak presence of the state (no decentralised forest offices) • Land tenure system avoid large-scale afforestation • Weak capacities in government agencies • Weak decentralised forest management structures (forestry offices) • Extensive transhumance system	• Develop sustainable co-management systems between herders and the forestry service • Assess the feasibility of a long-term leasing system for state-owned rangelands • Inform herders on the effect of grazing in forest land and on alternatives • Create ownership and responsibility by communities (municipalities) for woodlands • Better training and equipment of forest guards • Undertake development and testing of decentralised forest management models • Strengthen the cooperation among the various responsible government organisations • Mobilize national know-how in forestry and afforestation •
Encroachment on woodland by agriculture (forest clearances, agrochemicals)	• Decrease of woodland cover • Loss of woodland biodiversity • Change in species composition • Reduction of the ability of the soil for ground water retention • Poor natural regeneration of forests • Entry of agrochemicals into woodland ecosystem	• Traditional user rights • Limited effect of some regulations for private land • Open access to forests • Insufficient guarding • Rural poverty (need for additional income for poor rural people) • Negative effect of agrochemicals applied in and around forest land • Insufficient knowledge in good agricultural practices	• Weak capacities in government agencies • Maquis often private property • Weak decentralised forest management structures (forestry offices) • Private sector hardly able to deliver services in forestry	• Update cadastre records • Lay down the forest boundaries in a transparent way • Better training and equipment of forest guards • Strengthen the cooperation among the various responsible government organisations • Strengthening of agricultural extension services in respect to woodland management • Undertake development and testing of decentralised forest management models • Awareness-building for the application of agrochemicals
Intended and unintended forest fires	• Destruction of forests • Quick erosion of land after fires • Poor natural regeneration of forests • Development of wasteland (very little replanting of trees after forest fires)	• Insufficient guarding • Little economic incentives for local people for conducting afforestation measures • Inappropriate equipment to fight against forest fires (fire guards, fire brigades) • Open access to forests	• Weak capacities in government agencies • Weak decentralised forest management structures (forestry offices) • Insufficient financial resources	• Strengthen the system of fire warning • Build the necessary capacities for extinguishing forest fires • Undertake development and testing of decentralised forest management models • Introduce compensation measures (obligatory afforestation especially after intended forest fires)

		• Rural poverty (creation of new land for agriculture and housing) • Lack of forest clearings to stop the spread of forest fires		
Charcoal pro-duction	• Decrease of forest cover • Selective extraction of old trees	• Insufficient guarding • Traditional user rights • Need for additional income for poor rural people • Impossibility to get control of the state over charcoal production • Open access to forests	• Weak capacities in government agencies • Weak decentralised forest management structures (forestry offices)	• Integration of charcoal production into forest management • Legalising charcoal production • Establishing of a permitting system • Fixing annual production quotas • Undertake development and testing of decentralised forest management models
Forest pests	• Weak stands of Lebanon Cedars through infestation with the pest *Cephalcia tannourinensis*	• No clearance of undergrowth • Absence of non-commercial thinning • Insufficient control and monitoring of insects and pests attacks	• Only low number of technical forestry experts available in Lebanon (lack of knowledge) • Weak capacities in government agencies	• Continuation of capacity-building started in the frame of a FAO project • Continuation of aerial spray operations started by MoA

Annex 3
Barriers to Sustainable Land Management in Lebanon's Forest and Woodland areas and Planned Project Outputs to lift these Barriers

Barriers	project output #
Socio-economic barriers	
• Population growth	–
• Rural poverty	project goal
• Need for additional income for poor rural people	2.1
• No or little direct economic incentives from forests/woodlands for local communities	2.1
Policy barriers	
• Insufficient political ownership (stewardship) for wood lands	2.1, 2.2, 2.3
• Weak law enforcement on land use planning	1.4, 2.5
• No proper implementation of Environmental Impact Assessments (EIA's)	(1.4)
• Deficiencies in governance (including corruption)	–
• Uncontrolled development especially during civil war	–
• Illegal forest clearances insufficiently persecuted	1.2, 1.5 (indirect)
• Extensive bureaucratic procedures	–
• Poor law enforcement (e.g. grazing in forests and woodlands)	1.2, 1.5 (indirect), 2.5
Capacity barriers	
• Insufficient capacities (esp. technical expertise, management) in government agencies	1.2 (indirect), 1.3
• Deficiencies in cooperation among state agencies	1.2, 3.1
• Weak decentralised system of forestry offices (incl. deficiencies in forest guarding)	1.2 (indirect)
• Inappropriate equipment to fight against forest fires (fire guards, fire brigades)	–
• Insufficient financial resources for forest management	1.5
• Private sector hardly able to deliver services in forestry	2.4
• Shortage of nurseries which could provide autochthonous species for reforestation	1.3, 2.4
• Impossibility to get control of the state over charcoal production	1.3 (indirect)
• Insufficient control and monitoring of insects and pests attacks	–
Legal barriers	
• The present system of state-owned forests provides little or no benefits for local communities	1.1
• No incentives for afforestation on private land	1.1
• Unclear land register records	–
• Little economic incentives for local people for conducting afforestation measures	1.1
• Legal constraints avoid wood harvest (economic disincentive for forest conservation)	1.1
• Traditional user rights (e.g. on livestock grazing)	1.1, 2.1
• Open access to forests	1.1, 2.1
• Land tenure system avoid large-scale afforestation	(1.1)
Knowledge and awareness barriers	
• Number of technical forestry experts low (lack of knowledge)	1.3
• Insufficient awareness of the ecological value of forests and woodlands by local people	3.3, 3.4
• Maquis regarded as invaluable vegetation (function for soil protecting rarely understood)	3.3, 3.4
• Insufficient knowledge in good agricultural practices	(3.4)
• Insufficient awareness of the ecological effects of overgrazing by local people	3.3, 3.4
• Insufficient knowledge of local herders on grazing rotation techniques and other soil and vegetation conserving measures	3.3, 3.4

Annex 4
Logical Framework and Objectively Verifiable Impact Indicators

Project Title: *Safeguarding and Rehabilitating Lebanon's Woodland Resources*					
Project Goal: An enabling environment and capacity for sustainable land management as a contribution to greater ecosystem stability, reduced soil erosion, enhanced food security and improved rural livelihoods					
Project Strategy	**Indicator**	**Baseline**	**Target**	**Sources of Verification**	**Risks and Assumptions**
Objective of the project: A strategy for safeguarding and rehabilitating Lebanon's woodland resources developed and under implementation through capacity building and execution of appropriate SLM policies and practices.	Successful pilot projects which can serve as models for large-scale land rehabilitation	Only scattered experiences	At least 3 comprehensive pilots by end of project	Project reports, evaluations	– Political stability – Ability of the government to overcome inter-agency competition – Government continues to allocate significant funds for land rehabilitation (afforestation)
	Acceptance of the institutional setting necessary for sustainable forestry and efficient large-scale afforestation	None	Business plan accepted by year 2 of the project	MoE work plan	
	Strategy adopted by the government	None	Budget allocated by end of project	State budget	– Timely delivery of co-financing and baseline financing
	Degraded land in pilot sites restored by the project according SLM principles	None	300-400 ha	Reports	– Timely delivery of NRP financing

Outcome 1: An appropriate management framework and management capacities for the safeguarding and restoration of degraded forest areas.	– Forest management and rehabilitation authority	Responsibilities spread over various government organisations	– Only one strong coordinating organisation existing by end of project	Institutional structure	Political will Financial resources
	– Number of full-time forest engineers knowledgeable of and working for the restoration of degraded forestlands	less than 5	– Over 10 by end of project	Organigram	Political will Financial resources
	– Amended forest law	Present law	– Amended text by end of project	Report	Political will
Output 1.1: The legal instruments reviewed, gaps identified, and amendments elaborated.	– Gap analysis of forest-related laws and regulations with proposals for amendments	Demand for law amendments frequently outspoken, but not specified	Proposal for amendment to forest law by month 7	Specific technical report	Forestry experts are cooperative
Output 1.2: The institutional structure of a re-organised forest management authority designed, reflecting the cross-sectoral nature of land degradation.	– Plan of organisational structure with detailed description of responsibilities, functions, justification, costs, etc.	No comparative analysis	Proposal for organisational reform developed by end of first year	Specific technical reports	Government agencies are willing to share responsibility
Output 1.3: Human capacities for the design, implementation and monitoring of forest restoration measures strengthened.	– Training in participatory land use planning and in afforestation techniques	None	At least 20 MoA and MoE staff trained by end of project	Representative survey, training reports, evaluation reports	MoA and Moe will continue training after project termination
Output 1.4: Cross-sectoral integrated land use planning in the field of land degradation in woodland areas strengthened (mainstreaming).	– Inter-ministerial Project Oversight Committee	None	– Committee meets at least once in first 6 months	Progress reports, technical reports, evaluation reports	Other agencies and ministries not cooperative
	– Financial or in-kind contributions made by other agencies for implementation of pilot measures on a yearly basis	None	– Equivalent to at least 30% of the yearly budget		

			of NRP		
Output 1.5: Business Plan for SLM of forest areas developed.	– Business Plan developed and adopted by the Government	None	Business Plan adopted by end of second year	Report, government decision	Adoption of the plan political decision
Outcome 2: A set of innovative technologies and instruments for the rehabilitation of forests and woodlands, and their subsequent sustainable management, has been designed and validated in pilot areas.	– Innovative technologies	None	At least 3 demonstrated by end of project	Reports	Pilot areas reveal as unsuitable for technical, political or socio-economic reasons
	– Participatory approach	Not applied	Applied in all afforestation measures by end of project	Reports	Little interest in forestry issues
Output 2.1: Economic incentives to conduct woodland rehabilitation and management created for local communities and for private persons.	– Regulation guaranteeing their right to use wood and non-wood forest products	None	A law or regulation available by end of project	Law or regulation	Economic incentives not strong enough
Output 2.2: Afforestation and ecosystem restoration measures on public land implemented through participatory approaches.	– Participators stakeholder planning workshop	No workshops	At least 2 participatory planning workshops a year in each pilot site	Workshop report	No interest of local communities in these workshops
	– Voluntary contributions of local stakeholders to afforestation measures	No contributions	In-kind contributions from local communities amounting to 5% of estimated cost of measures		Local communities not ready or able to make contributions

Output 2.3: Responsibilities and duties for forests delegated to communal level, thus strengthening local stewardship.	– Budget allocations for communities (municipalities) for afforestation	No budgets within local administration	Budget allocation in 4 pilot sites by second year	Financial report	No budget allocations because of financial constraints
Output 2.4: Role of the private sector as provider of services and goods strengthened.	– Number of private firms offering services and goods related to sustainable forest management and forest restoration; number and quality of saplings offered per year	To be determined	Offer exceeds the demand by end of project	Assessment report	Market monopolised by a single firm; no competition among companies
Output 2.5: Local community based monitoring of the enforcement of the regulation on the protection of forests	number of persecuted cases of violation	To be determined	Increase by 100 percent by end of project	Monitoring report	Communities do not persecute violations done by members of the own community
Output 2.6: Good practice for SLM in woodland areas integrated in NRP	Examples for good practice in SLM	None documented	At least 10 cases documented by end of project	Monitoring report	No good practice
Outcome 3: Learning, evaluation, and adaptive management.	– Public awareness for forest SLM – Replication of innovative practices developed and tested by the project into the NRP	No. of news in the media None	No. of news in media increased by 100% by end of project At least 3 cases of replication shown by end of project	evaluation of media Reports	Political framework conditions do not allow the development of broad public awareness for environmental issues Budget of NRP to allowed to be used for innovative measures
Output 3.1: Project understood by the government as national cross-sectoral effort.	– Inter-ministerial Project Oversight Committee	None.	Committee in place	Minutes	Project Oversight Committee does not play an active role

Output 3.2: Assessment of the baseline situation of LD	– Assessment report	None	Baseline for LD indicators available at end of first year	Report	Availability of the results of the 1st Forest Resources Assessment
Output 3.3: The project's performance is monitored and evaluated.	– PMU in place	None	– Office operative by month 6 – average 60% yearly delivery rate	Reports Reports	None
	– M&E system established	None	– according to M&E plan		None
Output 3.4: Project results and lessons learnt disseminated for replication.	– Regional symposium conducted	None	– 2 symposia by the end month 6 and month 30	Proceedings	Partnershipf for the conduction of symposia could not be established
	– Report on lessons learnt – Participation of experts and decision-makers in international events	None None	– one report – participation of at least 10 experts throughout life of project	Report Mission reports	– Individuals not available for these events
Output 3.5: Awareness of decision-makers and the concerned communities for the importance of forest ecosystems for sustainable livelihood increased.	National annual demand for saplings and seedling	To be defined	Increased demand by 20% by end of project	Assessment report	Framework conditions promote other priorities
	Justification for afforestation measures (afforestation purpose, location, tree species)	To be defined	Awareness that afforestation measures are conducted for the purpose of SLM increased by 50% by end of project	Questionnaire report	Because of Lebanon's overall economic development, the public interest is focused on measures which give short-term returns

Annex 5
Incremental Cost Matrix

Note: The baseline includes running costs, which have been calculated here for the purpose of comparison with the GEF Alternative for a period of five years (project period).

Cost/Benefit	Baseline (B)	Alternative (A)	Increment (A-B)
Domestic Benefits	Forests and deforested areas are mostly not managed, or they are managed in a way that add some aesthetic and/or recreational value to the landscape, but fails to reha-bilitate ecosystem health.	A better forest cover will result in a greater retention of groundwater and better protection of soil against erosion.	Enhanced food security and improved rural livelihoods.
Global Benefits	Efforts undertaken to conserve and rehabilitate forest ecosystems are limited and ineffective, and positive effects on biodiversity, watershed health, and trans-boundary waters and are only punctiform.	The rehabilitation of degraded wood-lands will improve prospects for local communities to provide or leverage en-vironmental benefits. New partnerships and knowledge leverage additional re-sources for sustainable development.	Increased ecosystem health, stabilised cli-mate, richer biodiver-sity, watershed health, protection of trans-boundary waters.
Outcome 1 (An appropriate management framework and management capacities for the safe-guarding and restoration of degraded for-est areas.)	–	US$810,000	US$810,00
Outcome 2 (A set of innovative technologies and in-struments for the rehabilitation of forests and woodlands, and their subsequent sus-tainable management, has been designed and validated in pilot areas)	US$16,450,000	US$17,530,000	US$1,080,000
Outcome 3 (Learning, evaluation, and adaptive man-agement)	US$50,000	US$415,000	US$365,000
Cost Totals	US$16,500,000	US$18,755,000	**US$2,255,000**

Annex 6
Indicative Work Plan

	Year 1				Year 2				Year 3				Year 4				Year 5			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Outcome 1: An appropriate management framework and management capacities for the safeguarding and restoration of degraded forest areas.																				
Output 1.1: The legal instruments reviewed, gaps identified, and amendments elaborated.	X		X		X															
Output 1.2: The institutional structure of a re-organised forest management authority designed, reflecting the cross-sectoral nature of land degradation.	X		X		X															
Output 1.3: Human capacities for the design, implementation and monitoring of afforestation measures strengthened.	X		X		X		X		X		X		X		X		X		X	
Output 1.4: Cross-sectoral integrated land use planning in the field of land degradation in woodland areas strengthened (mainstreaming).			X				X				X				X				X	
Output 1.5: Business Plan for SLM of forest areas developed.			X	X	X						X	X								
Outcome 2: A set of innovative technologies and instruments for the rehabilitation of forests and woodlands, and their subsequent sustainable management, has been designed and validated in pilot areas.																				
Output 2.1: Economic incentives to conduct woodland rehabilitation created for local communities and for private persons.			X		X		X				X				X				X	
Output 2.2: Afforestation measures on public land implemented through participatory approaches.			X		X		X		X				X				X			
Output 2.3: Responsibilities and duties for forests delegated to communal level, thus strengthening local stewardship.							X				X				X				X	
Output 2.4: Role of the private sector as provider of services and goods strengthened.	X				X				X				X				X			
Output 2.5: Monitoring of the enforcement of the regulation on the protection of forests																				
Output 2.6: Good practice for SLM in woodland areas integrated in NRP																				

Outcome 3: Learning, evaluation, and adaptive management.																				
Output 1: Project understood by the government as national cross-sectoral effort.	X		X		X		X		X		X		X		X		X		X	
Output 3.2: Assessment of the baseline situation of LD																				
Output 3.3: The project's performance is monitored and evaluated																				
Output 3.4: Project results and lessons learnt disseminated for replication.												X						X		
Output 3.5: Awareness of decision-makers and the concerned communities for the importance of forest areas for sustainable livelihood increased.			X				X						X						X	

Annex 7
Indicative Monitoring and Evaluation Plan

Summary description of monitoring activities, responsible parties, budgets and time frames. Only activities to be funded by GEF sources are listed here.

Type of M&E activity	Responsibility	Indicative Budget	Time Frame
Inception report	Project Manager with Project Management Unit (PMU)	Paid from the operational budget.	Two months after the start of project implementation.
Characterisation of the natural assets in the pilot areas (baseline survey)	Team of national experts	US$5,000	During the first months of project implementation
Progress reports	Project Manager	Paid from the operational budget.	Every two months.
Visits to pilot sites	UNDP and government representatives	Paid from the IA fee and the operational budget.	Every year.
IA annual reports	UNDP country office with support from PMU	Paid from the IA fee and the operational budget.	Every year.
Mid-term evaluation	National consultant with project team	US$5,000 plus input from the operational budget.	At the mid-point of project implementation.
External final evaluation	Independent evaluation team (international consultants)	US$20,000	At the end of project implementation
Terminal report	IA country office, IA task manager, project team (PMU)	Paid from the IA fee and the operational budget.	At least one month before the end of the project
Baseline survey and monitoring of socio-economic parameters at pilot sites	Team of national experts	US$9,000	Annual surveys.
Participatory project monitoring at pilot sites	Local communities with project team	Paid from the operational budget.	Annual surveys.
Production of a video film on progress made at pilot sites	PMU with EA	US$15,000	At least two times a year during vegetation period plus finishing
Lessons learnt	GEFSEC, IA, Project Team, Executing Agency	US$8,000 for production of reports and participation in GEF-organised activities.	To be determined
TOTAL COST		**US$ 62,000** **(without input from IA fee and operational budget)**	

Annex 8
Stakeholder Involvement Plan

Stakeholder and beneficiary identification during project development

Project stakeholders and beneficiaries were identified during project development on the basis of the following criteria:
-   Vulnerability to problems stemming from unsustainable land management (especially for local level entities),
-   Livelihood related to forests and woodlands (local level);
-   Capacity for input into resolving issues of unsustainable land management (at all levels);
-   Need for wide sectoral representation (scientific sector, decision-makers, land-users, farmers) in identification of threats and problem-solving opportunities;
-   Need for reflecting the multi-cultural society of Lebanon.

Based on the criteria above, the following stakeholders have been identified and extensively consulted during the project development stage:

National and Local Government Institutions

-   Ministry of Environment (MoE): in charge of nature conservation, management of public owned lands, reforestation programme
-   Ministry of Agriculture (MoA): in charge of agricultural development and extension services, forest management, afforestation, grazing management, desertification.
-   Green Plan (Autonomous authority related to the Ministry of Agriculture): responsible for land reclamation, rehabilitation, construction of rural roads.
-   Council for Development and Reconstruction (CDR)
-   Ministry of Energy and Water (incl. the Litani River Authority)
-   Municipalities (to be distinguished between those with forest resources and without forest resources)

Research Institutions

-   Universities (in particular American University of Beirut, Saint Joseph's University, Public University);
-   Lebanese Agricultural Research Institute (LARI).

Civic Organisations

-   Association for Forest Development and Conservation (AFDC): NGO for forest management and conservation with strong emphasis on raising awareness and building capacities to contribute to the national efforts for better environmental management.
-   Society for the Protection of Nature in Lebanon (SPNL): public awareness campaigns.
-   Green Line: work coordinated with 56 local grass root NGOs; active in the field of reforestation and establishment of tree nurseries;

- René Moawad Foundation: Works in the field of reforestation and establishment of tree nurseries;
- Association for Rural Development (ADR): organisation to develop human and natural resources in the rural areas of Lebanon, focused on the southern part of the country.
- Makzoumi Foundation: Carries out work on Agroforestry and rural development;
- Community-based Organisation: several local organisations, mostly grassroots organisations.

Private sector

- Several private companies attempt to qualify themselves as service providers in the field of forest management and afforestation, e.g. through establishing tree nurseries for the provision of seedlings and saplings.

Most of the above listed institutions were consulted directly through bilateral meetings, and they gave their views and experiences on the design of the project. These institutions have, in their turn, consulted with land-users and further local NGOs/CBOs and scientific institutions.

Mechanisms for continued stakeholder and beneficiary involvement during the implementation stage

The project will be based on a close partnership of the Ministry of Environment (MoE) with other ministries and state organisations, municipalities and NGOs. Continued involvement of these groups is crucial for the success of the project. Whereas Outcome 1 aims at the development of capacities on central level (MoE and related organisations), Outcome 2, through the implementation of pilot measures, focuses on local stakeholders.

The involvement of the key stakeholders is envisaged in the following way:

Ministry of Environment: MoE as the executing agency will have the overall responsibility for steering and managing the project. Involvement in all stages of project preparation and project execution.

Ministry of Agriculture: MoA is responsible for forest management and desertification issues, and thus for the implementation of NAP. MoA will be involved as part of the Project Oversight Committee, and experts trained by MoA will work for the project. The formal involvement of MoA as a partner in project execution (e.g. usage of some facilities of MoA) awaits political decision.

Other central state organisations: Representatives will serve in the Project Oversight Committee and decisions on their further involvement will be taken together with them during project execution.

Municipalities: Municipalities are the key stakeholders for Outcome 2, the implementation of pilot on-the-ground investments. The mayors and their representatives will work closely together with MoE and PMU in order to test and validate measures for combating forest land degradation.

Research institutes: The research institutes such as LARI and universities will have an advisory function. Their input will be mainly in the form of technical expertise to guide the process.

Civic organisations: Representatives of the bigger NGOs and CBOs will become members of the Project Oversight Committee, and will thus have a complete insight into all aspects of project execution, and will have the opportunity to steer the process. It is envisaged to sub-contract certain measures to NGOs and CBOs, where they show against state organisations comparative advantages. Such measures may be particularly in the fields of participation and awareness-building. Lebanon has only a small community of forestry experts, and in addition to their work in state organisations and research institutions, most of them are engaged in NGOs. It will be avoided that members of the Project Oversight Committee will take decisions on issues in which they may be involved through such double-functions.

Local communities: Through participatory planning workshops in the pilot areas, it will be ensures that the local population has the opportunity to directly influence the project. These workshops will have the mandate to take binding decisions on the respective pilot area. The project will thus, whenever possible, take the views of and work with the local population in a direct way, not only through representatives (such as the mayors) and NGOs and CBOs.

Private sector: There is a need to qualify the private sector as provider of goods and services in the field of afforestation. Many services (such as technical backstopping and maintenance of afforestation fields) and goods (such as provision seedlings and saplings) would be typical tasks of private companies, but are in Lebanon hardly offered due to the absence of such a demand. The project will support the private sector through provision of precise information, creation of demand, and possibly through training.

Source: Ministry of Environment, 2005.

Annex 10
Land Cover Land Use Map of Lebanon
Ministry of Environment. Prepared by *MSC-IPP Environment*.
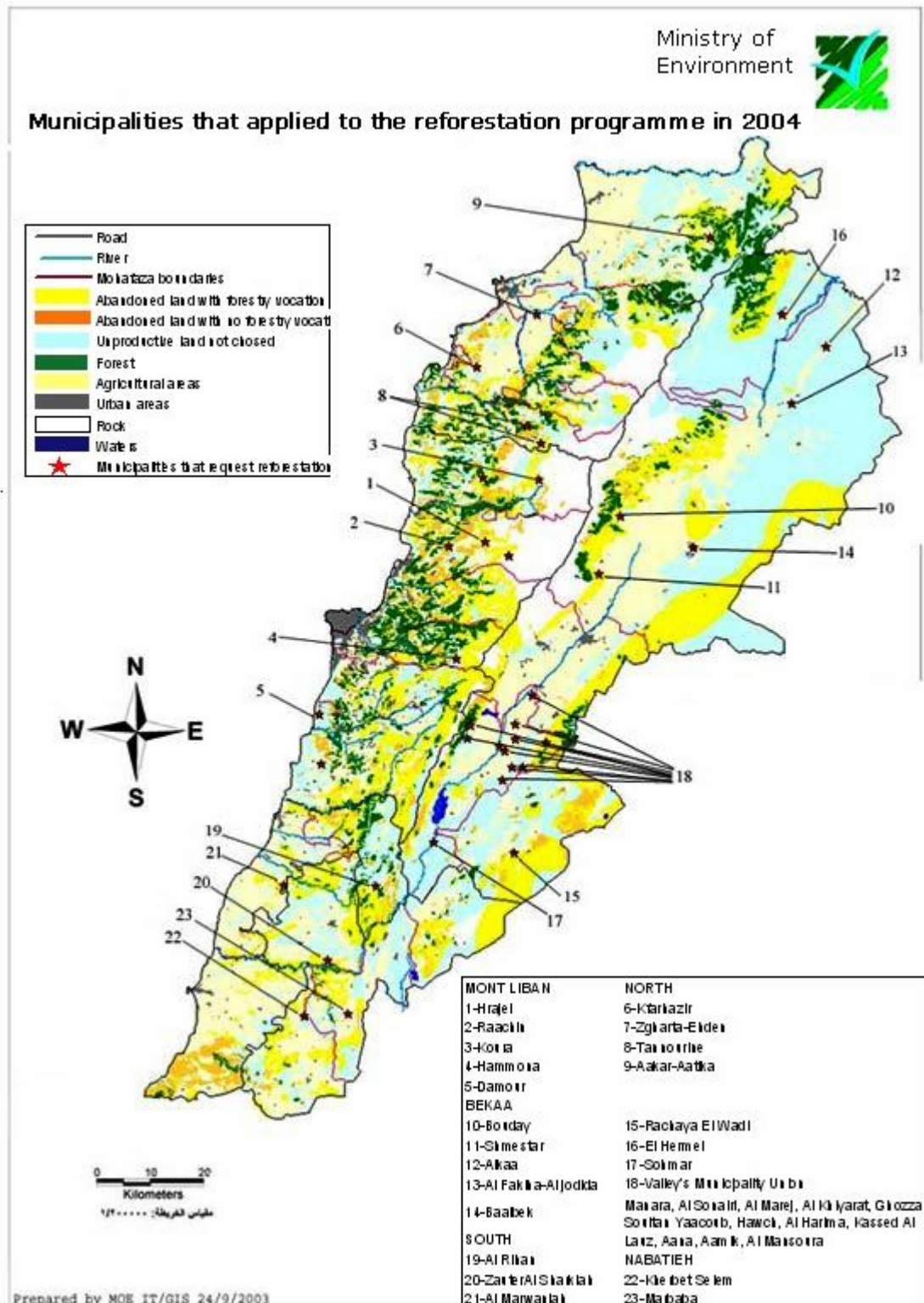
Annex 11 to Annex 14 are posted in a separate file on PIMS 3371