

COASTAL AREA MANAGEMENT PROGRAMME:

NAQOURA



JULY 2004

This document is the end result of the following Coastal Area Management Programme- Lebanon (CAMP) thematic reports:

- Urban management and sustainable development, prepared by M. Walid Bakhos;
- Integrated water resources management, prepared by ARD;
- Cultural heritage and sustainable development, prepared by Dr. Sami Al-Masri (Historic Lebanon);
- Marine Conservation Areas, prepared by the scientific team of Amwaj Al-Bi'aa;
- Overview of the socio-economic situation, prepared by M. Charles Abdallah;
- Sustainable tourism, prepared by Dr. Marwan Owaygen;
- Participatory programme, prepared by MADA;
- Environment, agriculture and fishery, prepared by Mores;
- Thesis "The fishery sector in CAMP area", prepared by Ms. Tania Mouawad.

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ACRONYMS

CAMP	COASTAL AREA MANAGEMENT PROGRAMME
CAS	CENTRAL ADMINISTRATION OF STATISTICS
DGA	DIRECTORATE GENERAL OF ANTIQUITIES
DGUP	DIRECTORATE GENERAL OF URBAN PLANNING
EPA	ENVIRONMENTAL PROTECTION AGENCY
EU	EUROPEAN UNION
FAO	FOOD & AGRICULTURE ORGANISATION
GOL	GOVERNMENT OF LEBANON
ICAM	INTEGRATED COASTAL AREA MANAGEMENT
IWRM	INTEGRATED WATER RESOURCE MANAGEMENT
LBP _s	LEBANESE POUNDS
LRA	LITANI RIVER AUTHORITY
MAP	MEDITERRANEAN ACTION PLAN
MoE	MINISTRY OF ENVIRONMENT
MoEW	MINISTRY OF ENERGY AND WATER
O&M	ORGANISATION AND MONITORING
SLWWE	SOUTH LEBANON WATER AND WASTEWATER ESTABLISHMENT
UNEP	UNITED NATIONS ENVIRONMENT PROGRAMME
USAID	UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
WB	WORLD BANK

PRELUDE

The CAMP-Lebanon Project is one of the national Coastal Area Management Programmes of the Mediterranean Action Plan-UNEP (MAP/UNEP). CAMP is the MAP component for sustainable coastal management, integrating environmental concerns into development planning and management, oriented at understanding and resolving practical environment, development and management problems in Mediterranean coastal areas.

CAMP immediate objectives call for:

- Identifying and elaborating strategies, solutions, tools and actions for sustainable development, environment protection and rational utilization of coastal and marine resources of the national coastline, in particular related to the Southern Coast of Lebanon,
- Applying methodologies, tools and practices of sustainable coastal management and of Integrated Coastal and Marine Areas Management (ICAM),
- Contributing to the upgrading of the relevant national and local capacities,
- Providing for the application in practice of the Project results and experiences, creating conditions for and implementing the post project activities, as envisaged by the Project Agreement, and
- Using the experiences and results achieved by the project in other areas at national and regional levels.

The decision to implement a CAMP project for Lebanon was adopted at the Meeting of the Contracting Parties to the Barcelona Convention held in 1995 following a request presented by the Government of Lebanon. The Agreement to effectively execute CAMP Lebanon was signed in April 2001 (Decision no. 921/B, date 6 April 2001). CAMP project area was defined at two levels:

- The national coastal area located to the South of Beirut, the Capital, and
- The three municipalities of Damour, Sarafand and Naqoura, as the operational level.

By applying the principles of sustainable development, as well as the methodologies and tools of Integrated Coastal and Marine Areas Management (ICAM), CAMP-Lebanon was executed through selected thematic and sub-thematic activities, some of these thematic activities being divided into sub-thematic components, with the intent to boost the benefits expected from project outputs, whether during its implementation or after its phasing out. These thematic activities are:

- Integrated Coastal Area Management, which covered the following components:
 - Urban management (land-use planning)
 - Diagnostic analysis of the environment, agriculture and fishery
 - Cultural heritage
 - Socio-economic overview
 - ICAM National Law
 - ICAM National Strategy;

- Integrated Water Resource Management (IWRM);
- Tourism and sustainable development;
- Participatory Programme;
- Systemic and Prospective Sustainability Analysis (SPSA);
- Marine Conservation Areas;
- Urban management and sustainable development;
- Data and information management.

The three municipalities of Damour, Sarafand and Naqoura chosen for the purpose of CAMP-Lebanon project were selected derived from a number of criteria, the most important ones being:

- The environmental situation at the municipality level;
- The level of cooperation of the municipal council;
- The presence of active non-governmental groups and/or local community;
- The relevance of CAMP methodologies at the municipal level;
- The capacity to replicate results and lessons learned obtained to other coastal towns and cities.

The present document is a sequence of three distinct reports targeting the coastal towns of Damour, Sarafand and Naqoura, and which draw together key analysis and findings acquired throughout the various CAMP-Lebanon thematic activities at the level of every municipality, thus aiming to assist the newly elected municipal councils along with other coastal towns in attaining sustainable development while properly set up and put into practice sustainable municipal development plans.

Last but not least, CAMP-Lebanon duration effectively extended between May 2002 (date of CAMP inception workshop) and December 2003 (Project phasing out). Therefore, information included within this document does not account or refer, by any mean, to impending recent events that might have occurred following the project closing.



**MUNICIPALITY OF NAQOURA:
GENERAL DATA**

Population	4,000 official and 1,800 residents
Main Economic Driver	Foreign transaction, UNFIL, tourism and agriculture.
Health Services	1 clinic and UNFIL base hospital.
Educational Services	One (1) school (elementary).
Priority of the municipality and surveyed members of the community	Solid waste treatment plant Construct a waste water channels and treatment plant Vehicle for solid waste transport Rehabilitating a protected area of 80, 000m ²
Fishing	
Fishing	A presence of a fishing COOP made up of 40 members conceived in 2001. Presence a fishing bay that is in great need for rehabilitation.
Agriculture	
Beekeeping	15-20 beehives for household use.
Farms (Livestock)	No animal farms are present in this municipality.
Crops	Banana, citrus, tobacco, and vegetables.
Irrigation	Highly water rich area, presence of hundreds of well which supply households and agricultural fields.
Forest cover	Oak cover with an area of 4,000 000 m ²
Soil Types	Hablic calcisols (marly) is dominant (Updated Soil Map of Lebanon, Darwish and Collaboraters 2002)
Industry	
Industries	No industries
Gas Stations	2 gas stations without car wash. Oil and water are dumped into the wastewater channels.
Tourism	
Restaurants/Resorts	Two legal restaurants and tens other that are illegally constructed.
Waste Management	
Waste water	Presence of the wastewater network that is channeled into the Ain Valley to "according to local officials" reduce seawater contamination.
Solid Waste	Municipality collects and disposes the waste in an open dump with the UNFIL waste.

Table 1. Municipal questionnaires- CAMP Office (2001)

NAQOURA

Naqoura is the last locality on the coastal area before reaching the national boundary. The town's urban development was -and still- heavily affected by the Israeli occupation since almost 2 decades. The number of populations returned almost permanently to Naqoura is quite weak. This is mainly due to feeble economic perspectives as well as the limited services provided to the populations.

Since the liberation, a restricted construction development activity was recorded. In particular, the land mining has curbed importantly private investments. The important presence of UNIFIL forces and the establishment of their headquarter in Naqoura has had an impact on commercial and services provisions. Most of the job opportunities converge into fishing activities, in addition to the management of small coffee shops, restaurants located all along the UNIFIL Camp.

Besides the outstanding natural scenery view of untouched coast and inland, a noticeable number of archaeological ruins are present all over Naqoura locality. Actually, not any system of protection is put into place to protect these sites and ruins that are currently considered under threat. Master plans, at this time under elaboration, have partially integrated this crucial component of the South Lebanon heritage.

It is to note that the conflict situation and the border closure do not allow Naqoura to play the traditional role of bordering villages (key commercial centres just like the function Chtaura town plays for the Lebanese-Syrian border). What the visitor discovers now is:

- A UNIFIL military Camp located at the sea border and surrounded by small shops and coffee shops run by villagers from Naqoura and adjacent areas.
- A fishing port still in need for rehabilitation;
- A rocky coast deserted except from around the UNIFIL;
- Some agricultural lands extending on both sides of the coastal road;
- Neglected ruins;
- Abandoned hills located between the village and the cultivable band; and,
- The core village.

Finally, the previous municipal council was faced with an empty municipal fund. No assistance was provided by the government so far.

The coastal strip of Naqoura has been practically preserved due to the war events. However, after the withdrawal of the Israeli military forces and the return of the commercial activities in the southern region of the country, there is a high risk and a potential threat that the area will be subject to uncontrolled development projects. Therefore, there is an urgent need to undertake proper measures, including the reviewing of the land-use master plan and enforcing its application to prevent illegal project developments that do not respect the preservation of the natural environment of the area.

1. Geographical situation

The municipality of Naqoura is located to the proximity of the Lebanese southern border. The village includes the land circumscriptions of Borj El-Naqoura and Iskanderouna. The highest point of Naqoura is located at 320 meters to the west of the village of Alma El-Chaab

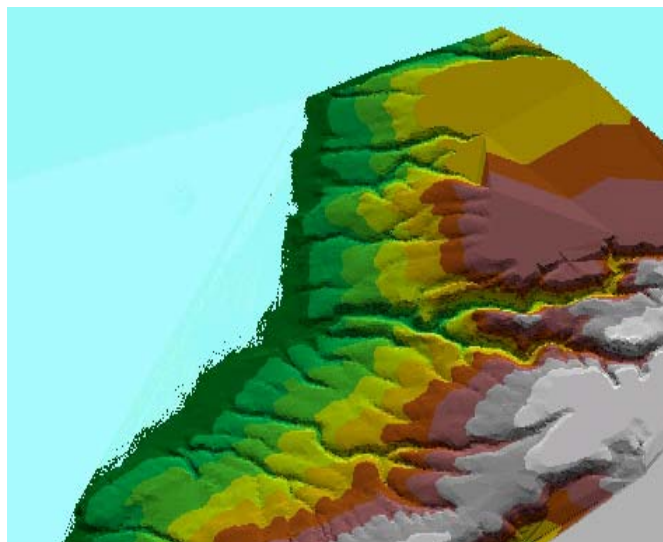


Photo 1. Naqoura: panoramic view of the coast

2. Altitude

The altitude levels [less than 5 meters] constitute only 2% of the total surface area of the land circumscription¹. 19% of the total surface area has an altitude comprised between 5 and 50 meters. 20% of the territory is located at a level of [50 – 100 meters].

The level [100 – 150 meters] covers 16% of the total surface area. The bulk of the circumscription surface area has an altitude higher than 150 meters.



Indeed, Naqoura lacks any official cadastral plan; cadastral services were not able to finalise the boundaries' delimitation works of the town. Through CAMP project, maps collected and used in the context of Naqoura land-use analysis were based upon private firms and which cannot substitute by any mean the official maps of Naqoura. At a later stage some of the work was verified through an IKONOS map elaborated.

The surface areas of slopes lower than 5% constitute 22% of the total municipal surface area. Around 47% of the lands are located on a slope ranging between 5% and 10%. Lands having slopes between 10% and 30% cover 29% of the surface area. Only 2% of the lands are characterized by a slope exceeding 30%.

3. Population

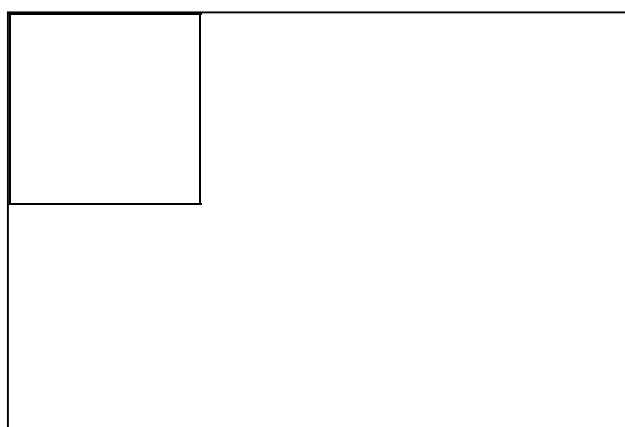
In 1996, and based on CAS buildings survey, around 1890 inhabitants reside permanently in Naqoura. After nine years of time and based on the last survey carried out by CAS, this number has slightly increased to reach 2460 inhabitants. It is understandable that UNIFIL army groups were not counted within this survey.

4. Land-use patterns

Urban zones increased between 1975 and 2002, passing from 2% to 7% of the total surface area. After a long stagnation period, the few years that preceded the South liberation have witnessed an increase in the number of construction.

To date, Naqoura lacks a cadastral map; the cadastral services were not able to finish the boundaries work. This was due among other factors to the absence of land registry for the whole region; the documents having disappeared or burned during the war.

Photo 2. Urban development and transformation of agricultural lands



4.1 Land-uses

Between 1975 and 2002, agricultural areas have decreased, passing from 14% to 7% only out of the total surface area. The Israeli occupation has had consequences on the agricultural activity which was long abandoned by inhabitants who left their village. Oppositely, natural areas have increased to 86% of total surface area.

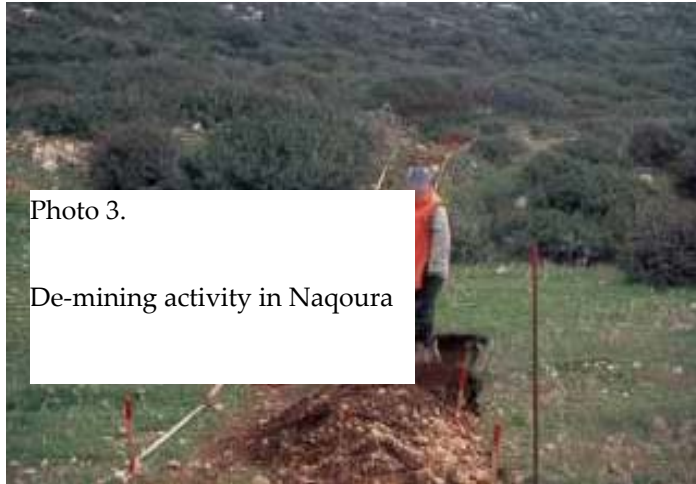


Photo 3.
De-mining activity in Naqoura

Based on land-use maps between 1975 and 2002, one can witness the importance of woodlands which covered in 2002 approximately 80% of circumscription surface area; on the other hand, a decrease in surface area dedicated to open field cultivations was observed. Following the Israeli invasion and occupation, an important part of the circumscription was mined, which made the peripheral agricultural lands dangerously accessible until last year.

It is to note that Naqoura was subject to a de-mining activity for the period of 9 months during 2003 extending from Al-Bayyada till Naqoura. Around 125.000 m² of surface area divided into 3 minefields were cleaned from different types of mines in addition to 250.000 m² of lands cleared from missiles residual of military airplanes attacks (Source: M. Oussama Youssef Al-Goussaibi, Project manager for Lebanon Branch, BACTEC International Limited).

Area	Type of mines		
	Anti-personal	Anti-tanks	UXO
Minefield 19	181	69	9
Minefield 267	24	-	4
Minefield 268	430	46	22
Area	Type of mines		
	BAC	BLU	
Bayyada	250.000 m ²		
Bayyada to Radar		1186	

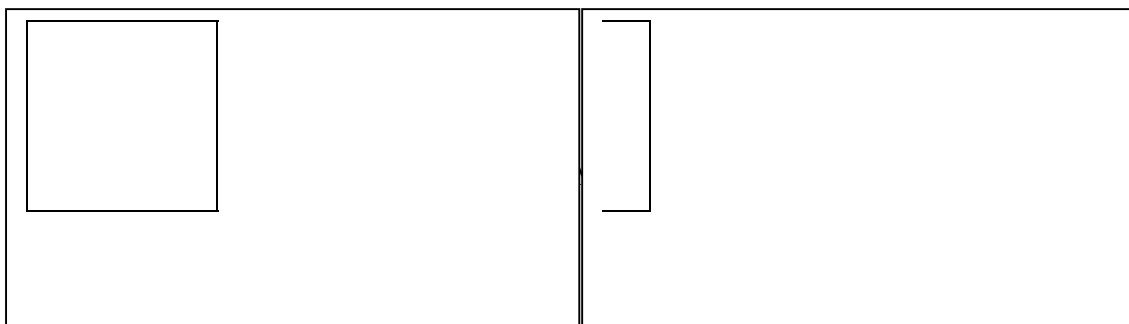
UXO=Unexploded weapons; BAC= Battle Clearance Area; BLU= Bomb Live Unit.

4.2 Urban zones

Between 1975 and 2002, urban zones constructed on an altitude level lower than 5 meters have increased by 7.1 due to the UNIFIL basement presence. At a higher level [5 – 50 meters], the part of the urban areas exceeded the double during the same period. At further upper altitude, the increase of urban zones was more moderate.

Land-use in 1975

Land-use in 2002



In 1975, 54% of the urban areas were located between [5 – 50 meters] altitude, while 32% were located on the plateau [50 – 100 meters]. In 2002, there were relatively more constructed buildings on the coast and higher zones, while fewer constructions were observed on intermediary located areas.

Finally, urban zones are mainly located on lands having slopes less than 5%.

4.2.1 Housing stocks

In 1996, the total number of buildings amounted to 415, among which 73.5% are characterised by one floor and 24.1% having two floors. Only 2.4% of buildings have more than three floors.

Table 2. Building distribution according to number of floors in 1996

Number of floors	1	2	3 to 6	7 to 9	10 and +	Total
Number of buildings	305	100	10			415
%	73.5%	24.1%	2.4%	0.0%	0.0%	100%

Source: central Administration of Statistics, *Building survey*, 1996

Available data show that 39% of buildings were constructed prior to 1975, while 210 buildings (47%) were constructed during the war. Between 1990 and 1996, construction activities were limited to 30 buildings only. 75 additional buildings were constructed between this period and 2000, which is the date of the most recent accessible survey. More than 85% of buildings are used as permanent (main) residence; 2% being secondary residences. Unoccupied buildings represent 14% of housing stock.

Table 3. Building distribution according to date of construction

Date of construction	Number of building	%
1950 and -	1	0%

1951-1960	3	1%
1961-1970	46	11%
1971-1975	116	28%
1976-1980	99	24%
1981-1985	95	23%
1986-1990	26	6%
1991-1993	20	5%
1994 – 1996	10	2%

Source: Central Administration for Statistics, *Buildings survey*, 1996

4.3 Natural areas

A major part of the land circumscription is covered with woodlands; a slight increase has been observed between 1975 and 2002, with the abandonment of agricultural lands. However and paradoxically, the oak forest (4 km²) located on the border has lost some of its density due to Israeli military operations (forest fire and tree cutting to facilitate visibility). Herbaceous areas witnessed an increase in surface areas to reach 5% of surface area in 2002. The coastal road allows access to outstanding natural landscapes still protected against human constructions.



Photos 3, 4 & 5. Natural areas in Naqoura

4.4 Agricultural lands

The type of agriculture practiced has radically changed between 1975 and 2002. Surface area dedicated to agricultural usage was reduced to its half. Accordingly, open field cultivations were cut up to 25% compared to initial surface area. Equally, the zones dedicated to vegetables were lessened to 1/3rd. The lands covered with olive trees have equally shrunk to represent nowadays 1% only of the total surface area. On the other side, one can observe an expansion in banana plantations which have doubled between 1975 and 2002. Citrus plantations have slightly increased.

Agricultural land conversion has reached 8.5% in 1963 and increased in 1998 to reach 8.9%. The conversion of woodlands was nil in 1963 and remained limited to 0.1% in 1998.

4.5 *Road network*

Roads occupy 26.5% of total urbanised areas and 1.84 of total surface area.

4.6 *Parking*

Due to weak population density, the village does not face parking problems. In 1996, 10% of buildings were provided with car parking.

4.7 *Impact of urban regulations*

Since 1973, Naqoura municipality is partially managed by the master plan of “southern beaches of Lebanon” (5450/73). The western section is reserved to touristic activities. This part could be dedicated to commercial and/or residential activities endowed with a land-use ratio of 40%.

Since 2001, the overall coastal area extending from the south of Tyre to the border and at an altitude reaching 250 meters is subject to a land-use study commissioned by the Directorate General of Urban Planning (DGUP). The objective was to protect the public domain all along the coast as well as to reduce the land-use coefficients. This master plan was not approved yet.

Table 4. SWOT Analysis of Naqoura

Strengths	Weaknesses
<ul style="list-style-type: none"> - Limited urbanisation - Outstanding natural landscape - Presence of a wide range of archaeological remains - Route passage for migratory birds - Terrestrial and marine fauna still preserved - Touristic know-how acquired due to the UNFIL army presence. 	<ul style="list-style-type: none"> - Lands partially mined - Proximity of border area in a « no-peace » era is a limitation factor towards investments - Absence of trustful cadastral maps - Lack of wastewater network - Lack of municipal financial means.
Opportunities	Threats
<ul style="list-style-type: none"> - Elaboration of a land-use master plan which enables the protection of archaeological and natural features of Naqoura - Possibility to put into place a wastewater treatment plant - Land completely cleared from mines - Ecotourism market (increasing at national level) is potentially interested by Naqoura as a destination. 	<ul style="list-style-type: none"> - Increasing risks of developing private settlements and investments that do not take into account the special characteristics of Naqoura - Privatisation of the sea by private sea complex resorts - Devastating passage of Highway M55 in natural and agricultural areas - Potential problems at the level of lands ownerships.

Naqoura is endowed with an exceptional natural site in Lebanon as well as wide range of archaeological sites, however weakly known and not valorised at all. By preserving the environment, the development of touristic activities could ultimately have a positive impact on the inhabitants' economic situation. The protection of these areas is a priority especially that some of the ruins are heavily threatened nowadays due to human settlement constructions. Any ultimate planning shall operate to put into place a cultural path in Naqoura thus linking natural, touristic and archaeological areas to the core village.

Fauna and flora present, by their diversity (migratory birds, sea turtles, etc.) and the presence of threatened species, are an important interest which should be highlighted and protected.

As for reinforcing the landscape strength, a master plan is currently under elaboration; nevertheless, and despite of its intrinsic qualities, the territorial vision is limited to providing construction coefficients and allocating functional areas. Therefore, it is necessary to couple this master plan with a landscape approach in order to reinforce the region's identity. This policy shall be translated into conserving view angles (sea, natural areas, archaeological sites, etc.), a matter that will increase the touristic attractiveness of the village and of the region as a whole.

Finally, local communities of Naqoura shall be strongly involved to ensure the success of



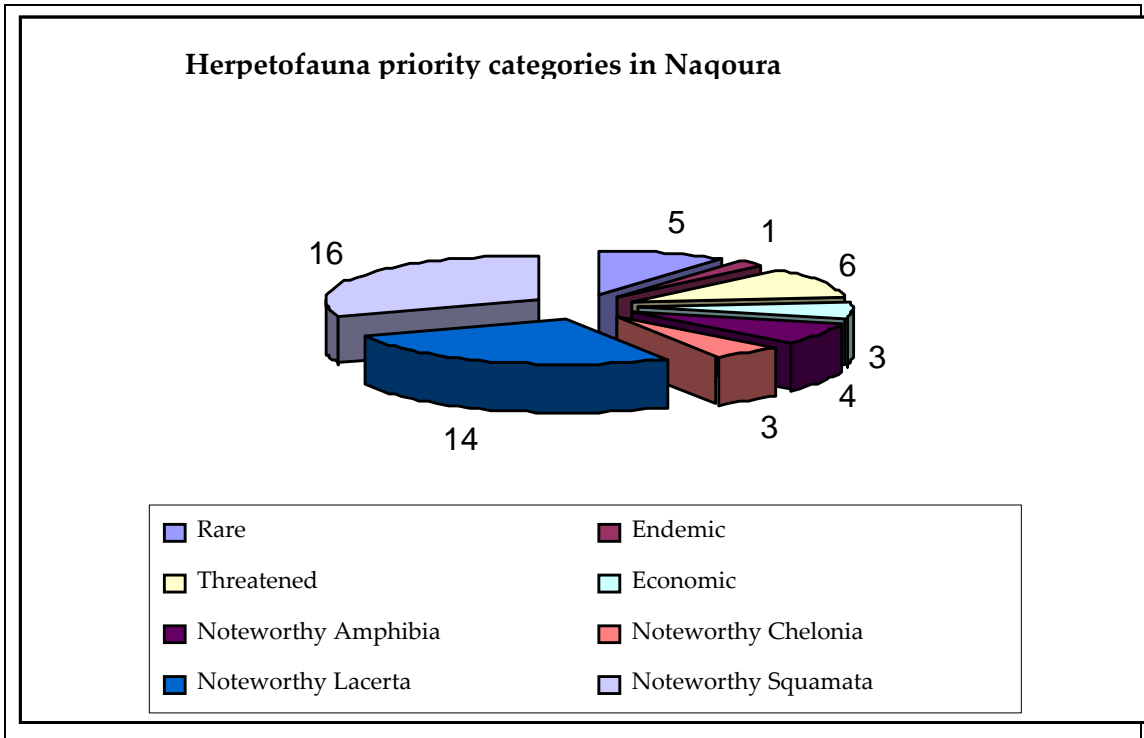
ime is one month

² Surveys were carried out by Tohmé and Tohmé in the context of CAMP-Lebanon activity on Marine Conservation Areas (2004).

5.2 *Reptiles and amphibians*

Apparently there is no major herpetological work conducted at Naqoura site prior to 2004. Instead, there is one comprehensive paper on the distribution of the herpetofauna species over the Lebanese territories (excluding Naqoura), that was published by Hraoui-Bloquet et al (2002).

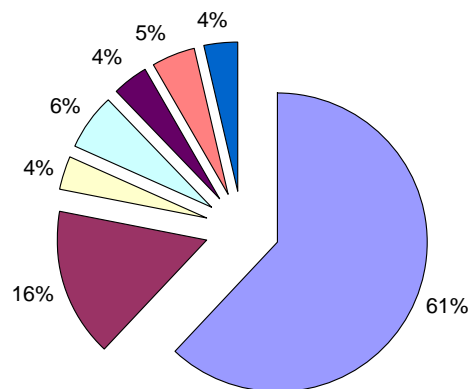
The recent work that was conducted by S. Hraoui during the first half of 2004 has resulted in a species list containing 4 amphibians, 3 turtles and tortoises, 14 lizard species and 16 snake species.



5.3 *Birds*

Naqoura doesn't figure in any of the available ornithological studies (published and unpublished) of Lebanon.

Status of birds in Naqoura region



Regular field surveys³ carried out in the context of CAMP have demonstrated so far the presence of eleven species found to be threatened according to the list of endangered or threatened species of the Protocol concerning specially protected areas and biological diversity in the Mediterranean. To which the CAMP-Lebanon specialist has added two threatened species (Cornecrake and Lesser Kestrel) according to the IUCN Red List. Another nine species that are threatened at regional level according to Evans (1994) were also recorded at this site. Six species are found to be wholly or partially restricted to the Middle East area according to Evans (1994). They are: Black-winged Pratincole *Glareola nordmanni*, Bulbul *Pycnonotus xanthopygos*, White-throated Robin *Irania gutturalis*, Upcher's Warbler *Hippolais languida*, Ménétries's Warbler *Sylvia mystacea* and Syrian Serin *Serinus syriacus*.

³ Between August 2003-early May 2004, G. Ramadan-Jaradi visited the Naqoura area on a monthly basis where the observed birds were recorded using the 20-minutes Point Count Method. The 195 recorded bird species are available in the list of the report of the study on Marine Conservation Areas, CAMP-Lebanon.



A Greenfinch from Naqoura (photo Dr. Ghassan RAMADAN-JARADI)

6. Socio-economic activities

The return of displaced populations and their permanent re-establishment depend on the economic conditions as well as on services to be potentially developed. In the absence of job opportunities, the homecoming of inhabitants remains somehow limited. In the same time, the current security/political situation does not allow the development of the traditional advantages for a village usually located on international borders.

In 1978, the United Nations Interim Forces in Lebanon (UNIFIL) has established its general headquarter in Naqoura; different basements were set up in some villages of the area, headquarters have the capacity to host up to a maximum of 4.000 persons. UNFIL has developed its own services, such as a hospital, solid waste disposal, etc. On the other hand, the presence of an international force has provoked some economic revenues. The decrease in number of soldiers has had a negative impact on the region's economy.

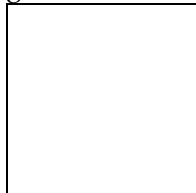
6.1 Agriculture

The cultivated land located inside the administrative boundaries of Naqoura is estimated to around 1,500,000 square meters. The cropping pattern is as follows:

- Citrus: 465,000 square meters
- Banana: 380,000 square meters
- Other crops (mainly field crops): 678,000 square meters.

Olive groves are still abundant in the vicinity and to the east of the town centre. Tobacco plantation, essentially present in South Lebanon, is subject to governmental subsidy. However, such plantation is put through quotas: indeed, every farmer can only cultivate a maximum of 4.000 m².

In the absence of any irrigation system, inhabitants use wells. Considerable area (almost 4 million m²) of potentially cultivable land can be reclaimed for agriculture and cultivated on long term. The preliminary assessment reveals that a considerable soil rich and potentially cultivable land is left abandoned due to several factors such as lack of support, guidance, and markets. These factors are leading younger generations of farmers to presently seek work in other sectors.



Prior to the Israeli invasion, approximately 30,000 heads of goats used to graze in the area. Currently, the numbers are minimal. Grazing is not allowed inside the town, but is permitted in the non-cultivated land on the outskirts, including in the 14 million m² of private land that is mainly forested with oak.

6.2 Industry

There are no industries in the entire circumscription. Some car repair workshops are detected all along the coastal area. Besides, only small shops are found such as bakeries, mini-markets, etc.

Table 5. Number of establishments according to economic affectation

	agriculture	industry	commerce	services	other	Total
Less than 5 workers		11	133	25	6	175
More than 5 workers			4		1	5
Total	0	11	137	25	7	180

Source: Central Administration for Statistics, *Building survey*, 1996

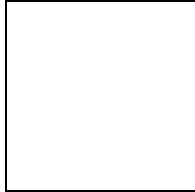
6.3 Services

Currently, the number of restaurants is limited to two, although several locals attempt to open food and beverage services after the Israeli withdrawal. Due to weak tourism passage (mainly as a result of extremely deficient road network), many of these were obliged to close. Nevertheless, some snacks illegally constructed are still found and located along the coastal stretch facing the UNIFIL basement.

6.4 Fishery sector

Fishing practices are regular in Naqoura due to the presence of a striking rocky shore and seawater considered the cleanest all along the Lebanese shore. Around 90 to 100 fishermen are counted in Naqoura (personal interview, Taha, 2003). Fishermen from neighbouring villages such as Bayada ,Tair Harfa , and A'lma come also to Naqoura to fish.

Photo 6. Naqoura Sea

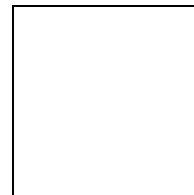


The Naqoura fishing port encompasses an area that is in immediate need of rehabilitation. The pier has been cracked and is no more capable of withstanding waves.

Local markets which exhibit sea products from Naqoura. In excess, fish are sent to Beirut markets. Local fishermen suffer from competitors with imported fish.

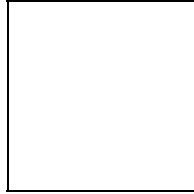
The quality and quantity of fish and marine products are affected by local fishermen. Fishermen claim that traditional fishing methods are still practiced by some and the authorities need to monitor and prevent this from deteriorating. Efforts to monitor and prevent this from deterioration in fishing equipment and material should try to assist in.

Photos 7 & 8. The fishing port in Naqoura



According to the decision issued on the 7th April 2001, a cooperative was established in the Naqoura area. The cooperative aims to facilitate the fishing business of its members which total number amount to seventeen.

Photo 9. Fishermen fixing their fishing nets in Naqoura port



The fishery sector has a potential in Naqoura under the mere fact that almost 100 families depend on it. The absence of legal control on prohibited fishing practices is probably the most critical constraint within this sector. Other constraints include the rehabilitation of the fishing marina and absence of necessary fishing equipment and material (baits, nets, boat handling equipment, “help calling” equipment, etc). The high cost of fuel is also seen as a main constraint to the fishery sector in the area.

It is urgent in the case of Naqoura to acquire the adequate financial instruments that should enable the municipality to properly operate and preserve the town’s comparative advantages. Moreover, the local population and those of surrounding villages suffer from high unemployment rate, especially among young people, as a result of the modifications that occurred inside the UNIFIL groups (indeed army groups of western European countries were replaced by soldiers from developing countries (less purchasing power). In the present time, only one person from Naqoura still works inside the UNIFIL Camp.

Economic and financial instruments shall be put in place to handle sectoral issues such as the management of municipal wastes and sell recyclable items. Also, the establishment of areas under protection (for ecotourism purposes) is an excellent mean to feed the municipality fund (entrance fees, transportation, parking fees, etc.). Besides, these areas would encourage locals to establish related small-scale businesses (food and beverages, accommodations, biking rents, etc.). The establishment of a common marketing plan for the coastal area extending from Tyre to Naqoura will positively help out in supporting and campaigning for a better economic situation of this area.

On the other hand, if preservation of agricultural and natural landscapes is properly maintained, residential areas will gain higher values. Accordingly, the increase in the rental value will be translated into a surplus in the municipal revenue.

In the case of areas located in zones classified as agricultural areas, the municipality shall undertake infrastructural works enabling the farmers to increase their income, to finance the *development... opportunity to implement the coastal highway junction*. One should mention that this decision is a replication of what previously happened to the Al-Kalb River (to the north of Beirut), where the highway stopped any junction linking the coast to the inland.

⁴ In 2003, CAMP-Lebanon office sent an official letter (through the Ministry of Environment) to both CDR and DGUP requesting a modification in the design of the highway so that the Naqoura coastal area is kept preserved. No reply was provided.

7.1 Traffic

Average daily traffic counts 12,500 vehicles on the coastal area. The road linking Naqoura to Bint Jbeil is frequented by around 1,140 vehicles per day. Traffic is negatively affected by the bad road conditions.

8. Waste management

According to CAS survey in 1996, only one building was connected to the wastewater network. Lately, a wastewater network was installed in the village by the MEW as an NGO funded by USAID programme promised to secure the financing of a wastewater treatment plant. However, the promised wastewater treatment plant is not executed up till now. Therefore, in attempt to prevent the direct discharge to the sea, the municipality diverted the wastewater outlet to Al-Ain Valley without considering the potential pollution to the groundwater.

The municipality itself performs the solid waste collection and disposal activity within its jurisdiction. However, there is a lack of proper solid waste collection and disposal system in Naqoura that is mainly revealed through the presence of the open solid waste dump to the south of the town. The dump receives all waste types, mainly those generated by the UNIFIL compound and related hospital.

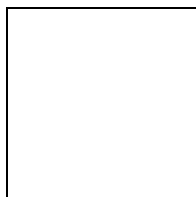


Photo 10.
Open Dump
in Naqoura.

9. Water resources management

9.1 Legal and Institutional Frameworks

Naqoura used to fall under the jurisdiction of Tyre Water Authority in terms of potable water but after the emergence of the New Water Law it has become part of the newly established South Lebanon Water and Waste Water Establishment (SLWWE). Even though the new water law states that these new establishments are responsible for domestic, irrigation and waste water issues, the new establishment will manage domestic and wastewater issues only, since the LRA is already responsible for irrigation projects in the South region.

The SLWWE has not yet assumed its responsibilities in Naqoura. The Municipality is currently managing water related issues and operates a well located within its municipal boundaries and connected to the majority of house units in the municipality. During the discussions in the context of CAMP activities in Naqoura, it was revealed that the Ministry of Energy and Water (MoEW) is initiating a dam project on the Hamoul River; disagreement was brought up concerning the responsible body that should manage the project after completion, whether the Litani River Authority (LRA) or the Municipality. The institutional set-up for water resources management needs to be put in place.

9.2 Water supply

The major water source in Naqoura is groundwater. The aquifer exploited is the Sannine Aquifer that is in direct contact with the sea. However, the nature of the Sannine Aquifer, having a relatively impermeable layer separating two water-bearing zones, resulted in the protection of the lower water-bearing unit from saltwater intrusion.

Table 6. Results of Well Survey in Naqoura

Type	Use	Aquifer Tapped	No. of Wells with Known Pump Discharge	No. of Wells with Unknown Pump Discharge	Total Wells	Average Pump Discharge (m ³ /day)	Volume Exploited (Mm ³ /year)	
							Low	High
PUBLIC	Domestic	Sannine	1	-	1	3456	0.42	0.63
PRIVATE	Domestic	Sannine	1	0	1	604	0.04	0.05
		Sannine	5	1	10	293	0.02	0.04
	Irrigation	Sannine	29	8	37	1396	1.30	2.60
Total No. of wells and the total yearly discharge					45		1.78	3.33

Note: 17 wells are out of use

Groundwater in Naqoura is being exploited through wells and springs. Two clusters of wells exist in the Naqoura area. One cluster is present in the village and the other is in Hamoul valley. Approximately 62 wells were surveyed, 17 of which are not in use. Wells not in use are either contaminated by saltwater or not equipped. Moreover many wells are abandoned since the municipality well is providing enough water for all the housing units. The remaining wells are private and are mainly used for irrigation purposes, yet few are used for domestic purposes. The estimated total volume of groundwater being exploited from wells in the Naqoura area ranges from 1.8 to 3.3 Mm³/year.



Photo 11. Private well used for irrigation

Four main springs, namely Hamoul, Iskandarouna, Labbouneh⁵ and Al Ain are present in the Naqoura area. Hamoul and Iskandarouna springs are being used for irrigation and their estimated yield is approximately 3000-3450 m³/day and 2000-2595 m³/day, respectively. The El Ain spring is being used by part of the village for domestic purposes and its discharge is approximately 100-172 m³/day. All of those springs discharge from the Sannine Aquifer. Several submarine springs with unknown discharge are also present along the coast of Naqoura.

9.2.1 Water Supply Infrastructure

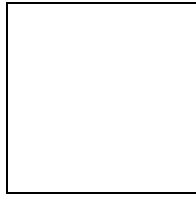
The municipality well, which has a maximum discharge of 3456 m³/day, pumps for 8 to 12 hours in summer providing about 1010 m³/day, and pumps for 2 to 4 hours during winter providing 865 m³/day. The fee of subscription to the main water supply system is 10,000 LBP⁶s per month. All houses in Naqoura are connected to the main water supply network, except for houses located uphill at the end of the village, and some parts of the coast starting from Hamoul section northward.

The second source of water is Sfeir Private Well, located at the coast, which provides mostly the houses and shops along the coast and the UN units with 150 m³/day in summer time, and with 75 m³/day of water in winter time. Approximately 200 housing units are subscribed to this service. There is a committee from Naqoura responsible for monitoring and operating the well.

Some of the habitants also exploits two major springs in the area, namely Nabaa El Ain and Iskandarouna. Nabaa El Ain is a spring located in Al-Ain Valley; it supplies water to all the neighbouring houses (5 houses). It has a daily discharge of 172 m³/day. Nabaa el-Iskandarouna (Iskandarouna spring) is located in the northern part of Naqoura near the Coast. It provides 7 m³/day for a house of 8 persons. There are also six private wells located throughout Naqoura that are used either because of dissatisfaction with the quality of the municipality well, or because operation of the private well is cheaper than the subscription to the main water supply service. It is worth mentioning that the wells pump water using fuel operating motors rather than electricity operating motors, since electricity is not always available.

⁵ Labbouneh spring was not visited in the context of CAMP Project because of its location in a military zone of Naqoura.

⁶ One American dollar is equivalent to 1500 Lebanese pounds.



Map 2. Illustration of Water Supply Infrastructure in Naqoura

As for irrigation water supply, land owners use private wells or springs that are located in or next to their lands, namely Iskandarouna and Hamoul springs. Iskandarouna spring provides 2595 m³/day for a 6-month period. It is used to irrigate using the trickle technique 600,000 m² of banana fields. Hamoul Spring has a maximum yield of 3456 m³/day. It is used to irrigate lands located in the valley. Also, 37 private irrigation wells are scattered throughout Naqoura village, especially in Hamoul area, El Khalleh, Aalaibat, El-Choumara, and Labbouneh. These private wells have discharge rates ranging between 1100 and 1300 m³/day. They all pump an average of 5400-6600 m³/day of water per season.

9.3 Water Demand

9.3.1 *Domestic water demand*

Field surveys have been performed for approximately 220 housing units. An estimate for water consumption per capita per day for summer and winter time was calculated. Water consumption for winter time averaged 122 L/capita/day while it averaged at 204 L/capita/day during summer. These values are close to the consumption recommended by the UNDP (150L/cap/day).

9.3.2 *Agriculture water demand*

In order to estimate irrigation water consumption from private wells and springs in Naqoura, 770 000 m² of agricultural lands were surveyed. Actual irrigation water consumption was calculated based on the discharge of the spring or well for each mode of irrigation. The actual consumption exceeds theoretical crop demand by no more than 20 percent⁷, which is a rather good result.

Table 8. Irrigation Water Consumption in Naqoura

Mode of irrigation	Irrigated surface (m ²)	Actual values (L/m ² /day)	Theoretical values (L/m ² /day)	Type of crops	Over use (%)
Surface	45 000	7.28	6.8	Banana	7-10
Trickle	725 000	4.26- 6.2	3.7-5.3	Banana Citrus	17-22

9.4 Water quality

While no major signs of pollution were yet identified, indication of potential pollution or water quality deterioration was found:

⁷ This value is actually within the margin of error in the estimations, but needs to be confirmed by future monitoring of irrigation water consumption.

- Although fecal coliforms were not encountered in the wells, tap water, or even spring samples, minor contamination in Iskandarouna spring was detected; hence, while the level of sewage pollution is still not alarming, despite the lack of wastewater treatment, the situation call for the immediate protection of the rich water resources in the area.
- Possible saltwater intrusion was detected in one sample; one well located in El Khalle (200m deep), tapping the first layer of the Sannine aquifer showed high value of TDS and Chlorides exceeding maximum admissible values; the first layer of the Sannine Aquifer could be affected by salt water intrusion especially that it is in direct contact with seawater; as for the municipality well (375m deep), it is taping the third layer of the Sannine aquifer, which is protected from salt water intrusion from an overlying impermeable layer.

9.5 *SWOT Analysis for water management*

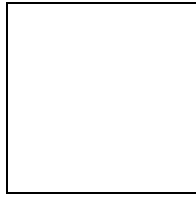
The SWOT analysis presents the strengths and weaknesses of the Naqoura municipality in terms of water management, as well as the opportunities and threats that could promote or disfavour, respectively, a sound water management in the area.

Table 9. SWOT Analysis for Water Resources Management in Naqoura

Strengths	Weaknesses
<ul style="list-style-type: none"> - Availability of groundwater - Available water infrastructure - Available sewage network - Increased awareness of farmers (relatively efficient use of water) - Limited development in the area 	<ul style="list-style-type: none"> - Lack of domestic wastewater treatment - Limited financial resources - Lack in human resources - Lack of monitoring in water consumption - Inadequate water pricing to promote efficient water use (on a lump sum basis for domestic and area of land basis for irrigation) - Weak institutional set-up leading to uncontrolled exploitation of groundwater resources
Opportunities	Threats
<ul style="list-style-type: none"> - Council for the South as a source of financing and implementation of water-related projects - External sources of fund for construction of wastewater treatment plant - Possible exploitation of Hamoul river for irrigation 	<ul style="list-style-type: none"> - Uncontrolled development of the area - Geo-political situation in the region - Water sharing with neighbouring country

9.6 *IWRM in Naqoura*

Integrated water resources management involves projects and actions aimed at increasing the conservation of water and the efficiency in its use and by increasing complementarity and/or decreasing conflicts between competing uses, both in quantity and in quality, by managing both supply and demand and enabling adequate organizations, regulatory frameworks (laws, policies, strategies, plans, programs and rules) and human resources.



To achieve a sound integrated water resource management in Naqoura, the following recommendations are proposed: 1) institutional set-up, 2) water monitoring; 3) water quality protection; and 4) community participation.

9.6.1 Institutional set-up

The institutional set-up with respect to the management of the water resources in Naqoura is not yet fully operational. This is mainly due to the relatively recent formation of the municipality and the long period of military occupation in the area. This has led to the multiplication of the sources of water used in the area and the non-controlled exploitation of the aquifer for both domestic and irrigation uses.

Table 10. Proposed Organizational Structure for Water Resources Management in Naqoura

Water Use	Proposed Management Scheme
Domestic	<p>Issue: Although the municipality water supply network is connected to most of the housing units of the village, other sources of water are used in several areas of Naqoura, including private wells and springs; there is no control on the quantity of water or the quality of the water supplied through these sources.</p> <p>Recommendation: The municipality, in coordination with the South Lebanon Water Establishment, would take in charge the supply of domestic water; this includes coordination with the persons responsible for other sources of water supply to reach a common agreement; in this way, the municipality will be able to control the quantities of water exploited and monitor losses.</p>
Irrigation	<p>Issue: There is no institution currently responsible for providing irrigation water in Naqoura; as such, private wells and springs are used for irrigation without any control of the quantities used and the quality of water.</p> <p>Recommendation: provision of irrigation water to local farmers should be the responsibility of one institution; there is a draft law that sets the LRA as the national authority for irrigation in Lebanon; in that case, the LRA would be the coordinating body with the assistance of the Naqoura municipality; upon construction of the Hamoul dam, which may be financed by the MoEW, the Hamoul river could serve as the major source of irrigation water, hence alleviating the pressure on the groundwater</p>

9.6.2 Strengthening monitoring capabilities

It is essential that the Naqoura municipality strengthen its water resources monitoring capabilities. Pressing monitoring needs are in the areas of: 1) water consumption; 2) water quality; 3) losses in canalisation; and 4) private wells.

Table 11. Pressing Water Monitoring Needs in Naqoura

Monitoring Need	Recommended Actions
Water consumption	<p>Objective: Monitoring water consumption is important to control water losses in the networks and as a tool to enforce more effective pricing schemes that promote water</p>

	<p>conservation.</p> <p>Means: Installation of a metering system covering the main lines, housing connections and wells (especially the irrigation wells).</p> <p>Investment cost: The average cost of an installed meter is USD 300 for a housing/well connection and USD 500 for a main line; the estimated total investment in Naqoura would range between USD 75,000 and 90,000.</p> <p>O&M: Once the metering system is connected, the municipality will secure, in coordination with the water authority, enough staff to monitor the counters and report the results.</p>
Water quality	<p>Objective: Monitoring the quality of groundwater in the area with especial emphasis on bacteriological and agriculture pollution.</p> <p>Means: Sampling and analysis of specific samples and parameters; Recommended Sampling Program:</p> <p>1) Municipality well Parameter: full chemical and bacteriological analysis</p> <p>2) Municipality well, El Ain Spring and Iskandarouna spring Parameter: Fecal coliforms</p> <p>3) Hamoul spring Parameter: nitrates</p> <p>Frequency: bi-annual for full analysis in municipality well, and monthly sampling programme for others</p> <p>Investment costs: none</p> <p>O&M: one staff for sampling; transportation costs for samples; Sampling analysis costs: 1) 180,000 LL per sample 2) 15,000 LL per sample 3) 15,000 LL per sample Yearly sampling analysis cost: 1,080,000 LL (USD 720)</p>
Private wells	<p>Objective: monitor sources of abstraction of groundwater in the area and promote centralization of the domestic and irrigation water supply systems</p> <p>Means: maintaining and updating a list of wells in Naqoura; Recommended actions: 1) update the list of wells prepared during this study; 2) perform an yearly update of the list to monitor changes</p> <p>Investment cost: none</p> <p>O&M: municipality staff for yearly monitoring</p>
Losses in canalisation	<p>Objective: minimize losses in canalization</p> <p>Means: field checking of canalization and networks in the area to control losses and leakages</p> <p>Investment cost: none for checking; rehabilitation costs will raise when necessary; rehabilitation works could be performed by the Council for the South or the MoEW</p> <p>O&M: municipality staff to perform routine checking</p>

9.6.3 Water quality protection

The Naqoura municipality should take advantage from the still limited level of development in the area, and therefore the limited number of sources of pollution to promote a fully preventive approach towards water quality protection. This preventive approach should be based on the following major pillars: 1) construction and operation of a domestic wastewater treatment plant; 2) careful examination of every proposed activity in the area using tools such as Environmental Impact Assessment (EIA); 3) conducting a comprehensive environmental awareness campaign in the area.

Table 12. Preventive Approach towards Water Quality Protection in Naqoura

Water Quality Protection Measure	Comments

Build and operate domestic wastewater treatment plant	Construction and operation of a sustainable wastewater treatment plant will minimize the risks of bacteriological pollution of the groundwater resources. Prior to selecting and building the plant it is recommended to: - prepare an EIA that will include an analysis of alternatives, impact assessment, mitigation and monitoring plans. - fully understand the operation and maintenance requirements of the plant (financially and technically) to ensure that the municipality can secure its sustainability
Promote environmental management systems	All projects proposed in the area should undergo an EIA or IEE to ensure that the project will not lead to severe environmental impacts; it would be interesting to undergo a Strategic Environmental Assessment (SEA) for the local master plan to evaluate the sustainability of the proposed urban plan; coordination with the MoE should be promoted; the MoE is currently undergoing a project to promote SEA in Lebanon; Naqoura could serve as a case study for the project for its demonstration activity.
Conduct a comprehensive environmental awareness campaign	Raising the environmental awareness of the local population would facilitate the cooperation of the local community in the fight against pollution. The awareness campaign should cover issues related to water conservation, natural resources protection, and BMPs in agriculture. This activity should be initiated by the municipality with the contribution of active local community representatives.

9.6.4 Community participation

The local community in Naqoura should become more involved in the water-related activities of the municipality. It is important first that the community builds a sense of identity, pride, accomplishment and ownership so that the local residents get more involved in the management of natural resources. The community can help in many aspects such as:

- Awareness on the importance of placing water meter devices to monitor water consumption and losses;
- Awareness on water conservation needs and methods;
- Awareness in schools;
- Follow-up on the wastewater treatment issue (especially the sustainability issues);
- Promoting environmental protection in the area in general;
- Coordinating with the municipality on issues related to water resources and environmental protection.

10. Environmental pollution

So far, Naqoura is still not connected to the South Highway (which currently stops in Aqbieh). Therefore, the noise and air pollution caused by heavy traffic do not exist. In addition, the absence of industrial and manufacturing activities render the area free from industrial air pollution.

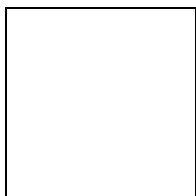
The extent of benefiting from the rangelands and woodlands in Naqoura for tourism is currently non-existent. The expanse of these lands seems to be great potential for the development of natural reserve where controlled grazing of ruminants, like sheep and goat can take place.

The remoteness of Naqoura and its presence within a military zone for a lengthy period of time has developed some positive opportunities, including the availability of agricultural land that can be developed for organic farming. Establishment of protected coastal areas and the development of touristic traditional fishing areas for community livelihood are viable examples. Linked with organic farming, this area has a great potential for environmentally aware tourists and eco-tourism.

The potentiality of the area as a natural resort would dictate the remediation and closure of the open solid waste dump. The small community living in Naqoura with respect to the size of the surrounding land is an opportunity to develop environmental awareness

Naqoura is endowed with wealthy cultural and archaeological resources which were, and still, neglected or subject to vandalism and destruction. The utmost attributes embrace:

- Cultural landscape,
- Old town core,
- Surviving fishermen's' trade,
- Defensive military architecture.



Relative proportions of Naqoura heritage resources.

11.1 Characteristics of the cultural resources

Naqoura's heritage resources are mostly archaeological; in this case, the wealth of archaeological remains is substantial particularly in the areas to the north of the town of Naqoura. Other types are historic town core and the surviving fishing trade.

Cultural landscape: mainly, the cultural landscape stretching from Naqoura and beyond it to the border and extending north as far as Khirbet Iskandarouna and Chamaa. The area is rich in archaeological remains consisting of ancient olive oil production complexes with settlements and ancient agricultural plots in the vicinities. The area falling within the municipal boundaries incorporates the sites of Umm al-Amad and Umm al Aafayye.

Old town core: the remaining few vernacular houses give some coherency to the historic core; they are characteristic of rural architecture which must be preserved.

Surviving fishermen's trade: a large contingent of fishermen is still active at Naqoura. They maintain alive the ancient tradition of fishing that is closely linked to the historical legacy of the place.

Defensive military architecture: associated with the Crusader-Arab defensive tower that guarded the coast of Naqoura from sea attack in the medieval period.

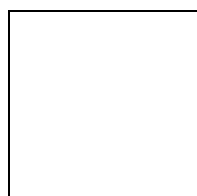


Photo 13. Natural unspoiled landscape in the immediate surroundings of Naqoura.

11.2 Assessing the cultural significance of Naqoura

Due to the special circumstances of Naqoura with its long period of occupation and isolation from the rest of the country, the place still suffers greatly from lack of

resources and years of neglect. On the other hand however, due to this isolation, the area is still unspoiled and enjoys a special local character and 'sense of place' quite unique in the whole country. The natural beauty of the area coupled with its archaeological richness gives the place aesthetic and appealing values.

Naqoura's main values can be summed up to the following:

Uniqueness of the cultural landscape: The cultural landscape of Naqoura's and its surroundings (i.e., from Iskandarouna to the southern border of Lebanon, including the site of Oumm el 'Amed) is rich in ancient settlements dating back to the Phoenician period. This period is associated with a rich culture and religious beliefs as well as a developed urban history and trade. The ancient cyclopean and monumental remains of the area are juxtaposed with the outcropping vegetation and the beauty of the natural setting with the clear sea in the background. In addition to that, the fact that the place is still unaltered by modern unsympathetic development contributes highly to enhance the beauty of the region.

Naqoura's cultural landscape is unique because it represents a material culture recognized universally for its contributions to the history and development of human civilization, either through the propagation of the alphabet, or through its strong commercial relations with Mediterranean cities. The continuous settlement history of the area from the Phoenician to the Byzantine period and the fact that it is the only still preserved ancient landscape of its kind in Lebanon with monumental remains such as temples with Doric capitals and Churches with Byzantine mosaics increases the significance of the place and its historical, cultural and scientific values.

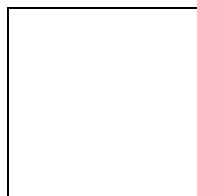


Figure 14. The old town core in Naqoura has potential for rehabilitation and re-adaptation.

Important archaeological evidence: The discovery of Phoenician stelae and inscriptions at the site of Oumm el 'Amed, in the vicinity of Naqoura, sheds light on the nature of Phoenician religion as well as on the development of the alphabet through time.

Crusader military towers: There are two Crusader watch towers within Naqoura's area. One is located in Iskandarouna and the other in the town of Naqoura (inside the UN camp). Both sites offer great potential for interpretation and presentation to visitors. They are also significant as historic witnesses of the chain of watch towers which were situated all along the coast and used as early warning posts.

Archaeological richness: Naqoura and its surroundings constitute an archaeological landmark of outstanding importance, not only because of the cultural significance of the archaeological sites but also for the rich and wide variety of the remains. In

addition to the vast archaeological settlements, the area has two watch towers from the Crusaders period, funerary caves, rock shelters (some of them possible prehistoric), ancient olive press complexes and some beautiful examples of traditional vernacular houses and agricultural farms.

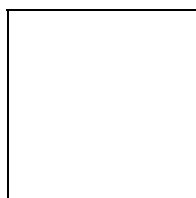


Figure 15. The archaeological site of Umm al-Amed prior to its excavation in the 60's.

Potential for adaptive re-uses: Some of the old residential buildings within Naqoura's town and agricultural farmhouses located on its immediate vicinity provide great opportunities for adaptive re-uses such as tourism lodgings. Naqoura's rural setting and beautiful landscape offer great opportunities for alternative tourism such as rural or cultural tourism. It is important to keep in mind that tourism can act as the driving motor for economic development, especially in rural areas such as the case of Naqoura, and can strongly contribute to the enhancement of the social, economic, cultural and environmental development of an area. Tourism has the potential to create beneficial effects on the natural and cultural environment it occurs by contributing to environmental protection and conservation. It is also a way to raise awareness of cultural and natural values and it can serve as a tool to finance protection of natural and cultural resources and increase their economic importance.

Natural attractiveness of the area: Naqoura's mix between rural and coastal settings coupled with the place's rich natural and cultural landscape, provide the area with scenery of great beauty and aesthetic value. The fact that the area still preserves an unspoiled and authentic local character just adds to this appealing value.

11.3 Assessment of the condition of the cultural resources of Naqoura

The general condition of the heritage resources of Naqoura and its area is stable; this is due to limited development that took place in the area because of the Israeli occupation. Nevertheless, many issues face the preservation of the resources and threaten their integrity and conservation:

Heritage Resources	State of preservation and condition
Cultural landscapes	Stable, but piece-meal destruction of archaeological remains goes unchecked, particularly in the area of Iskandarouna where construction works threaten to destroy a large part of a classical period settlement.
Old Town core of Naqoura	The core of the town is neglected; many old vernacular houses are obsolete and suffer from major structural problems and collapse of fabric, not to mention the potential threat of demolition for re-building.
Defensive military architecture	Depicted in the Crusader-Arab tower of Naqoura. The building is in stable condition but structural collapse has occurred in the past and the structure is exposed to weather action and water penetration into the fabric. The archaeological mound underneath the tower is suffering from erosion of its section and

from continuous excavation through the digging of graves in the cemetery.

Based on the assessment of the condition of these resources, a number of interventions are necessary in order to plan for their conservation:

Heritage Resources	Proposed actions/interventions
Cultural landscapes	What is required to maintain the integrity of these landscapes is a detailed inventory of the entire area so as to clearly identify the extents and limits of the landscapes so rich in terms of its natural and archaeological potentials.
Old town core	A comprehensive plan for conserving and rehabilitating the traditional building stock within the core of the town is necessary so as to create a mechanism for their preservation and adaptive re-use.
Defensive military architecture	Repair and improvements using traditional materials and methods, consolidation of the exposed section of the mound and provide an alternative location for the expansion of the cemetery.

The five main key issues that must be dealt with in the proposals for integrated management of these resources are:

- Extending legal protection to the cultural landscapes in the area.
- Conserving the old traditional town core through a comprehensive plan for its rehabilitation.
- Conserving the Crusader-Arab defensive tower and area.
- Enhancing the quality of the heritage resources, increasing people's appreciation and enjoyment of their heritage.
- Making sure that the management of these resources is carried out in a sustainable way and that local economic benefits are extracted from the use of these resources in a sympathetic and sustainable manner.

Accordingly, management proposals for the cultural resources of Naqoura should try to accommodate these needs within the existing constraints and the available opportunities. Based on the special character of Naqoura and its area and the nature of its cultural resources, the appropriate policy for managing the heritage should be the following:

- Provide legal and administrative protection to the cultural landscapes across the area.
- Enhance the quality of the living environment within the town core.
- Make sure that the old trade of fishing is sustained.

11.4 Strategies for implementing the management policy

The management policy as specified above requires a set of practical measures and strategies for its implementation, these have been detailed below:

Inventorying the existing cultural landscapes and their geographical extents, providing special protection to these	The extent of the cultural landscapes around Naqoura and across the area from the border south to Ras al-Biyyada north and eastwards beyond Chamaa needs to be accurately identified. Because of the uniqueness and high significance of
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resources	this area on a national and international scale, there is an urgent need to extend protection over these resources in the context of a special natural and cultural reserve or through the enforcement of rigid and monitored planning regulations. Such a task can only succeed if there is consensus and close collaboration between the municipalities of the area, the ministry of environment and the ministry of culture.
Conserving the archaeological heritage	Some urgent measures of fabric conservation are needed to stop the decay and erosion of exposed archaeological remains such as the ones at Oum all-Amad and the tower of Naqoura. These measures should be first identified in the context of an overall management plan for the resources of Naqoura with an identification of the legal and financial requirements to establish the aims.
Upgrading the quality of the living environment within the town core of Naqoura	A special rehabilitation plan for the old core of Naqoura should be drafted in order to first identify the potential for regeneration, whether it is via rural tourism development, community empowerment, etc. The Directorate General of Urban Planning can be asked to commission such a study. Otherwise, a study of this kind can be provided as part of the ongoing collaboration between the municipality of Naqoura and the Italian government. The outcome of the study could be the development of a community activity area within the core including a public library, a cultural center and a community gathering center.
Encouraging Research	Research is needed in order to identify the nature and extent of the cultural landscape around Naqoura as well as the significance of these resources. Archaeological excavations can be an option to draw more attention to the area and highlight the significance of the remains there.
Visitor information and management	The area has great potential in the context of an open cultural park with archaeological and natural attractions; it could become a primary visitor destination that needs a sustainable approach for its management.
Building capacities	Providing training sessions for staff that will care for the preservation and management of the resources of the place, such as the archaeological park.

11.5 Visitors' scenarios

One of the most significant scenarios linked to visitors' management in the area and the development of cultural and eco-tourism could be the creation of an open-air cultural park with natural and archaeological attractions extending from the southern border to Ras al-Bayyada. This could be achieved through the designation of the area a cultural and natural reserve, or through the application of strict planning regulations in the context of a comprehensive and sympathetic master plan. The provision for tourist lodgings of the Bed and Breakfast type could be partly in Naqoura and partly in the towns and villages further east such as Aalma al-Chaab or even Chama'.

The sites of the tower of Naqoura, Oum al-Amad and Oum al-Aafaye are already accessible archaeological attractions which require nevertheless comprehensive management plans and proposals for visitors' centres and a regional museum.

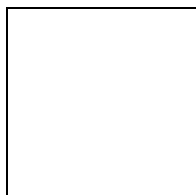
12. Sustainable tourism

Ecotourism is defined as the "tourism that consists in traveling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas" (Hector Ceballos-Lascurain). Accordingly, ecotourism involves a broad spectrum of activities related to nature. At one end of this spectrum, some market segments are relatively small and well defined such as a specialized ornithologist or those who seek out rare species. At the other end, one might have people who casually observe and enjoy scenic beauty while on trips taken primarily for another purposes (Munasinghe, 1994). Ecotourism is seen as a form of alternative tourism. The more widely accepted understanding of alternative tourism is a one involving modes of tourism thought to be more benign with respect to their impacts upon the destination.

Building on the archaeological and cultural features of Naqoura, the bordering town is convincingly up to attracting nature-loving tourists, whether nationals or Europeans, provided that the exceptional natural, scenery and landscape resources are appropriately preserved and managed; thus, enabling the local communities to wisely invest in the available potentials for promoting nature-based alternative tourism. Among these resources one can refer to the coastal plain and the woodlands.

The narrow coastal plain extending between Ras El Bayada and Naqoura village presents a potential for camping activities. The presence of a striking rocky shore with clear blue waters offers a very special place for bathing and diving. The coastal road running inside the coastal plain with a length of around 6 kms is suitable for bikers who are seeking to enjoy unique scenery.

The relative isolation of **the agricultural land**, located relatively far away from other cultivated land in neighbouring villages, in addition to the absence of polluting industries, both give Naqoura a unique opportunity for organic farming. Bio-products are expected to serve visiting tourists as well as national markets. Large-scale bee keeping has to be promoted (currently, there are 15 to 20 beehives in Naqoura for household use).

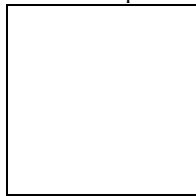


A large woodland area (mainly oak trees) of around 17,000,000 square meters is largely located towards the border. Out of these, around 2,500,000 square meters are very dense, presenting an important habitat for wildlife, mainly jackals and hyenas. Because of the sensitive location of these woodlands, these species are protected for a long time and most likely became abundant. Besides, the

Map 3:
Camping area
in Naqoura

present a potential for migratory bird-watching, hiking and night wildlife-watching. Wooden towers, equipped with infra-red binoculars, serve for night wildlife-watching.

Map 4: Land use in Naqoura



12.1 Carrying capacity assessment

The perceptual carrying capacity of a given area is not easy to establish since people have different tolerance thresholds. Therefore, the following assessment should be considered as a rough and subjective estimation.

The camping area in the coastal plain of Naqoura is estimated to be 430,000 square meters. If 50% of this area can be used for superstructure (tents) and if 500 square meters are allocated per one tent (4 persons), the carrying capacity would be 430 tents and around 1,700 persons per day.

12.2 Touristic infrastructure and superstructure

The existing support services for tourism in Naqoura are as follows:

- 2 gas stations without car wash
- 2 legal restaurants and 10 others that are illegally constructed
- 1 clinic and UNIFIL base hospital.

Regarding touristic accommodation units, one should keep in mind that nature-based tourism requires simple superstructure, integrated in the natural setting and preferably owned by locals. An important issue to be taken into consideration is the management of parking places. These places have to be located relatively far from the attraction in order to minimize the negative environmental impact on the resource in question, mainly fragile habitats like beaches.

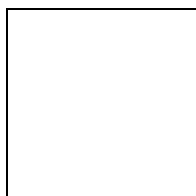


photo 16. road sign: a touristic attraction by itself

Naqoura has also its own positive feature, due its proximity to the Israeli borders. Keeping in mind the long history of Israeli occupation of South-Lebanon and its recent withdrawal, the seeing of the border with Israel and of a road sign like "Towards Palestine" is itself a touristic attraction.

12.3 Threat and constraints

The major threat for potential alternative to of the seashore in favour of construction exodus taking place in Naqoura is putting le land for housing activities. On the other ha

belongs to few large owners from outside the village. This would entail additional risks of using such lands for construction in the future and hence reflect negatively on alternative tourism potential.

The main current physical constraints facing tourism development is the bad quality of the coastal road between Sour and Naqoura, in addition to the lack of touristic accommodation units and of organized parking places. Other constraints relate to the presence of mines, although removed, still can have a long term psychological negative effect on tourism. The suggested wildlife-watching area is considered for the time being as bordering a military zone; this would hinder using this area for any type of potential tourism activity.

Finally, social and or cultural factors may hinder some forms of tourism development in Naqoura, especially camping activities. However, one can suggest some other basic measures to initiate tourism development in the short-run, which can be carried out by the municipality:

- Signposting for Naqoura cultural attractions
- Soft management (food and sunbathing services) as part of the Naqoura seashore.

Such steps would attract some visitors to Naqoura (most likely, from the tourists coming to the Tyre).

12.4 Strategic objective and policies

In order to enhance and sustain alternative tourism as a strategic choice for the sustainable use of natural resources and as an economic activity which can complement or even dominate other economic activities taking place in Naqoura, the following points have to be taken into consideration:

- *Concerning land use*
- Preservation through legislation of the agricultural character of around 1,500,000 square meters of currently cultivated land. This could be through a low coefficient of land use for construction (less than 5% for example).
- Declaration of Naqoura beach and Naqoura woodlands (around 17,000,000 square meters of woodland) as areas of special importance not only at national level, but also at the Mediterranean scale.

The expansion of housing activities of the local community as well as of small-size accommodation units for tourists has to be concentrated in one zone surrounding the core village. Any new construction in the suggested zone has to be perfectly integrated in the natural surrounding, according to specific legislations. The current relatively large area used by UNIFIL could serve in the future as a construction area for small-size touristic accommodation units and as a car parking for the visitors.

- *Concerning supportive policies for the preservation of the agricultural character*

The agricultural land of Naqoura presents a good potential for organic farming mainly because of its geographical isolation. A direct significant support from the

ministry of agriculture is needed. This support could be through the promotion of organic farming as well as through the protection of the local products from foreign competition. Additional support can come through extension services in order to reduce the cost of production and to improve the quality and the productivity.

- *Concerning implementing agents*

The involvement of the private sector in the implementation of the touristic superstructure is crucial for tourism development. The government is responsible for promulgating legislative texts pertaining to land-use, and for improving infrastructure. The media would play an essential role in the promotion of alternative tourism. The municipality of Naqoura, supported by local NGOs, should be responsible of tourism management at site level.

13. Municipal development plan

Based on the different CAMP reports outputs as well as the community involvement, local agenda 21 principles and techniques were used to promote sustainable development concept among local communities at large and more specifically to be part of the municipal planning. Accordingly, the CAMP thematic recommendations were discussed with the municipal councils and local communities and consequently presented within a proposed municipal development plan.

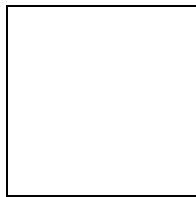


Photo 17. Local meetings in the context of CAMP Participatory programme activities

Municipal Action Plan
 NAQOURA
 2004

Strategic objective	1. INTEGRATED LAND USE MANAGEMENT.				
Output	1. Protection and development of the archaeological sites.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Control urban growth by limiting construction in specific residential zones.	Municipality DGUP	Land use plan for Naqoura	Municipal license Municipal violation tickets	Continuous	Proposed land-use plan should enable
2. Develop heritage tourism	Municipality	Lessons learnt from other heritage sites in Lebanon	Cleaning up of site	Starting mid-2004	controlling urban growth control
	Directorate of Antiquities		Protection of site		
	Tour operators	Inventory of materials composing the cultural heritage tourism CAMP cultural heritage recommendations	Media campaigns		
	Heritage management expert		Information booth Coordination with neighboring towns		
Output	2. Protection of animal and plant life.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Control urban growth by limiting construction in specific residential zones.	Municipality DGUP	Land use plan for Naqoura	Municipal license Municipal violation tickets	Continuous	Refer to CAMP report on land-use management

2. Protect natural green spaces and beach	Municipality	Land use plan for Naqoura	Municipal police	Continuous	Refer to CAMP reports recommendations
	Ministry of Environment				
	DGUP	Fauna & Flora characteristics	meetings/ seminars		
	Local community	Property ownership data			
	Private owners	Awareness campaigns	Campsites identification		
	Volunteers to encourage community protection		Protection signboards		
3. Develop new green spaces	Municipality	Land-use map	Trees	Feb. 2004	Spring and autumn
		Landscaping map	Human resources		
	Landscape expert	Fauna & Flora characteristics	Landscaper		
	Community volunteers	Land use plan for Naqoura	funding resources		
Output	3. Community-wide consultations on municipal plans.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Consult community on CAMP expert recommendations to improve urban plan of village	Municipality	Land use plan for Naqoura	Community meetings	Jan. 2004	Consensus should be reached among municipal council members on these recommendations first
	Land use management expert	CAMP reports			
	Community				

2. Present community with achievements, setbacks and plans for following year	Municipality	Land use plan for Naqoura	Community meetings	Dec 04	End of every year
	Land use management expert	Proposed municipal	Summary reports distributed to houses		
	Community	yearly action programme			
Output	4. Development of alternative tourism based on Naqoura's natural and archaeological assets.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Implement two suggested ecotourism projects proposed either by the municipal council or a local community member	Ecotourism and heritage experts	Texts and details of the proposed projects	Sites identification Funding resources	Starting December 2004	Permanent superstructure should not be encouraged in highly valued nature areas
	Municipality	Alternative tourism plan	Plans		
	Ministry of Tourism	Initiation of training sessions related to	Sites development		
	Directorate of Antiquities	projects' management	Approval of concerned authorities		
	Community private initiatives				
Strategic objective	2. CULTURAL HERITAGE MANAGEMENT.				
Output	1. Development of cultural sites.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Declare the Naqoura Bay & Beach as an area of special importance at Mediterranean level and to integrate existing cultural sites in Naqoura within a wider protection plan of the coast of Lebanon.	Municipality	Detailed map of cultural sites	Coordination with concerned institutions	Starting end of 2004	Based on CAMP report of Marine Conservation Areas

	Ministry of Environment		Information sign posts		
	Barcelona Convention Bureau		Memorandum of Agreements with private owners		
	Ministry of Public Works	Inventory	Site management Plan		
	Ministry of Tourism	Fauna & Flora Characteristics	Marketing plan for the selected site		
	Private owners	Awareness campaigns to introduce importance of protecting the site	Funding resources		
	NGOs				
	Cultural heritage expert				
Output	2. Protection and development of old village.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Develop comprehensive plan to protect and renovate old local houses according to historical architecture and as potential for alternative tourism.	Municipality	Comprehensive plan of old village. Identification of first set of buildings for rehabilitation purposes	Sites visits	Jan. 2005	Refer to CAMP report on Cultural heritage
	Directorate of Antiquities		Financial resources		
	Ministry of Tourism	History and background information on old town	Adequate building/renovation materials		
	Cultural heritage expert				
	Funding agencies				
2. Renovate 2 pilot houses and use as tourist dwellings for benefit of local owners.	Municipality	Houses selection criteria	Traditional material	Jan. 2005	

	Private owners	Marketing plan	Incentives		
	Private sector	Media coverage	Media coverage		
	Heritage architect	How to run a tourist dwelling.			
Output	3. Renovation of historical military citadel (Crusader and Arab)				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Renovate historical military citadel.	Municipality	Architecture plan	Traditional material	Starting early 2005	Current protection should be a task allocated to UNIFIL (due to citadel presence inside basement)
	Directorate of Antiquities	Detailed plans	Financial resources.		
	Ministry of Tourism		Site protection		
	UNIFIL				
Cultural heritage expert					
2. Find alternative site for cemetery.	Municipality	Options based on urban plan and site availability	UNIFIL equipment	Undefined	Consensus should be reached among local communities
	UNIFIL				
	Community				
Strategic objective	3. DEVELOPMENT OF ALTERNATIVE TOURISM AS A SUSTAINABLE ECONOMIC USE OF COASTAL RESOURCES.				
Output	1. Declaration of Naqoura as a natural park of national importance.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	

1. Protect the whole coast of Naqoura	Municipality	Comprehensive map	Municipal violation ticket	Continuous	This step should be preceded by clear understanding of "national park" from local communities
	Ministry of Public Transport	Management plan	Municipal police		
	DGUP		National Park sign post		
	Ministry of Environment				
	NGOs				
	Private owners				
	Alternative tourism expert				
2. Protect 1.5 million m2 of cultivated land from any construction.	Municipality	Land-use map	Signposts	Mar 04 ongoing	
	DGUP	Alternative use scenarios	Awareness to landowners and farmers		
	Syndicates of farmers				
	Land owners				
	Ministry of Agriculture				
3. Protect 17 million m2 of forestland.	Municipality	Land-use map	Signposts	Mar 04 ongoing	
	Private owners	Forestland map	MoU between municipality and land-owners		
	Local community				
	Ministry of Environment				
Output		2. Development of local dwellings for tourists.			
Activities		Resources needed			Remarks
	Human	Information/Training	Logistics	Timeline	
1. Build ecological dwellings or renovate old houses close to village for tourists.	Municipality	Architect plans	Ecological material	Starting 2005	

	Ministry of Tourism	Ecological criteria			
	Traditional dwelling architect	Alternative tourism	Memorandum of Agreements		
	Owners	Training on sustainable tourism services and marketing	Funding resources		
	Alternative tourism expert				
	Community				
2. Use UNIFIL compound after it is deserted to set up small ecological dwellings, and a parking for tourists and visitors.	Municipality	Ecological criteria for beach use	Ecological material	Undefined	
	Ministry of Tourism	Management plan	Memorandum of Agreements		
	Alternative tourism expert	Information sharing	Management structure		
	Private owners		Funding resources		
	Traditional dwelling architect				
	UNIFIL				
Output	3. Marketing of alternative tourism activities				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Train community members on alternative tourism.	Municipality	Alternative tourism information	Workshops	Indefinite	Depends on agreement set between different stakeholders to market alternative tourism
	Community		Field visits to others Lebanese successful areas		
	Alternative tourism expert				

2. Involve tour operators, all concerned NGOs and ministries to market alternative tourism in Naqoura	Municipality	List of tour operators	Consultative meetings	End 2004	
	ADR (NGO)	List of environmental NGOs	Information leaflets		
	Tour operators		Media spots		
	Ministry of Tourism				
	Ministry of Environment				
Strategic objective	4. INTEGRATED WATER RESOURCE MANAGEMENT.				
Output	1. Developing a water resources management structure.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Municipality to provide water to community households and to negotiate provision of water from other sources in order to keep track of and control waste of water.	Municipality	Amount of water provided by each source	Household metres	Continuous	Refer to CAMP report on IWRM
	Water authorities				
	Water management expert				
2. Municipality to identify one authority for the distribution of irrigation and coordinate with it to monitor use of water for agriculture and to limit the use of wells and underground aquifers.	Municipality	Follow up on progress of Hamoul dam		Feb. 04	
	Litani Water Authority				
	Water management expert				
Output	2. Develop a water resources monitoring system.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	

1. Municipality to monitor household water consumption by installing metres in residences, wells and main water lines.	Municipality	Number of households	Metres at \$300 for households and wells, \$500 for the main line. Total cost for Naqoura is \$75,000-\$90,000.	Starting june 2004	
	Community	Main lines, wells			
	Water management expert				
2. Municipality to monitor underground water pollution as follows:	Municipality	Train one municipal worker how to take samples.		Continuous	
	Laboratories	Sample tracking file			
a) Municipal well (complete test for bacteria and chemicals, coliform)			LL 180,000/sample		Once every week
b) Ain and Iskandarona wells			LL15,000/sample		Once every month
c) Hamoul spring (Nitrate)			LL15,000/sample		Once every month
3. Municipality to monitor illegal use of water and to promote centralised system of distribution to households and for irrigation.	Municipality	Updated list of wells in Naqoura	Regular inspections		Once every month
	Water Authority				
4. Build and operationalise waste water treatment station	Municipality	Environmental Impact	Funding	Jan-Dec04	
	Ministry of Energy and Water	Assessment (EIA)	Proper location		
	Council of the South	Study report of the plant			
	Donors	Adequate training on	Maps		
Engineers	how maintenance of station.				
5. Municipality to promote environment management system by subjecting every project in the village to an Environmental Impact Assessment.	Municipality	Guidance on EIA	monitoring	Continuous	Naqoura can aspire to be a model village given relatively little pollution.

	Ministry of Environment		Follow-up projects execution		
6. Comprehensive environmental awareness campaign focusing on conserving water resources, good practices in agricultural use of water resources, and prevention of pollution.	Municipality	Training material	Workshops	Jan-Dec04	Focus should be per group (women, farmers, children, restaurants, UNIFIL, others)
	Community activists	Case studies/ lessons learned	Door-to-door campaigns		
	Experts		Training on site		
	Ministry of Environment				
Output	3. Participation of local community in water resources awareness and conservation.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Awareness raising about importance of installing water meters to monitor consumption and waste.	Local Committee established during CAMP.	Awareness raising material	Meetings/workshops	Starting Mar04	Continuous
	Ministry of Environment		Demonstration on site		
2. Awareness raising about ways to preserve water.	Local Committee established during CAMP.	Awareness raising material	Meetings/workshops	Starting Mar04	Continuous to all community groups
3. Awareness raising in schools.	Local Committee established during CAMP.	Awareness raising material	Meetings/workshops	School periods	
4. Follow up on wastewater treatment.	Local Committee established during CAMP.	Awareness raising material	Meetings/workshops	Starting Mar04	
5. Encourage protection of environment in general.	Local Committee established during CAMP.	Awareness raising material	Meetings/workshops	Starting Mar04	

6. Coordinate with municipality on water related issues and environmental protection.	Local Committee established during CAMP. Municipality	Awareness raising material	Meetings/workshops	Starting Mar04	
Strategic objective	5. SOCIO-ECONOMIC DEVELOPMENT.				
Output	1. Urban management plan for Naqoura				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Preserve agricultural land beside the beach and specify an area for restaurants and trade shops.	Municipality	Land use plan for Naqoura		On-going	
	Syndicates of Farmers				
	DGUP				
	Local community (farmers, restaurant owners, etc.)				
	Land use planner				
2. Protect public beach property all the way to the border and prevent any type of construction on that strip.	Municipality	Land use plan for Naqoura	Memorandum of agreements with land owners	On-going	
	Ministry of Public Transport	Construction material guidelines	Alternatives inside the core town		
	Private owners		Incentives for protection		
	Ministry of Environment				

	Public property lawyer				
3. Classify area extending from the plain to the village as a residential area with controlled construction (very little on upper lands) in order to preserve scenery (high pricing for lands).	Municipality	Land use plan for Naqoura		Mar04	
	Community				
	Land use planner				
	DGUP				
4 Organize entrance into agricultural plain, and beach by compelling tourists to leave their cars in special parking lots (close to trade shops and village to encourage economic activities) and by using public transportation run by the municipality for its profit.	Municipality	Land use plan for Naqoura	Parking lots	Starting Jan. 2005	
	Private sector	Signposts	Organized bus rides		
	Community	Information for tourists			
Output	2. Economic benefits from environmental practices.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Impose taxes on tourists who bring in pollutants such as plastic bags.	Municipality	List of nearby recycling factories	Availability of paper and reusable bags.	Starting 2005	
	Ministry of Environment				
	Recycling factories	Train local police	Municipal tickets Signposts		
	Community				
2. Municipality to sub-contract collection of municipal waste and provide land for garbage separation, and to inform community of economic and financial benefits of recycling.	Municipality	Schedule of garbage collection in community	Land to separate garbage	End of 2004	
	Community initiatives				
	Private sector	Workshops/ informative sessions	Municipal tickets		
	Ministry of Environment				

3. Promote Naqoura as an eco- touristic area and use part of revenues generated from eco-tourism activities to re-invest in agricultural development such as access roads, and water networks etc. to increase competitive edge of Naqoura's agriculture.	Municipality	Leaflets	Signposts	Starting end 2004	Identify sites that are possible to visit in the short-term. Avoid any potential military areas for visitor security purposes.
	Tour operators	Media spots	Media coverage		
	Ministry of Tourism	Lists of available ecotourism activities and destinations	Seed money for initiating small scale activities (micro-credits, grants, etc.)		
	Private sector				
	ADR (NGO)				
	Local community Syndicate of Farmers				
	UNDP Programme				
Syndicate of fishermen					
Strategic objective	6. LOCAL PARTICIPATION IN COMMUNITY DEVELOPMENT.				
Output	1. Participation of men, women and youth in community priority setting and initiatives.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Involve members of the community in priority setting for community development through local group formations, meetings with NGOs and active members in the community.	Municipality	Draft of municipal priorities	Community meetings	Mid-2004	Establishment of Local Agenda
	Local community members	Recommendations of CAMP project			
	NGOs				
2. Support local groups and individuals in taking up community initiatives and joint activities with municipality and other NGOs.	Municipality	Municipal action plan	Contacts with neighboring NGOs and community groups	Starting mid-2004	Establishment of Local Agenda
	Local community members	Information on similar initiatives			

	NGOs				
3. Support implementation of project ideas identified by youth group: setting up social and environmental club, kick-starting private eco-tourism initiatives and beach activities.	Municipality	Youth group written plan	Resources needed for implementing activities	Starting mid-2004	
	Local community members	Detailed plan of activities, budget and partners	Media		
	NGOs		Fundraising		
	Cultural Heritage experts	Organization of youth groups per project	Contacts with other NGOs or UNDP		
	Eco-tourism experts				
Output	2. Municipal members are supported through training, information sharing and networks.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Ministries, NGOs and experts to support municipal members in municipal action planning, fundraising, documentation and mobilizing community members for local development.	Municipality	Skill needs identification	Training workshops	Continuous	
	Community development experts	Municipal development resources			
2. Municipal members to participate in relevant workshops with other municipalities and to select model projects or activities for implementation locally.	Municipality	Lessons learnt from other municipalities.	Exploration visits	Starting mid-2004	
	NGOs		Experience sharing meetings		
	Municipality Unions				
Strategic objective	7. LOCAL SUSTAINABILITY INDICATORS DEVELOPED AND MONITORED.				
Output	1. Sustainability indicators monitored and reflected in municipal action plan.				
Activities	Resources needed				Remarks

	Human	Information/Training	Logistics	Timeline	
1. Municipality to set annual plan to monitor list of indicators identified through CAMP.	Municipality	Draft of municipal priorities	Community meetings	Jan-04	on-going
	Local community members	Recommendations of CAMP project			
	Thematic experts				
	Laboratories				
	University students				
2. Annual review of indicators and historical data collected.	Municipality	List of sustainability indicators	Monitoring tracking file	On-going	Check intervals for monitoring in list
	Thematic experts				
	Related ministries				
3. Municipality to integrate local sustainability indicators in its annual municipal action plan and to regularly review indicators in light of new developments.	Municipality	List of indicators		On-going	
	Thematic experts	Municipal action plan			
	Related ministries	Historical data of indicators			
	Universities				
	Local community				
Output	2. Advocacy and media plans around sustainability indicators implemented for positive change.				
Activities	Resources needed				Remarks
	Human	Information/Training	Logistics	Timeline	
1. Municipality to carry out advocacy plan with related ministries and authorities.	Municipality	advocacy action plan	Planned meetings and pressure group sessions	On-going	Review dates of plan
	Thematic experts				
	Related ministries				
2. Involve media in shedding light on priority indicators and strategies to promote positive change at local coastal levels.	Municipality	advocacy action plan	Press releases	On-going	Review dates of plan
	Thematic experts	Current historical data	TV programmes		
	Related ministries				

