

PART II

THE BCHARRE HIGHLANDS

Chapter 6 The Regional Setting – Bcharre Highlands

6.1 The Natural Environment

6.1.1 Existing Conditions

(1) Topography

The study area is considered as a mountainous region, which is 47 km away from Tripoli at the coast and about 115 km from the capital Beirut. The study area could be divided into two main topographic units:

- The Valley: this unit includes the Valleys of Qadisha and Qannoubine including the Qadisha River. It has an altitude range of 900 to 1400 meters.
- Elevated areas: this unit includes the villages situated above the valley starting from Hadath el Jibbe passing by Bcharre and reaching Ehden. This part has an altitude range of 1400-1900meters.

(2) Soil Erosion

Severe soil erosion is not found in the study area.

(3) Hydrogeology and Groundwater

The valley is well developed in terms of karstification. The existence of fracturing systems within the carbonate rocks leads to develop a spectrum of karstic conduits along the weak surfaces. Surface karstic features are well observed in the Valley such as holes, pits, cavities, galleries, and natural bridges.

(4) Fauna and Flora

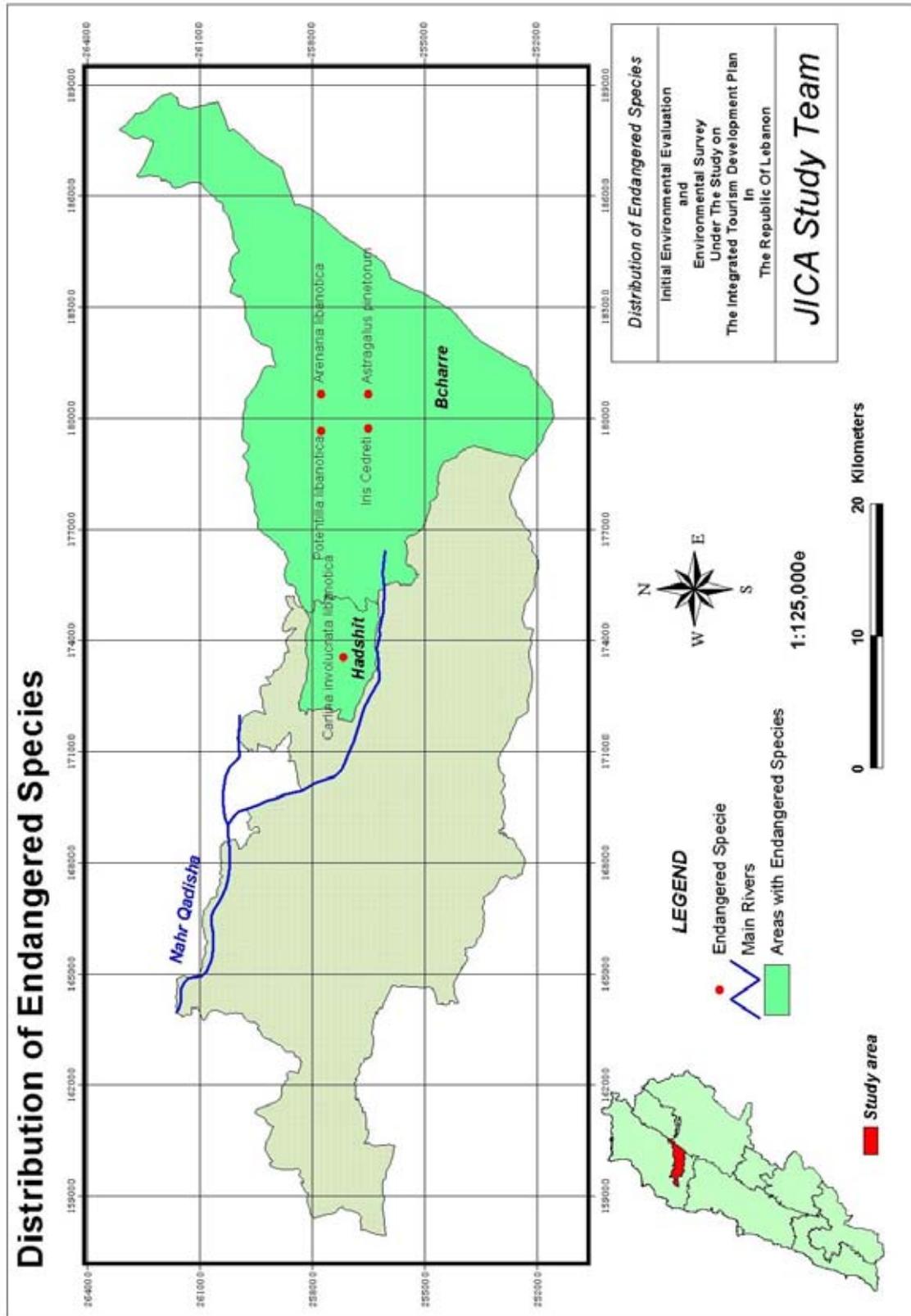
The Qadisha Valley (lower elevations 1000-1500m) is covered mainly by a community of *Quercus calliprinos*. In Qadisha, on higher altitudes (on the slopes of the valley) *Quercus infectoria* is present in addition to *Quercus calliprinos*. The tree grouping in the altitude between 1100 and 1500 m corresponds to the forests which include the following species: *Cytisus syriacus*, *Adenocarpus complicatus*, and *Halimium umbellatum*. The zone (between approximately 1500 and 1800 m of sea level) can be defined as that of the Cedars of Lebanon and the Fir tree of Cilicia. According to the 2000 IUCN Red List of Threatened Species, only the Cedars of Lebanon (*Cedrus libani*) is considered an endangered species in Lebanon. Five endangered species (regarding flora) were reported in the study area as shown in Figure 6.1.1. The rare species or those very close to extinction including amphibians, reptiles and birds were not reported in Bcharre.

(5) Hydrology

The Bcharre qaza is endowed with surface water streams and several springs. The Abu Ali River is one of the major rivers in North Lebanon and its main water sources are from Bcharre springs and melting snow. The Qadisha Spring has formed a natural cave of

around 550 meters of horizontal development. The Abu Ali River drains at the Tripoli Bay feeding the Mediterranean Sea. The study area is rich in major and minor springs that are contributors to the Qadisha River.

Exhibit 6.1.1 Distribution of Endangered Species

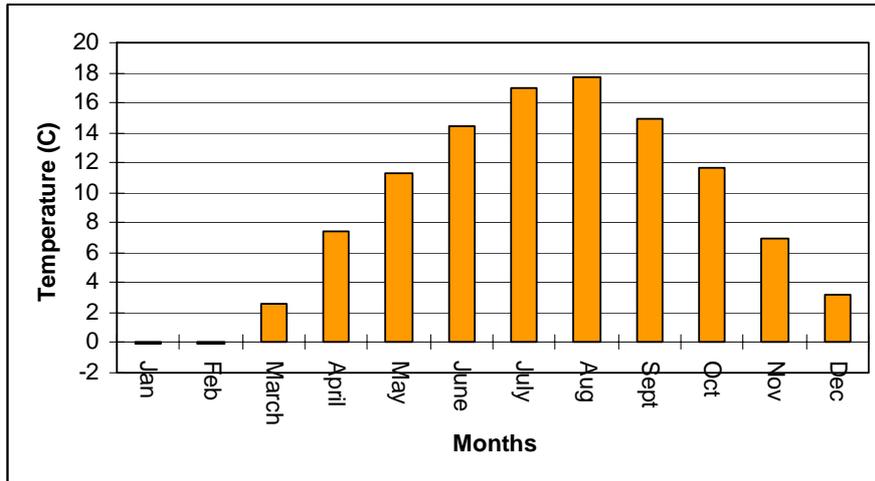


Source: JICA Study Team

(6) Meteorology

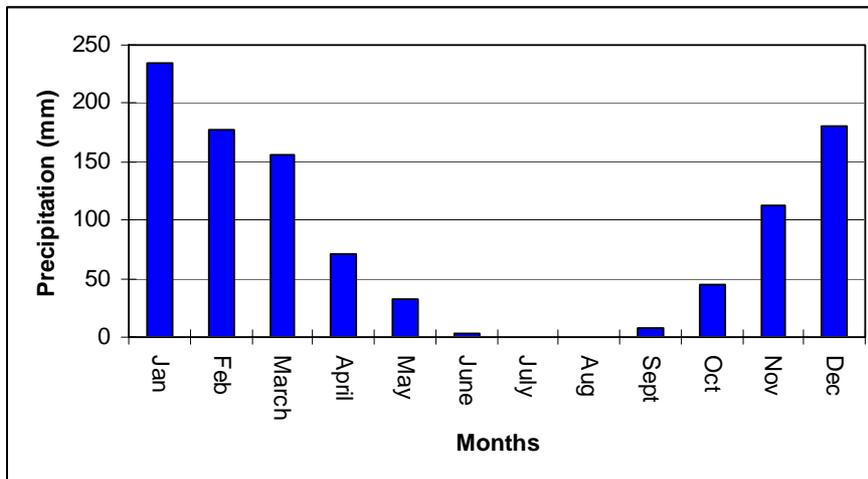
There exists only one meteorological station in the study area that records wind parameters and it is located at the Cedars. The wind speed varies throughout the year from 0 to 15 m/seconds. The average temperature is as shown in Figure 6.1.2, and Figure 6.1.3 shows the average monthly precipitation in the study area based on the stations in the Cedars and Bcharre.

Figure 6.1.2 Average Monthly Temperature



Source: Atlas Climatique du Liban, 1982

Figure 6.1.3 Average Monthly Precipitation



Source: Atlas Climatique du Liban, 1982

(7) Landscape

The Qadisha Valley has a rich landscape. Its landscape is characterized by high rocky cliffs, waterfalls, the Cedars grove, the widespread caves and sinkholes, vegetation, old monasteries and traditional villages that form a harmonized equilibrium with its mountains. Hasroun, Hadath el Jibbe, and Hadchit villages are some of the villages that preserve their traditional architecture where houses are made of stone with two to three floors and red tiled roofs.

(8) Air Pollution

The JICA Study Team surveyed air contamination at five locations (Bcharre, El-Arz, Hasroun, Hadath el Jibbe and Ehden) in Bcharre during a 48 hour period each from 28 July 2003 (Mon) to 5 Aug 2003 (Sun). While CO and NO₂ concentrations were found to be within standards at all times, SO₂ and TSP concentrations exceeded standards in some instances.

(9) Water Pollution

The JICA Study Team carried out the water quality survey. Five major springs in the study area and five locations along the Qadisha River were selected. Water samples were analyzed for physical properties (turbidity, conductivity, and color), aggregate properties (hydroxide alkalinity, bicarbonate alkalinity (HCO₃⁻), and total suspended solids (TSS), inorganic parameters (pH, calcium, chlorine, ammonia, total nitrogen, and sodium), organic parameters (biochemical oxygen demand (BOD₅) and chemical oxygen demand (COD), microbiological parameters (total coliforms and fecal coliforms), and silica and oil content. Pollution from sewage discharge is evident from the large value of fecal coliforms identified, especially in the surface water samples.

(10) Soil Contamination

The soil types in the study area have been classified according to their texture into five different classes. Terra Rossa soil is mainly covering the part bordering the valley. There is however limited information available on soil contamination [source: *Soil Map of Lebanon* (Geze)]

(11) Noise and Vibration, Land Subsidence, Offensive Odor

No data on these items exists in the study area.

6.1.2 Initial Environmental Examination

(1) Screening and Scoping

i) Screening

Screening and scoping were carried out using the JICA Format with existing and new surveyed data. Purpose of screening is to identify potential environmental problems with regard to the proposed projects. As a result of screening, further environmental examination is judged necessary. Details of each factor are shown in Table 6.1.1. Based on examination of screening as presented and discussed in Table 6.1.1, a scoping procedure for further examination was carried out and the results are presented in the last column.

Table 6.1.1 JICA Format for Screening (Tourism) in Bcharre

Environmental Item		Description	Evaluation	Remarks (Reason)
Social Environment				
1	Resettlement	Resettlement due to land occupancy (transfer of rights of residence/land ownership)	(U)	Approximately twenty vendors may be relocated because of the establishment of a buffer zone; need to survey for houses.
2	Economic Activities	Loss of bases of economic activities, such as land, and change of economic structure	(N)	No negative impacts. Positive impact is assumed.
3	Traffic and Public Facilities	Impacts on schools, hospitals and present traffic conditions, such as the increase of traffic congestion and accidents	(U)	Some increase in traffic volume is expected. There can be some mitigation measure for this.
4	Split of Communities	Community split due to interruption of area traffic	(N)	No big traffic flow is expected.
5	Cultural Property	Damage to or loss of the value of churches, temples, shrines, archaeological remains or other cultural assets	(U)	Positive impact. Historical sites in the Qadisha valley will be well maintained under a site management plan.
6	Water Rights and Rights in Common	Obstruction of fishing rights, water rights, rights of common	(N)	No change of rights to drinking or irrigation water.
7	Public Health Condition	Deterioration of public health and sanitary condition due to generation of garbage and the increase of vermin	(N)	No change expected with Public Health Condition.
8	Waste	Generation of construction and demolition waste, debris and logs	(N)	No significant construction works are expected.
9	Hazards (Risk)	Increase in risk of landslides, cave-ins and accidents	(N)	No significant construction works are expected.
Natural Environment				
10	Topography and Geology	Changes of valuable topography and geology due to excavation or filling work	(N)	There is no factor regarding this item
11	Soil Erosion	Topsoil erosion by rainfall after reclamation and vegetation removal	(N)	There is no factor regarding this item
12	Groundwater	Change of distribution of groundwater by large-scale excavation	(N)	There is no factor regarding this item
13	Hydrological Situation	Changes of river discharge and riverbed condition due to changes of habitat conditions	(N)	There is no factor regarding this item
14	Coastal Zone	Coastal erosion and sedimentation due to landfill or change in marine condition	(N)	There is no coastal zone.
15	Fauna and Flora	Obstruction of breeding and extinction of species due to changes of habitat conditions	(U)	According to the 2000 Red List, the Cedars of Lebanon (<i>Cedrus libani</i>) is in the Study areas.
16	Meteorology	Changes of temperature, precipitation, wind, etc. due to large-scale land reclamation and building construction	(N)	There is no factor regarding this item
17	Landscape	Changes of topography and vegetation due to reclamation. Deterioration of aesthetic harmony by structures	(U)	The designs of new tourism new facilities are not clear at present, but design guidelines are recommended.
Pollution				
18	Air Pollution	Pollution caused by exhausted gas or toxic gas from vehicles and factories	(U)	The increase of tourist vehicles is not clear compared to present traffic volumes.
19	Water Pollution	Pollution by inflow of slit, sand and effluent into rivers and groundwater	(U)	How to manage the tourist excreta, is not clear at present but treatment is necessary.
20	Soil Contamination	Contamination of soil by dust and chemicals, such as herbicides	(N)	There is no factor regarding this item
21	Noise and Vibration	Noise and vibration generated by vehicles	(N)	The increase of tourist vehicles is not clear comparing with present amount.
22	Land Subsidence	Deformation of land and land subsidence due to the lowering of groundwater table	(N)	There is no factor regarding this item
23	Offensive Odor	Generation of exhaust gas and offensive odor by facility construction and operation	(N)	There is no factor regarding this item
Overall Evaluation: Either IEE or EIA is necessary for the project implementation ?			(Y)	EIA is necessary for the project implementation because that the evaluation column includes (Y and U).

Y: Yes N: No U: Unknown

Source: JICA Study Team

ii) Scoping

The evaluation of the following eight items could not be carried out because the details of proposed projects were not decided. Therefore, extent of impact is unknown, but a further examination through EIA are needed. The impact may become clear as the study progresses.

- a. Approximately twenty vendors may be relocated because of the establishment of a buffer zone; a survey for houses is necessary.
- b. Traffic and public facilities: Some increase in traffic volume is expected. There can be some mitigation measure for this.
- c. Cultural property: Positive impact is expected. Religious and other heritage sites in the Qadisha Valley will be well maintained under a management plan.
- d. Fauna and flora: The project detail is not clear for area around the Cedars Forest and the endangered species.
- e. Landscape: The detail of tourism facilities is not clear.
- f. Air pollution: The increase of tourist vehicles is not clear compared with present volume.
- g. Water pollution: How to manage human wastes by tourists is not clear at present.
- h. Noise: The increase of tourist vehicles is not clear compared with present volume.

6.1.3 Key Problems Related to Tourism

Key problems and proposed measures are shown in Table 6.1.2.

Table 6.1.2 Proposals Related to Environment

Location	Key deficiency	Proposed Measure
Qadisha Valley	Water pollution by sewage	Sewage management at towns
The Crown Villages	Air pollution and noise by traffic	Village bypass roads
	Animal accident by traffic	Road improvements for animal safety
The Cedars Reserve	Insufficient protection the Cedars	Buffer zone for Cedars
The Cedars Ski Area	Water pollution by sewage	Sewage management at ski area

Source: JICA Study Team

6.2 Tourism Resources and Products**6.2.1 Key Resources**

The region's key resources are summarized as follows. They are reviewed with respect to the key segments of tourism or user groups that are making use of them. This reflects the customer-focused approach used in this analysis.

Table 6.2.1 Key Resources and Products in Bcharre Study Area

User group	Key resources	Relevant travel product, comment
Cultural	Symbolism of Cedars & of Monasteries, Gibran House and Museum, crown towns, festivals, Saydet el Karm structures, historic village architecture	Heavy Lebanese/Diaspora recreational visits. Inclusive tour groups on part day visits to valley, museum and Cedars grove ex-Beirut/Tripoli.
Nature (hikers/walkers youth groups, etc)	Qadisha Valley trails and general beauty of valley terraces and treed landscape Cedars Forest	1 and 2-day walking tours of valley floor in organized groups. Youth associations, NGOs and eco-tourist operators are sponsoring trips. Tours start either at valley floor or up at valley rim. Trail signage is poor; total absence of toilet facilities [except in restaurants & in Qannoubine monastery]
Pilgrims	Mar Lichaa, Mar Antonius, Qannoubine Patriarchate Museum	Full or half day visits by car/bus in family groups, church or school groups. Good road access, adequate signage, exhibits, shops, toilet facilities.
Snow skiers	Cedars ski resort, slopes	Ski packages using chalet, hotel lodging. Also cross-country skiing for enthusiasts. Limited ski area with only 4 lifts.
General [families]	Qadisha Valley floor, riverside areas. Qadisha Grotto	Daytime family outings along Qannoubine river with picnicking creating noise, litter, parking congestion along valley road.

Source: JICA Study Team

The key resources are made up of the fabled World Heritage site – the Cedars Forest and the revered Qadisha Valley with its religious structures - and the popular Gibran Museum. However, in essence it is the striking natural beauty of this area that is its prime resource from the valley floor up to the ski slopes above the Cedars grove. The crown villages also represent a key resource; they derive their charm also in part from their dramatic location on the valley rim, and in part from their pleasing urban fabric and architecture.

A major resource, perhaps the most important one, is the meaning and deep symbolism of both the valley and of the famed Cedars grove. The valley is an open-air sanctuary for the Maronite faith and offers a fascinating history of the survival and development of this faith. The Cedars grove is perhaps the most famous and revered of the few remaining groves in Lebanon, and draws a tremendous flow of all types of Lebanese citizens and foreigners. This master plan sets forth a program to fully preserve and better present the meaning contained in these very special places.

6.2.2 Strengths and Weaknesses

(1) Key Strengths

The following factors relate to the area's strengths with respect to its competitiveness as an international tourism destination.

- Scenic beauty of Bcharre: It offers a unique combination of a dramatic gorge with green terraces, situated below sweeping mountain landscapes.
- Beauty of the crown villages: Some of these offer pleasing architecture, atmospheric churches and town centers, spectacular valley views and delightful festivals celebrating local traditions and personages.
- Symbolism of Cedars and Qadisha Valley: This is a powerful, unique and lasting advantage for Bcharre drawing the cultural visitors.

The first represents its natural beauty, the second a spiritual strength of the man-made environment, and the third a unique feature found nowhere.

(2) Key Weaknesses

The following represent weakness of the area.

- Incompatible recreational activities in the valley: Families and groups of walkers are using the valley floor for recreational purposes creating a disrespectful atmosphere at times and causing some damage to the road and riverside areas.
- Minimal interpretive information: For persons of different ages and cultures there is a minimum of posted explanatory information to enrich the value of visits to key sites and make them more memorable.
- Fragmentary efforts to promote: This unique combination and strengths is not promoted as such.

The area needs to take some control over the various recreational activities inside the valley [picnicking, hunting, partying] of the local population, which could be easily accommodated elsewhere to spare the heritage areas any further degradation.

6.3 Infrastructure and Facilities

6.3.1 Infrastructure

In this subsection, i) transport infrastructure (road system, public transport, terminals) and ii) social infrastructure (water supply and sewerage, electricity, and telephone) are examined from a tourism point of view.

(1) Existing conditions

iii) Transport Infrastructure

Considering the Inland and mountainous location, both accessibility from outside Qaza, and local roads are examined separately. There are three access routes, i.e. from Chekka, Tripoli and Bekaa Valley. Every route brings tourists through a hilly and narrow road with panoramic views. The route from Chekka is going to be upgraded by CDR within 2004. The Ehden bypass completed in 2003 has shortened the access time by 10 minutes from Tripoli to Bcharre. The access from Bekaa is closed during winter, and the physical condition is inadequate for tour passengers. The present capacity, two lane

with a passing lane for plain area and two lanes for mountain area is considered adequate for the future demand in 2015¹.

For local roads, there are four important sections for tourism; a) traverse road southern section, b) northern section, c) the Cedars access, and d) access road to Qadisha Valley. The sections a) and c) are going to be improved by CDR in 2004, particularly with a bypass in Bcharre, Hasroun, Diman and Hadath el Jibbe sections. Along b) narrow sections of less than seven meter width constitute bottlenecks. Along d) the entire stretch is below seven meter width, inadequate for safety equipment (railing, mirror, etc.), and difficult to pass.

The present traffic demand on the traverse road is 415 vehicles per hour in peak² for both directions, half the capacity of the existing road. In Bcharre, Hasroun and other towns, however, on-road parking is usually observed due to the shortage of parking reducing the road capacity. It is expected that the bypass road will help to create comfortable town space.

With regard to public transport, there is no direct service from Beirut, but only via Tripoli. Informal transport utilizes a terminal center developed spontaneously in the Bcharre town.

(2) Social Infrastructure

i) Potable water

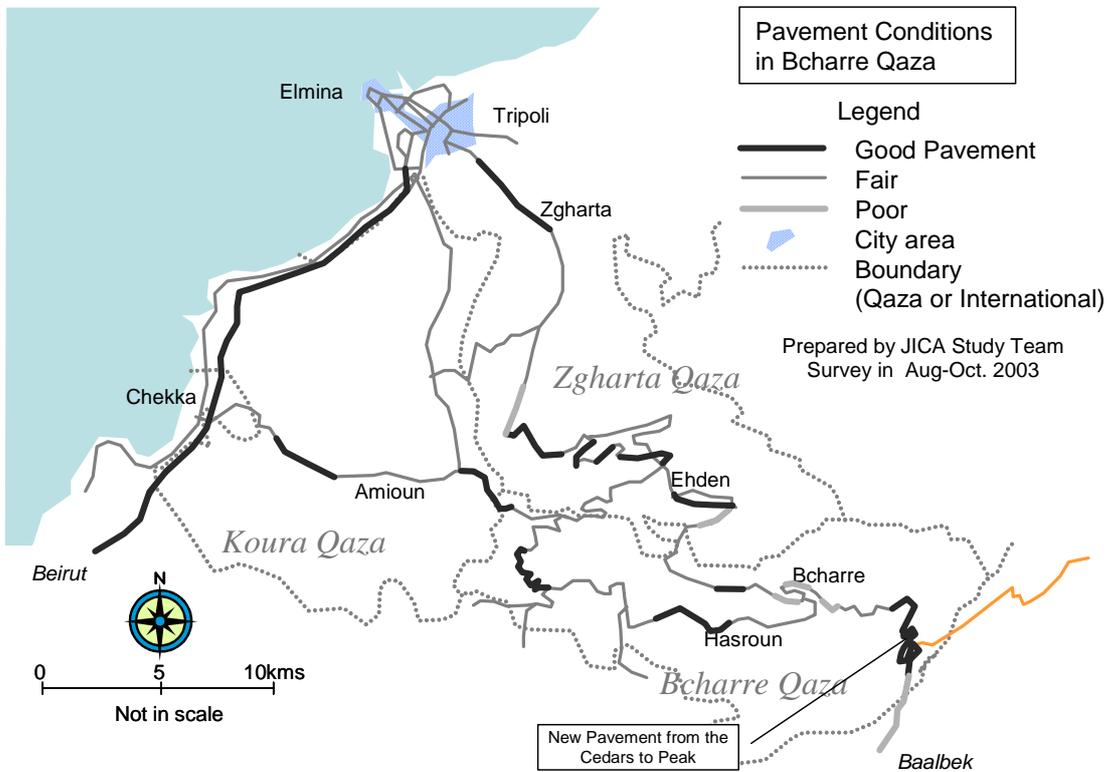
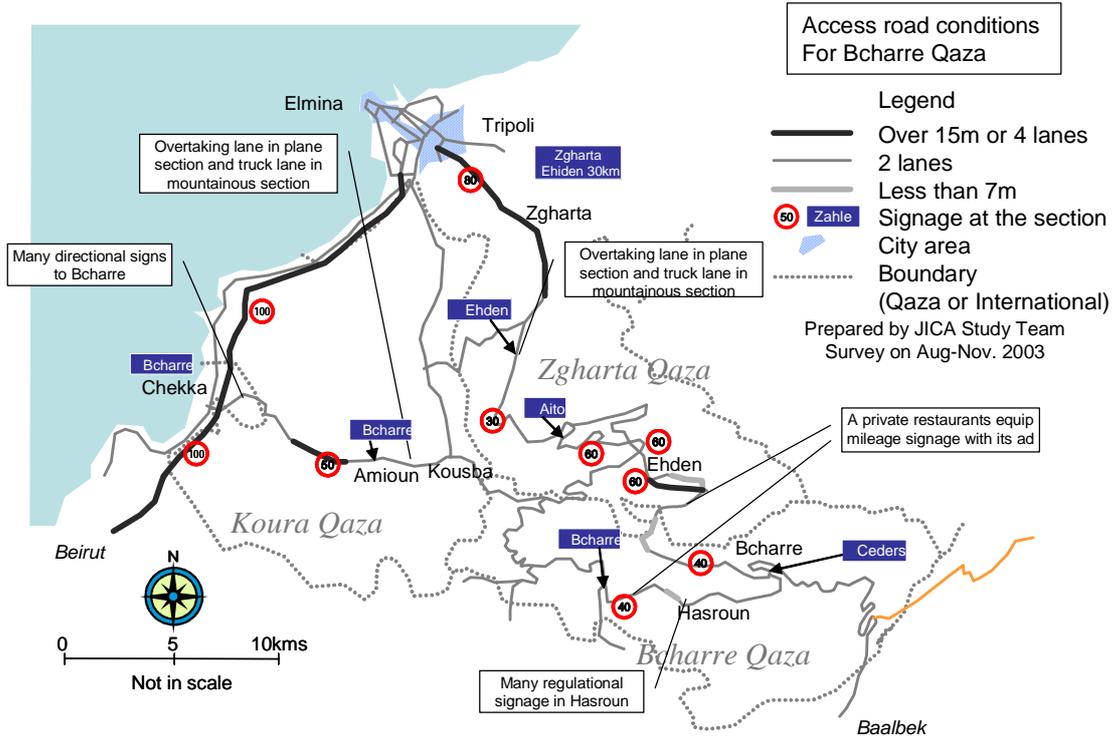
Municipalities maintain the facilities based on rich water resources. According to the IEE of this study, the upper catchment areas are kept free from pollution. The Water Authority of Bcharre is legally responsible for the potable water supply system, but practically, municipalities conduct the role of the authority. In 1995, the Ministry of Hydraulic and Electric Resources (currently the Ministry of Energy and Water), conducted water supply management master plan, feasibility study and detailed engineering design for the Bcharre qaza. There is no water treatment plant in the Bcharre qaza. Most potable water supply is provided by local spring water.

Bcharre municipality and El Arz village residents are connected with the existing water supply network composed of 1.4km of old pipe installed in the early 20th century and 666m of house connection provided in 2002. Basically all the area is covered with the supply network, but only 40 % of residents benefit from continuous water supply because of low service level. There is practically no maintenance on main and distribution network, which causes high water losses. Rusted pipes freeze in winter because they are not set deep enough in the ground causing also, irrigation, flood water and sewerage intrude in the potable water.

¹ DAH Naji Taleb, Bahsassa-Kousba-Bcharre-Cedar Road improvement for CDR, 2001

² According to the survey of JICA Study Team, a section west to Bcharre comes up 415 vehicles during 12 pm to 1 pm on 24 September, Sunday, 2003.

Figure 6.3.1 Access Road Condition for Bcharre Qaza



Source: JICA Study Team

In the Hadchit municipality, the potable water network was installed in 1960s, and major maintenance was done in 1990s. During summer days, water supply is restricted to 6 hours.

ii) Sewerage water

The North Lebanon Water and Wastewater Authority is responsible for the sewerage development, but practically, municipalities are taking care of the wastewater treatment. The Bcharre municipality has developed about 5,000 m wastewater collection network in 1950s, which covers only 10 % of its built up area at present. There are two main lines, each line directed to Qadisha valley without any treatment. CDR has equipped another main sewer line under sidewalk for its road development project in 1992, which are not used yet due to lack of house connection.

The Hadchit municipality's system, consisting of 4,000 m asbestos or PVC pipes, covers 35 % of its built up area. There is no treatment before discharging to the Qadisha valley. The Hasroun municipality has 2600 m collection network that directly discharges into the valley. However, due to the infiltration and vegetation uptaking, discharged effluents do not reach the river in the Valley so far. There are about 20 houses using septic tanks, but the municipality is trying to forbid these tanks when their altitude is higher than the potable water spring level.

iii) Other

Regarding garbage collection, municipalities contract with private sanitation companies. According to a survey, 80 % of garbage consists of organic matters, and therefore composting may be a viable means for treatment. The municipalities are served by electricity, subscriber telephone and mobile phone services.

(3) Required Solutions

The sensitive scenery and precipitous terrains present challenging conditions for infrastructure development in Bcharre. Water quality is still adequate due to small population and ample and rapid flow of river water. It is necessary to equip some treatment facilities combined with awareness education in order to expand the tourism, particularly for development in ski area highlands, newly developed accommodation and public facilities. Advanced septic tanks for small demand, wetland treatment, and composting system are adequate options. Large-scale development for the whole area is not necessary urgently.

i) **Types of programs****Table 6.3.1 Types of Programs**

Types of Program	Policies Needed	Key Actor
Safe and Comfort atmosphere in town	<ul style="list-style-type: none"> • Bypass development and Traffic management in town. • Parking area development for public transport. • Footpath improvement. 	Municipality, MOI, WB
Capacity building for Qadisha valley access	<ul style="list-style-type: none"> • Entree control and Alternative system development (Visitor's parking + Bus ride, telepherique, etc.). • Safety improvement of existing access. 	Municipality
Stable access from broad area	<ul style="list-style-type: none"> • Signage improvement (Incl. Chekka and Tripoli area). • Safety improvement (Curved Mirror, railing, marking). 	CDR, MOPWT
Portable water quality control	<ul style="list-style-type: none"> • Land use control of water catchment's area. • Regular Quality Control. 	MOPWT, MOE, Water Authority
Sewage Development	<ul style="list-style-type: none"> • Prioritization for Ski area, New development, and public facilities. • Introduction of educational elements: Advanced septic tanks, wet-land treatment, etc. • Treatment development fund based on the entrance income. 	Municipality
Easy Telecommunication	<ul style="list-style-type: none"> • Easy Access for international network 	Private syndicate

Source: JICA Study Team

ii) **Key actors to implement programs, policies**

MOI and the World Bank established a loan for municipality road development from 2001. Sewage treatment plant usually needs large fund, but proposed small treatment package would stimulate private investment, and realize treatment in advanced stage. The education to raise environmental awareness is necessary for local residents, young generation and tourists.

(4) Key proposed Measures

Table 6.3.2 Proposed Measures

Location	Key Deficiency	Proposed Measure
Qadisha valley	Unstable access Low awareness of water quality	Safety development
		Entree control
		Park and ride development
		Site management
Crown Villages	Bad traffic environment in city Low quality transport service for tourist	Bypass development
		Traffic management
		Park and circulation bus system
	Little Circular facility on the rim	Pedestrian circular, View point
Cedars Reserves	Poor site management of adjacent area	Bypass development
Ski area	Low awareness of water quality	Treatment plant Site management

Source: JICA Study Team

6.3.2 Facilities

This section includes tourism facilities such as lodging, dining, cultural, entertainment, resort, nature reserve and others that are provided in the Qadisha Valley, villages, Cedars Reserve, and Cedars ski area. Following the resources, key deficiencies are identified and proposed solutions (policies and programs) are presented. A comprehensive chart of the villages, Valley, cultural and built heritage and commentary follows the text.

(1) Qadisha Valley

The area is a quiet, natural, religious heritage site with agricultural terraces, groves of trees, and an informal trails system. In accord with its symbolism and image, it offers very little lodging and dining and no entertainment facilities. The Maronite faith has a long history in the Valley, and its monasteries and fragile frescoes and hermit caves dot the landscape. Some of the monasteries offer interesting religious exhibits. A small grouping of historic buildings called Saydet el Karm across the Valley gorge from Qannoubine Monastery offer an intact cultural landscape. Within the region is the Qadisha Grotto, which is being followed up on by MOT.

Key deficiencies – Lack of site management, visitor information and control of circulation, protection for some of the historical resources such as frescoes and stone buildings, informal trails with little directional or interpretive signage, damaged olive and grape terraces, and few toilets for hikers.

Recommended solutions – Site management plan that provides organized visitor education, management, circulation (organized vehicular access and improved and signed pedestrian trails) and protection for the World Heritage site, including a parking area and visitors center/exhibition galleries at the formal entrance to the site.

Preservation and civic re-use, perhaps a small local heritage museum with very limited family based rural gite lodging, of the Saydet el Karm stone structures.

(2) The Crown Villages

There are a number of villages that ring the Qadisha Valley, most of which are relatively small. Some have strong historic character with stone buildings and red tiled roofs. Most provide panoramic views of the Valley. Ehden, which is outside the Bcharre Qaza but is a village at the crown provides the best tourism resources, including a central plaza, restaurants, and hotels. Bcharre and Hasroun also offer lodging and dining with night-time entertainment, but there are very few shops in any of the villages. The most organized trail into the Valley leads from Diman, summer home of the Maronite Patriarche, and there are religious signs along the trail. Less well organized trails lead from a few of the other villages. The strongest sense of cultural identity emanates from the poet, Gibran Khalil. His childhood home in Bcharre is now an interesting little museum, and his art, furniture and tomb are located in a formal museum near Bcharre.

Key deficiencies – Lack of visitor information facilities to introduce individual village identities and resources to the visitor; lack of historic preservation regulations including design guidelines to preserve local character and control cityscapes (degraded by circulation and electrical lines); few hotels, restaurants, or shops with interesting or authentic character.

Recommended solutions - Gibran House Museum needs cleaning, painting and better interpretation; Bcharre plaza needs re-design with renovation of existing buildings, to include a handicrafts souk; directional signage connecting the villages and directional and interpretive signage within the villages to guide tourists to resources.

(3) The Cedars Reserve

The groves of trees, though currently limited, are being replanted, and the reserve has a pleasant hiking trail that winds through the vegetation. Because it is a reserve near the Cedars ski resort, appropriately there are no lodging, dining, or entertainment facilities.

Key deficiencies - There is a lack of presentation of visitor information at the entrance to reserve/trail that provides the visitor with a sense of the importance of the cedar tree historically and symbolically (national flag). There is also nothing that indicates to the visitor that the Cedars of the Lord are linked to the Qadisha Valley through World Heritage status. Souvenir vendors located in kiosks line the road at the trail head, giving the Cedars a very commercial rather than religious or historical environment.

Recommended solutions - Creation of a protective buffer zone around the Cedars grove to include relocation of souvenir vendors outside the protected zone but still close to the tourists; development of a small visitors information center at the trail head with information on the historic and religious significance of the Cedars.

(4) Cedars Ski Area

The ski area is Lebanon's oldest and highest, extending from 1,850 to 3,087 m, with a natural snow base that outlasts the other ski areas. There are few shops and no

cultural facilities. The ski area offers a number of hotels, restaurants, and night-time entertainment during the winter. There are a few private second homes scattered in the hills near the resort. The Cedars Resort, a public shareholding company, includes a complex of three types and levels of lodging from rustic log cabins (La Petite Ourse) to medium level inn (La Grand Ourse) to the L'Auberge Des Cedres and the Lodge Restaurant. The complex is operated by Shore and Mountain Resorts and markets itself on a relatively sophisticated web site. The cedars resort offers year-round activities including horse back riding, hiking, paragliding, etc.

Key deficiencies: Lack of positive, cohesive village design; no shopping; old and outdated lifts.

Recommended solutions: Comprehensive master plan for the ski resort to create a strong sense of an aesthetically appealing ski village with associated amenities and lifts. If well designed with good restaurants, lodges, shops, and upgraded lifts, with better marketing connections and transport to nearby ski areas, the Cedars ski resort should be able to draw skiers from throughout the region and Europe and provide year-round jobs for the nearby villagers.

Photo 6.3.1 Qadisha Valley

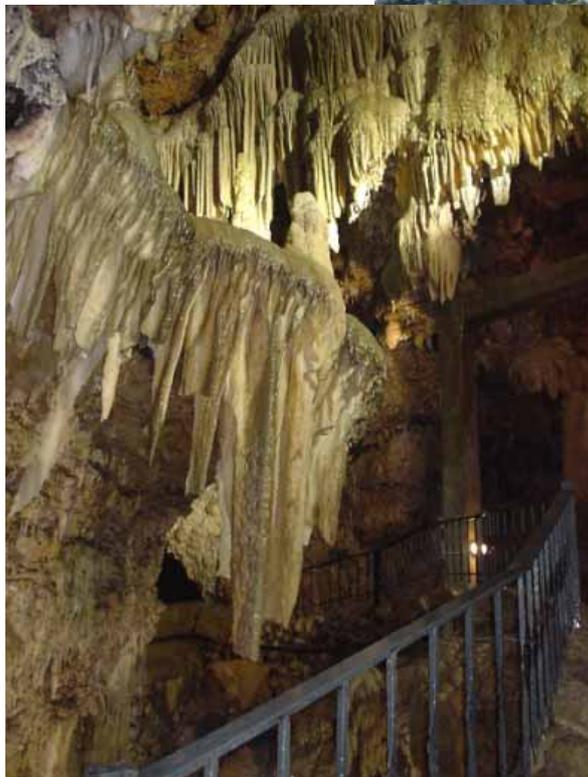
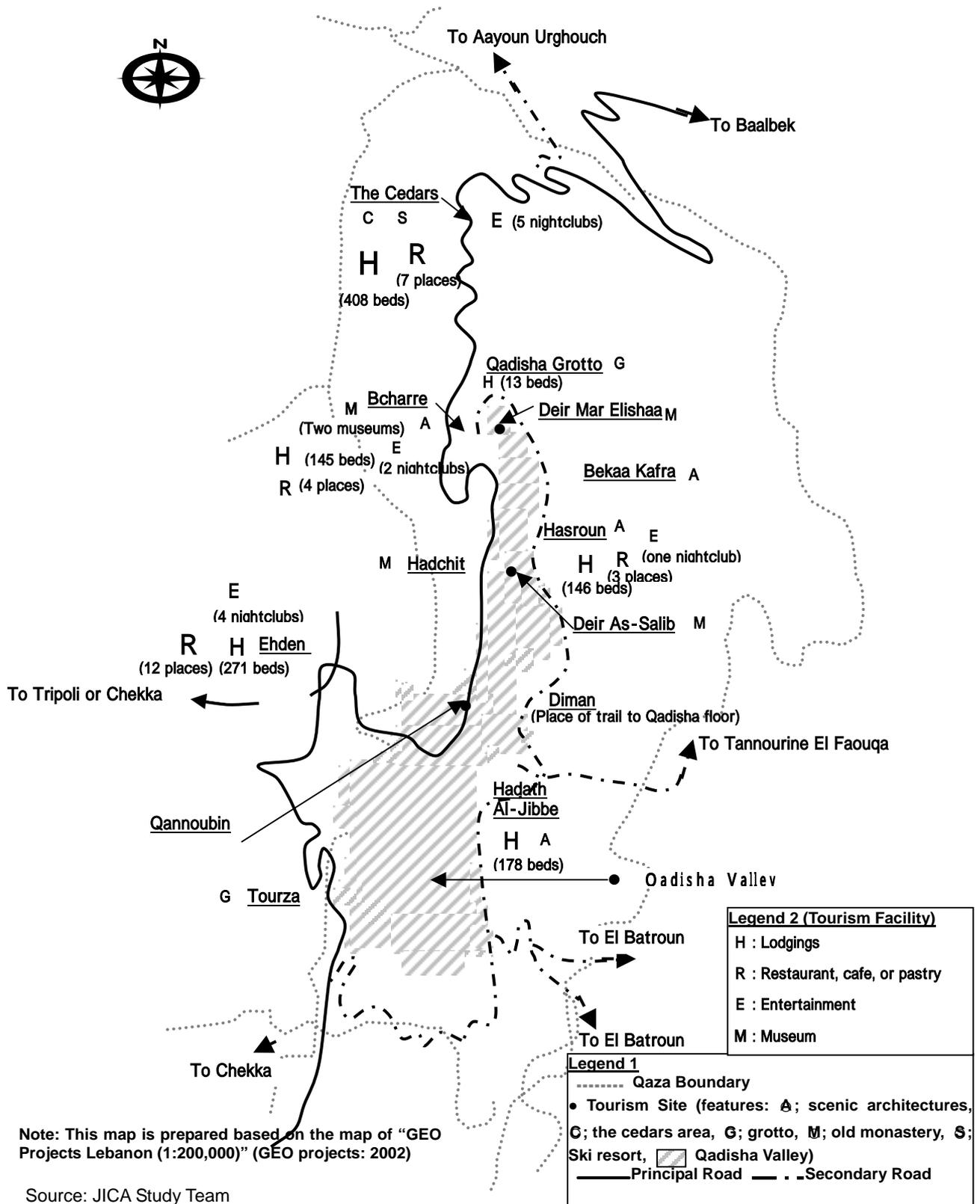


Photo 6.3.2 Qadisha Grotto

Figure 6.3.2 Tourism Sites of Bcharre Qaza



6.4 Demand

6.4.1 Current Patterns

Current patterns of tourism activities are reviewed. This study estimates visitor volume into Bcharre on the basis of a set of reasonable assumptions in the absence of consumer behavior data. Key observations and these assumptions are summarized below.

The Qadisha/Cedars hotel capacity is summarized as follows³:

- The Crown villages: eight properties with 200 rooms/469 beds in three centers of Bcharre (two properties), Hadath (3) and Hasroun (3)
- The Cedars ski area: five properties with 121 rooms/305 beds
- Combined capacity: thirteen properties with 321 beds/774 rooms
- The average annual occupancy (AAO) for Qadisha accommodations ranges from 30, 40, 50, 70 to 90% in peak months (July, Aug.) and in 10 to 20% (Jan., Dec.) during low months. When some average length of stay indicators (unknown yet) become available, similar exercise as in the Grand Kadri Hotel of Zahle will be made to estimate guest arrivals (overnight/more) in Qadisha.
- The occupancy (AAO) for Cedars properties ranges from 10, 20, 40, 50 to 60% in low months (July, Aug.) and 80 to 90% in peak months (Jan., Dec.).
- The Gibran museum, Bcharre has 35,000 to 50,000 visitors annually on average. Majority Lebanese visit during the six peak months (May to Oct.) with few visitors in winter months.

Two exercises have been made to estimate visitor distribution by seasons/weekend/weekday as shown in Table 6.4.1.

Table 6.4.1 Estimation of Annual Visitor Volume - Bcharre

Total Visitors	High Season		Low Season	
35,000	28,000		7,000	
Per day	153		38	
Weekend/ Weekdays	Weekend 380 a day	Weekdays 60 a day	Weekend 95 a day	Weekdays 15 a day
RT ratio	1.1%			
50,000	40,000		10,000	
Per day	220		55	
Weekend/ Weekdays	Weekend 540 a day	Weekdays 90 a day	Weekend 135 a day	Weekdays 23 a day
RT ratio	1.1%			

Source: JICA Study Team Estimates

³ Source: Ministry of Tourism, *Hotel Guide 2003*.

One of the established “rules of thumb” [RT] in facilities planning (visitor number at tourist attractions/facilities), tentatively called “RT ratio” offers the following:

- The maximum visitor number a day of an attraction/facility comes within 1.0 to 1.5 % of the total annual visitor volume; and
- The same ratio comes within 3.0 to 5.0 % for a site/facility where high seasonal fluctuation is the norm (such as ski runs).

The Gibran museum’s RT ratio falls exactly within this standard RT of 1.0 to 1.5%, underlining reliability of the source numbers (annual average visitors of 35,000 to 50,000)⁴.

Because there is an absence of consumer surveying that would yield information on visitor motives, and critical behaviors such as spending and type of lodging, it is not possible to readily estimate domestic versus foreign visitor volumes and day-trip versus overnight visitor volumes.

6.4.2 Potentials

It is apparent from the survey of the area’s potentials that the following types of tourism products show substantial potential for Bcharre.

- Religious/pilgrim visitors: Lebanon can attract international religious groups visiting the Holy Land destinations if more services and more meaningful experiences are offered in the Bcharre area. This is in addition to the domestic pilgrims already visiting Bcharre’s monasteries.
- Recreational activities: To spatially separate activities and reconcile needs for preservation, environmental protection and leisure, Bcharre needs to provide more leisure and recreational facilities to handle the rising volume of day visitors.
- Snow skiers: Improved and expanded facilities will build the competitiveness of the Cedars ski area and perhaps enable it to draw more international skiers.
- Cultural tours: If Bcharre provides greater interpretive content it can extend visitor stay and expenditure and even capture some overnight business that now bypasses the area. Its different cultural attractions need upgrading for this purpose.
- Eco-tourism options: Bcharre can expand the flow of nature-based hikers, walkers, skiers and even rock climbers and other sports people both inside the valley and on the mountain slopes.

The master plan presents strategies for expanding these and other types of tourism.

⁴ As to methodology, the validity of this “rule of thumb was tested with 3 archaeological sites of Baalbek, Aanjar, Niha and 1 popular tourist site of Jeita Grotto and resulted in RT ratios of 0.5% respectively for Baalbek, Aanjar, 0.4% for Niha and 1.5% for Jeita Grotto (exercise details found in the Appendix XX).

6.5 The Socio-economic Setting

6.5.1 Communities

The Qaza includes the following settlements. There are ten official municipalities including: Bazoun, Bcharre, Beqaa Kafra, Berhalioun, Bqorqacha, Diman, Hadath el Jibbe, Hadchit, Hasroun, and Tourza. The other ten villages are managed by Qaim'maqam, and they include Aabdine, Blaouza, Ban, Billa, Breesat, El Arz, Koniour, Mazraat Bany Saab, Qanat, and Wadi Qannoubine. (Ehden is not in the Bcharre Qaza.)

The Bcharre Qaza includes a Federation or Union of Municipalities, and four primary groups that function like associations or NGOs, most of which are devoted to the preservation of the cultural and natural heritage. They are the National Committee for Gibran Khalil Gibran, the Committee for Safeguarding the Environment of Bcharre (Qadisha), the Committee for the Friends of the Cedars Forest, and the Bcharre Committee for Tourism Development. To strengthen the Committee for Safeguarding the Qadisha, a reorganization took place in September to create a more effective public/private partnership. There are two other groups that focus on tourism: Agro Nim (agro-tourism) and Eco Club (eco-tourism).

The Qadisha Valley's structures are defined as religious property (Waqf), owned and controlled by the Maronite Patriarchate, the Maronite Ouadi Eshaya Order, and the Lebanese Mariamite Order. There is also land in the Qadisha Valley that is owned by the Municipality of Hadchit. The heritage houses at Saydet el Karm that are inhabited by tenant farmers (sharecroppers or metayers) are actually owned by the Patriarchate. The buildings of the Qadisha Valley are protected on Lebanon's General Register of Historic Monuments (entered March 22, 1995 by Decree).

Recognizing the joined site's (Cedars and Qadisha) outstanding universal value, the Ministry of Culture and Education/Directorate General of Antiquities requested UNESCO nomination. The site was selected to the World Heritage list as a cultural landscape with important religious attributes in 1998., with the official name of the "Quadi Qadisha (the Holy Valley) and the Forest of the Cedars of God (Horsh Arz el-Rab)." The study area is being developed currently by the Ministry of Public Works, Directorate General of Urban Planning. Qadisha Valley is classified as natural site under the protection of the Ministry of Environment under the decision No151/1 date 17/10/1997 issued by the Ministry in Environment

6.5.2 Regional Socio-Economy

(1) Population

According to the survey by UNDP and the Ministry of Social Affairs, the total number of inhabitants in the Qaza of Bcharre was 16,830 in 1996. Responses to the questionnaire survey conducted as part of the Study indicate the total Qaza population of more or less 20,000 as of 2003. These numbers are respectively much smaller than the registered population of over 30,000 as a result of outmigration. The population of the Qaza is significantly larger in summer as many migrants return, close to 50,000 according to the questionnaire survey (Table 6.5.1).

The population of the Qadisha Valley is limited to about 10 families who are tenants of the Patriarch in Saydet and the nuns at Qannoubine Monastery, both of which only reside down in the Valley in the summer.

It is interesting to note that the ratio of working age population (15-64 years old) to the total population or the labor force coefficient is 65.3 %, almost the same as the national average of 65.4 % in 1996 (UNDP/MSA). This implies that despite the significant outmigration family ties are not undermined by age-selective, often job seeking outmigration. This conjecture is supported by detailed population data provided by the municipality of Hadath El Jibbe showing almost equal numbers of mothers and fathers. Also a large number of emigrants come back to their respective home towns in summer, further ensuring the social stability as well as family cohesion.

According to the questionnaire survey, the total number of housing units in the Qaza is approximately 5,000, which may accommodate up to 30,000 populations. Thus there exist considerable vacancies on houses during winter. The total population of the municipality of Bcharre is reported to be about 5,000 in winter and 15,000 in summer, according to the questionnaire survey.

(2) Economy

According to the social survey conducted as part of the Study, the agricultural land occupies 2,426 ha or only 15 % of the total land area (161 km²) of the Qaza, decreased from 3,652 ha in 1960 (FAO, 1996). Fruit trees occupy 2,170 ha, consisting mainly of apples, citrus and pears, followed by olives, almond and grapes occupying 100 ha or less. The agricultural sector employs 19.5 % of the labor force (4,961 in total), consisting of 946 male and 20 female. Of the agricultural employment, some 40 % are engaged in apple production, producing 25,000 ton apples. Assuming the average yield of 25ton/ha, a total of 1,000 ha is devoted to active apple production, corresponding to 40 % of the agricultural land. This is smaller than the FAO statistics showing 1,500 ha under apple trees. Active apple producing farmers represent about 200 farm families, owning on an average 5 ha farm land per family.

Livestock activities in the Qaza are dominated by small ruminants with 11,406 goats and 5,420 heads of sheep (FAO, 1996). Poultry is insignificant with 6,000 birds, and cattle is almost non-existent (87 cows).

Manufacturing industries employ 8.9 % of the Qaza labor force, consisting of 392 male and 50 female (UNDP/MSA). Including mining, utilities and construction subsector, the industry sector employs 1,579 workers or 31.8 % of the total labor force. There exist 55 small handicraft businesses in the Qaza as reported by the social survey. The details are given in Table 6.5.2

Table 6.5.1 Socio-economic Characteristics of Towns/Municipalities in Qaza of Bcharre

Town/Municipality	Population	Housing units	Family size	Job opportunities	Unemployment rate	Hotels and accommodations	Restaurants	Shops
Bcharre m.	5,000 in winter 15,000 in summer	1,000	7	Wood carving Livestock & poultry	~ 30% including under-employment	9 hotels in Cedars 2 hotels in Bcharre 25 rooms in chalets	-	-
Abadeen	(500)	140		Bed manufacturing	7 %	None	-	9 grocery stores
Diman	1,000 (returnees in summer)	115	5-6	None	~ 5 %	None	4 snack shops	5 small shops
Balaouza	235	~ 60		None		None	2	1 exhibition of woodcraft
Ban	~ 400	-		None		None	-	-
Breesat	~ 300	42	4-8	None		None	2 coffee/snack shops	1 grocery
Kanjour	-	-		None		2 hotels	4 snack bars	2 shops 1 petrol station
Mazraat Bany Saab	~ 600	65		None		None	-	-
Valley of Qannoubine	~ 300	40		None	80 %	None	1	-
Berhalioun m.	800 in winter 1,300 in summer	210	~ 6	Poultry	~ 40 %	None	1	1
Bazoun m.	4,000 in summer (1,000)	220	5	None	20 %	1 hotel with 8 rooms	-	8
Bqorqacha m.	5,000 in summer (1,200)	250	~ 6	Agriculture	50 %	None	-	-
Hadath El Jibbe m.	1,100 (1,600 registered)	850		Furniture & mattresses, Bakery	15 %	3 hotels with ~ 120 rooms each 420 houses for rent	8	12
Hadchit m.	2,500 in winter 4,000 in summer	~ 500		None	60 %	None	2	-
Hasroun m.	3,000 in winter over 10,000 in summer	700	5	None	90 % in summer 40 % in winter	3 hotels with 35 rooms each	8	30
Qanat m.	4,000 in summer (1,000)	260	8	Livestock	40 %	Houses & apartments for rent	6	-
Tourza m.	~ 1,200	225	5	None	45 %	none	-	2
Total	~ 20,000 (~ 50,000 in summer)	~ 5,000				20 hotels with about 500 rooms	38	72

Source: Questionnaire survey to municipalities conducted by the JICA Study Team

Table 6.5.2 Handicraft Activities in Bcharre

Type of Handicraft	Number of business organization
Copper handicraft	2
Silver handicraft	1
Metal handicraft	1
Cane handicraft	1
Wood handicraft	8
Pottery handicraft	2
Porcelain handicraft	5
Glass handicraft	2
Textile handicraft	22
Architectural works	3
Culinary works	3
Others	5
Total	55

Source: Ministry of Social Affairs

The services sector employs 2,415 or 48.7% of the Qaza labor force. Private services are led by trade and maintenance employing 563, followed by transport and communications (272), and hotels, restaurants and cafes (131). Public services employment is comparatively larger, consisting of public administration, defense, social security, education and training, and public health and social works.

Existing economic activities, revealed through the questionnaire survey and various interviews, are apple and other crops production, livestock and poultry, manufacturing of beds, furniture and mattresses, aluminum sash manufacturing, cedar woodcrafts and other handicrafts (some disappearing), and bakery, as well as tourism and related services. A total of some 200,000 visitors come to Bcharre and the Cedars.

(3) Unemployment and income levels

The unemployment rate in the Qaza is reported to be 11.3 %, the highest of all the Qazas in the North (UNDP/MSA). The average unemployment rate in the North is 10.7 %, the same as in the Bekaa region, while the national average is 7.3 %. Of the unemployed, those who were once employed number 201, while those never employed, mostly the youth count 372.

The questionnaire survey shows more serious unemployment situations in the Qaza. Unemployment rates are reported to be up to 40% even in summer and 80-90% in winter in some towns/municipalities (Table 6.5.1). The unemployment rate in the municipality of Bcharre is reported to be 30%, including underemployment. Rates are comparatively lower in Aabdine, Diman and Hadath El Jibbe, and higher rates are reported deeper in the valley.

Bcharre ranks 13th of 26 Qazas in Lebanon in terms of the share of low income households. According to UNDP, 34.8 % of households in Bcharre are classified as low income households (Table 6.5.3). This share is slightly larger than the national average of 32.1 %. Poverty incidence in the Qaza is also higher than the national average.

Table 6.5.3 Qaza Ranking Based on Shares of Low Income Households

(Qaza)	Low	Medium	High	Total
1. Bent Jbeil	76.2%	28.5%	4.34%	100%
2. Hermel	65.9%	28.6%	5.58%	100%
3. Aakkar	63.3%	29.1%	7.59%	100%
4. Marjaayoun	60.0%	32.3%	7.63%	100%
5. Minie	54.2%	39.3%	6.51%	100%
6. Baalbek	49.2%	40.1%	10.7%	100%
7. Tyre	45.0%	41.0%	14.0%	100%
8. Hasbaiya	41.5%	48.4%	10.1%	100%
9. Nabatiye	40.0%	47.4%	12.6%	100%
10. Rashaiya	39.5%	51.9%	8.66%	100%
11. Jezzine	35.7%	38.2%	26.9%	100%
12. Tripoli	32.1%	41.6%	26.4%	100%
13. Bcharre	34.8%	45.4%	19.8%	100%
14. Batroun	34.2%	45.0%	20.8%	100%
Lebanon Average	32.1%	41.6%	26.4%	100%
15. Baabda	31.6%	42.2%	26.1%	100%
16. Chouf	31.0%	50.0%	19.0%	100%
17. Western Bekaa	30.7%	53.6%	15.8%	100%
18. Jbeil	30.1%	46.7%	23.2%	100%
19. Zgharta	29.7%	43.0%	27.3%	100%
20. Saida	28.9%	45.3%	25.8%	100%
21. Zahle	29.7%	43.0%	27.3%	100%
22. Koura	27.0%	44.7%	28.3%	100%
23. Alley	25.0%	45.6%	29.3%	100%
24. Metn	19.7%	43.9%	36.4%	100%
25. Beirut	18.4%	38.7%	43.0%	100%
26. Kesrouan	13.5%	38.3%	48.2%	100%

Source: UNDP

6.6 Voice of the Stakeholders

Direct stakeholders of the Qadisha Valley include the Maronite Patriarchate, which owns most of the land, two other church orders who own small sections (the Maronite Ouadi Esshaya Order the Lebanese Mariamite Order), the village of Hadchit which owns a vertical sliver of land that leads from the crown to the river at the bottom of the Valley, and employs a ranger to patrol and protect their land. Other stakeholders include summer residents: the 10-20 families of Saydet el Karm village (former share croppers who live on land owned by the Patriarchate), and the 3-4 nuns of Qannoubine Monastery (also summer residents). There are three restaurants, two at the entrance and one near Qannoubine Monastery, who are also stakeholders. The Valley is occupied mainly by animal life in the winter.

Other stakeholders include the villages at the crown of the Valley, who would benefit from increased economic development related to better preservation, presentation and promotion of Qadisha, including NGOs, apple growers, museums, tourism guides, hotels, restaurants, cafes, gift shops, crafters, etc. Government and national

stakeholders include the Ministry of Environment (which would co-manage the site if it were a nature reserve or national park), the Ministry of Tourism (which would co-manage the site), and the Ministry of Culture/Directorate General of Antiquities (which works with UNESCO to protect and preserve the site under its World Heritage status). The Ministry of Public Works is in charge of master planning for Qadisha, so they, too, are a stakeholder through the JICA Study Team's proposed land uses and recommendation that the Holy Valley become a nature reserve.

The JICA Study Team held a focus group meeting on October 16, 2003, in follow-up to an earlier focus group meeting on July 26 and separate interviews in July-September with key stakeholders, including hotel owners, His Holiness, the Maronite Patriarch, and the nuns of Qannoubine. Ten local people participated in the October focus group.

Strategies and project ideas recommended by the participants included

- preservation and site management (including recommendations for a public/private national and local coordinating committee to manage the site,
- site admission fees,
- environmentally friendly transportation into the Valley,
- a buffer zone at the Cedars,
- more visitor amenities such as toilets,
- local industry including agro processing to stem out-migration of local people in search of jobs,
- large scale tourism development to attract tourists year-round,
- implementing infrastructure improvements including environmental management to stem pollution of the Valley, and
- activating the tourism sector through better marketing and promotion (including information centers at the entrance to the Valley).

Another project idea was to renovate the homes and monasteries of the Valley, in order to allow local people to remain. Some participants thought a cable car could better link the Qadisha Valley to the Cedars Reserve and could provide transportation for visitors from the villages into the Valley.

The last group discussions were held on January 13 to discuss on more specific proposals presented by JICA Study Team and issues for implementation. The results are summarized in Table 2.3.1. All of the stakeholders recommendations and comments were carefully noted and analyzed by the JICA Study Team in finalizing the master plans.