5.3 Development Framework

5.3.1 Selected Development Scenarios

a. Alternative Scenarios

5.053 In view of comparative advantages of Target Area in the framework of national tourism development and overall objective of regional development identified in the Phase I Study, tourism development in Target Area is expected to contribute to the following:

(1) Full utilization of available and potential resources, including the cool summer climate, natural vegetation and historical assets;

(2) Increase in foreign exchange earnings as a result of intensive investments in potential areas considered attractive to foreign tourists;

(3) Regional development through improvement of infrastructure and promotion of local industries;

(4) Revitalization of cultural heritage, including antiquities and ruins; and

(5) Provision of better recreational opportunities with more diversified facilities and services.

5.054 In achieving the above, four alternative development scenarios can be considered in tourism development:

Alternative 1. Tourism development primarily to increase foreign currency earnings in the country;

Alternative 2. Tourism development emphasizing the provision of recreational opportunities for the people in the country as a part of a social education and welfare program;

Alternative 3. Tourism development as a lever for promoting regional development of the Target Area; or

Alternative 4. Tourism development giving top priority to the preservation and rehabilitation of historical assets in the Target Area from archeological and educational viewpoints.

5.055 Each alternative is characterized by assignment of a different degree of importance to the relative conditions for development, such as quality of natural environment and landscape, existence of historical assets, accessibility and convenience, levels and diversity of recreational facilities and tourism services and availability of public

utilities, and hence, each alternative intrinsically is accompanied by constraints. The following describes the essential conditions and special constraints for the respective alternatives and summarizes a possible consequence of the alternatives in future.

5.056 Alternative 1 will need in the first place the existence of accessible historical assets for especially for attracting non-Arab foreign tourists, and a high quality of natural environment and landscape to attract Arab foreign tourists. Historical assets are concentrated in two spots, Jerash and Ajlun. Natural environment and landscapes in Ajlun will also be highlighted in the context of Alternative 1 because of its proximity to historical assets. More diversified facilities and services for recreation will substantially contribute realization of the potential tourism demand which is difficult to attract by natural and cultural resources alone. The importance of accessibility and convenience can be enhanced by improved transportation facilities serving the places which even at present have high potentialities for attraction of foreign tourists. Availability of public utilities will be important but not as much as in Alternatives 2 and 3 because key facilities to be developed under Alternative 1 are expected to be provided with sufficient utilities of their own. Although Jerash and Ajlun appear important under this alternative, Ajlun is still weak as a development core with only the Castle of Rabad as its selling point. Another bottleneck or constraint is possible conflict between preservation of antiquities and utilization of them as an element of tourism development.

5.057 Under this alternative, a few development cores in the Target Area will become attractive spots for foreign tourists in a relatively short period of time with the result that foreign currency earnings in the country will increase substantially. Facilities and services provided under this alternative, particularly in development cores, will be utilized for local tourists as well, thereby providing people with better opportunities for recreation and social education.

5.058 Alternative 2 will need, among other things, a high quality of national environment and landscape because of the preference of people in this country to spend their free time in an environment full of greenery and water. Accessibility and convenience are equally important in view of the concentration of local tourists in peak seasons. They will demand a larger capacity of utility services, too.

5.059 Recreational facilities and services are important under Alternative 1, but more emphasis will need to be given to those provided in places endowed with a good natural environment, such as Dibbin and Ishtafina, in addition to Ajlun. Historical assets will be seen as material for a social education program in the context of Alternative 2. For this alternative, the Target Area lacks adequate facilities to enable diversified outdoor recrational activities, such as sports facilities in particular. Another bottleneck is shortage of the tourism feeder roads which would enable visitors to utilize potential resources, including approaches to many excellent vista points in the Ajlun area.

5.060 If this alternative is taken, natural resources and landscapes will be utilized to the greatest extent, especially in Dibbin, Ajlun, Ishtafina and areas along the routes connecting these three. In utilizing natural resources for tourism purposes, careful zoning of land use will be necessary to keep a balance between utilization and preservation of natural resources, including forests, small rivers and wild animals. Moreover, this strategy will need rapid development of infrastructures and utilities to meet the increasing demand.

5.061 Alternative 3 will emphasize most of all the accessibility to every part of the Target Area and provision of conveniences to tourism-related local industries and agriculture, and will deliver effects of developmental activities at development cores to peripheral areas in the Target Area. In line with this, the area between Jerash and Ajlun, and that around Suf, will emerge as priority zones, in addition to major development cores. In these areas, excellent natural environment and landscapes will help to promote local industries and agriculture, not simply as economic activities, but as elements of tourism development. In this connection, relevant recreational activities and services need to be dispersed and provided along major routes for tourism. The drawbacks of the approach based on this alternative are that the area between Jerash and Ajlun has few viable local industries, in spite of having good accessibility, and the area around Suf is decidedly disadvantages in terms of tourism activities although the area is endowed with agricultural activities deemed suitable to be utilized for tourism purposes.

5.062 This alternative will be effective in developing all parts of the Target Area and should enhance the economic well-being of the local people, although a low priority is placed on it at present by the national government when it considers the promotion of tourism development in this area. Also, there is some possibility that disintegration of traditional local communities will be a by-product under this alternative.

5.063 As for Alternative 4, no consideration will be given to the intensive use of historical assets in Jerash and Ajlun for tourism development purposes. Under this alternative, development of access, recreational facilities and public utilities will be regarded as having an adverse impact on historical assets. Therefore, there will be difficulty in utilizing excellent natural and historical endowments for tourism development.

5.064 If this alternative is taken, valuable antiquities will be preserved as a permanent asset of the country, but at the same time, an enormous budget will be required for effective excavation and rehabilitation and few benefits in terms of tourism will be brought forth.

b. Selection of Best Scenarios

5.065 For identifying the most desirable alternative, the following criteria have been set and the four alternatives have been assessed from the viewpoint of expected benefits and their magnitude.

(1) National benefit I: Foreign exchange earnings in the country;

(2) National benefit II: Recreational opportunities of the people;

(3) Regional benefit I: Viable local economic activities;

(4) Regional benefit II: Improved infrastructure and urban utilities;

(5) Investment benefit I: Immediate effects; and

(6) Investment benefit II: Multiplier effects.

Results of the assessment are shown in Table 5.9.

Table 5.9 Assessment of Alternative Development Scenarios

	National Benefit I (1)	National Benefit II (2)	Regional Benefit I (3)	Regional Benefit II (4)	Investment Benefit I (5)	Investment Benefit II (6)	Total Score
Alternative							
1	3	2	3	2	3	3	16
2	2	3	3	3	3	2	16
3	1	2	3	3	2	1	12
4	1	1	0	0	3	1	6

Source: Study Team.

Note: Score values are defined as:
3: Very large
2: Large
1: Fair
0: Nil

5.066 Thus, Alternatives 1 and 2 have emerged to be the most desirable from the viewpoint of aggregated benefits from (1) through (6), followed by Alternative 3.

5.067 As foregoing discussions imply, each alternative is related to its priority area for development. Table 5.10 demonstrates (1) priority areas for the respective alternatives and (2) principal development approaches to pertinent areas, which will be called an area-specific approach. The area-specific approaches have been identified in view of area-wise potentialities (see Section 5.2.3.f.).

Table 5.10 Priority Areas of Alternative Development Scenario and Area-specific Approaches, for the Target Area

Alternative	Priority Area	Area-specific Approach
Alternative 1	Jerash	Making use of existing potentials with investment stimulus.
	Ajlun	Fostering development cores with intensive investments.
2	Dibbin	- ditto -
	Ishtafina	- ditto -
3	Between Jerash and Ajlun	Inducing activities of development cores with supporting investment.
4	Around Suf	- ditto -

Source: Study Team,

5.068 Bearing in mind the results of assessment and identified area-specific approaches, this Study recommends the following:

(1) Alternatives 1 and 2 should be given top priority as immediate tourism development strategies to be followed until 1985.

(2) Towards the year 2000, Alternative 3 should be given increasing important strategy. Alternatives 1 and 2 should then be incorporated in the Alternative 3.

(3) Ajlun should be given top priority for intensive investment on account of its gravity in both Alternatives 1 and 2. Jerash shall be the center of spontaneous tourism growth, to be stimulated by supporting investments.

These recommendations are schematically shown in Figure 5.15.

5.3.2 Projection of Tourists

a. General

5.069 Tourists in the Target Area are divided broadly into three groups according to their origin, which in good part will determine their typical interests and behavior, and hence influence planning of tourism development:

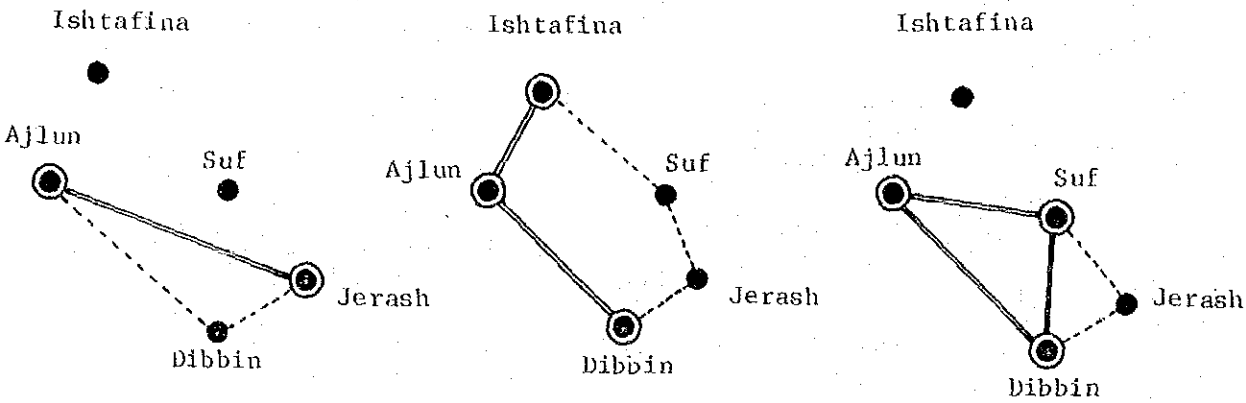
(1) Non-Arab foreign tourists,
(2) Arab foreign tourists, and
(3) Domestic tourists.

Generally, each group has its own reasons for visiting the area. The major reason in the case of non-Arab foreign tourists is to visit historical places, notably the Jerash antiquities and the Castle of Rabad. In contrast, the major interests of Arab tourists and domestic tourists are to visit the excellent natural environment in the Target Area in summer when the forests are a lush green. Bearing in mind the different reasons for these three groups of visitors, a future projection of tourists to the Target Area has been made, and is shown hereunder.

b. Foreign Tourists

5.070 The process of estimation of foreign tourists in the Target Area follows the flowchart shown in Figure 5.16.

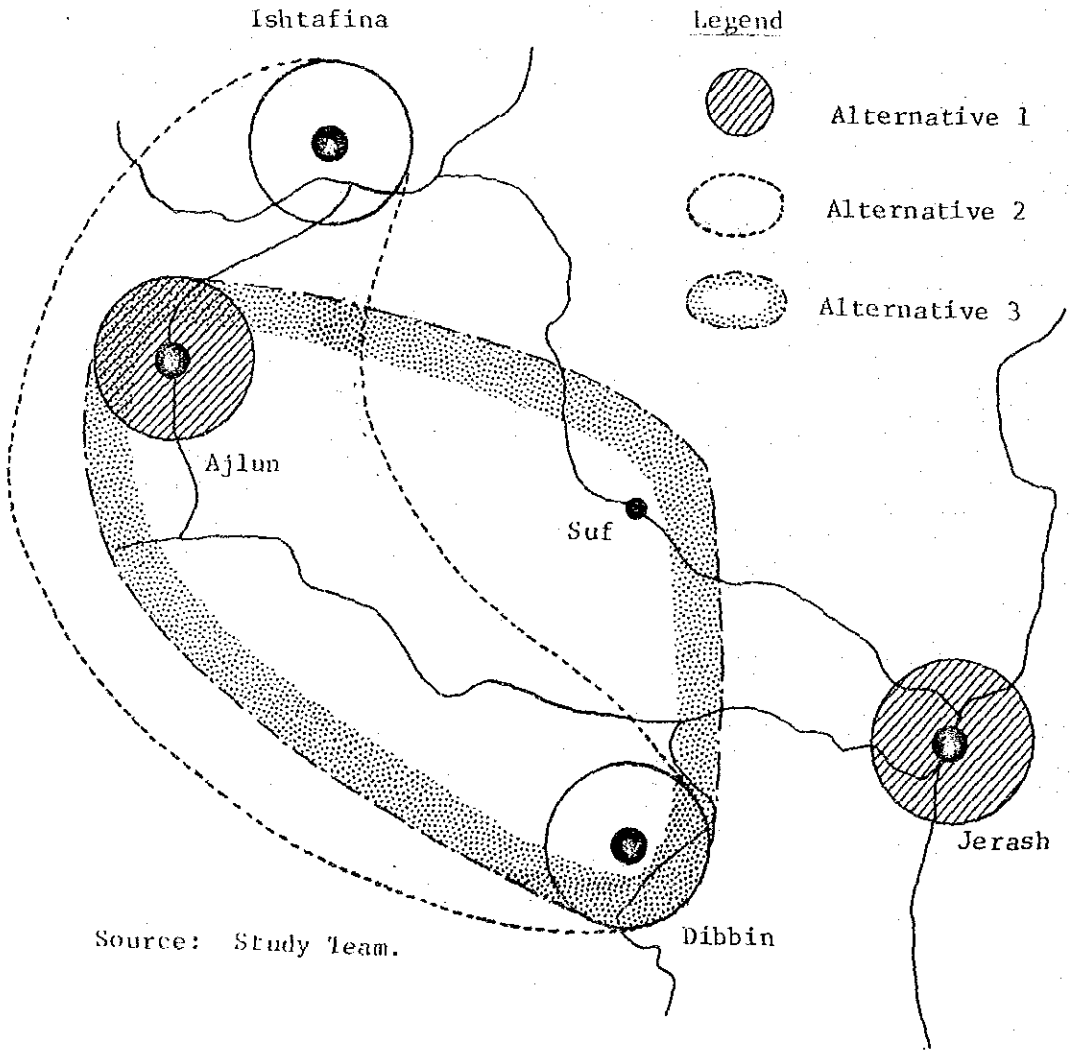
Figure 5.15 Schematic Chart of Alternatives Recommended



Alternative 1:
Foreign Tourist Oriented

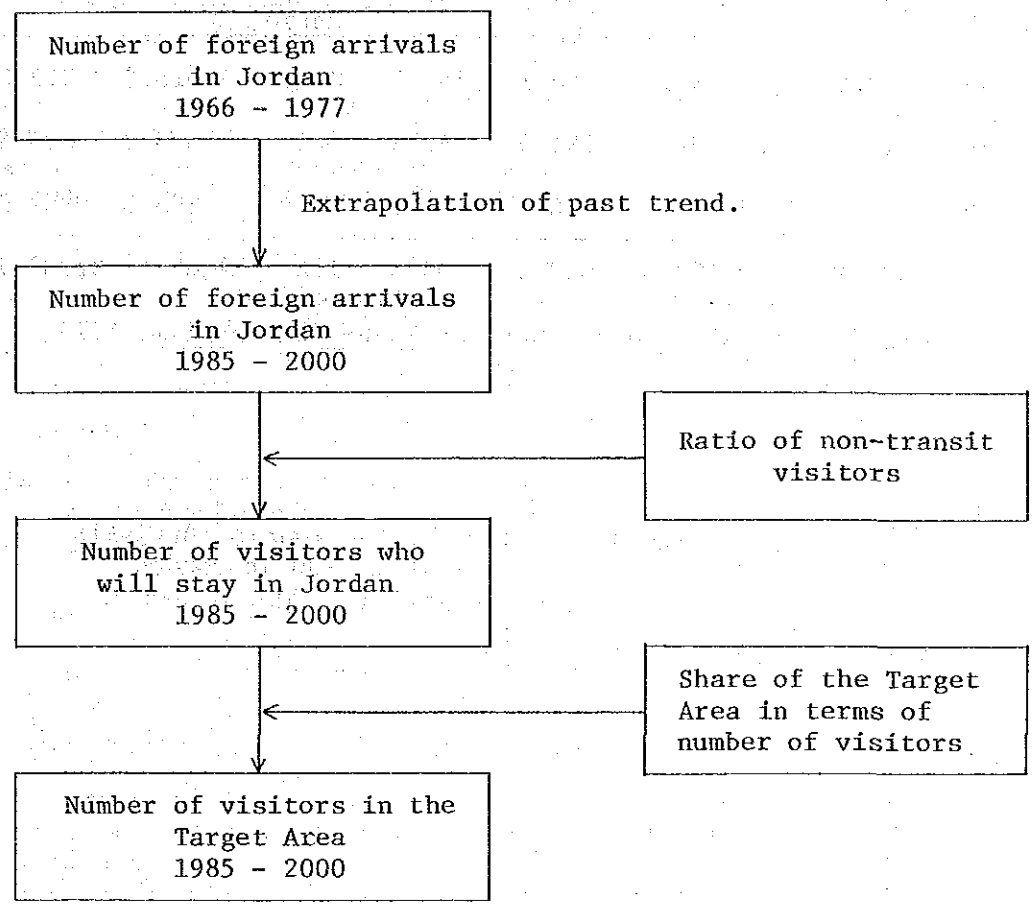
Alternative 2:
Recreation Oriented

Alternative 3:
Regional Development Oriented



Source: Study Team.

Figure 5.16 Estimation of Foreign Tourists in the Target Area



Source: Study Team.

5.071 Basically the method of estimation follows Part II. However, some amendments have been made based on the "Numerical Index for Tourism 1979" by Economic Department. In estimating the total number of foreign arrivals, two methods are used, Method A which assumes a fixed rate of increase and Method B which assumes a fixed number of increase in terms of the arrivals. The estimation results by the two methods are listed on Table 5.11.

Table 5.11 Foreign Arrivals in Jordan, 1966, 1973-1977, 1985, 2000

(Unit: thousand persons)

	Number of Arrivals						Future Arrivals				
							Distri-bution Ratio	Method A		Method B	
	1966	1973	1974	1975	1976	1977		1985	2000	1985	2000
Arab Countries	348.6	258.6	350.0	431.1	746.1	781.7	0.60	1,018.3	2,273.2	876.8	1,276.9
Asian Countries	75.2	17.0	149.1	192.8	196.3	199.2	0.22	373.9	833.5	321.5	468.2
The Rest	173.6	32.3	55.8	83.7	120.9	124.9	0.18	305.5	682.0	263.1	383.1
Total	616.8	307.9	554.9	707.6	1,063.3	1,105.8	1.00	1,697.7	3,788.7	1,461.4	2,128.2

Source: Travel Statistics, 1977, and Numerical Index for Tourism, 1979.

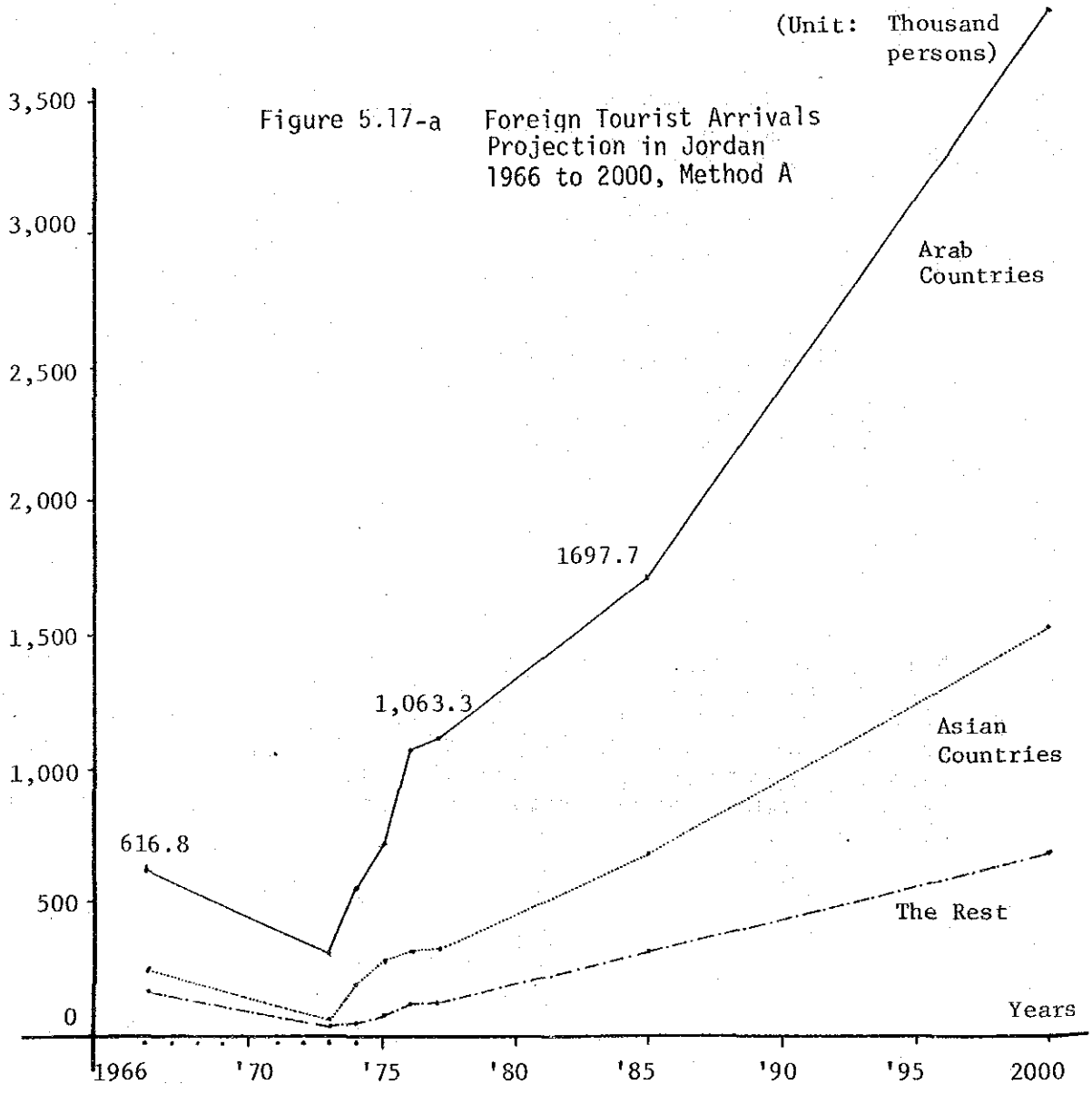


Figure 5.17-a Foreign Tourist Arrivals Projection in Jordan 1966 to 2000, Method A

Source: As in Table 5.11.

5.072 Based on the data in 1966 and 1977 and based on Figure 5.17-a, the following formula for estimation has been obtained by the Method A.

$$Y = 1.055^{N} \times 1105.8$$

where Y = Number of foreign arrivals in thousand persons
N = Number of years from 1977

The number of arrivals will reach 1,697,100 in 1985 and 3,788,640 in 2000. Then, to separate the total number of foreign visitors into three sections, those from Arab countries, Asian countries and others, the following method has been employed:

(1) To estimate the share of the Target Area in terms of number of visitors by taking average of the values in 1966, 1974 and 1975; and

(2) To distribute total number of visitors into three parts: Arab, Asia and Others.

It should be noted that in estimation the data during the period 1967 to 1973 were excluded due to their fluctuations caused presumably by increased tourism activities at the outbreak of the Lebanon war.

5.073 As a result, the number of foreign arrivals from Arab countries will reach 1,018,300 in 1985 and 2,273,200 in 2000. The number of those from Asian countries will reach 373,400 in 1985 and 833,500 in 2000. The rest, including Euro-Americans, will reach 305,500 in 1985 and 682,000 in 2000.

5.074 Forty (40) percent of foreign arrivals from Arab countries, 30 percent of those from Asian countries and 10 percent of the rest are considered to visit Jordan only for transit. Accordingly, the number of visitors who are expected to stay in this country are estimated below:

(1) Visitors from Arab countries: 611,100 in 1985 and 1,363,900 in 2000.

(2) Visitors from Asian countries: 261,400 in 1985 and 583,500 in 2000.

(3) The rest: 275,000 in 1985 and 613,800 in 2000.

5.075 The share of the Target Area in terms of number of visitors is expected to be 40 percent of the above for Arab countries, and 80 percent for each of the Asian countries group and the rest group (source: "Arrivals by Nationality and Month During 1977"). With these shares of the Target Area, the number of tourists in the Target Area is estimated at 213,900 in 1985 and 477,400 in 2000 from Arab countries, 209,120 in 1985 and 466,800 in 2000 from Asian countries and 220,000 in 1985 and 491,000 in 2000 from the rest of the world.

5.076 As for the estimation by the Method B, based on Figure 5.17-b, following formula has been obtained:

$$Y = 44.45\ N + 1105.8$$

where Y = Number of foreign arrivals in Jordan in thousand persons;
N = Number of years from 1977.

According to the Method B, the number of arrivals in Jordan will reach 1,461,400 in 1985 and 2,128,100 in 2000. The details are as follows:

(1) Arrivals from Arab countries: 876,800 in 1985 and 1,276,900 in 2000

(2) Arrivals from Asian countries: 321,500 in 1985 and 468,200 in 2000

(3) Arrivals from the rest: 263,100 in 1985 and 383,100 in 2000.

5.077 Taking the same ratio used in the Method A for distributing foreign arrivals to foreign visitors, the following results have been given:

(1) Visitors from Arab countries: 526,100 in 1985 and 766,100 in 2000

(2) Visitors from Asian countries: 225,100 in 1985 and 327,800 in 2000

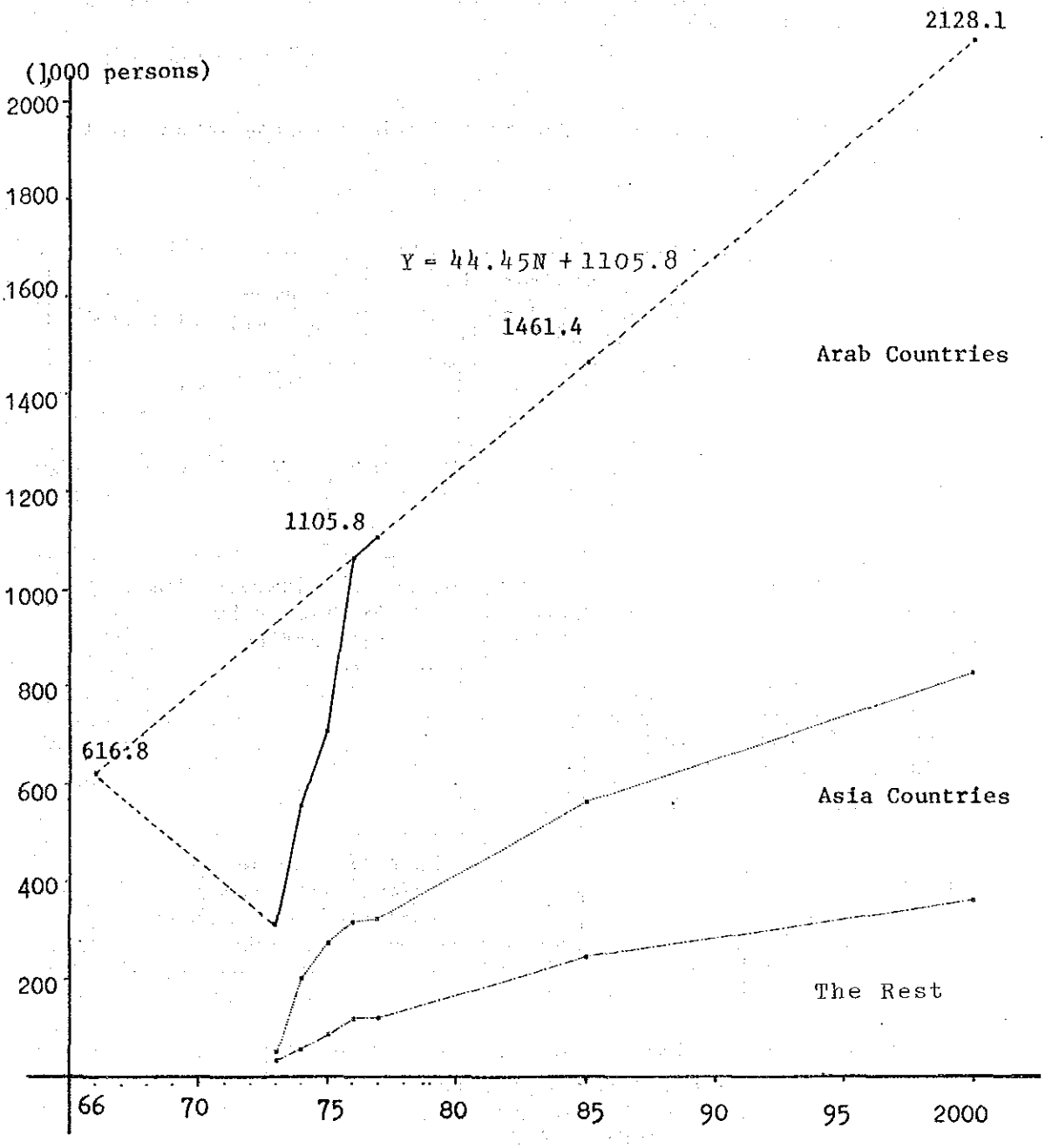
(3) The rest: 236,800 in 1985 and 344,800 in 2000.

5.078 With the expected shares of the Target Area in terms of number of visitors, the number of visitors in the Target Area have been estimated as follows:

(1) 40 percent of visitors from Arab countries and 80 percent from Asian countries group and the rest group will be expected to visit in the Target Area. Therefore the number of visitors in the Target Area will reach 210,400 in 1985 and 306,400 in 2000 from Arab countries, 180,100 in 1985 and 262,200 in 2000 from Asian countries, and 189,400 in 1985 and 275,800 in 2000 from the rest of the world.

5.079 Since the number projected by Method A seems to be a little high, the numbers of visitors in Jordan estimated by Method B will be taken hereafter.

Figure 5.17-b Foreign Tourist Arrivals Projection in Jordan, 1966 to 2000, Method B



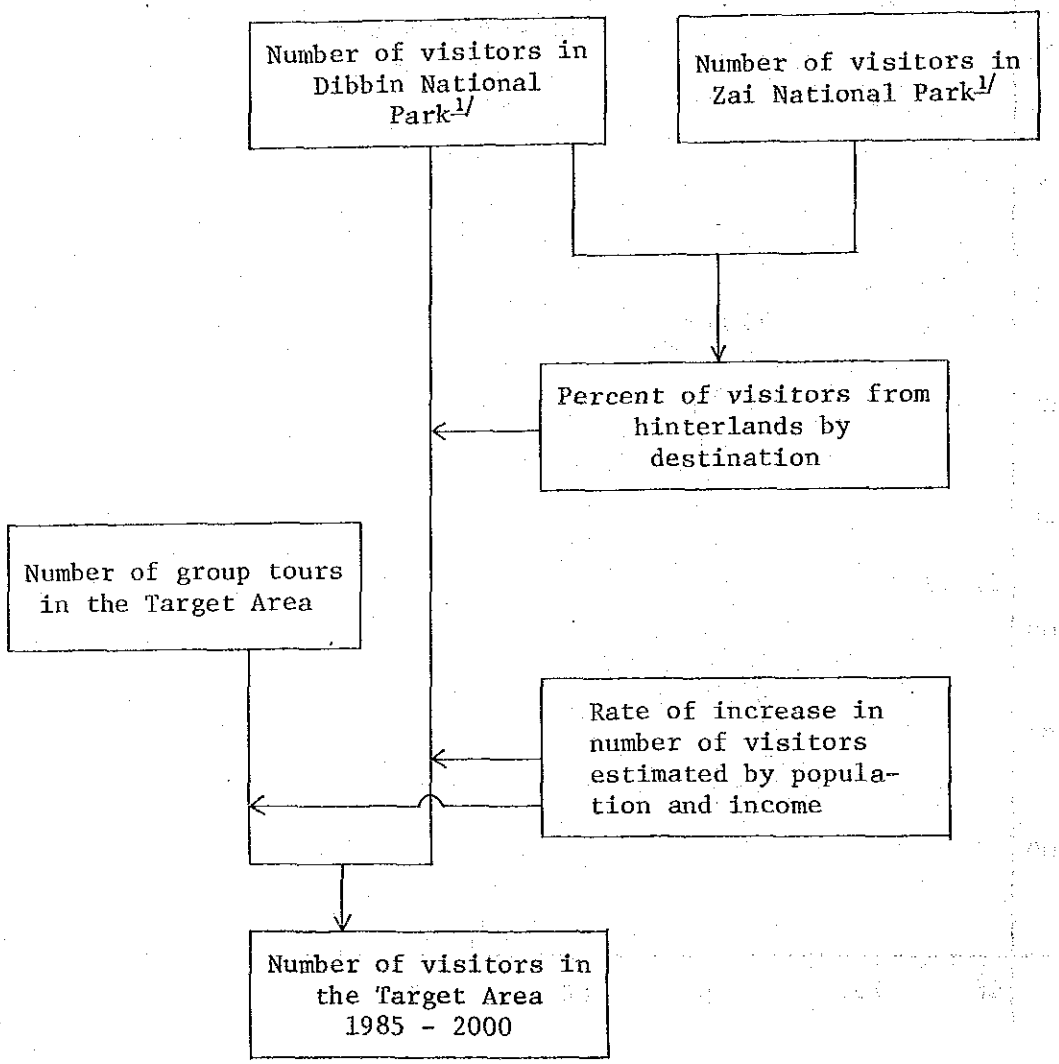
Source: Study Team.

c. Domestic Tourists

i. Estimation Method

5.080 The estimation of domestic tourists in the Target Area follows the process as in Figure 5.18.

Figure 5.18 Estimation of Domestic Tourists in the Target Area



Source: Study Team.

Note: 1/ The Study Team conducted a survey of visitors at Dibbin and Zai National Parks on September 7, 1979 in order to obtain the data for projection.

ii. Number of Visitors in Dibbin and Zai Areas

5.081 As there is no secondary data for estimation of visitors in the Target Area, a survey was carried out at Dibbin and Zai National Parks and their immediate surroundings as follows:

(1) The Survey

Date: September 7, 1979 Friday
Time: 8:00 - 18:00 (10 hours)
Data: Number of cars and people, place of origin and length of stay

(2) Method of Survey: Interview to all drivers

(3) Survey Spots: Dibbin: Main gate
Zai: Two existing entrances

5.082 The number of visitors who went through the Dibbin National Park main gate was 3,913. According to the manager of the National Park, approximately 95 percent of visitors come through the main gate. Total number of visitors in the area of Dibbin National Park is thus estimated at 4,120 (see Table 5.12 and Figure 5.19).

5.083 Meanwhile, approximately the same number of visitors was estimated to visit its immediate surroundings according to field observation and the opinions of national park managers, in view of the spatial distribution of picnic spots. Therefore, the total number of visitors in Dibbin areas was estimated at 8,000. Likewise, based on the number of visitors recorded in Zai National Park, i.e., 2,917, the total number of visitors to the Zai area was estimated at 6,000 (see Table 5.13 and Figure 5.20).

iii. Visitors by Origin and Destination

5.084 According to the team's survey, the total number of visitors from Amman who visited Dibbin or Zai amounted to 4,753, and 58 percent of them visited Dibbin and 42 percent visited Zai. From Irbid, 90 percent of visitors went to Dibbin and only 10 percent to Zai. From Zarqa, 54 percent went to Dibbin and 46 percent went to Zai (see Figure 5.21 and Table 5.14).

5.085 Based on these results, the share of Dibbin has been assumed to be 60 percent of visitors from Amman and 95 percent of those from the Irbid Governorate.

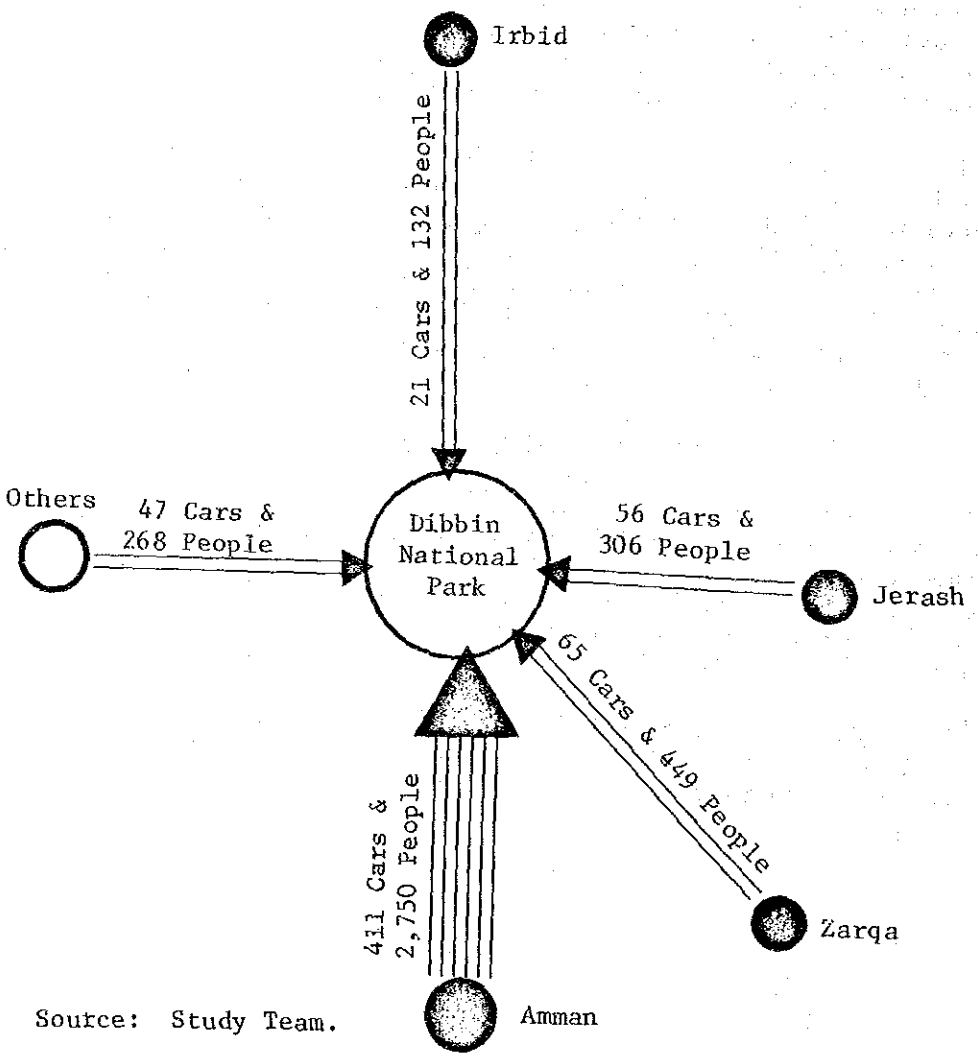
Table 5.12 Visitors in Dibbin National Park per Day, 1979

(Unit: Person)

	Total	Amman	Irbid	Jerash	Zarqa	Salt	Swei-leh	Bagha	Mafraq	Madaba	Wasid-der	Suf
Cars												
No.	600	411	21	56	65	3	13	6	17	4	2	2
%	100	68.5	3.5	9.33	10.83	.5	2.16	1.0	2.83	.66	.33	.33
People												
No.	3,913	2,758	132	306	449	13	83	36	113	9	8	6
%	100	70.48	3.37	7.82	11.47	.33	2.12	.92	2.88	.23	.20	.15

Source: Study Team,

Figure 5.19 Origin of Visitors in Dibbin National Park per Day



Source: Study Team.

Table 5.13 Visitors in Zai National Park per Day, 1979

(Unit: Person)

	Total	Amman	Salt	Zarqa	Sweileh	Madaba	Irbid	Zai	Ajlun	Bakha
Cars										
No.	484	320	79	68	6	4	3	1	1	2
%	100	66.11	16.32	14.04	1.23	.82	.61	.20	.20	.41
People										
No.	2,917	1,995	453	382	24	23	14	8	4	14
%	100	68.39	19.92	13.09	.82	.78	.47	.27	.13	.47

Source: Study Team.

Note: Average staying time per car = 4.02 (hour)

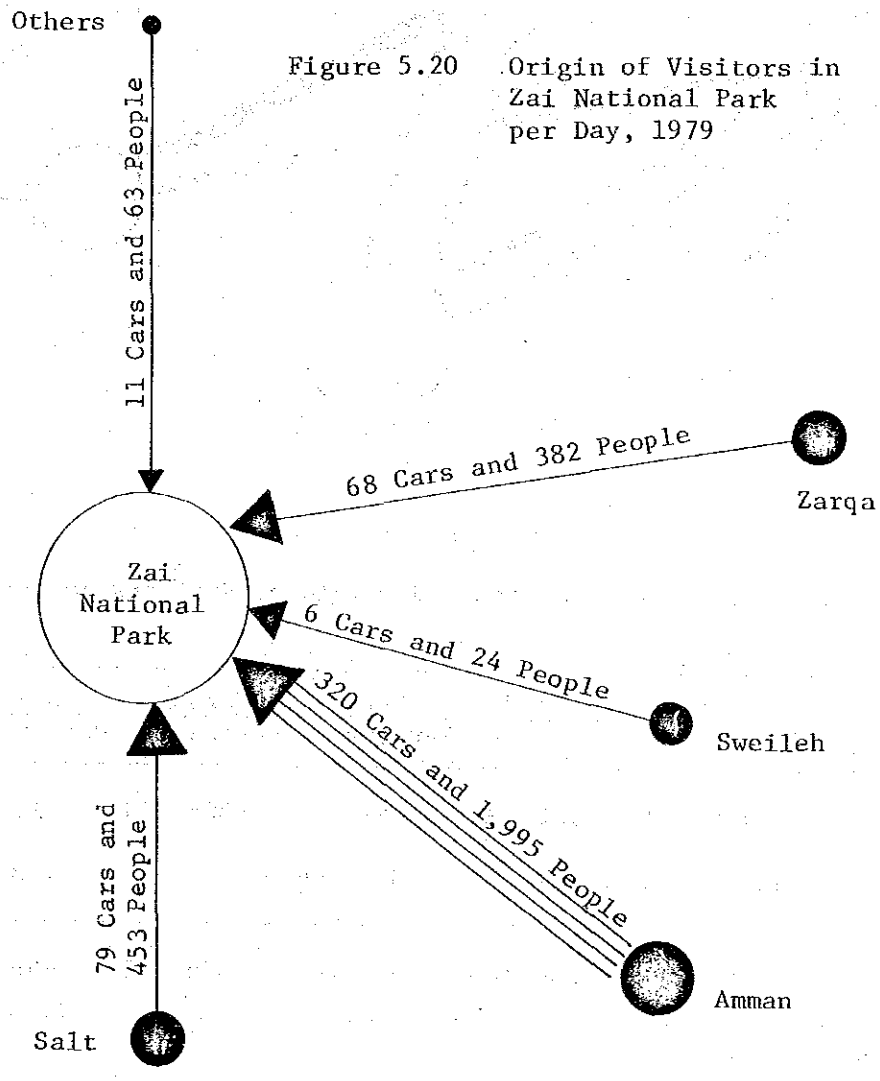


Figure 5.20 Origin of Visitors in Zai National Park per Day, 1979

Source: Study Team.

Figure 5.21 Origin and Destination of Visitors in Zai and Dibbin National Park

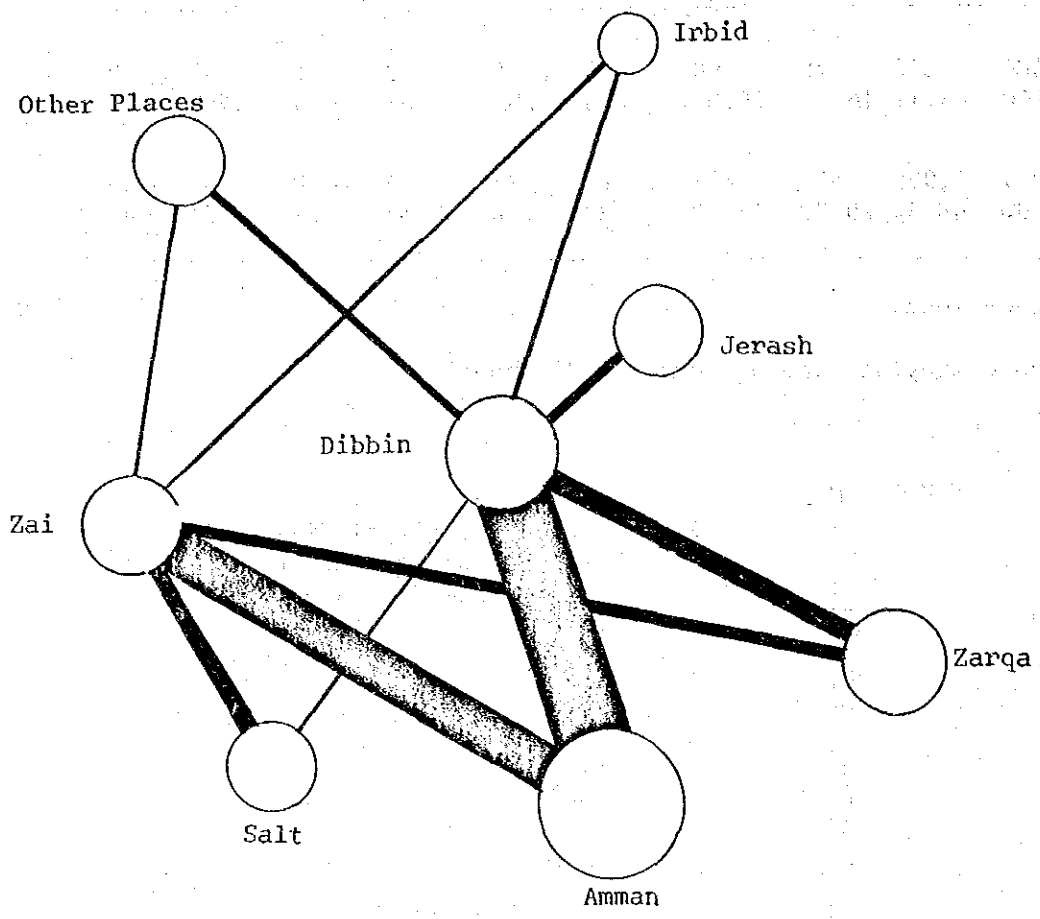


Table 5.14 Destination and Origin of Visitors per Day, 1979

From / To	Amman		Irbid		Zarqa		Jerash		Salt		Other Place	
	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%
Dibbin	2,758	58	132	90	449	54	306	100	13	3	255	78
Zai	1,995	42	14	10	382	46	0	0	453	97	73	22
Total	4,753	100	146	100	831	100	306	100	466	100	328	100

Source: Study Team

iv. Number of Group Tours in the Target Area

5.086 According to "The Analysis of Trips Accomplished by Schools, Clubs and Societies from Amman and Irbid," 9,550 participants visited the Target Area out of the total number of 37,452 from Amman between January 30 and June 1, 1979 and 7,290 out of 20,700 from Irbid between January 30 and June 10, 1979 (see Table 5.15). The number of group tours for the whole year of 1979 has been estimated at approximately 28,000 from Amman and 20,000 from Irbid by simple extrapolation.

Table 5.15 Number of Group Tours in Jordan, 1979

Destination	From Amman Jan.30 - June 1, 1979			From Irbid Jan.30 - June 10, 1979		
	No.of Tours	No. of Participants	%	No.of Tours	No. of Participants	%
Northern Jordan & Middle Ghor, Dead Sea	277	13,850	37.2	198	8,910	43.0
Hemma, Um Qeis Northern Heights	23	1,350	3.6	55	2,475	12.0
Amman, Zarqa	86	4,300	11.5	6	270	1.3
Jerash, Ajlun, Dibbin, King Talal	191	9,550	25.6	162	7,290	35.2
Es Salt, Wadi Shneib, Zai Area	52	2,600	7.0	7	315	1.5
Azraq-Desert	47	2,350	6.3	26	1,170	5.7
Aqaba, Petra South	65	3,452	8.8	6	270	1.3
Total	745	37,452	100.0	460	20,700	100.0

Source: Ministry of Tourism and Antiquities.

Table 5.16 Day-return Visitors Projection in the Target Area, 1979, 1985 and 2000

(Unit: Persons)

		Amman Governorate	Irbid Governorate	Other Governorate	Total
Population[1/]	1977	1,219,000	600,000	308,000	2,127,000
	1979	1,337,000	633,000		
	1985	1,689,000	732,000		
	2000	2,827,000	1,140,000		
Growth Rate of GDP	1985	1975 - 1985	10 percent a year		1.77
	2000	1975 - 1985 1986 - 2000	10 percent a year 8 percent a year		6.06
No. of Individual Visitors in Dibbin a Day[2/]	1979	3,310	1,670	50	5,030
	1985	6,200	2,900	100	9,200
	2000	21,300	7,900	300	29,500
No. of Individual Visitors in the Target Area a Day[3/]	1979				15,090
	1985				27,600
	2000				88,500
No. of Group Tour Visitors a Day	1979	77	55		132
	1985	150	100		250
	2000	500	300		800
Total No. of Visitors a Day	1979				15,222
	1985				27,900
	2000				89,300

Source: Study Team.

Notes: 1/ 1979 is chosen for the base year, therefore the population in 1979 is estimated using those of 1977 and 1985 which was estimated by Part II.

2/ It is assumed that Dibbin National Park and its immediate surroundings will absorb one-third of the total visitors to the Target Area. These numbers are considered as an approximation of the level during the peak season.

3/ Growth rate of the number of visitors to the Target Area is estimated to be about 7.0 percent based on the following assumptions.

(1) I(Growth rate of tourism income) = E(Growth rate of expenditure per visitor) + V(Growth rate of visitors)

(2) I is assumed to be equal to the growth rate of GDP, i.e., 10 percent.

(3) E is assumed to be three percent based on the past data.

v. Number of Visitors to the Target Area in the Future

5.087 The population of Amman Governorate will reach 1,689,000 in 1985 and 2,827,000 in 2000, and that of Irbid Governorate 732,000 in 1985 and 1,140,000 in 2000 as noted in the Part II.

5.088 In addition to population growth, increasing income level is considered to accelerate the increase in recreational opportunities. It is estimated that GDP will increase by 10 percent annually until 1985 and by 8 percent annually after 1986. Assuming that the number of visitors will increase in parallel with growth of both population and income, the number of day-return visitors a day including individual and group tours will reach approximately 27,900 in 1985 and 89,300 in 2000 (see Table 5.16).

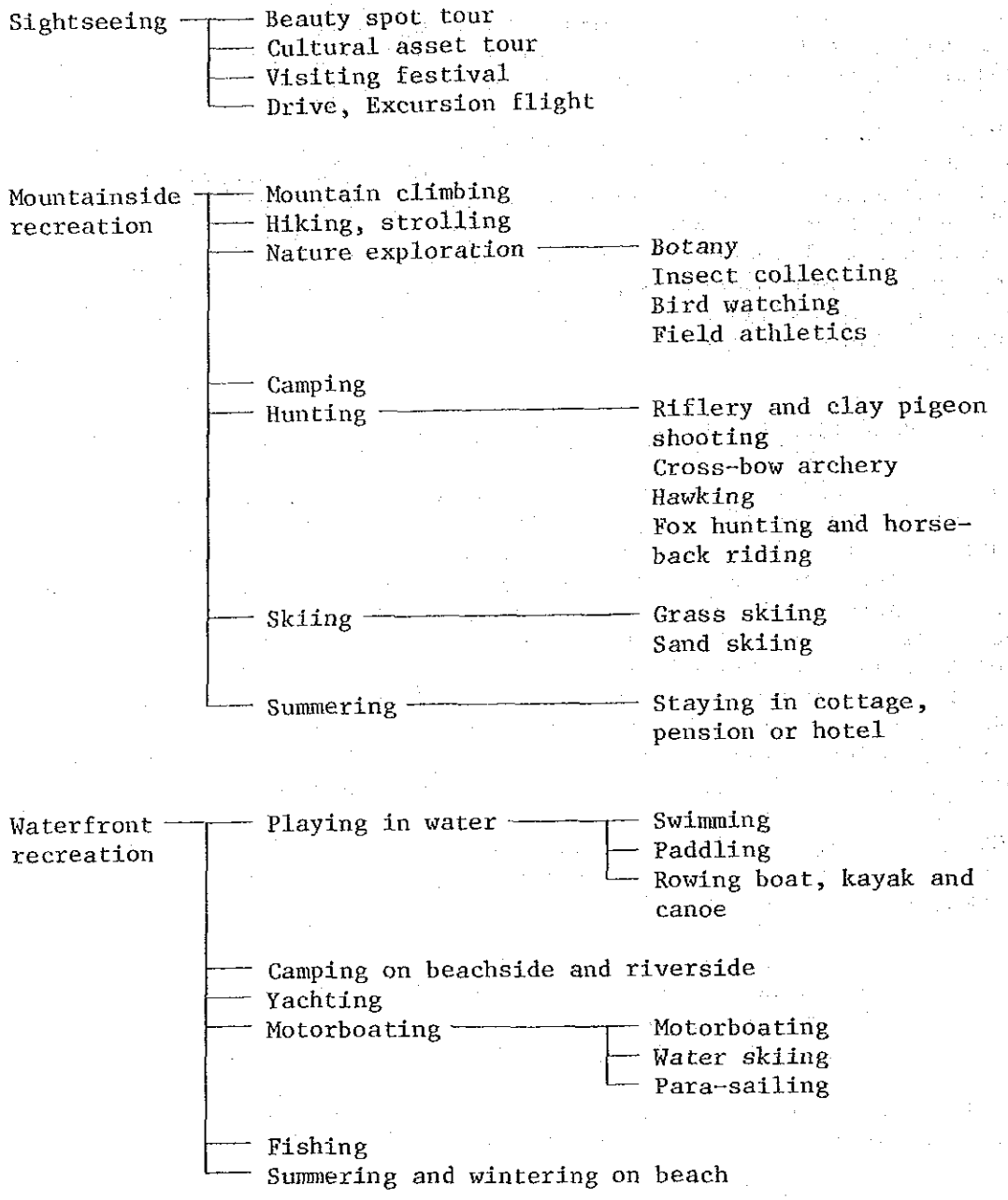
5.3.3 Identification of Possible Tourism Activities in the Target Area

5.089 In order to translate the development scenarios discussed earlier into a set of desired facilities and services to be provided for tourism and into linkages among them, it is necessary to identify the tourism activities which can possibly be induced into the Target Area. For this purpose, firstly, categories of tourism activities have been set, taking account of resource potentials of the Target Area. Secondly, an inventory of a full range of possible tourism activities has been made according to the category. Thirdly, a review has been made of the tourism activities existing in the Target Area. Finally, possible tourism activities in the Target Area have been identified bearing corresponding facilities and services in mind.

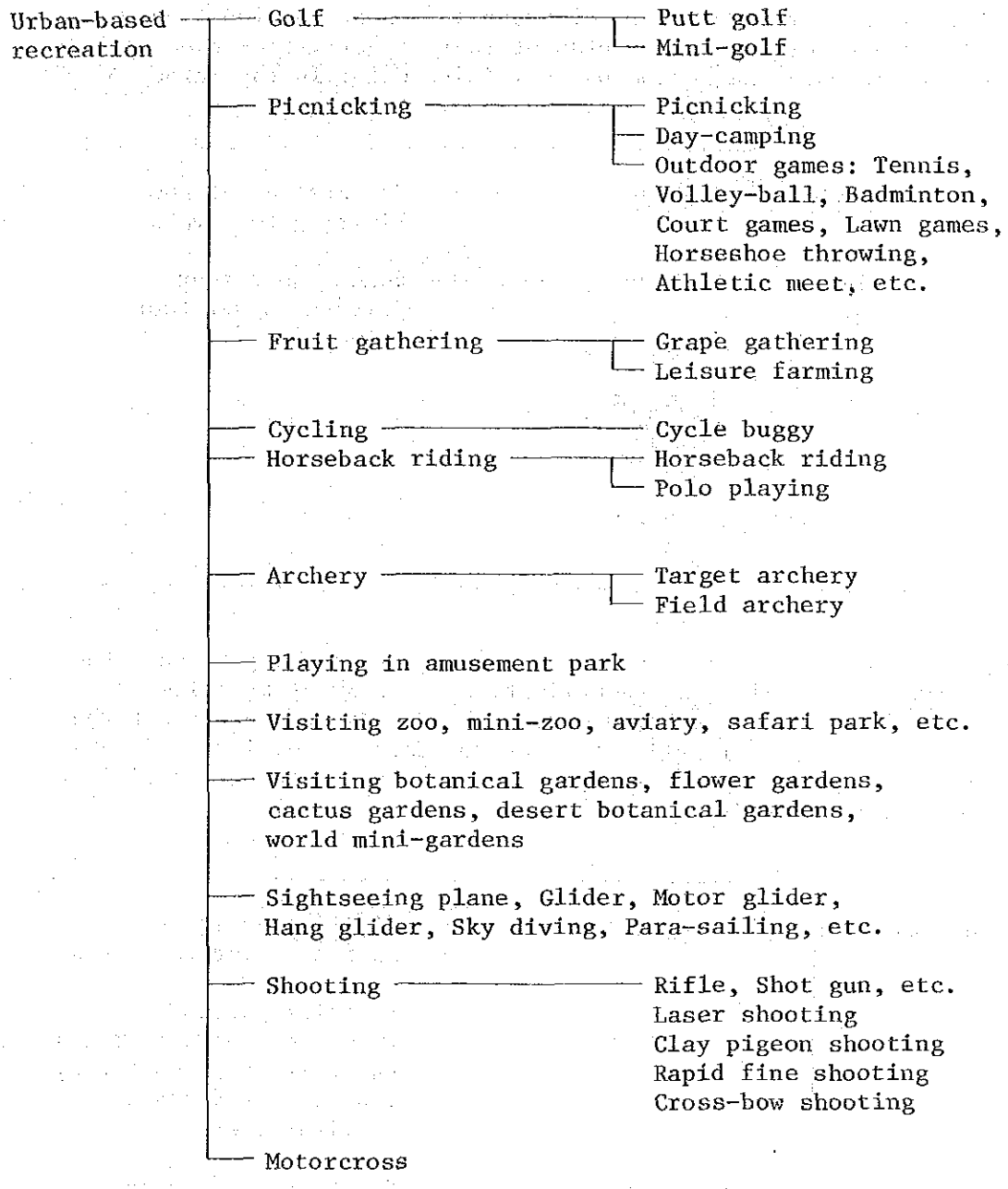
5.090 Categorization of tourism activities depends on diversity of tourism resources. The following categories seem relevant to the tourism resources of the Target Area:

(1) Sightseeing;
(2) Mountainside recreation;
(3) Waterfront recreation; and
(4) Urban-based recreation.

5.091 According to these categories, possible tourism activities have been sorted out and inventorized as follows:


Sightseeing
Beauty spot tour
Cultural asset tour
Visiting festival
Drive, Excursion flight
Mountainside recreation
Mountain climbing
Hiking, strolling
Nature exploration
Botany
Insect collecting
Bird watching
Field athletics
Camping
Hunting
Riflery and clay pigeon shooting
Cross-bow archery
Hawking
Fox hunting and horse-back riding
Skiing
Grass skiing
Sand skiing
Summering
Staying in cottage, pension or hotel
Waterfront recreation
Playing in water
Swimming
Paddling
Rowing boat, kayak and canoe
Camping on beachside and riverside
Yachting
Motorboating
Motorboating
Water skiing
Para-sailing
Fishing
Summering and wintering on beach

(to continue)



Source: Study Team,

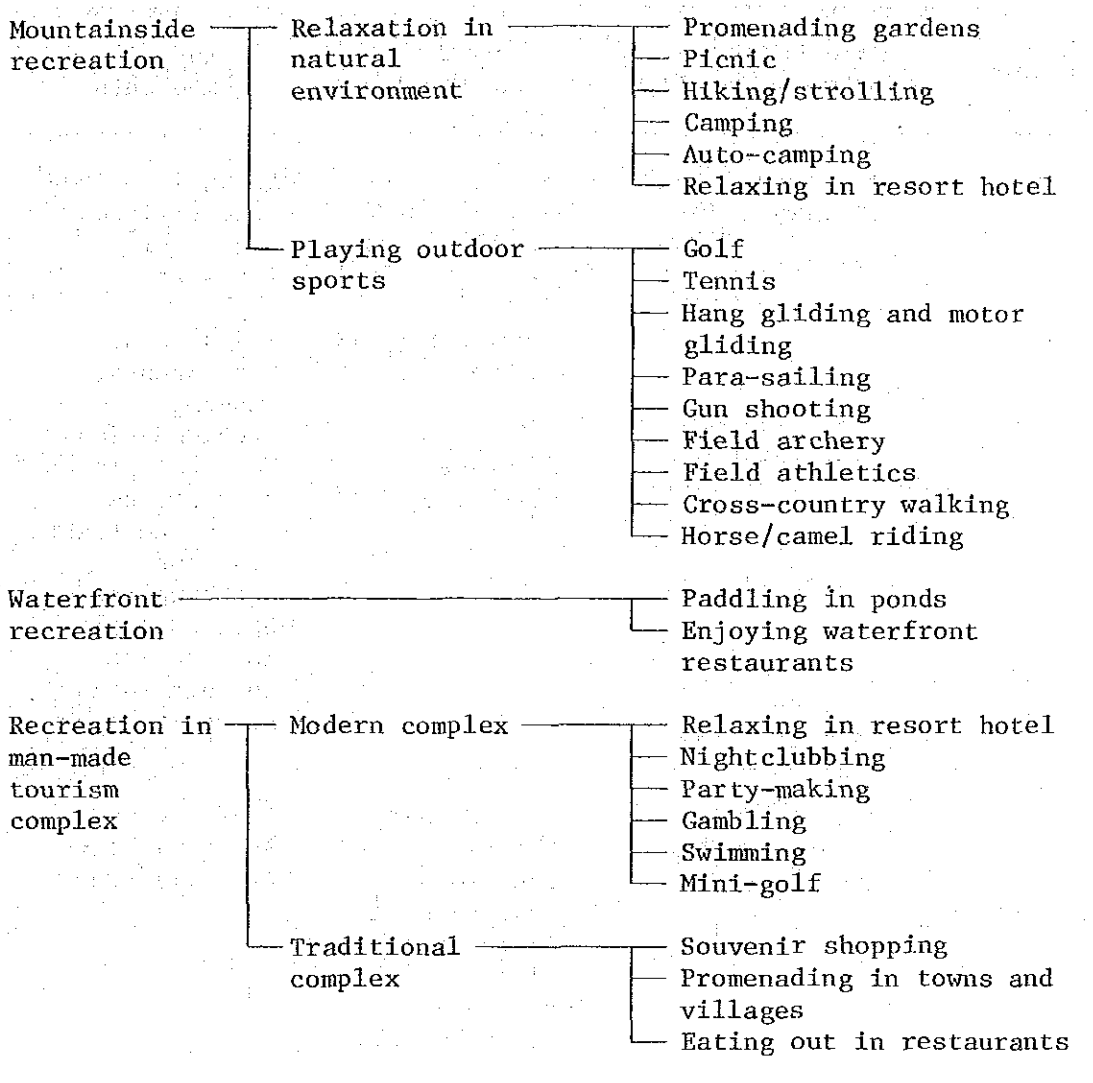
5.092 On the other hand, a limited variety of tourism activities can be seen in the Target Area at present because of inadequate facilities and services. Lack of organization of the location of facilities and services makes present tourism activities piecemeal as well. At present, the following activities exist in the Target Area.

Jerash	Sightseeing	Cultural asset tour Visiting festivals
Ajlun	Sightseeing	Beauty spot tour Cultural asset tour Drive
Dibbin	Sightseeing Picnic Day Camp	
Ishtafina	Sightseeing Picnic	

5.093 In view of the resource potential of the Target Area, the inventory of possible tourism activities and current practice of tourists observed in the Target Area, this study has sorted out the following as potential activities for the Target Area in the future. These are to be used as a basis to identify the types of facilities/ services to be provided.

- Sightseeing
  - Cultural asset tour
    - Visiting antiquities
    - Seeing historical plays and shows
    - Visiting museums
    - Experience of Arab cultures; cuisines, folk costumes, customs, handicrafts, festivals, etc.
  - Scenic spot tour
    - Visiting vista points
    - Ropeway riding
    - Drive
    - Staying in resthouses and youth hostels at beautiful spots

(to continue)



Source: Study Team.

5.3.4 Facility Requirements

a. General

5.094 Required types of facilities can be identified from the viewpoint of (1) what facilities can best fit into the existing or planned environment and (2) how they can fully make use of the environment. At the same time, types of facilities need to be examined in terms of the purpose of tourists' visits to the Target Area. Having these considerations in mind, the types of facilities required for the Target Area have been identified as shown in Table 5.17, in which the

Table 5.17 Types of Facilities Required

Type of Tourist Activity	Waterfront and Recreation Facility	Verdant Plateau Facility	Man-made Components
Sightseeing	-King Talal Dam -Observatories	-Observatories -Botanic gardens -International gardens	-Antiquity sites -Arab villages -Handicraft industry
		-Tourism Skyline Highway	-Resthouses, Restaurants, Museums -Accommodations
		-Ropeways -Resthouses	-Festival plazas -Performances -Sound and Light programs -Trotting races -Sports complex -Tour routes through ruins -Souvenir shops
Recreation	-King Talal Dam -Fishing ponds -Paddling pool	-Picnic spots -Observatories -Tourism orchard -Dude ranch -Hiking trails -Riding -Ropeways -Youth hostels	-Sports complex -Festival plaza -Arab villages
Resort	-King Talal Dam -Fishing ponds	-Camping sites -Summer houses -Auto-camping sites -Chalets	-Resort hotels -Sports complex -Visitor's center

Source: Study Team.

nature of the environment is categorized into (1) waterfront, (2) verdant plateau and (3) man-made complex, and types of tourism activity are categorized into (1) sightseeing, (2) recreation and (3) resort, more or less corresponding to foreign and domestic tourists of short stay, domestic tourists, families and youths in particular, and long-stay domestic tourists and foreign tourists from neighboring countries.

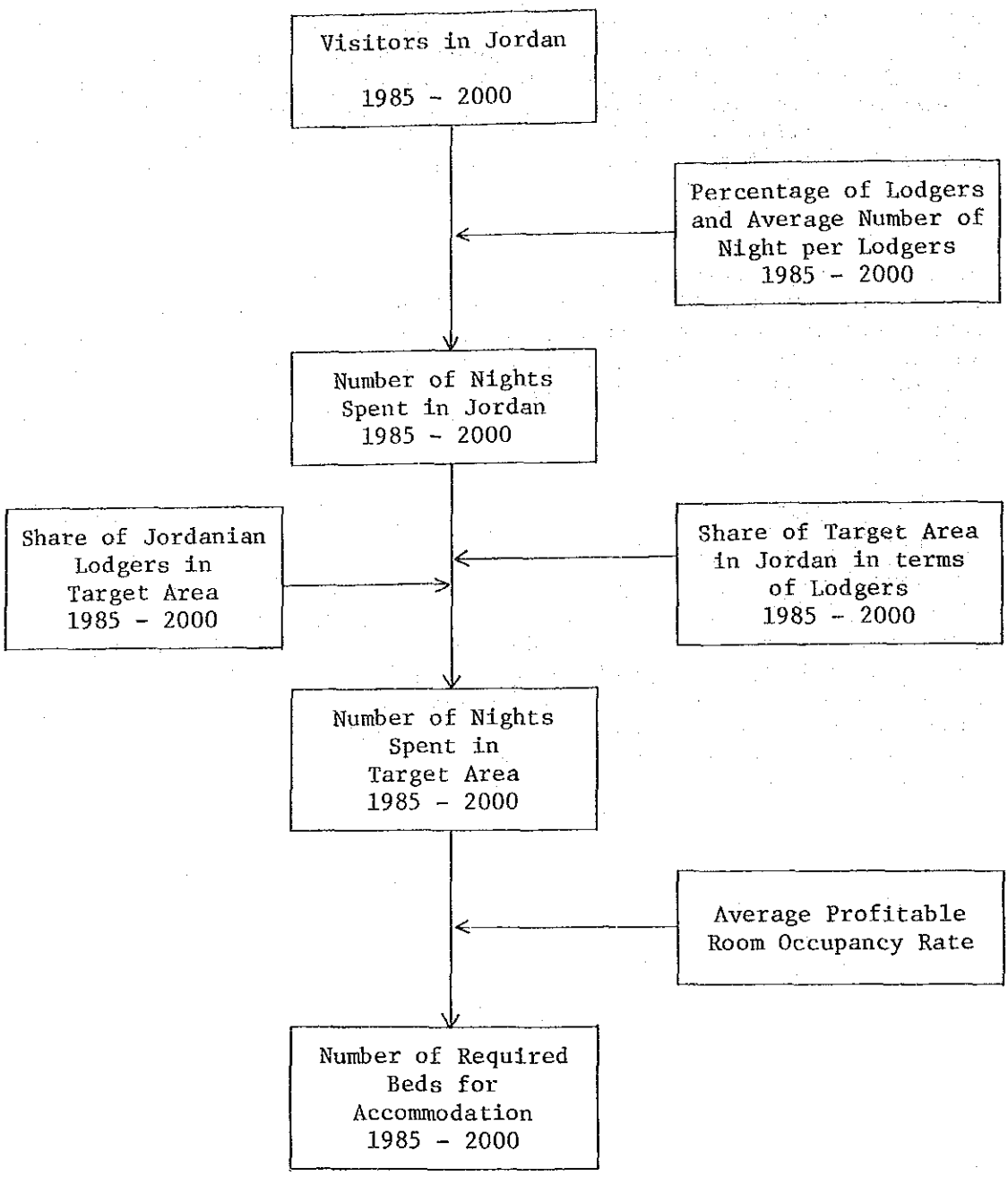
5.095 Out of the facilities and infrastructures listed in the Table 5.17, (1) accommodation, (2) restaurant, (3) picnic spot, (4) parking space and (5) road need to be examined with reference to their requirements in quantitative terms. The reasons for taking these five facilities/infrastructure into special consideration is that they are generally thought to be most needed by tourists.

b. Accommodation

5.096 The process of estimation of the required scale of accommodations follows the flowchart shown in Figure 5.22. According to the demand projection, the number of foreign visitors from Arab countries, who are expected to stay in Jordan, will reach 526,100 in 1985 and 766,900 in 2000; those from Asian countries will reach 225,100 in 1985 and 327,800 in 2000, and those from the rest will reach 236,800 in 1985 and 344,800 in 2000.

5.097 The percentage of lodgers from each country and the average number of nights per lodger in 1985 and 2000 are shown in Table 5.18. Thus, the annual number of nights spent in the Target Area will reach 344,200 in 1985 and 590,800 in 2000. It is assumed that about 30 percent of lodgers will stay in de-luxe type accommodations, 40 percent in standard type accommodations and 30 percent in economy type accommodations. Therefore, 450 beds in 1985 and 800 beds in 2000 are estimated to be required for de-luxe accommodations. For standard class accommodations, 670 beds in 1985 and 1,100 beds in 2000, and for economy class accommodations 450 beds in 1985 and 800 beds in 2000 will be required.

Figure 5.22 Flowchart of Requirements Projection of Accommodation Facilities in the Target Area, 1985 to 2000



Source: Study Team.

Table 5.18 Accommodation Requirement in the Target Area, 1973 to 1977, 1985 and 2000

		1973	1974	1975	1976	1977	1985	2000
No. of Lodgers in East Bank (in person)	Arab	53,480	67,401	94,754	211,713	215,527	207,900	301,300
	Asian	6,021	8,790	10,380	17,783	23,108	43,400	63,200
	The Rest	27,536	39,237	47,783	45,104	52,307	120,000	174,700
	Foreign Total	87,037	115,428	152,917	274,600	290,942	371,300	539,200
	Jordanian[1/]	175,175	179,505	176,686	148,692	140,955	181,800	304,500
No. of Nights Spent in Hotels[2/] in East Bank (in night)	Arab	112,945	160,214	244,188	573,459	618,025	786,300	1,416,300
	Asian	12,867	16,574	22,077	35,187	59,870	151,900	297,100
	The Rest	61,582	86,519	118,225	115,361	131,291	347,900	646,400
	Foreign Total	187,394	263,307	384,490	724,007	809,186	1,286,100	2,359,800
	Jordanian	437,178	447,115	470,480	377,630	385,796	527,220	1,065,800
	Total	624,572	710,422	854,970	1,101,637	1,194,982	1,813,320	3,425,600
Average No. of Nights per Lodger[2/] in East Bank (in night)	Arab	2.11	2.38	2.58	2.71	2.87	3.8	4.7
	Asian	2.14	1.89	2.13	1.98	2.59	3.5	4.7
	The Rest	2.24	2.21	2.47	2.56	2.51	2.9	3.7
	Foreign Total	2.15	2.28	2.51	2.64	2.78	-	-
	Jordanian	2.50	2.49	2.66	2.54	2.74	2.9	3.5
Share of the Target Area in Jordan in terms of Lodgers[3/] (in person)							20%	20%
	Arab						157,300	283,300
							10%	10%
	Asian						15,200	29,700
							10%	10%
	The Rest						34,800	64,600
							16%	16%
	Foreign Total						207,300	377,600
							20%	20%
	Jordanian						136,900	213,200
							344,200	590,800
No. of Required Beds in the Target Area[4/] (in beds)	Total						1,570	2,700
	De-luxe	International Class Hotel			approx.	30%	450	800
	Standard	Hotel, Chalet Bungalow				40%	670	1,100
	Economy	Auto-camp, Youth Hostel, Pension				30%	450	800

Source: Statistical Yearbook, 1976, 1977.

Notes: 1/ Number of Jordanian lodgers in 1985 and 2000 is estimated based on population growth in the East Bank.

2/ Average number of nights per lodger in 1985 and 2000 is estimated using the following formula:

Arab Foreigners	$Y = 0.0003243\ x^2 + 1.4569$
Asians	$Y = 0.0004324\ x^2 + 0.376$
The Rest	$Y = 0.0002883\ x^2 + 0.817$
Jordanians	$Y = 0.0002162\ x^2 + 1.338$

Y: Average number of nights per lodger
x: Year

3/ It is assumed that 30 percent of Arab foreign lodgers in summer and 10 percent of those in winter, thus 20 percent on the average throughout a year, will stay in the Target Area in 1985 and 2000. Jordanian lodgers are assumed to take the tourism pattern similar to Arab foreign lodgers, hence, the same ratio is adopted. Here, 10 percent of non-Arab foreign lodgers are assumed to stay in the Target Area throughout the year.

4/ Average profitable room occupancy is estimated at about 60 percent in annual average according to existing statistics.

c. Restaurants

5.098 There are eight restaurants mainly for tourism purposes in the Target Area, i.e., six in Jerash (one of which is still in the planning stage), one in Dibbin and one in Ajlun. However, the service offered in these restaurants does not seem to meet the requirements of an adequately high number of tourists. Except for a few restaurants in Jerash, no high quality restaurant exists in the Target Area although demand for such restaurants have already come to have high priority. Meanwhile, economy or standard retaurants are also required in the Target Area, this type of restaurant also being necessary for those who visit the Target Area for sightseeing and resort purposes. Therefore, restaurants are strongly required in Jerash, Dibbin, Ajlun and Ishtafina areas.

5.099 Parallel to the increasing rates of tourists in the Target Area, it is assumed that an additional 3 restaurants by 1985 and a further additional 7 restaurants by 2000, will be required covering all the grades discussed above.

d. Picnic Spots

5.100 Based on our survey, it is estimated that the total number of domestic tourists will become 27,900 in 1985 and 89,300 in 2000 in the Target Area; they will come to the area mainly for recreational purposes. Present recreational behavior such as picnicking is likely to continue until 1985. However, the behavior will be diversified towards the end of the twentieth century. Bearing these in mind, it is assumed that the number of picnickers per day in the Target Area will reach 25,000 in 1985 and 50,000 in 2000.

5.101 In Zai National Park, about 3,000 picnickers stay in its area of 43.8 hectares at its peak day. According to this figure, i.e., 150 m^2 per person, total picnic area will require 380 hectares of land in 1985 and 750 hectares in 2000 in the Target Area.

5.102 As to the supply of space for park users, green forest and roadside areas seem to be available to the extent of approximately 1,200 hectares at present. Out of this 1,200 hectares, about 450 hectares are readily available for picnic use and the rest needs some improvement works. Since the needs of picnic sites are estimated to be 750 hectares in 2000, additional 300 hectares of green land requires access roads and some up-grading works (see Section 5.2.3,a., Table 5.3). In addition, improvement of facilities such as parking places, public conveniences and small shops is important for providing better picnic opportunities.

e. Parking Places

5.103 A few public parking places have already been provided in the Target Area. In general they are attached to facilities used by the public, such as the visitor's center in Jerash, national parks of Dibbin and Ishtafina, and the restaurant in Ajlun. So far, the

provision of parking places seems to be adequate but it is necessary to provide more public parking lots in Jerash, Dibbin, Ajlun, Ishtafina and nearby picnic spots to accommodate the increasing number of visitors.

f. Road

5.104 It is extremely important to develop an access road or roads to each tourism destination. At present some of the existing roads can be utilized for tourism purposes as described in Section 5.2.3, d. However, provision of chances to enjoy the excellent panoramic view from the mountain ridges has been neglected due to lack of adequate access roads. Also, accessibility from major cities to certain parts of the Target Area is a little inconvenient in terms of travel time.

5.105 Accordingly, the accessibility from Amman to Ishtafina, from Irbid to Dibbin, and from Dibbin to King Talal Dam should be improved. In addition, the skyline driveway connecting mountain ridges and green forests should be provided as well as distribution roads reaching to each tourism spot. Pedestrian trails, hiking routes and horseback riding trails are considered important for recreational type of tourism as well.

5.4 The Plan

5.4.1 Objectives, Targets and Strategies

5.106 Based on the assessment of resources and other potentials and the development framework, the Study proposes to set the following development objectives for tourism in the Target Area:

(1) To attract the maximum number of foreign tourists into the Target Area, thereby contributing to improvement in the balance of payments of the country;

(2) To provide better and more recreational opportunities for the people in Jordan, thereby enhancing the people's quality of life; and

(3) To preserve and revitalize the historical and cultural assets of the country.

5.107 In connection with the first objective, the target amount of income from foreign tourists has been set, based on the projection of the numbers of foreign tourists and unit amount of expenditures by them. According to the Tourism Expenditure Survey, 1976, average expenditure of a foreign tourist per night amounted to JD 6.9 for Arabs, JD 10.2 for Asians and JD 11.8 for the rest. Assuming that the amount will increase at the rate of 3 percent per annum up to year 2000 as world economy grows, the average expenditure of foreign tourists per night will increase as shown in Table 5.19. Based on this and the projection of tourists (see Section 5.3.2) total expenditures by foreign tourists

are estimated to be JD 3.2 million or US$10.6 million in 1985 and JD 8.2 million or US$27.3 million in 2000 at 1976 constant price.

Table 5.19 Average Expenditures of Foreign Tourists per Night in the Target Area, 1976,1985 and 2000

(Unit: JD at 1976 constant price)

	Arabs	Asians	The Rest	Average
1976	6.9	10.2	11.8	10.2
1985	9.0	13.3	15.3	13.3
2000	14.0	20.7	24.0	20.7

Source: Tourism Expenditure Survey, 1976

5.108 For the second objective, target figures can be derived from the results of tourist projections as such. Hence, the target number of recreational opportunities for the people in Jordan is 136,900 lodgers in man-days and 3,348,000 day-return tourists in 1985, and 213,200 and 10,716,000 respectively in the year 2000. It follows that in both the Amman and Irbid Governorates, one out of eighteen people will make one overnight tour to the Target Area in 1985 and one out of nineteen people will do so in the year 2000 and also, on the average, each family will make day tours 1.4 times a year in 1985 and 2.7 times a year in the year 2000.

5.109 As for antiquities, special attention should be given to the rehabilitation of Qal'at Er Rabad and the ancient city of Jerash in their utilization for tourism.

5.110 In order to achieve these objectives and targets, the following strategies are recommended:

(1) To utilize the excellent climate, vegetation, landscape, and historical and cultural assets to the maximum extent;

(2) To provide and facilitate intensive investments to selected clusters of potential tourism spots;

(3) To link loosely the clusters to each other by making full use of natural conditions such as skyline, forest belt and wadis, and by improving the access network; and

(4) To provide a different style of tourism development for each cluster in order to effectively meet the demands of each tourist group, such as sightseeing, recreation and resort visiting.

5.4.2 Development Plan: 1985 and 2000

a. Overall Structure Plan

5.111 Before translating the strategies in the previous section into spatial allocation of tourism facilities and services, the Study established an overall structure plan comprising such elements as development cores, zoning, access network, green network and key strategic facilities (see Figure 5.23). This plan functions mainly for the purpose of connecting each development core closely.

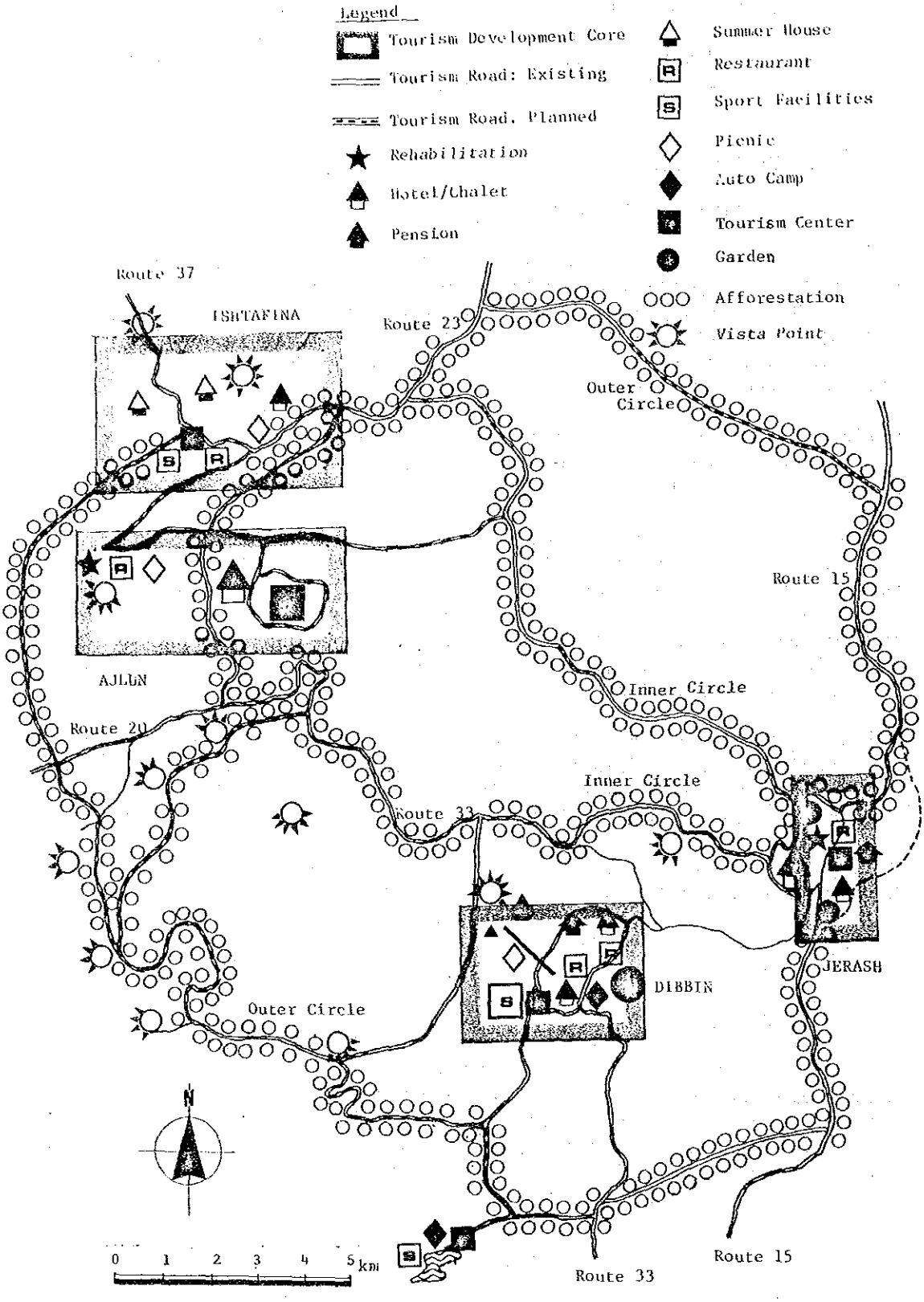
5.112 Four development cores are proposed for tourism development in the Target Area. They are Ajlun, Ishtafina, Dibbin and Jerash, the places where many tourism resources are concentrated.

5.113 Broadly speaking, the Target Area has two zones. One is the Jerash-Ajlun zone, characterized by antiquities and contemporary Arab towns with development cores at Jerash and Ajlun/Rabad. The other is the Dibbin-Ajlun-Ishtafina zone, characterized by an excellent natural environment with development cores at Dibbin, Ajlun/Anjara and Ishtafina. The Ajlun area situated where the two zones cross, and is the center of the Target Area.

5.114 The access network consists of an inter-regional network, two circle roads and feeder roads. The major inter-regional network includes a two-pronged approach from Amman to Ajlun/Jerash by Routes 33 and 15; the similar approach from Irbid to Ajlun/Jerash is by Routes 23, 37 and 15, and the route to connect the Target Area and the Jordan Valley runs through Kufrinja. It is proposed to create an Inner Circle Road connecting Jerash, Ajlun, Dibbin and Ishtafina and an Outer Circle Road connecting Jerash, King Talal Dam, Kufrinja, Ishtafina and Ibbin through the Zarqa River area and mountainous ridges. The feeders connect the Inner and Outer Circle Roads.

5.115 The green network is comprised of green zones and makes use of existing forests at Dibbin, Ishtafina and their surroundings. Greenbelts are to be created along Wadis and mountain ridges of the Outer Circle Road and green clusters are to be created around selected strategic points such as Jerash giving the impression of an ancient city surrounded with verdure. Anjara is to be the gateway to the Ajlun area, the center of the Target Area and to the King Talal Dam, the only part the Target Area having an appreciable waterfront.

Figure 5.23 Diagram of the Target Area
Tourism Development, 2000



Source: Study Team.

5.116 Among the various facilities identified in Table 5.17, an International Resort Hotel, an Arab Village and International Gardens have been selected as key strategic facilities for attracting tourists who have as their objectives resort visiting, sightseeing and recreation. Their location has been determined on the basis of the locational factors assessed for each development core (see Table 5.20). Thus, it is recommended that an International Resort Hotel and an Arab Village be located at Ajlun, and the International Gardens at Dibbin. Location of other facilities has been determined taking into account the link between each possible tourism activity (see Section 5.3.3).

Table 5.20 Assessment of Locational Factors of Key Strategic Facilities in the Target Area

Locational Factors	Factor Weighting			Area Assessment			
	International Resort Hotel	Arab Village	International Gardens	Ajlun	Jerash	Dibbin	Ishtafina
Natural Environment	2	1	2	2/2	1/1	3/3	2/2
Accessibility	1	2	2	2/3	3/3	2/3	1/2
Amenity and Convenience	2	1	1	1/3	2/2	1/2	1/2
Reputation	2	2	1	2/3	3/3	1/2	1/1
Efficient Implementation	1	2	2	1/2	2/2	1/2	1/2

Facility	Aggregated Score			
	Ajlun	Jerash	Dibbin	Ishtafina
International Resort Hotel	13/21	17/17	12/19	10/14
Arab Village	13/21	19/19	12/19	9/12
International Gardens	13/20	18/17	14/20	10/15

Source: Study Team.

Note: In the score X/Y, X and Y indicate the score values measured based on present conditions and future improved conditions, respectively.

b. Development Plan: 1985 and 2000

5.117 Based on the facility requirements and Overall Structure Plan, and by translating the development strategies into the facilities, tourism development plans have been made for 1985 and 2000 in order to achieve the development objectives. For the 2000 development plan, see the colored map entitled "Tourism Development Plan of Target Area, 2,000;" for the 1985 development plan, see the mono-chrome map entitled "Tourism Development Plan of Target Area, 1985," which are in the envelope attached to the back cover of this report.

5.118 Broadly speaking, Jerash and Ajlun will exist mainly for the purpose of maximizing foreign exchange earnings. Therefore, convenient and comfortable facilities for international tourists, including international class hotels, high quality restaurants, tourism centers and tourism amusements will be required and have high priority. Simultaneously, in considering investment effectiveness, it is suggested that utilization of tourism potentialities by concentrated investment in the Ajlun area will show more immediate profit than that in Jerash.

5.119 On the other hand, the area from Dibbin to Ishtafina through Anjara and Ajlun, will function so as to provide better recreational opportunities, mainly for local people and surrounding foreign countries, with the full utilization of the excellent natural environment. Therefore, recreational facilities such as picnic sites, camping sites, auto-camps, outdoor sports facilities and tourism centers will be given priority. Taking into consideration the accessibility from the major hinterland, and existing and future potentialities, Dibbin will have top priority for this type of development.

5.120 In addition to these projects oriented toward the development cores, the projects which fill in the areas between development cores and thereby greatly increase the total appeal of the area have also been proposed. They are listed in the Tourism Development Plan of Target Area, 2000.

5.121 All the projects included in the Tourism Development Plans, 2000 and 1985 are listed in Table 5.21. They are also classified into two groups based on development period.

5.122 Here, it should be noted that coordination and cooperations between managing organizations of facilities in the Target Area and those in the Jordan Valley, particularly in the Suweima area, should be fully developed. The Target Area is the tourism area in summer, whilst the Suweima area is the one in winter. If the organizations in both areas work together, they can attract many tourists to Jordan all the year round. Furthermore, if they arrange a swapping of personnels and some of their mobile equipments by season, it will reduce a certain amount of operation costs.

Table 5.21 Projects Included in the Tourism Development Plan, 1985 and 2000

Project Package Title	Development Projects	
	First Period: by 1985	Second Period: 1986-2000
Jerash Development	-Museum -Restaurant -Visitors Center incl. handicraft, souvenir shop and resthouse -Youth Hostel -Rehabilitation of Ruins	-Festival Plaza -Hotel -Pension -Paving for Pedestrians -Wadi Jerash Park -West Hill Park -Car parking -Rehabilitation of Ruins
Dibbin National Park Area Development	-Visitors Information Center -Chalet -Car parking -Auto-camp -Restaurant -Shopping Center -Swimming pool -Camping Site	-Central Plaza -Chalet -Ropeway -Resthouse (Mt. Aqra) -Hotel -Pension -International Gardens -Botanic Gardens -Sports Complex -Parking (at Sports Complex) -Camping Site
Ajlun Development	-Resthouse (at Rabad) -Restoration of Rabad -Museum (in Rabad) -International Resort Hotel	-Parking -Restoration of Rabad -Lift (at Rabad) -Picnic spot -Arab Village
Ishtafina Development	-Bungalow	-Bungalow -Visitors Center -Restaurant -Sports Complex -Shopping Center -Picnic spots -Summer Resort House Estate
Tourism Road Network	-Improvement of Routes 15, 23, 30, 33 -Skyline Driveway between Dibbin and King Talal Dam	-Improvement of Road from Anjara to Jordan Valley through Kufrinja -Skyline Driveway between Dibbin and Ishtafina
Forestation and Plantation	-Ajlun -Ishtafina -King Talal Dam -Skyline Driveway	-Dibbin -Ajlun and Arab Village -Ishtafina -Skyline Driveway

Source: Study Team.

5.4.3 Development Core Plans

a. General

5.123 Plans for development cores have also been prepared to show more concrete ideas of development cores and to show the detail of the key strategic facilities identified in Section 5.4.2,a. They follow hereunder.

b. Jerash Development

5.124 Jerash will be considered as the gateway to the Target Area. It has already established itself in Jordan as a well-known tourism spot noted for its historical assets. Therefore, some facilities have already been or are going to be provided, such as a Visitor's Center and Restaurant. However, improvement of tourism conveniences are further required to accelerate the growth of tourism income. The map entitled "Plan of Development Core: Jerash, 2000," which is in the envelope attached to the back-cover of this report, shows concrete ideas for development through the year 2000.

5.125 Basic strategies of development underlying this plan are:

(1) To provide a tourism-facilities-complex surrounding the central plaza of Jerash;

(2) To pedestrianize the part of Route 15 within Jerash City and to connect it to the central plaza;

(3) To create green clusters along the west side of the ancient city wall, on the east side of the existing city and along Wadi Jerash;

(4) To construct accommodations of various types to permit tourists to stay in Jerash;

(5) To restore Jerash ruins; and

(6) To encourage public cooperation to implement this development plan more easily.

5.126 Based on these strategies the following projects and facilities are proposed for this core:

(1) Festival Plaza (Central Plaza);
(2) Visitor's Center including Handicraft Center souvenir shops and resthouse;
(3) Museum;
(4) Youth Hostel/Hotel/Pension;
(5) Restaurant;
(6) Public car parking space;
(7) Wadi Jerash Green Cluster and West Hill Green Cluster'
(8) Tourism roads; and
(9) Restoration of ruins.

c. Dibbin National Park Area Development

5.127 Dibbin has high potentialities for active outdoor recreational opportunities and, especially, the existing natural environment will play an important role in the development of tourism. Thus, those facilities which will improve and diversify recreational opportunities effectively are required enthusiastically. The map entitled "Plan of Development Core: Dibbin, 2000," which is in the envelope attached to the back-cover of this report, shows concrete ideas for development through the year 2000.

5.128 Basic strategies of development underlying this plan are:

(1) To provide new facilities and up-grade old facilities for outdoor recreation by utilizing the existing National Park;

(2) To provide various types of economical accommodation such as chalets, auto-camps and camping sites;

(3) To provide a large scale Sports Complex, especially for families and the younger people;

(4) To make full use of the excellent view from Mt. Aqra;

(5) To create gardens as quiet, attractive places, making use of the existing green resources and the wadi; and

(6) To establish a public cooperation body for better development.

5.129 Based on these strategies, the following projects facilities are proposed for this core:

(1) In central area:

1) Visitor's Information Center;
2) Central Plaza;
3) Chalets, Youth Hostel, Auto Camp;
4) Shopping Center;
5) Car parking space;
6) Restaurant;
7) Children's Garden and Swimming Pool; and
8) Ropeway Station.

(2) In Mt. Aqra area:

9) Ropeway;
10) Resthouse; and
11) Hotel.

(3) In outer area:

12) International Garden;
13) Botanical Garden;
14) Sports Complex including athletic field, football field, gymnasium, tennis courts, swimming pool, field athletic site and archery; and
15) Access and connecting roads.

d. Ajlun Development

5.130 This area has both natural environment assets and historical assets and therefore an effective link is required for better utilization of them. The symbolic space for presentation of the historical heritage of Arab culture, and the summer resort center, are also desirable. The map entitled "Plan of Development Core: Ajlun, 2000," which is in the back-cover envelope, shows concrete ideas for development through the year 2000.

5.131 Basic strategies of development underlying this plan are:

(1) To rehabilitate the Castle of Rabad and to enhance its attractiveness for tourists;

(2) To create a large-scale modern recreational resort complex in keeping the historical image of Rabad;

(3) To create an Arab Village as a symbol of the Arab-World; and

(4) To promote beautification of buildings in the town of Ajlun and Anjara.

5.132 Based on these strategies, the following projects facilities are proposed for this core:

(1) Rehabilitation of Rabad Castle;
(2) Museum in Rabad Castle;
(3) Resthouse beside the Castle;
(4) Up-grading of roads;

(5) International Resort Hotel Complex equipped with conference hall and amusement facilities such as casino, night club, tennis courts and swimming pool;

(6) Arab Village including 1) Traditional Buildings such as a mosque, palace and village house, 2) Festival Plaza, 3) Visitor's Center, 4) Restaurant, 5) Pillared Boulevard, 6) Symbolic Monument Tower, 7) Pedestrian/Carriageway and 8) Parking; and

(7) Access roads to facilities.

e. Ishtafina Development

5.133 The most remarkable resource of this area is the excellent natural environment. Therefore, the development of a spacious and exclusive resort for long-stay tourists will be considered to effectively utilize this resource. The map entitled "Plan of Development Core: Ishtafina, 2000," which is in the back-cover envelope, shows a concrete ideas for development through the year 2000.

5.134 Basic strategies of development underlying this plan are:

(1) To make full use of the good accessibility to Ajlun and to link this area closely with the International Resort Hotel in Ajlun;

(2) To provide better accommodations for long-stay holiday makers seeking resort facilities;

(3) To develop an exclusive, low-density summer resort housing estate;

(4) To provide space for exclusive sports facilities such as golf, gun shooting, swimming and tennis, to be used especially by resort holiday makers;

(5) To develop the tourism center for conveniences; and

(6) To establish public-cooperation body for effective development.

5.135 Based on these strategies, following projects/facilities are proposed for this core:

(1) High-class bungalows;
(2) Visitor's Center;
(3) Restaurant and Resthouse;
(4) Shopping Center Complex;
(5) Plaza;
(6) Sports Complex including golf club, shooting club, tennis club, horse-riding club, swimming club and health center;
(7) Mosque;
(8) Picnic spots;
(9) Summer resort house; and
(10) Access roads.

5.5 Project Proposal

5.5.1 Project Identification

a. General

5.136 Most of the projects are already identified in Section 5.4.3 except for those located outside the development cores. Thus, all the projects are listed again in Table 5.23 which appears later in the text of this report. Table 5.23 also shows project components inclusive of physical facility and activity, project size, project location, category of main executive body and other remarks particularly on supporting and complementary activities. It should be noted that an executive body is classified into four categories, i.e., Central Government, Local Government, Public Corporation and Private Sector.

5.137 In the Table, almost all the projects are reclassified into five groups slightly different from the development cores, based on features of projects that are listed above (i.e., from project component through executive body). In addition to these groups, four independent special projects are separately identified in the Table. These groups and independent special projects are:

(1) Jerash Development;
(2) Dibbin National Park Area Development;
(3) Ajlun Development;
(4) Ishtafina Development;
(5) King Talal Dam Tourism Development;
(6) Arab Village Project;
(7) International Resort Hotel Project;
(8) Skyline Driveway Project; and
(9) Summer Resort House Project.

Their explanations appear in turn except for the first four groups. Projects in the first four groups are almost the same as those listed for the four development cores.

b. King Talal Dam Tourism Development

5.138 To utilize very rare and precious waterfront resource for tourism, especially to provide better recreational opportunities for Jordanian people:

(1) Facilities for water sports such as swimming, boating and yachting, fishing and water skiing, are considered to be important.

As supporting facilities for visitor's conveniences, the following facilities should be provided:

(2) Visitor's center including restaurant, souvenir shop and information office;

(3) Improvement of access road from Route 33; and
(4) Auto-camp site.

These facilities will be constructed and managed mainly by Central Government.

c. Arab Village

5.139 To enhance the cultural heritage of the Arab world, the establishment of an Arab Village is regarded as totally effective as a symbol space of Arab culture. An Arab world exposition is recommended to be held to accelerate the accomplishment of this project. The project components are:

(1) Traditional Arabian buildings including dwellings, mosque and palaces;

(2) Visitor's Center including handicraft workshop, souvenir shop, information office and folklore museum;

(3) Festival Plaza, Pedestrian and Carriageway and Pillared Boulevard for pedestrian usages; and

(4) Symbolic Tower.

For tourist's convenience, the following should be provided:

(5) Parking and boundary access road.

In addition, afforestation is important. All these project components except road and afforestation by the Central Government, will be constructed by a newly-established public corporation.

d. International Resort Hotel

5.140 To utilize natural resources, notably the cool climate in summer and verdant surroundings, for improvement of foreign exchange earnings, concentrated investment seems to be effective. Therefore the International Resort Hotel equipped with a conference hall, casino, garden, swimming pool and tennis courts, is to be listed as one of the major strategic projects. This hotel should be located in natural surroundings, thus the location which has been chosen is in the eastern hilly part of Ajlun and the investment will be done by private capital.

e. Skyline Driveway

5.141 To provide more alternative tourism-and-recreational opportunities and to utilize natural environmental resources, the Skyline Driveway has been planned along the ridge of the western part of the Target Area. This driveway road will define the boundary of the natural environment preservation area and will be an Outer Circle road in the Target Area. Plantation along the roadside and the occasional

provision of scenic terraces with parking spaces are especially important for recreational tourism. This project will be the responsibility of Central Government.

f. Summer Resort House Project

5.142 To meet needs which will arise from changing life style, summer resort house estates will be required in quiet, cool and verdant areas. These estates will be located in the Ishtafina area. However, preservation of the natural environment is strongly required, and therefore a subdivision will not be made and only distribution and access roads will be constructed. This project will be done by private investment.

5.5.2 Phasing and Scheduling of Project Implementation

5.143 Concerning phasing and scheduling of project implementation, the following conditions have been given as a guideline.

(1) To give priority to the projects which will have immediate effect in attaining the objective, i.e., to obtain foreign currency, to provide better recreational opportunities, and to revitalize the historical and cultural assets of the country.

(2) To give priority to the projects which already have been recognized as being necessary, but have not been implemented because of the shortage of capital.

(3) To give priority to the projects which will improve accessibility to the Target Area.

(4) To meet demands when and where tourism and recreational projects play an important role on social and educational development.

5.144 The period of implementation from 1981 to 2000 can be divided into four phases, each of five years duration.

5.145 During Phase I -- up to 1985 -- emphasis should be given to road up-grading with priority on inner circulation and Route 33, construction of an International Resort Hotel in Ajlun, development of tourism conveniences such as tourist centers, restaurants, and rest-houses in Jerash, Dibbin, and Ajlun, and afforestation around Ajlun, Ishtafina and King Talal Dam.

5.146 During Phase II -- 1986 to 1990 -- the Arab Village should be completed and the construction of some accommodations in Dibbin and Ishtafina should be continued. The Skyline Driveway and the ropeway to Mt. Aqra should start to be constructed.

5.147 During Phase III -- 1991 to 1995 -- the high class hotel in Jerash, the afforestation around Jerash and Dibbin, the Sports Complex in Dibbin and the development of facilities at King Talal Dam should be continued.

5.148 During Phase IV -- 1996 to 2000 -- the gardens in Jerash and Dibbin, and the development of Ishtafina, including the summer resort house estate and the Sports Complex, should be given high priority. The Skyline Driveway, which will be defined in the Target Area as the Outer Circle of green network, should be completed.

5.149 Table 5.22 shows the priority of each program in each phase. Table 5.23 shows the phasing of each project.

Table 5.22 Phasing of Programs, 1980 to 2000

	Program	Phase						
		I	1985	II	1990	III	1995	IV
1.	Rehabilitation of Antiquities	XX		XX		X		X
2.	Accommodations	XX		X		XX		X
3.	Restaurants	XX		X		X		-
4.	Tourism Center	XX		XX		-		X
5.	Sports Facilities	X		X		XX		XX
6.	Camping & Picnic	XX		X		XX		X
7.	Afforestation	X		XX		XX		XX
8.	Transportation	XX		XX		XX		XX
9.	Special Program	-		XX		-		XX

Source: Study Team.

Notes: XX - high priority
X - priority

Table 5.23 List of Proposed Projects in the Target Area, 1980 to 2000

(Unit: JD 1,000 at 1979 prices)

Group or Special Project	Project Component		Size	Location	Executive Body[1]	Project Duration '81 '86 '91 '96	Crude Cost Estimates	Remarks
	Facilities	Activities						
1. Jerash Development	1-1 Festival Plaza	Jerash Festival	3ha	Jerash	P.C.		60	-Establishment of a corporative body
	1-2 Museum		500m^2		P.C.		35	-Development of information system
	1-3 Restaurant		100 seats		P.V.		200	
	1-4 Youth Hostel		100 beds		P.C.		75	
	1-5 Hotel		450 beds		P.V.		4,200	
	1-6 2 Public Car Parking including 1 relocation		1ha		P.C.		15	-Relocation of existing buildings
	1-7 Handicraft Center	Demonstration and spot selling	Complex 500m^2		P.C.			-Arrangement for preservation of traditions
	1-8 Souvenir Shop				P.C.		35	-Relocation of existing market
	1-9 Resthouse				P.C.			
	1-10 Road (tourism road only)		4.5km		L.G.		210	-Relocation of road
	1-11 Wadi Jerash Park		35ha		C.G.		350	
	1-12 West Hill Park		75ha		C.G.		750	
	1-13 Pension		200 beds		P.V.		90	

(to continue)

Group or Special Project	Project Component		Size	Location	Executive Body[1]	Project Duration	Crude Cost Estimates	Remarks
	Facilities	Activities				'81 '86 '91 '96		
	1-14 Amphitheater rehabilitation	Traditional Drama Festival	500m²		C.G.		135	-Restoration of theater -Sound and Light program
	1-15 Hippodrome restoration				C.G.		405	-Excavation and restoration
	Facilities Total						6,020	
	1-16 Utilities						3,150	
	Project Total						9,710	
2. Dibbin National Park Area Development	CENTRAL AREA							
	2-1 Visitors Information Center	Information services including booking of accommodation	2,000		P.C.		140	-Establishment of Jordan Tourist Information Organization and Dibbin National Park -Corporation under the Min. of Tourism and Antiquities
	2-2 Central Management Office	Afforestation Preservation						-Forest Patrol and Tourism Police -Designation of National Park Area/Natural Preservation Area
	2-3 Central Plaza	Festival	5ha		P.C.		100	
	2-4 Car Parking		4,000m²		P.C.		6	
	2-5 Chalet		90 unit		P.C.		900	-Additional equipment of water supply, sewage and solid water disposal facilities

(to continue)

Group or Special Project	Project Component		Size	Location	Executive Body[1]	Project Duration '81 '86 '91 '96	Crude Cost Estimates	Remarks
	Facilities	Activities						
	2-6 Youth Hostel		100 beds		P.C.		75	
	2-7 Autocamp		20ha		P.C.		270	
	2-8 Restaurant		300 seats		P.V.		450	
	2-9 Shopping Center		2,500m^2		P.C.		250	
	2-10 Children's Garden		—		P.C.		—	including in central plaza
	2-11 Swimming Pool						25	
	OUTER AREA							
	2-12 Ropeway		1.9km	Dibbin Mt.Aqra	P.V.		500	
	2-13 Resthouse		100 seats		P.C.		150	
	2-14 Hotel		250 beds		P.V.		1,200	
	2-15 International Garden		100ha		C.C.		1,000	
	2-16 Botanic Garden				C.C.			
	2-17 Pension		200 beds		P.V.		90	-Establishment of Pension Association
	2-18 Sports Complex including: •Athletic Field •Football Stadium •Swimming Pool •Gymnasium •Field Athletic •Tennis Court	Athletic Game	60ha		P.C.		1,200	

(to continue)

Group or Special Project	Project Component		Size	Location	Executive Body[1]	Project Duration '81 '86 '91 '96	Crude Cost Estimates	Remarks
		Facilities	Activities					
	2-19	Parking		1ha		P.C.		15	
	2-20	Access Road		9km		L.G./C.G.		484	
	2-21	Afforestation		52.5ha		C.G.		525	
	2-22	Camping Site				P.C.		120	
	Facilities Total							7,500	
	2-23	Utilities						3,822	
	Project Total							11,322	
3. Ajlun Development	3-1	Rabad Castle	Rehabilitation of Rabad Castle		Rabad	C.G.		300	-Ongoing project by UNESCO -Improvement of access road
	3-2	Museum			in Rabad	C.G.		—	
	3-3	Resthouse		200 seats	Rabad	C.G.		300	
	3-4	Parking		5,000m^2	Rabad	C.G.		70	
	3-5	Lift		200m	Parking Castle	C.G.		50	
	3-6	Picnic		100ha		C.G.		40	
	3-7	Afforestation		70ha		C.G.		700	
	3-8	Road		5km	To Ishtafina	C.G.		300	
	Facilities Total							1,760	
	Project Total							1,760	

(to continue)

Group or Special Project	Project Component		Size	Location	Executive Body[1/]	Project Duration '81 '86 '91 '96	Crude Cost Estimates	Remarks
	Facilities	Activities						
4. Ishtafina Development	4-1 Bungalow		200 rooms		P.C.		3,500	
	4-2 Visitor's Center		1,000m²		P.C.		70	-Establishment of Ishtafina National Park Corporation under the M.T.A. for management
	4-3 Restaurant Resthouse		200 seats		P.V.		400	
	4-4 Sports Complex •Golf Course •Shooting •Tennis Court •Swimming Pool •Clubhouse •Parking		120ha		P.C.		2,500	
	4-5 Mosque		1,000m²		L.G.		70	
	4-6 Shopping Center		2,000m²		P.C.		140	
	4-7 Plaza		3ha		P.C.		60	
	4-8 Picnic		100ha		P.C.		40	
	4-9 Road		6km		L.G.		280	
	4-10 Afforestation		700ha		C.G.		700	
	Facilities Total						7,760	
	4-11 Utilities						2,100	
	Project Total						9,860	

(to continue)

Group or Special Project	Project Component		Size	Location	Executive Body[1]	Project Duration	Crude Cost Estimates	Remarks
	Facilities	Activities				'81 '86 '91 '96		
5. King Talal Dam Tourism Development	5-1 Visitor's Center with restaurant, souvenir shop and information		1,000m^2		C.G.		70	-Improvement of access road (3km) -Plantation
	5-2 Autocamp Site		40ha		C.G.		550	-Assessment of utilization of water-frontage
	5-3 Water Sports Base, Swimming, Yachting, Fishing, etc.				C.G./P.V.		270	
	5-4 Access Road		3km		C.G.		160	
	5-5 Plantation		500ha		C.G.		500	
	Facilities Total						1,550	
	5-6 Utilities						600	
	Project Total						2,150	
6. Arab Village	6-1 Traditional Arabian Buildings including Palace, Mosque	Exposition of Arab World	180ha 125 units + 10,000m^2		P.C.		2,925	-Promotion of International Exposition -Establishment of Arab Village Corporation
	6-2 Festival Plaza		2ha		P.C.		40	
	6-3 Restaurant		300 seats		P.V.		450	

(to continue)

Group or Special Project	Project Component		Size	Location	Executive Body[1/]	Project Duration '81 '86 '91 '96	Crude Cost Estimates	Remarks
	Facilities	Activities						
	6-4 Handicraft work shop	Demonstration of traditional craft industry and spot selling						-Establishment of organization for preservation of traditional skill
	6-5 Souvenir shop		3,000m^2		P.C.		210	
	6-6 Visitor's Center							
	6-7 Forklore Museum							
	6-8 Symbolic Tower				P.C.		50	
	6-9 Pillared Boulevard		30,000m^2		P.C.		30	
	6-10 Pedestrian and Carriage-way		12km		P.C.		150	
	6-11 Parking		20,000m^2		P.C.		30	
	6-12 Boundary access road		6km		C.G.		280	
	6-13 Afforestation		150ha		C.G.		1,500	
	Facilities Total						5,665	
	6-14 Utilities						1,050	
	Project Total						6,715	

(to continue)

Group or Special Project	Project Component		Size	Location	Executive Body 1/	Project Duration	Crude Cost Estimates	Remarks
	Facilities	Activities				'81 '86 '91 '96		
7. International Resort Hotel	7-1 Hotel, Casino, Conference hall, Bungalow	Special Performance	300 rooms 450 persons		P.V.		4,200	-Construction of access road and improvement of accessibility from Amman
	7-2 Parking	International Conference			P.V.			
	7-3 Garden including swimming pool and tennis courts				P.V.			-Adjustment to land use plan
	7-4 Access Road				P.V.			
8. Skyline Driveway	8-1 Road		31.5km		C.G.		1,600	-Plantation along road-side
	8-2 Parking terrace with public convenience		60 units		C.G.			
	8-3 Plantation		630ha		C.G.		630	
	Project Total						2,230	
9. Summer Resort House	9-1 Access/distribution road		Total (31km) 10km until 2000		P.V.		500	

Source: Study Team.

Note: 1/ C.G.: Central Government L.G.: Local Government P.C.: Public Corporation P.V.: Private Corporation

5.5.3 Additional Recommendations for Tourism Development

5.150 For effective implementation and full utilization of these projects, there require some additional recommendations as follows.

(1) In order to carry out the tourism development plans smoothly, training of skilled man-powers for tourism and consequently establishing authorized organizations for its training will be required. Those skilled manpowers consist of qualified tourism guides, recreation leaders, information receptionists, hotel's and restaurant's staffs, and tourism planners as well. This subject will be discussed further in the next paragraph.

(2) Before the implementation of this tourism development plan, careful researches with special reference to environmental assessment, land use and related regulations for tourism will be required.

(3) As for the shortage of government financial resources to make the every tourism development project implemented, diversification of implementing bodies and linking them in response to the different types and sizes of projects will be necessary. Those bodies are Central Government, Local Governments, Public Corporations, Domestic Private Enterprises and Foreign Private Enterprises as mentioned in the note of Table 5.23.

(4) To make the tourism development project attractive as much as possible, promotion of international events such as national days in the Arab Village, performance of folk music and dancing of various countries, and motor racing will be vital.

5.151 As to the above recommendation (1), the Team roughly investigated the necessity of training institutions for tourism. According to the Director of Hotel Training Center in Amman, approximately 3,000 workers, including skilled workers, will be needed in 1985 to work in resthouses, hotels and tourist centers in Jordan. It means about 600 new workers per annum are required if its supply starts in 1981. As to its supply side, there are one existing training center, one new training institute about to be constructed, and one educational course planned. The existing center is called the Hotel Training Center in Amman and has been in operation for 9 years up to the end of 1979 having produced 330 trainees. This is the 6-month training course for ordinary hotel workers such as receptionists or waiters, and can produce about 40 graduates per year. The new training institute is called the Hotel Training Institute and is planned to be constructed in 1980 by the Ministry of Tourism and Antiquities and the Ministry of Education with an assistance from United Nations. This has training facilities including a 100-room hotel and two restaurants and is planned to be a three

year training course of higher or academic level training for management and hotel maintenance. This will have 100 graduates annually after 1982. The education course for tourism is planned by Yarmouk University to be one component of the University's caliculum. It will be a several-years academic course in tourism and consequently will provide high level tourism workers such as tourism planners and managers. Its opening date is not specified yet.

5.152 Based on above, it seems that there will be reasonable amount of supply of high level tourism workers but there will be a supply shortage in ordinary level tourism workers at the national level. The existing Hotel Training Center is only one source of ordinary worker supply producing 40 trainees every year. Although it was not calculated explicitly, even the demand for ordinary tourism workers only in the Target Area seems to exceed 40 persons every year. Therefore, it is recommended either to expand the training capacity of the existing Hotel Training Center or to establish additional training centers similar to the existing one for ordinary tourism worker supply.

5.5.4 Financial Requirements

a. Total Cost Through 2000

5.153 The cost of each project is estimated based on the unit costs in Appendix D. The result is shown on Table 5.24.

5.154 Thus, the total cost of the tourism projects amounts to JD 37,725,000 at 1979 prices. In addition, the cost of utilities will reach JD 10,722,000 by 2000.

5.155 Dividing these projects' implementation into four phases, 22.3 percent of total facility cost will be invested during the Phase I period, 27.3 percent of it during the Phase II period, 26.7 percent of it during the Phase III period and 23.7 percent of it during the Phase IV period.

5.156 In regard to the executive body, we strongly recommend that a public corporation be established under the Central Government for effective development.

5.157 We estimate that 35.4 percent of the total cost for facilities will be invested by the public corporations. Also, 32.6 percent is expected to be borne by the private sector, 30.1 percent by the Central Government and only 1.9 percent by local governments. Additionally, utility expenses, which will amount to JD 10,722,000, will be borne by the Central Government. Therefore, the total amount of tourism development cost will reach JD 48,447,000, and the Central Government will be expected to invest JD 22,079,000, being 45.6 percent of the total cost.

5.158 The total cost seems to be relatively high. The reason of the relatively high cost is that the total amount of investment for tourism includes (1) the investment by private sector and (2) the investments by other sectors such as highway, transportation and afforestation. Thus we can exclude these costs from the total cost to arrive at the net cost to public tourism sector. Moreover, the Public Corporation can invite private money for tourism investment, consequently reducing the public fund required for tourism investment. Such being the case, the total cost for tourism purposes which should be invested by the Central Government will not be so large.

b. First Phase Requirement

5.159 In this Section, the detailed investment program of public projects, i.e., the projects to be undertaken by C.G. (the Central Government), L.G. (a local government) and P.C. (the Public Corporation), is recommended for the period of the Next Five Year Plan (1981 to 1985). According to Table 5.24, the total costs of the public projects during the first phase (i.e., the Next Five Year Plan period) is estimated at JD 3.577 million in 1979 prices; being comprised of JD 1.167 million by C.G., JD 0.192 million by L.G. and JD 2.218 million by P.C.

5.160 This costs was allocated to each fiscal year based on individual projects (see Table 5.25). If we look at these projects by program type, accommodation projects are the largest among them amounting to JD 1.4 million; afforestation projects are the second amounting to JD 0.475 million; tourism centers the third JD 0.46 million; transportation the forth JD 0.377 million; camping and picnic the fifth JD 0.33 million; restaurant the sixth JD 0.3 million; rehabilitation of antiquities the seventh JD 0.21 million; spot facilities the eighth JD 0.025 million; and no special program. Table 5.26 shows the investment program by executing body.

Table 5.24 Cost of Tourism Projects and Utilities, the Target Area, 1980 to 2000

(Unit: JD 1,000 at 1979 prices)

Program		Phases									
		1981	I	1985	II	1990	III	1995	IV	2000	Total
Rehabilitation of Antiquities	Total		210		210		210		210		840
	C.G.		210		210		210		210		840
Accommodation	Total		5,600		1,325		5,240		2,165		14,330
	P.C.		1,400		1,325		950		875		4,550
	P.S.		4,200		-		4,290		1,290		9,780
Restaurant	Total		950		400		150		-		1,500
	C.G.		300		-		-		-		300
	P.C.		-		-		150		-		150
	P.S.		650		400		-		-		1,050
Tourism Center	Total		460		300		-		270		1,030
	P.C.		460		300		-		270		1,030
Sport Facilities	Total		25		135		1,135		2,700		3,995
	C.G.		-		135		135		-		270
	P.C.		25		-		1,000		2,700		3,725
Camping and Picnic	Total		330		100		590		-		1,020
	C.G.		-		40		550		-		590
	P.C.		330		60		40		-		430
Planting	Total		475		825		1,325		1,900		4,525
	C.G.		475		825		1,325		1,900		4,525
Transportation	Total		337		1,118		475		120		2,090
	C.G.		182		410		170		60		822
	L.G.		192		190		290		60		732
	P.C.		3		18		15		-		36
	P.S.		-		500		-		-		500
Arab Village	Total		-		5,165		250		250		5,665
	C.G.		-		1,280		250		250		1,780
	P.C.		-		3,435		-		-		3,435
	P.S.		-		450		-		-		450
Skyline Driveway	Total		-		700		700		830		2,230
	C.G.		-		700		700		830		2,230
Summer Resort House	Total		-		-		-		500		500
	P.S.		-		-		-		500		500
Whole Facilities	Total		22.3%		27.3%		26.7%		23.7%		100%
		100%	8,427	100%	10,278	100%	10,075	100%	8,945	100%	37,725
	C.G.		10.3%		31.7%		29.4%		28.6%		100%
		13.8	1,167	35.9	3,600	33.2	3,340	36.3	3,250	20.1	11,357
	L.G.		26.2%		26.0%		39.6%		8.2%		100%
		2.3	192	1.9	190	2.9	290	0.7	60	1.9	732
	P.C.		16.6%		38.4%		16.2%		28.8%		100%
		26.3	2,218	50.0	5,138	21.4	2,155	43.0	3,845	35.4	13,356
	P.S.		39.5%		11.0%		34.9%		14.6%		100%
		57.6	4,850	13.1	1,350	42.5	4,290	20.0	1,790	32.6	12,280
Utilities	C.G.		2,418		3,468		2,418		2,418		10,722
Total			22.4%		28.4%		25.8%		23.4%		100%
			10,845		13,746		12,493		11,363		48,447

Source: Appendix A.

Notes: C.G.: Central Government L.G.: Local Government P.C.: Public Corporation
P.S.: Private Sector

Table 5.25 First Phase Investment Program of Public Projects, 1981 to 1985

(Unit: JD 1,000)

Projects by Group	Executive Body	1981	1982	1983	1984	1985	1981-1985
Jerash Total		32	67	77	77	87	340
1-2 Museum (Tourism Center)	P.C.			35			35
1-4 Youth Hostel	P.C.				35	40	75
1-7∿9 Tourism Center	P.C.		35				35
1-10 Road	L.G.	14	14	14	14	14	70
1-14 Rehabilitation	C.G.	20	20	30	30	35	135
Dibbin Total		90	260	260	265	320	1,195
2-1 Visitors Information Center	P.C.		70	70			140
2-4 Car parking	P.C.					3	3
2-5 Chalet	P.C.	90	90	90	90	90	450
2-7 Autocamp	P.C.		90	90	90		270
2-9 Shopping Center	P.C.				50	200	250
2-11 Swimming Pool	P.C.				25		25
2-20 Access Road	LG/CG	20	20	20	20	44	124
2-22 Camping Site	P.C.		10	10	10	30	60
Ajlun Total		50	70	210	210	90	630
3-1 Restoration (Rabad)	C.G.	15	15	15	15	15	75
3-3 Resthouse (Restaurant)	C.G.			150	150		300
3-7 Afforestation	C.G.	35	35	25	25	55	175
3-8 Road	C.G.		20	20	20	20	80
Ishtafina Total		210	210	180	180	270	1,050
4-1 Bungalow	P.C.	175	175	150	150	225	875
4-9 Road	L.G.	12	12	12	12	12	60
4-10 Afforestation	C.G.	35	35	30	30	45	175
King Talal Dam Total		25	25	35	35	45	165
5-4 Road	C.G.	5	5	10	10	10	40
5-5 Afforestation	C.G.	20	20	25	25	35	125
Total		441	666	796	801	873	3,577

Source: Study Team.

Note: Public projects include those to be implemented by P.C., L.G. and C.G.

Table 5.26 First Phase Investment Program by Executing Body, 1981 to 1985

(Unit: JD 1,000)

	1981	1982	1983	1984	1985	1981-1985
Public Corporation (P.C.)	265	470	445	450	588	2,218
Local Government (L.G.)	36	36	36	36	48	192
Central Government (C.G.)	140	160	315	315	237	1,167
Total	441	666	796	801	873	3,577

Source: Study Team.

APPENDICES

APPENDIX A

FINANCIAL RATE OF RETURN

A.001 This Appendix shows the detail of the financial rate of return calculation for seven Alternatives for the Industrial Estate of Irbid (IEI), which are defined in Section 3.9.1.

Table A.1 Financial Rate of Return, Alternative 1

(Unit: JD Million at 1978 prices)

Year		Outflow					Inflow					
		Land Acquisition Cost	Development Cost	Building Cost at S.S.	Operating Cost	Total	Rental Fee at S.S.	Rental Fee at I.L.	Rental Fee at C.S.	Sale of Land: Cash	Sale of Land: Installment	Total
1982	0	1.330	0.840	0.210		2.380						
	1			0.210	0.021	0.231	0.073	0.019	0.001			0.093
	2				0.040	0.040	0.146	0.047	0.001			0.194
	3				0.046	0.046	0.146	0.085	0.001			0.232
	4				0.047	0.047	0.146	0.094	0.001			0.241
	5				0.047	0.047	0.146	0.094	0.001			0.241
	6				0.047	0.047	0.146	0.132	0.002			0.280
	7				0.047	0.047	0.146	0.132	0.002			0.280
	8				0.047	0.047	0.146	0.132	0.002			0.280
	9				0.047	0.047	0.146	0.132	0.002			0.280
	10				0.047	0.047	0.146	0.132	0.002			0.280
	11				0.047	0.047	0.146	0.184	0.003			0.333
	12				0.047	0.047	0.146	0.184	0.003			0.333
	13				0.047	0.047	0.146	0.184	0.003			0.333
	14				0.047	0.047	0.146	0.184	0.003			0.333
	15				0.047	0.047	0.146	0.184	0.003			0.333
	16				0.047	0.047	0.146	0.258	0.004			0.408
	17				0.047	0.047	0.146	0.258	0.004			0.408
	18				0.047	0.047	0.146	0.258	0.004			0.408
	19				0.047	0.047	0.146	0.258	0.004			0.408
	20				0.047	0.047	0.146	0.258	0.004			0.408
	21				0.047	0.047	0.146	0.361	0.006			0.513
	22				0.047	0.047	0.146	0.361	0.006			0.513
	23				0.047	0.047	0.146	0.361	0.006			0.513
	24				0.047	0.047	0.146	0.361	0.006			0.513
	25				0.047	0.047	0.146	0.361	0.006			0.513
Total						3.731						8.671

Notes: FRR: 8.2% I.L.: Industrial Lot C.S.: Commercial Space S.S.: Standard Shed

Table A.2 Financial Rate of Return, Alternative 2

(Unit: JD Million at 1978 prices)

	Year	Outflow					Inflow					
		Land Acquisition Cost	Development Cost	Building Cost at S.S.	Operating Cost	Total	Rental Fee at S.S.	Rental Fee at I.L.	Rental Fee at C.S.	Sale of Land: Cash	Sale of Land: Installment	Total
1982	0	1.330	0.840	0.210		2.380						
	1			0.210	0.021	0.231	0.065	0.019	0.001			0.085
	2				0.040	0.040	0.130	0.047	0.001			0.178
	3				0.046	0.046	0.130	0.085	0.001			0.216
	4				0.047	0.047	0.130	0.094	0.001			0.225
	5				0.047	0.047	0.130	0.094	0.001			0.225
	6				0.047	0.047	0.182	0.132	0.002			0.316
	7				0.047	0.047	0.182	0.132	0.002			0.316
	8				0.047	0.047	0.182	0.132	0.002			0.316
	9				0.047	0.047	0.182	0.132	0.002			0.316
	10				0.047	0.047	0.182	0.132	0.002			0.316
	11				0.047	0.047	0.255	0.184	0.003			0.442
	12				0.047	0.047	0.255	0.184	0.003			0.442
	13				0.047	0.047	0.255	0.184	0.003			0.442
	14				0.047	0.047	0.255	0.184	0.003			0.442
	15				0.047	0.047	0.255	0.184	0.003			0.442
	16				0.047	0.047	0.357	0.258	0.004			0.619
	17				0.047	0.047	0.357	0.258	0.004			0.619
	18				0.047	0.047	0.357	0.258	0.004			0.619
	19				0.047	0.047	0.357	0.258	0.004			0.619
	20				0.047	0.047	0.357	0.258	0.004			0.619
	21				0.047	0.047	0.499	0.361	0.006			0.866
	22				0.047	0.047	0.499	0.361	0.006			0.866
	23				0.047	0.047	0.499	0.361	0.006			0.866
	24				0.047	0.047	0.499	0.361	0.006			0.866
	25				0.047	0.047	0.499	0.361	0.006			0.866
	Total					3.731						12.144

Notes: FRR: 10.5% I.L.: Industrial Lot C.S.: Commercial Space S.S.: Standard Shed

Tabel A.3 Financial Rate of Return, Alternative 3

(Unit: JD Million at 1978 price)

	Year	Outflow					Inflow					
		Land Acquisition Cost	Development Cost	Building Cost at S.S.	Operating Cost	Total	Rental Fee at S.S.	Rental Fee at I.L.	Rental Fee at C.S.	Sale of Land: Cash	Sale of Land: Installment	Total
1982	0	1.330	0.840	0.210		2.380						
	1			0.210	0.021	0.231	0.073	0.038	0.003			0.114
	2				0.040	0.040	0.146	0.094	0.003			0.243
	3				0.046	0.046	0.146	0.169	0.003			0.318
	4				0.047	0.047	0.146	0.188	0.003			0.337
	5				0.047	0.047	0.146	0.188	0.003			0.337
	6				0.047	0.047	0.146	0.188	0.003			0.337
	7				0.047	0.047	0.146	0.188	0.003			0.337
	8				0.047	0.047	0.146	0.188	0.003			0.337
	9				0.047	0.047	0.146	0.188	0.003			0.337
	10				0.047	0.047	0.146	0.188	0.003			0.337
	11				0.047	0.047	0.146	0.188	0.003			0.337
	12				0.047	0.047	0.146	0.188	0.003			0.337
	13				0.047	0.047	0.146	0.188	0.003			0.337
	14				0.047	0.047	0.146	0.188	0.003			0.337
	15				0.047	0.047	0.146	0.188	0.003			0.337
	16				0.047	0.047	0.146	0.188	0.003			0.337
	17				0.047	0.047	0.146	0.188	0.003			0.337
	18				0.047	0.047	0.146	0.188	0.003			0.337
	19				0.047	0.047	0.146	0.188	0.003			0.337
	20				0.047	0.047	0.146	0.188	0.003			0.337
	21				0.047	0.047	0.146	0.188	0.003			0.337
	22				0.047	0.047	0.146	0.188	0.003			0.337
	23				0.047	0.047	0.146	0.188	0.003			0.337
	24				0.047	0.047	0.146	0.188	0.003			0.337
	25				0.047	0.047	0.146	0.188	0.003			0.337
	Total					3.731						8.089

Notes: FRR: 8.9% I.L.: Industrial Lot C.S.: Commercial Space S.S.: Standard Shed

Table A.4 Financial Rate of Return, Alternative 4

(Unit: JD Million at 1978 prices)

Year		Outflow					Inflow					
		Land Acquisition Cost	Development Cost	Building Cost at S.S.	Operating Cost	Total	Rental Fee at S.S.	Rental Fee at I.L.	Rental Fee at C.S.	Sale of Land: Cash	Sale of Land: Installment	Total
1982	0	1.330	0.840	0.210		2.380						
	1			0.210	0.021	0.231	0.073		0.001	0.044		0.118
	2				0.040	0.040	0.146		0.001	0.066	0.050	0.263
	3				0.046	0.046	0.146		0.001	0.088	0.124	0.539
	4				0.047	0.047	0.146		0.001	0.220	0.220	0.389
	5				0.047	0.047	0.146		0.001		0.238	0.385
	6				0.047	0.047	0.146		0.002		0.230	0.378
	7				0.047	0.047	0.146		0.002		0.222	0.370
	8				0.047	0.047	0.146		0.002		0.214	0.362
	9				0.047	0.047	0.146		0.002		0.206	0.354
	10				0.047	0.047	0.146		0.002		0.198	0.346
	11				0.047	0.047	0.146		0.003		0.191	0.340
	12				0.047	0.047	0.146		0.003		0.183	0.332
	13				0.047	0.047	0.146		0.003		0.175	0.324
	14				0.047	0.047	0.146		0.003		0.167	0.316
	15				0.047	0.047	0.146		0.003		0.159	0.308
	16				0.047	0.047	0.146		0.004		0.151	0.301
	17				0.047	0.047	0.146		0.004		0.117	0.267
	18				0.047	0.047	0.146		0.004		0.071	0.221
	19				0.047	0.047	0.146		0.004		0.014	0.164
	20				0.047	0.047	0.146		0.004			0.150
	21				0.047	0.047	0.146		0.006			0.152
	22				0.047	0.047	0.146		0.006			0.152
	23				0.047	0.047	0.146		0.006			0.152
	24				0.047	0.047	0.146		0.006			0.152
	25				0.047	0.047	0.146		0.006			0.152
	Total					3.731						6.987

Notes: FRR: 9.4% I.L.: Industrial Lot C.S.: Commercial Space S.S.: Standard Shed

Table A.5 Financial Rate of Return, Alternative 5

(Unit: JD Million at 1978 prices)

Year		Outflow					Inflow					
		Land Acquisition Cost	Development Cost	Building Cost at S.S.	Operating Cost	Total	Rental Fee at S.S.	Rental Fee at I.L.	Rental Fee at C.S.	Sale of Land: Cash	Sale of Land: Installment	Total
1982	0	1.330	0.840	0.210		2.380						
	1			0.210	0.021	0.231	0.073		0.001	0.048		0.122
	2				0.040	0.040	0.146		0.001	0.072	0.048	0.267
	3				0.046	0.046	0.146		0.001	0.096	0.118	0.361
	4				0.047	0.047	0.146		0.001	0.024	0.209	0.380
	5				0.047	0.047	0.146		0.001		0.227	0.374
	6				0.047	0.047	0.146		0.002		0.221	0.369
	7				0.047	0.047	0.146		0.002		0.214	0.362
	8				0.047	0.047	0.146		0.002		0.208	0.356
	9				0.047	0.047	0.146		0.002		0.201	0.349
	10				0.047	0.047	0.146		0.002		0.195	0.343
	11				0.047	0.047	0.146		0.003		0.188	0.337
	12				0.047	0.047	0.146		0.003		0.182	0.331
	13				0.047	0.047	0.146		0.003		0.175	0.324
	14				0.047	0.047	0.146		0.003		0.169	0.318
	15				0.047	0.047	0.146		0.003		0.162	0.311
	16				0.047	0.047	0.146		0.004		0.156	0.306
	17				0.047	0.047	0.146		0.004		0.150	0.300
	18				0.047	0.047	0.146		0.004		0.143	0.297
	19				0.047	0.047	0.146		0.004		0.137	0.287
	20				0.047	0.047	0.146		0.004		0.130	0.280
	21				0.047	0.047	0.146		0.006		0.124	0.276
	22				0.047	0.047	0.146		0.006		0.096	0.248
	23				0.047	0.047	0.146		0.006		0.058	0.198
	24				0.047	0.047	0.146		0.006		0.011	0.163
	25				0.047	0.047	0.146		0.006			0.152
Total						3.731						7.411

Notes: FRR: 9.1% I.L.: Industrial Lot C.S.: Commercial Space S.S.: Standard Shed

Table A.6 Financial Rate of Return, Alternative 6

(Unit: JD Million at 1978 prices)

Year		Outflow					Inflow					
		Land Acquisition Cost	Development Cost	Building Cost at S.S.	Operating Cost	Total	Rental Fee at S.S.	Rental Fee at I.L.	Rental Fee at C.S.	Sale of Land: Cash	Sale of Land: Installment	Total
1982	0	1.330	0.840	0.210		2.380						
	1			0.210	0.021	0.231	0.073		0.001	0.372		0.446
	2				0.040	0.040	0.146		0.001	0.558	0.012	0.717
	3				0.046	0.046	0.146		0.001	0.744	0.030	0.921
	4				0.047	0.047	0.146		0.001	0.186	0.052	0.385
	5				0.047	0.047	0.146		0.001		0.057	0.204
	6				0.047	0.047	0.146		0.002		0.055	0.203
	7				0.047	0.047	0.146		0.002		0.054	0.202
	8				0.047	0.047	0.146		0.002		0.052	0.200
	9				0.047	0.047	0.146		0.002		0.050	0.198
	10				0.047	0.047	0.146		0.002		0.049	0.197
	11				0.047	0.047	0.146		0.003		0.047	0.196
	12				0.047	0.047	0.146		0.003		0.046	0.195
	13				0.047	0.047	0.146		0.003		0.044	0.193
	14				0.047	0.047	0.146		0.003		0.042	0.191
	15				0.047	0.047	0.146		0.003		0.041	0.190
	16				0.047	0.047	0.146		0.004		0.039	0.189
	17				0.047	0.047	0.146		0.004		0.038	0.188
	18				0.047	0.047	0.146		0.004		0.036	0.186
	19				0.047	0.047	0.146		0.004		0.034	0.184
	20				0.047	0.047	0.146		0.004		0.033	0.183
	21				0.047	0.047	0.146		0.006		0.031	0.183
	22				0.047	0.047	0.146		0.006		0.024	0.176
	23				0.047	0.047	0.146		0.006		0.015	0.167
	24				0.047	0.047	0.146		0.006		0.003	0.155
	25				0.047	0.047	0.146		0.006			0.152
	Total					3.731						6.401

Notes: FRR: 11.1% I.L.: Industrial Lot C.S.: Commercial Space S.S.: Standard Shed

Table A.7 Financial Rate of Return, Alternative 7

(Unit: JD Million at 1978 prices)

Year		Outflow					Inflow					
		Land Acquisition Cost	Development Cost	Building Cost at S.S.	Operating Cost	Total	Rental Fee at S.S.	Rental Fee at I.L.	Rental Fee at C.S.	Sale of Land: Cash	Sale of Land: Installment	Total
1982	0	1.330	0.840	0.210		2.380						
	1			0.210	0.021	0.231	0.073	0.009	0.001	0.024		0.107
	2				0.040	0.040	0.146	0.023	0.001	0.036	0.024	0.230
	3				0.046	0.046	0.146	0.042	0.001	0.048	0.059	0.296
	4				0.047	0.047	0.146	0.049	0.001	0.012	0.105	0.313
	5				0.047	0.047	0.146	0.047	0.001		0.113	0.307
	6				0.047	0.047	0.146	0.066	0.002		0.111	0.325
	7				0.047	0.047	0.146	0.066	0.002		0.107	0.321
	8				0.047	0.047	0.146	0.006	0.002		0.104	0.318
	9				0.047	0.047	0.146	0.006	0.002		0.100	0.314
	10				0.047	0.047	0.146	0.006	0.002		0.098	0.312
	11				0.047	0.047	0.146	0.092	0.003		0.094	0.335
	12				0.047	0.047	0.146	0.092	0.003		0.091	0.332
	13				0.047	0.047	0.146	0.092	0.003		0.087	0.328
	14				0.047	0.047	0.146	0.092	0.003		0.085	0.326
	15				0.047	0.047	0.146	0.092	0.003		0.081	0.322
	16				0.047	0.047	0.146	0.129	0.004		0.078	0.357
	17				0.047	0.047	0.146	0.129	0.004		0.075	0.354
	18				0.047	0.047	0.146	0.129	0.004		0.071	0.350
	19				0.047	0.047	0.146	0.129	0.004		0.069	0.348
	20				0.047	0.047	0.146	0.129	0.004		0.065	0.344
	21				0.047	0.047	0.146	0.181	0.006		0.062	0.395
	22				0.047	0.047	0.146	0.181	0.006		0.048	0.381
	23				0.047	0.047	0.146	0.181	0.006		0.029	0.362
	24				0.047	0.047	0.146	0.181	0.006		0.006	0.339
	25				0.047	0.047	0.146	0.181	0.006			0.333
	Total					3.731						8.049

Notes: FRR: 8.6% I.L.: Industrial Lot C.S.: Commercial Space S.S.: Standard Shed

APPENDIX B

EXISTING FACTORIES IN AMMAN AND IRBID

B.001 Several items on the 33 existing factories in Amman and Irbid have been collected through the interviews with private entrepreneurs with an aim of using them for economic analysis of the Industrial Park project. Among these items, production level, import ratio of import portion within materials, wage level of laborers and initial capital expenditure are the important and useful data to decide the assumptions for economic feasibility study.

Table B.1 Existing Factories in Amman and Irbid, 1979

(Unit: JD)

No.	Commodities	Raw Materials	Value of Production/Year (in 1978)	Employment				Import Ratio of Raw Materials (%)	Initial Capital Expenditure	Running Cost/ Month	Starting Year
				Skilled		Unskilled					
				No.	Wage	No.	Wage				
1.	Razor Blade, Band Saw for Wood	Steel, Chemical Materials	-	7	115	7	-	100	250,000	2,000	-
2.	Blanket, Rags, School Girl's Cotton Materials	Wool, Cotton, Other Materials	194,000	25	75	15	40	70	43,000	4,000	1961
3.	Marble, Tiles	Cement, Marble, Small Stones	341,000	25	100	75	60	70	30,000	4,500	1948
4.	Jam, Marmalade, Vinegar, Squash	Fruit, Sugar	50,000	2	120	6	45	70	2,000	2,000	1956
5.	Windows, Doors, Aluminum Fixtures	Aluminum	101,000	10	110	10	45	100	3,171	2,200	1970
6.	P.P. Sack	Poly Propylene	163,000	25	75	25	60	100	3,000	13,000	1975
7.	Plastic	Polyethylene	45,000	7	140	3	40	100	2,000	1,000	1958
8.	Plastic for House, Boxes for Agriculture	Petroleum 9,000 ton Derivatives 1,600 ton	-	35	135	200	75	100	70,000	43,000	1967

(to continue)

(Unit: JD)

No.	Commodities	Raw Materials	Value of Production/Year (in 1978)	Employment				Import Ratio of Raw Materials (%)	Initial Capital Expenditure	Running Cost/ Month	Starting Year
				Skilled		Unskilled					
				No.	Wage	No.	Wage				
9.	Plastic Containers, Crates	Plastic	New	4	70	1	150	100	100,000	-	1974
10.	Paints	Synthetic Resin, Pigments, Solvents	100,000	2	100	7	60	50	17,000	-	1977
11.	Plastic Boxes	Poly Styrene	50,000	1	150	15	50	100	4,000-5,000	-	1976
12.	Paints	Alkaloid Titanium, Carbonate, Calcium	-	5	110	35	60	100	1,500	10,000	1974
13.	Doors	Wood, Veneer	500,000	7	80	107	-	100	25,000	20,000	1977
14.	Fruit Juice	Concentrated Juice, Citric Acid	300,000	2	120	15	40	50	4,000	6,500	1977
15.	Earthen Ware, Pipes, Red Bricks, Refractories	Kaolin, Sand	15,000	2	60	8	45	100	2,000	950	1972
16.	Wool, Worsted	Yarns	1,000,000	200	100	100	60	100	100,000	75,000	1965
17.	Tile, Marble	Cement, Block, White Cement	200,000	35	90	-	-	-	-	-	1964

(to continue)

(Unit: JD)

No.	Commodities	Raw Materials	Value of Production/Year (in 1978)	Employment				Import Ratio of Raw Materials (%)	Initial Captial Expenditure	Running Cost/ Month	Starting Year
				Skilled		Unskilled					
				No.	Wage	No.	Wage				
18.	Feeding Material Which Depends on Milk & Derivatives	Milk	1,200,000	36	-	135	-	30	127,000	45,000	1964
19.	Ice	Water, Salt, Ammonia	-	3	120	2	60	-	23,000	3,000	-
20.	Water Stores	Fiber Glass, Resin	New	5	80	2	40	40	-	-	1978
21.	Beer	Malt, Water, Hops, Yeast	750,000	12	103	38	55	-	49,950	17,500	1969-70
22.	Cars, Machines, Radiators		250,000	3	100	32	60	55	2,000	5,000	1975
23.	Butter, Meats, Dairy	Ammonia Gas, Propane Gas, Methane, Milk	New	3	60	1	80	100	200,000	1,500	1979
24.	Sesame-oil	Sesame-seed	3,000	1	90	4	60	100	150	700	1971
25.	Ballpoint Pen	Plastic Chips	20 million	17	100	24	50	100	-	-	1970
26.	Battery	Lead	1 million	70	60	13	40	90	1,500,000	80,000	1970

(to continue)

(Unit: JD)

No.	Commodities	Raw Materials	Value of Production/Year (in 1978)	Employment				Import Ratio of Raw Materials (%)	Initial Capital Expenditure	Running Cost/ Month	Starting Year
				Skilled		Unskilled					
				No.	Wage	No.	Wage				
27.	Decorative & Industrial Paints	White Coloured Pigments Fillers, Oxides, Chromates Resins, Binders	700,000	14	90	22	60		55,000	30,000	1969
28.	Shoes	P.V.C. Grains Rubber, Leather	300,000	4	120	81	45	80	20,000	9,000	1960
29.	Detergents, Soap, Powder	Sulfate Sulfuric Acids	872,000	15	80	65	60	-	500,000	-	1978
30.	School Uniforms for Girls	Cotton Yarns	20,000	-	-	5	40	-	100	1,250	1970
31.	Soft Drink	Sugar, Essence, Water	500,000	10	170	53	50	100	10,000	40,000	1971
32.	Washing Machine, Boiler	Iron Sheets	-	20	70	94	60	70	-	-	1972
33.	Carton Boxes, Pencil, Biscuit, Soap	Varnishes, Carton, Chemical Material, Printing Machine	300,000	5	140	22	70	100	7,000	-	1975

Source: Interview with entrepreneurs by the Study Team.

Note: -: not acquired.