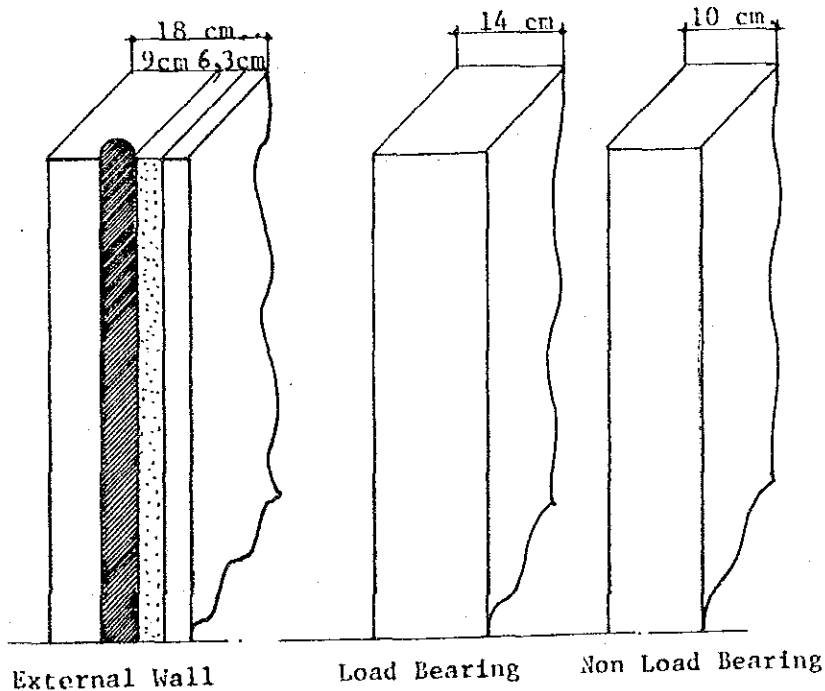


iii. Panelized with Precast Concrete

08.021 This system consists of the precast reinforced concrete panels with sandwich core filled with styropore concrete. This sandwich is effective for sound, heat and humidity shielding and of relatively light weight, which also helps easy handling and hauling. Electrical and plumbing extensions are installed simultaneously while pouring the concrete. This system is used in the Marka Project (1,002 units), which is composed of 167 three storied apartment buildings. Each building has 6 units consisting of 141 panel elements. Precast panels are made at the contractor's factory located 3 km away from the site. Production capacity of the factory is an average of 0.9 building per day. Capacity for erection is about 15 buildings per month. Kinds of wall panels are shown on Figure 8.1. Building cost is estimated to be at JD. 35 to 36/m<sup>2</sup>.

Figure 8.1 Wall Panels



iv. Modular System on Site 1

08.022 This is known as the tunnel system, and consists of tunnel-shaped shutterings where concrete is cured either by electricity or heating and the shutterings could be dismantled after 8 hours curing. Hereafter, open ends of the tunnel are closed and the internal walls are installed by utilizing concrete block walls or precast units. Electric and plumbing extensions are installed during the shuttering operation. This system is used in the Aqaba Project for 662 house units and dormitories for 1,400 workers. This system requires equipment to handle the modular shuttering and is well fitted to the construction of mono designed unit at mass scale production such as a dormitory and hotel rooms. Main features of the system are time and labour saving but flexibility of building design is limited. No building cost was confirmed.

g. Housing Contractors and Labor

08.023 Generally speaking, urban housing construction has been undertaken by the local general contractors. The local general contractors engage not only in housing construction but also other various construction works. Major contractors in Jordan are as follows:

- 
- (1) Arab Concrete (MFG) Co.
  - (2) Arab Trading And Engineering Co.
  - (3) Building and Roads Prepart'n Co.
  - (4) International Housing Jordan
  - (5) Sabri Farah International
  - (6) Serenico Co.
  - (7) Shaheen Engineering & Contracting Co.
  - (8) Toukan Cont. & Trading Co.
  - (9) Trans Orient Engineering & Const. Co.
  - (10) Union Building and Contracting Co.
- 

Source: Ministry of Public Works.

Note: Listed in Alphabetical Order.

08.024 According to a brief observation of the current activities, their construction methods and technologies are substantially mechanized and well modernized. This may be primarily due to the shortage of manpower in this Country. The large contractors have their own heavy equipment and machinery in modest numbers such as earth moving equipment, road building equipment, concrete batcher plant, concrete

precast plant, portable concrete mixer, portable concrete block machine, mobile crane and tower crane etc.. They have accumulated a number of experiences in the recent years. However their financial resources limit their opportunities to undertake large scale projects which are sometimes called for turnkey contract and require a large number of modern equipment.

08.025 Skilled construction workers and engineers are not an exception for having been drained to the neighbouring oil producing countries for better payment. Scarcity in manpower and increasing demand for higher payment by the remaining workers is another problem for the construction industry. In reality, they have to import both skilled and unskilled workers from Lebanon, Syria, Egypt and other countries. Many Syrian workers are found in the Irbid Governorate. It is told that Syrian workers are not required to obtain work permits but other foreign workers are required to do so. Current wage scale for construction workers are as follows:

---

(1) Field Worker

Unskilled	Minimum JD 2.5 hrs. Minimum JD 3.0/8 hrs for rough work. In a case of longer employment, the above rate will be reduced by about 20%.
Semi-Skilled & Skilled	JD 3 to 20/8 hrs. Average at JD 6 to 7/8 hrs. Tiling, masonry, concrete work, shuttering, plastering, electricity and small plumbing workers.

(2) Factory Worker

Unskilled	JD 2/8 hrs.
Skilled	JD 5 to 7/8 hrs.

---

Factory workers are normally given paid-holidays and other fringe benefits. Wages for construction workers are customary paid twice a month. Camping facilities and meals are generally not offered even to the foreign workers.

08.026 Payment schedules to contractors by the project owners vary by each contract. A contractor interviewed is now constructing a government building under a deferred payment condition of 4 to 5 years against the promissory note issued by the Government. Billing is made every three months and such note has to be discounted by the

local bank at current rate of 11 to 11.5% per annum. On the other hand contractors have to pay the costs of building materials on COD basis or short term credit basis with a certain amount of deposit in advance, if materials are locally made. When imported materials are required, they have to open the letter of credit directly or through the local agent which also requires deposit at the opening bank. It will take 2 to 6 months until they get materials. Therefore, contractors are generally required to have sufficient funds for operation in addition to the technical qualification. Not well financed small contractors are generally supplied with all the necessary materials by the owners and recruit workers at a people's gathering place like a mosque.

#### h. Building Material Industries

08.027 The prices of building materials as a major component of the housing construction have risen significantly, which contributed to the high cost of housing and eventually to the added burden on consumers, particularly on the low-and middle-income groups. It is said that approximately 65% of the building costs are for the materials.

08.028 Building materials in Jordan could be classified into two categories: the first being locally produced while the second being imported from abroad. The Government exerted tangible efforts to develop local building material industries in order to reduce construction costs as well as to reduce dependency on imported materials, which consequently affects the national economy as a whole. As a result, many building material industries were established. Table 8.4 shows the major local enterprises for building materials.<sup>5/</sup> Among them, glass sheet factories, aluminium profile and lime and calcium silicated brick factories were newly established. Also an integrated wood processing factory to produce sawn lumber, chipboard and plywood is now to be developed at Aqaba. There are also a number of small scale concrete block and brick factories, terrazzo factories, carpentry workshops and aluminium and steel window fabricators.

08.029 Historically many of the building materials have been imported from abroad, which resulted in the mixed building module situation caused by the standard of those exporting countries. For example, concrete blocks are 20 cm module. Tiles are 20 cm and 30 cm modules and terrazzos are 50 cm module. As to the quality of building materials, it is said that so far there is no established industrial standard. The Department of Buildings of the Ministry of Public Works have published detailed specifications entitled "General Specifications for Buildings, 1971". But it is not followed by producers. For example, it requires a minimum strength of 35 kg/cm<sup>2</sup> for concrete blocks, but it is also told that many products fall well below this standard, and that quality varies very widely product by product.

<sup>5/</sup> Source: The Industrial Development Bank

Table 8.4 Building Material Enterprises in Jordan

Type of Industry and Manufacturer	Product & Production Capacity	Annual Output(JD)	Market (%)		Location
			Local (%)	Export (%)	
<u>Electric Elevators</u>					
1. Jordan Lifts and Cranes Manufacturing Co.	Electric elevator: 97 units Cranes : 6 units	480,400	60	40	Ma'daba
<u>Ready Made Wooden Doors</u>					
1. Jordan Wood Industries Co., Ltd.	19,478 doors/ann.	448,000	70	25	Amman
<u>Sanitary Porcelain Fittings &amp; Glazed Tile</u>					
1. Jordan Ceramic Factory Co., Ltd.	Sanitary porcelain fittings: 2000 tons/ann. glazed tiles: 4000 tons/ann.	512,000	100	-	Ruseifa
<u>Glass Sheets</u>					
1. Jordan Glass Industries Co., Ltd.	Glass sheets: 18000 tons/ann.	1,760,000	30	70	Ma'an
<u>Steel Pipes</u>					
1. Jordan Steel Pipes Manufacturing Co.,Ltd.	Steel pipes: 8200 ton/ann.	1,260,000	50	50	Zarqa
<u>Boilers, Radiators, and Cylinders for Central Heating</u>					

(To Continue)

Table 8.4 (Continued)

Type of Industry and Manufacturer	Product & Production Capacity	Annual Output(JD)	Market		Local
			Local (%)	Export (%)	
<u>Boilers, Radiators, and Cylinders for Central Heating</u>					
1. Metal Industries Co.	Boilers: 270 units/ann. Radiators: 5000 units/ann. Cylinders: 7000 units/ann.	436,250	100	-	Marka-Amman
2. Jordan Steel Industries Co., Ltd.	Radiators (Sec.): 11700/ann. Radiators (panels): 13500 units/ann.	221,960	70	30	Um-Al-Basateen Village-Madaba Region
<u>Aluminium Profiles</u>					
1. Arab Aluminium Industries Co., Ltd.	Analyzed profiles: 600 metric tons per year	420,000	100	-	Al-Baqa'a
<u>Lime &amp; Calcium Silicate Bricks &amp; Aggregates</u>					
1. n.a.	Hydrated lime 17500t/ann. CS Bricks 124000 cu.m/ann. Aggregates 100000 t/ann.	2,206,000	70	30	Amman
<u>Portland Cement</u>					
1. The Jordan Cement Factories Co.,Ltd.	1700000 t/ann. (after expansion in 1983)	23,278,000	100	-	Amman

(To Continue)

Table 8.4 (Continued)

Type of Industry and Manufacturer	Product & Production Capacity	Annual Output (JD)	Market (%)		Location
			Local (%)	Export (%)	
<u>Clay Bricks</u>					
1. Jordan Bricks Manufacturing Co., Ltd.	Fire Bricks: 18900 tons/ann.	315,000	80	20	As-Salt
<u>P.V.C Pipes</u>					
1. Abidin & Yassin Industrial Co.	P.V.C. rigid pipes: 600 ton	300,000			Amman
2. Arab Plastic Factory	" : 220 ton	110,000	70	30	Amman
3. Jordan Amiantit Co.	" : 400 ton	200,000			Ramah Valley-Salt
<u>Asbestos</u>					
1. Jordan Amiantit Co.	Asbestos Cement: 17800 ton pipes	1,780,000	100	-	Ramah Valley-Salt
<u>Electric Fittings</u>					
1. S.Ma'an Factory	Elec. Globes: 144000 unit Covers of elec. boxes: 288000 unit	36,000 14,400	100 100	- -	Irbid
2. Arab Plastic Co.	Elec. pipes: 45000000m.	135,000	60	40	Amman
3. Zaki Nassar & Brother					
4. Orient Plastic Co.	Elec. pipes: 10000000m.	30,000	60	40	Amman
5. Al-Faray trading Co.	Elec. pipes: 4500000	135,000	60	40	Amman

(To Continue)

Table 8.4 (Continued)

Type of Industry and Manufacturer	Product & Production Capacity	Annual Output(JD)	Market (%)		Location
			Local (%)	Export (%)	
6. Jordan Plastic Co.	Elec.pipes: 10000.000m.	300,000	60	40	Amman
7. Elec.pipes Jordan Co.	Elec.pipes: 6000000	180,000	60	40	Amman
8. Al-Shamal Plastic Co.	Elec.Boxes: 1440000 unit	57,600	100	-	-
	Elec. pipes: 1350000m	42,750	60	40	Irbid
<u>Wire Mesh</u>					
1. Welded Wire Fabric Mesh Co., Ltd.	Welded wire fabrik mesh 3000 tons/ann.	480,000	100	-	Amman
<u>Steel Nails</u>					
1. Jordan Nails Manufac- turing Co.	Steel Nails: 1050 tons/ann.		100	-	Amman
2. The Modern Factory for manufacturing Steel Nails	Steel Nails: 480 tons/ann.	450,600	100	-	Amman
3. Steel Nails National Co.	Steel Nails: 213 tons/ann.		100	-	Amman
4. The Modern Company for manufacturing construc- tion materials	Steel Nails: 510 tons/ann.		100	-	Zarga

(To Continue)



Table S.4 (Continued)

Type of Industry and Manufacturer	Product & Production Capacity	Annual Output(JD)	Local (%)	Market Export (%)	Local
<u>Paints</u>					
Emulsion & Oil Painting					
1. Al-Husseini Industrial City	300,000 gallons/ann.				Al-Ruseifa
2. Rema lux Factory	610,000 gallons/ann.				Amman
3. Shafik Al-Burghly factory	185,000 gallons/ann.				Amman
4. National paints	600,000 gallons/ann.	3,530,000	50	50	Amman
5. Adnan Ssh'alan factory	437,500 gallons/ann.				Amman
6. Sigma Factory	96,000 gallons/ann.				Amman
7. Al-Ahram Factory	58,000 gallons/ann.				Amman
8. Torgonol Factory	77,000 gallons/ann.				Amman
9. Nora lux Factory	83,700 gallons/ann.				Russeifa
<u>Gypsum</u>					
1. Bishtawi, Shamali & Partners Factories	Plaster of Paris : 900 ton Wall slabs : 4050 ton	224,940	100	-	Ein-Al-Basha Village
Co. for Gypsum & Artware	Decorative block: 600 ton School chalks : 120 ton				

08.030 The following is a current profile of the imported building materials. But it must be noted that there are some which were reexported to the neighbouring countries. Value based on CIF.

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(1) Value JD 30,000 to JD 100,000/year

Marble waste; gypsum (calciuned) and plasters; sawn lumber; blaittering materials bound together; building board of wood pulp; wallpaper; asbestos pipes; Tiles and sheets; roofing tiles; unglazed wall-tiles; and Glass fibers.

(2) Value JD 100,000 to JD 500,000 /year

Marble raw; beeched wood; inlaid wood; builder's carpentry and joinery; woven mats and rugs; asbestos cement; sinks and wash basins; doors; windows, and their frames; sanitary wires; lamps and lighting fittings; plastic insulated electric wires; furnitures and parts; and aluminium shapes.

(3) JD 1,000,000/year and over

Cement; white timber wood; plywood; glazed tiles; unworked drawn glass; steel structures; stoves and range cookers; central heating boilers; wrought bass; angles; and shapes.

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Source: External Trade Statistics, 1977

### 8.2.2 Role and Achievements of the Housing Corporation

08.031 Housing supply in Jordan had been 100 percent dependent on the private efforts until the Government established the H.C. in 1965 recognizing the necessity of the public supply of housing to the low income group who were unable to secure dwellings by their own efforts alone. The H.C. first started its activities as a specialized lending institution for housing. It granted individual loans for civil servants at 5-percent simple interest over a period of 15 years, which amounted to JD 1,116,154 and were given to 509 beneficiaries by the end of 1968. It also granted collective loans for two housing societies amounting to JD 281,000 for 155 beneficiaries. In 1969 the H.C. ceased its function to extend individual loans and shifted its operation to the construction of the comprehensive housing projects to be distributed among beneficiaries on a rental-purchase basis over a 20-year period with 5-percent simple interest. This phase extended until the end of 1972 during which it invested JD. 1,207,000 to construct 660 house units for the limited income groups.

08.032 During the Three-Year Plan period (1973-1975) 35 housing projects were implemented at a total cost of JD 6,575,000, consisting of 2,904 units which was about 53 percentage of achievement

against the target number of units of 5,450. Total houses built in the Country during the same period is said to be 21,000.

08.033 Under the current FYP the H.C. established target number of 7,708 units which is about 24 percentage of the national target of 31,000 units. Its work started on 10 projects located in the different sites in the Kingdom. The total number of their units is 3,621 with an estimated cost of JD 12,641,670, which constitutes about 47 percentage of the H.C.'s target mentioned above. Among them, 524 units have already been completed at the cost of JD 1,769,571. Presently, there are 3,097 units under construction at an estimated cost of JD 10,872,099.

08.034 In addition to the housing projects contained in the current FYP the government acquired 2,300 dunums in Abu Nusseer near Sweileh for the construction of a satellite town with a planned population of 30,000 to 40,000 at an estimated cost of JD 55 million.

08.035 It will be the largest housing project in Jordan. The plan is being carried on by a Swiss Consultant. Private offices and light industry may be located in this project.

08.036 The following four points are its major functions:

- (1) Prepare housing lots using national land. Private land may be bought.
- (2) Study, design, construction, and its selling or renting of housing for limited income group.
- (3) To cooperate with other agencies and propose policies regarding housing for the general public and urban development to the Government.
- (4) Arrange grants and loans for housing purposes.

08.037 There are certain restrictions to move in, for example, the families must be living in a rental house, must be a married couple with children, their income must be within the limits set by the Corporation, etc.. The selection of the residents are thus on a conditional bases, and lotteries are rarely used.

08.038 Building specifications for housing models are as follows:

- (1) Foundation: made of plain concrete with no framework.
- (2) Walls: Exterior walls are made of hollow cement blocks 20 cm thick, or solid plain concrete. Interior walls are made of solid cement blocks 10 cm thick. (According to the 5 Year Plan, it is suggested by the Housing Corporation that 7 cm cement blocks can be used for interior walls).

- (3) Roofs: Roofs are made of solid reinforced concrete slabs, 10 cm thick. The roof will have an appropriate slope for drainage purposes, furnished directly while pouring the slab. There are also many houses which have asphalt water proof roofs.
- (4) Floors: Floors are of furnished tiles.
- (5) Doors and windows: steel doors and windows are common for houses for low income families, but mazonite wood for doors are sometimes seen, and aluminium sashes are becoming wide-spread.
- (6) Sanitary works: The bathroom of a house for a low income family will have a toilet of Oriental style, water supply facilities and drainage pipes. A terrazzo sink and an overhead water tank made of galvanized sheet are to be installed in the kitchen. A house for a middle class family will include a bathroom with a flushing device and a wash basin. Bottled gas is usually used for cooking and kerosene boiler for hot water supply.
- (7) Outside of the feacewall: Made of solid cement blocks 10 cm thick over the foundation as explained previously. A gate will be fixed.
- (8) Sewage Disposal: A huge septic tank is set underground in the housing project.
- (9) Solid waste: Solid waste from kitchen, etc., will be brought eache family to certain places where it will be collected and then sent to a dumping ground.

09.039 Sources of financing the housing projects by the H.C. are as follows:

- (1) The annual Government contributions which totalled JD 2,550,000 by the end of 1976;
- (2) Corporation's inflow from repayments of installments and interests which amounts to JD 3,038,437 by the end of 1977;
- (3) Loans and credits from the Central Bank totalling JD 1,618,775 until now;
- (4) Loans from the Housing Bank amounting to JD 7,900,000; and
- (5) Loans from the Arab Fund For Economic and Social Development totalling JD 900,000.

The present system of the H.C's credit is 20 years repayment with a 5-percent simple interest rate. 10-percent down payment is required. For example a buyer of a housing unit costing JD 3,000 has to pay in the following manner.

---

Down payment	JD 300
Monthly Installment	JD 16.87 X 240 months.

---

If 20 percentage of monthly income is the maximum allowable expenditure for housing, the buyer has to have monthly income of JD 84.35. or annual income of JD 1,012 who is considered to belong to the middle income group.

08.040 Major problems of the H.C. now are (1) scarcity of land to build housing for the low income group to whom the H.C. must pay primary and at most efforts, (2) limited financial resources which enable extending soft term credit, and (3) increasing costs of building construction. In order to minimize the cost of housing unit the H.C. has endeavoured and challenged all the possible areas such as securing National land, researching on new building materials and introducing new building systems.

### 8.2.3 Role and Achievements of the Housing Bank

08.041 The Housing Bank (the H.B.) was established in 1974. As indicated in Table 8.5, 15,851 units were built under the finance of the H.B., which amounted to JD 58.9 million from 1974 to the end of 1977.

08.042 The H.B. has emphasized the financing of apartment and multi-storied buildings with the aim of encouraging this type of housing in line with the Government policy of promoting high efficient land use at the place where the necessary facilities were already provided. The H.B. has also set-up a financing policy to limit the size of a housing unit /to be financed within 200 m<sup>2</sup>. Tables 8.5, 8.6, and 8.7 present the various activities of the Housing Bank.

Table 8.5 Distribution of Loans Granted by Beneficiaries,  
East Bank, 1974 to 1977

(Unit: JD 1,000)

Beneficiary	1974		1975		1976		1977	
	Amount	%	Amount	%	Amount	%	Amount	%
Individuals	1,614	88	5,461	64	10,632	32	8,308	54
Cooperative Housing Funds	229	12	1,055	12	703	2	1,604	11
<b>Total</b>	<b>1,843</b>	<b>100</b>	<b>6,516</b>	<b>76</b>	<b>11,335</b>	<b>34</b>	<b>9,912</b>	<b>65</b>
Commercial Loans	---	---	1,677	20	7,813	24	3,450	22
Local Ministries and Administ- rative Offices	---	---	385	4	13,974	42	2,049	13
<b>Total</b>	<b>1,843</b>	<b>100</b>	<b>8,578</b>	<b>100</b>	<b>33,122</b>	<b>100</b>	<b>15,411</b>	<b>100</b>

As you see in the Tables in addition to the main activity of granting housing loans to individual the H.B has also initiated the following functions:

- (1) It has granted considerable commercial loans for private constructors and construction firms as an incentive for building multi-storied houses, which will at the same time allow them higher yield with better circulation of the money.
- (2) It has granted loans to the public sectors including the H.C. for investments in various public facilities under the guarantee of the Government.
- (3) It has granted housing loans not only to the new construction but also to the finishing, extending and buying.

08.043 The Bank's terms of financing are as follows:

(1) Interest:

Name	Beneficiary	Interest Rate
- Housing Loan	Individual	8.5%
	Cooperatives	7.25 to 7.5%
- Commercial Loan		9% + 1% commission

(To Continue)

Table 8.6 Activities of the Housing Bank, West Bank, 1974 to 1977

Activities	1974	1975	1976	1977	Total
No. of Granted Agreed Loans	718	2,092	3,078	2,409	8,297
* No. of Financed Units	762	2,774	8,006	4,309	15,851
Amount Granted (m JD)	1.8	8.6	33.1	15.4	58.9
Financed Areas (1,000 m <sup>2</sup> )	101	392	973	510	1,976
Average Amount of Finance per Unit (JD/Unit)	2,362	3,100	4,134	3,574	3,716
Average Amount of Finance per m <sup>2</sup> (JD/m <sup>2</sup> )	18	22	34	30	30

Source: The Housing Bank, Annual Report, 1977

Note: \* Units mean houses, offices and commercial stores, even though most of the financed units are units made for housing purposes.

Table 8.7 Distribution of Granted Loans by Purpose, East Bank, 1974 to 1977

(Unit: JD 1,000)

Purpose	1974		1975		1976		1977		
	Amount	%	Amount	%	Amount	%	Amount	%	
Construction	1284	70	6567	76	27406	83	10204	66	
Finishing	440	24	1539	18	4489	13	4363	29	
Extending	41	2	230	3	348	1	375	2	
Buying	78	4	243	3	879	3	469	3	
Total	1843	100	8578	100	33122	100	15411	100	
									-53

Source: The Housing Bank, Annual Report, 1977

Note: 1/ Percentage of change of 1977 to 1976.



(1) Interest: (Continued)

Name	Beneficiary	Interest Rate
- Loan to Public Body	Ministries Municipalities	8 to 8.5%
- Loan to the H.C.		4.5%

(2) Maximum amount of housing loan:

The maximum amount of housing loan is the less amount of either 75 percentage of the building cost or the amount obtained by multiplying 30 by the applicant's monthly income.

(3) Qualification:

- . Own the land to build.
- . Have an engineering plan stamped by the Engineering Committee.

(4) Bank's current definition for classification of building is based on the unit building costs as follows:

. JD 90/m <sup>2</sup>	High income
. JD 50/m <sup>2</sup>	Middle income
. JD 35/m <sup>2</sup>	low income

08.044 Table 8.8 shows the breakdown of loans granted by repayment period of three ranges. Though there were fluctuations in percentage share in each year among the short, medium and long term, the short-term loans seem to have increased. More distribution to the long-term is desired but the present tendency to allocate more to short-term loans can be understood for the time being, because the B.C. is still young and has to raise its financial resources rapidly so that more funds may be distributed in the future to the long term loans which are primarily designated to the low income group.

Table 8.8 Loans Granted by Repayment Periods

(Unit: JD 1,000)

Repayment Period	1974		1975		1976		1977	
	Amount	%	Amount	%	Amount	%	Amount	%
1 - 5 Years	242	13	3,101	36	10,003	30	5,853	38

(To Continue)

Table 8.8 (Continued)

(Unit: JD 1,000)

Repayment Period	1974		1975		1976		1977	
	Amount	%	Amount	%	Amount	%	Amount	%
5 - 10 Years	652	35	2,686	31	17,966	54	5,042	33
10- 15 Years	949	52	2,791	33	5,153	16	4,516	29
Total	1843	100	8,578	100	33,122	100	15,411	100

Source: The Housing Bank

08.045 Table 8.9 presents the geographical distribution of the Bank loans.

Table 8.9 Loans Granted by Geographical Area

(Unit: JD 1,000)

Districts	1974		1975		1976		1977	
	Amount	%	Amount	%	Amount	%	Amount	%
Amman	1259	68.3	6453	75.2	23099	69.7	10314	66.9
Irbid	155	8.4	666	7.8	1960	5.9	1378	9.0
Salt	134	7.3	181	2.1	257	0.8	399	2.6
Karak	74	4.01	128	1.5	53	0.2	214	1.4
Zarqa	80	4.3	596	6.9	3969	12.0	973	6.3
Madaba	43	2.3	162	1.9	235	0.7	539	3.5
Fuhais	--	--	--	--	139	0.4	449	2.9
Mafraq	34	1.9	129	1.5	301	0.9	170	1.1
Tafila	24	1.3	27	0.3	5	--	100	0.7
Ajlun	14	0.8	55	0.6	118	0.4	121	0.8
Jerash	15	0.8	48	0.6	39	0.1	201	1.3
Ma'an	4	0.2	12	0.1	4	--	80	0.5
Ramtha	7	0.4	31	0.4	3	--	157	1.0
Aqaba	--	--	90	1.1	2551	7.7	311	2.0
Others	--	--	--	--	385	1.2	5	--
Total	1843	100	8578	100	33122	100	15411	100

It is quite evident that almost 75 to 80 percentage of loans have been distributed in Amman/Zarqa areas and the rest of areas have been squeezed accordingly. However a slight tendency is shown to try to gradually improve geographical distribution from 1976. In view of the balanced development of the Country, it is desired that more attention be paid to the distributional aspect.

08.046 Another activity of the H.B is the equity participation and real estate investments. The total amount of the H.B's invest-

ment in the capital of different companies at the end of 1977 was JD 1.6 million out of which the actual paid up capital amounted to JD 1.2 million. Those companies are as follows:

- (1) The Jordanian Company for Bricks and Blocks;
- (2) Jordanian Ceramic Plant Company;
- (3) Jordanian Silicate and Bricks Company;
- (4) Holiday Inn Hotels;
- (5) Jordanian Limited Shareholding Company for Manufacturing of Paper;
- (6) International Contracting and Investment Co.;
- (7) Jordanian Timber Manufacturing and Production Company;
- (8) The Industrial Development Bank; and
- (9) Arab Jordanian Investment Bank.

As for the real estate investment, the H.C. invested in the following two projects:-

- (1) The Commercial Union Cooperative in Shmisani, and
- (2) The Building of the Main Branches of the H.B.

This investment activity is a major factor in the bank's ability to achieve appropriate profits and to hedge against the inflation.

08.047 As being seen, the H.B is a unique bank in its functions. It has combined functions of (1) long term credit bank for housing and industry, (2) commercial bank by operating saving and time/notice accounts, (3) investment bank for equity participation and (4) real estate investment. It has achieved marked growth in 4 years from the start in 1974. Though the interest rate of the H.B for housing loan is higher than that of the H.C, it is still cheaper than that of the ordinary commercial banks which are currently offering at around 12-percent annum.

### 8.3 General Characteristics and Present Situation in the Study Area

#### 8.3.1 General

08.048 According to the estimate by the Department of Statistics, the population of the Study Area in 1975 was 563,000 which represents the population share of 28.8 percentage of the national total. Out of 563,000, 23 percentage of the population is centering at

Irbid Municipality which is the second largest Municipality in the Country next to Amman. Then Ramtha and Mafraq are following Irbid but their population shares in the Area are low and 4.3 percentage and 2.9 percentage respectively. The rest of the population is scattered over the Area as small agricultural villages. There are 4 refugee camps in the area, three of those are for refugees who came in 1967. Table 8.10 shows the trend of new housing construction of the major municipalities in the Area from 1972 to 1976. The coverage of information is only about 50 percentage of the population of the area. Therefore the actual total number of new construction of the Area must be almost doubled

### 8.3.2 Irbid Municipality

08.049 Irbid Municipality has been growing as the population center of the Area. The administration area of the Municipality is about 1,500 ha with a population of about 128,000 in 1975. Main economic activity is commerce. Industrial activity is almost negligible compared with that of Amman-Zarqa. However a few new industries were recently set up and some more are expected.

08.050 The shares of new housing construction in terms of number and floor area constructed was on average 45 percentage and 50 percentage respectively in the first 4 years but there was dramatic decline in 1976. The reasons for this are not clear, but it may be one of the reasons that many people were driven to build their houses outside the Municipality due to the rapid rise of land cost in the Municipality. The average room number and floor area per unit are about 15-percent to 20-percent above the level of those in other municipalities in the Area.

### 8.3.3 Other Municipalities and Villages

08.051 Ramtha is the second largest municipality after Irbid. It is worth mentioning that it has grown rapidly and its share of new construction, number in the Area in 1976 became twice as large as that in 1972, which may imply a favorable growth of trade at the border area in the recent years. Concrete block building is the dominant type of construction in Ramtha which is also unique compared with the majority of other municipalities of the Area.

08.052 Jerash has a tendency to decline in terms of new construction number and floor area. Perhaps people have been migrating outside.

08.053 Mafraq has shown a high rate of growth in new construction number and floor area constructed in the past 5 years. The shares of those in the Area in 1976 became 2 times and 3 times bigger than those in 1972. Similar to Ramtha, concrete block building is the dominant type of construction.

08.054 N. Mazar shows no particular growth with the share of 2 to 3 percentage of construction in the Area. The average room number and floor area per unit is about 60 percent of that of the Area.

Table 8.10 Trend of New Housing Construction in the Northern Jordan

Municipality	1972	1973	1974	1975	1976
<b>1. Irbid (23%)</b>					
a. Population				128,000	
b. Units constructed	653	844	547	881	333
c. Share in region	45.5	59	45.5	42.2	19.8
d. Floor area	59,400	44,700	35,000	60,000	24,845
e. Share in region	55	57	49.3	45	24
f. Average rooms/unit	2.9	2.3	2.7	3.1	3.6
g. Average floor area /unit	91	53	64	68.1	74.6
h. Dominant type of Construction	RC73	RC88	RC100	RC100	RC100
<b>2. Ramtha (4.3%)</b>					
a. Population				24,012	
b. Units constructed	200	82	163	376	388
c. Share in region	13.9	5.7	13.6	18	23
d. Floor Area	14,300	63,000	91,000	14,900	24,932
E. Share in Region	13.2	8	12.8	11	24/2

( To Continue)

Table 8.10 (Continued)

Municipality	1972	1973	1974	1975	1976
<b>2. Ramtha (4.3%)</b>					
F. Average Rooms/unit	3.4	2.6	1.7	2.8	2.8
G. Average Floor area/unit	71.5	76.8	55.8	39.6	64.3
H. Dominant type of Construction	RC89	RC100	CB52	CB53	CB87
<b>3. Jerash (1.9%)</b>					
a. Population	102	63	28	10,504	44
b. Units constructed	7.1	3.8	2.3	3.4	2.6
c. Share in region	36,000	6,000	2,200	4,300	2,218
d. Floor Area	3.3	7.6	3.1	3.2	2.2
e. Share in region	2.6	3.1	3.1	2.5	3.5
f. Average rooms/unit	35.3	95.2	78.6	57.3	50.4
g. Average floor area/unit	RC59	RC74	RC89	RC60	RC76
h. Dominant type of Construction					

( To Continue )

Table 8.10(Continued)

Municipality	1972	1973	1974	1975	1976
<b>4. Mafrag (2.9%)</b>					
a. Population				16,094	
b. Units constructed	59	112	129	165	221
c. Share in region	4.1	7.8	10.7	7.9	13.1
d. Floor Area	5,800	7,800	8,100	10,200	14,304
e. Share in region	5.4	10	11.4	7.7	13.9
f. Average rooms/unit	2.8	2/6	2.4	3.0	5.0
g. Average floor area unit	98.3	69.6	62.8	61.8	64.7
h. Dominant type of Construction	RC83	CB87	CB82	CB88	CB82
<b>5. N. Mazar (1.08%)</b>					
a. Population				5,367	
b. Units constructed	52	31	13	35	66
c. Share in region	3.6	2.2	1.1	1.7	3.9
d. Floor area	1800	1100	500	1200	2140
e. Share in region	1.7	1.4	0.7	0.9	2.1
f. Average rooms/unit	2	1.8	2.3	1.6	1.7

( To continue)

Table 8.10(Continued)

Municipality	1972	1973	1974	1975	1976
<b>5. N. Mazar (1.08%)</b>					
g. Average floor area /unit	34.6	35.5	38.5	34.3	32.4
h. Dominant type of Construction	RC 78	RC 100	RC 100	RC 71	RC 88
<b>6. Ajlun (0.7%)</b>					
a. Poulation				4.087	
b. Units constructed	53	135	33	33	51
c. Share in region	3.7	9.4	2.7	1.6	3
d. Floor Area	2600	2500	1500	2800	1687
e. Share in Region	2.4	3.2	2.1	2.1	1.6
f. Average Rooms/unit	2.6	2.2	3.7	3	2.7
g. Average Floor area /unit	49.1	18.5	45.5	84.8	33.1
h. Dominant type of Construction	RC 100%	RC 100%	RC 100%	CB 100%	RC 100%
<b>7. Taiyiba (0.9%)</b>					
a. Population				5.168	

(To Continue)



Table 8.10(Continued)

Municipality	1972	1973	1974	1975	1976
<b>7. Taiyiba (0.9%)</b>					
b. Units constructed	96	20	13	73	68
c. Share in region	6.7	1.4	1.1	3.5	4
d. Floor Area	8200	1500	9000	4200	4112
e. Share in region	7.5	1.9	1.3	3.2	4
f. Average rooms/unit	2.9	2.2	2.2	2.5	3.2
g. Average floor area /unit	85.4	75	69.2	57.5	60.5
h. Dominant type of Construction	RC 89	RC 100	RC 100	REC 92	RC 98
<b>8. Kufrinja (112%)</b>					
a. Population				6,930	
b. Units constructed	41	51	15	69	74
c. Share in region	2.9	3.6	1.2	3.3	4.4
d. Floor Area	2700	3100	600	2700	2581
e. Share in region	2.5	3.9	0.8	1.0	2.5
f. Average rooms/unit	2.0	1.9	0.9	1.3	1.5

( To Continue)

Table 8.10 (Continued)

Municipality	1972	1973	1974	1975	1976
<b>8. <u>Kufrinja (11.2%)</u></b>					
g. Average floor area unit	65.9	60.8	40	39.1	34.8
h. Dominant type of Construction	RC 41	RC 100	RC 75	RC 96	RC 98
<b>9. <u>Husn (3.2%)</u></b>					
a. Population				17.848	
b. Units constructed	39	20	97	96	110
c. Share in region	2.7	1.4	8.1	4.6	6.5
d. Floor area	3400	1500	5500	7400	9049
e. Share in region	3.1	1.9	7.7	5.6	8.8
f. Average rooms/unit	3.0	3.7	2.7	3.2	5
g. Average floor area /unit	87.2	75	56.7	77.6	45.9
h. Dominant type of Construction	RC 89	RC 92	RC 96	RC 98	RC 95
<b>10. <u>Anjara (1.0%)</u></b>					
a. Population				5.898	

(To Continue)

Table 8.10 (Continued)

Municipality	1972	1973	1974	1975	1976
10. <u>Anjara (1.0%)</u>					
b. Units constructed	-	25	47	65	34
c. Share in region	%	1.7	3.9	3.1	1.8
d. Floor area	m <sup>2</sup>	1300	2800	4200	1384
e. Share in region	%	1.7	3.9	3.2	1.3
f. Average rooms/unit		1.8	2.2	3.6	1.8
g. Average floor area/unit	m <sup>2</sup>	52	59.6	64.6	40.7
h. Dominant type of Construction	%	RC 100	RC 100	RC 97	RC 97
11. <u>Deir Abu Said (0.7%)</u>					
a. Population				3,872	
b. Units constructed	71	35	21	24	27
c. Share in region	%	2.4	1.7	1.1	1.6
d. Floor area	m <sup>2</sup>	1800	1300	1600	1493
e. Share in region	%	4.9	1.7	1.1	1.6
f. Average rooms/unit		1.3	1.7	1.7	1.9

( To Continue)

Table 8.10 (Continued)

Municipality	1972	1973	1974	1975	1976
<u>11. Deir Abu Said (0.7%)</u>					
g. Average floor area /unit	m <sup>2</sup> 25.4	31.4	61.9	66.7	55.3
h. Dominant type of Construction	RC 75	RC 85	RC 100	RC 100	RC 100
<u>12. Nueima (1.4%)</u>					
a. Population				7.672	
b. Units constructed	48	9	16	31	62
c. Share in region	% 3.3	0.6	1.3	1.5	3.7
d. Floor area	m <sup>2</sup> 3300	900	1100	1800	3175
e. Share in region	% 3.1	1.1	1.5	1.4	3.1
f. Average rooms/unit	2.3	3.8	2.3	2	1.7
g. Average floor area /unit	m <sup>2</sup> 68.8	100	58.8	58.0	51.2
h. Dominant type of Construction					
<u>13. Suf (2.7%)</u>					
a. Population				15.047	

( To Continue)

Table 8.10 (Continued)

Municipality	1972	1973	1974	1975	1976
13. <u>Suf (2.7%)</u>					
b. Units constructed	21	11	40	50	110
c. Share in region	1.5	0.8	3.3	2.4	6.5
d. Floor area	1100	700	2400	6000	6450
e. Share in region	1.0	1.1	3.4	4.5	0.3
f. Average rooms/unit	2.5	2.2	2.3	2.1	1.6
g. Average floor area /unit	52.4	63.6	60	120	58.6
h. Dominant type of Construction	RC 95	RC 89	RC 85	RC 96	RC 100
14. <u>Shajara (0.7%)</u>					
a. Population				4,000	
b. Units constructed				67	74
c. Share in region				3.2	4.4
d. Floor area				3700	3826
e. Share in region				2.8	3.7
f. Average rooms/unit				1.9	1.6
g. Average floor area /unit				55.2	51.7

( To continue)

Table 8.10 (Continued)

Municipality	1972	1973	1974	1975	1976
14. <u>Shajara (0.7%)</u>					
h. Dominant type of Construction				CB 76	CB 92
15. <u>Samma (0.5%)</u>					
a. Population				2,896	
b. Units constructed				49	23
c. Share in region				2.3	1.4
d. Floor area				2200	782
e. Share in region				1.7	0.8
f. Average rooms/unit				2.6	2.2
g. Average floor area /unit				44.9	34
h. Dominant type of Construction					
				CB 89	CB 95

( To continue)

Table 8.10 (Continued)

Municipality	1972	1973	1974	1975	1976
<u>Total (46.1%)</u>					
Units	1435	1438	1162	2089	1685
Floor area	108,000	78,700	71,000	127,200	102,978
rooms	2,958	2,488	2300	4573	4101
Average rooms/unit	2.1	1.7	1.9	2.2	2.5
Average floor area /unit	75.3m <sup>2</sup>	55.0m <sup>2</sup>	59.1m <sup>2</sup>	63.7m <sup>2</sup>	61.1m <sup>2</sup>
N.B	RC	Reinforced concrete			
		Concrete Block			

Source: Statistical Yearbook, 1972 to 1976.

It seems that this is one of the lesser developed parts in the Area.

08.055 The number of new constructions and floor area of Ajlun have fluctuated largely year by year. There were 3 digit numbers of new construction in 1973 but the average floor area per unit was extremely small at 18.5 m<sup>2</sup>. The reason for this may be the dormitory construction for the teachers' college. The share of floor area constructed in the Area has been declining. All buildings constructed are of reinforced concrete.

08.056 The share of floor area constructed in Taiyiba in the Area shows the average of 4 percentage, and averaged number of rooms and floor area per unit, which indicate a kind of quality of housing, is nearly the same as the average of the Area.

08.057 The share of floor area constructed in Kufrinja is almost constant at 2 percentage. The average floor area per unit is in a similar situation to that of N. Mazar.

08.058 Husn has shown steady growth. The number of new constructions and floor area constructed in 1976 became 2.5 times of those in 1972. However it is also noted that floor area per unit has been getting smaller which may be interpreted either as a higher rate of family subdivision or immigration of families of a small-size from outside.

08.059 Available statistics for Anjara are for 4 years from 1974 to 1976. The shares of new construction number and floor area constructed fluctuated every 2 years between 1.8 percentage and 3 percentage.

08.060 Deir Abu Said has remained constant at 1.7 percentage of the share. Though the number of new construction has decreased, floor area constructed has grown which indicates improvement of quality of housing.

08.061 Nueima has shown a growth in floor area constructed, but its share has fluctuated between 2 percentage and 3 percentage. Its number of rooms and floor area per unit are 10-percent less than the average of the Area.

08.062 Suf has achieved marked growth. The total floor area in 1976 is 6 times as large as that of 1972, which appears as 6 percentage of the share of the Area.

08.063 Statistics available for Shajara and Samma' are only for 1975 and 1976, which are difficult to analyze. The share of floor area constructed is 3-percent for Shajara and 1-percent for Samma'. Floor area per unit in Samma' is about 60 percentage of the average of the Area.



#### 8.3.4 Yarmouk University

08.064 The Yarmouk University is the second state university in Jordan established in 1975. The Academic Instruction has commenced in October 1976 at a temporary campus in Irbid. The permanent site of the University has an area of 2,600 situated in the strategic point of the Area, which is planned to be fully developed by 1986. The total number of students in 1986 is expected to be 20,000 which will far exceed the existing student capacity of the first state university: Jordan University. Economic benefits given to the Area by this University construction would be very significant. It also creates substantial housing demand. Details of this are discussed in Chapter XII of this report.

#### 8.3.5 Activities of the Housing Corporation and the Housing Bank

##### a. The Housing Corporation

08.065 The total of 256 units composed of 5 projects were constructed in the Area by the H.C. with the total investments of JD 771,000 under the Three Year Plan (1973-1975). At the National level, the H.C. constructed 2,904 with the total investment of JD 6,375,000. Therefore, the shares given to the Area were 8.8-percent and 12-percent in terms of the number of units and amounts of investment, which are far less than the population share of the Area. During the same period, the total number of units built in the municipalities listed in Table 8.9 were 4,689 which gives the H.C. the share of only 5.5 percentage, but this share must be further discounted if considered the actual total number of units.

08.066 Outline of the above mentioned 5 projects are as follows:

- (1) Wadi Dhuleil/Al-Othman project:  
This project consists of 40 units at a total cost of JD. 64,000, which were distributed to the farmers in this area. (new agricultural settlement).
- (2) Wadi Dhuleil/Dhaythem Al-Khalaf Project: This project consists of 40 units at a total cost of JD 64,000. These units were distributed to farmers working in this area. (new agricultural settlement).
- (3) Deir Al-Waraq (Manshiet Bani Hasan) Project:  
This project consists of 42 units at a total cost of JD 65,000. (Rural).
- (4) Ramtha Project:  
This project consists of 44 detached housing units at a total cost of JD. 128,000. Part of these units were distributed among Ramtha inhabitants, and the rest were leased to the Government employees.

(5) Irbid Project:

This project consists of 90 units over 15 buildings at a total cost of JD 450,000, which were later sold to the Yarmouk University for their faculty members.



08.067 Under the current FYP, the H.C. has 3 projects in the Area with the total units of 490, of which 290 are for meeting population growth in Irbid and the remaining 200 are for industrial workers at Irbid Industrial Estate (40 ha). It should be noted that all three projects are for Irbid and no single unit is allocated to other areas. Also it seems that attention is not duly paid to the Area within the Country because of the fact that the share given is 6.4 percentage of the total planned units of 7,708 by the H.C. which is far less than the population share.

b. The Housing Bank

08.068 The H.B has financed a sum of JD 5,602,000 to build a total of 1,863 housing units in the Area from 1974 to 1977. The averaged share given to the Area is 10.9 percentage of the National total of the H.B. which is better than the distribution given by the H.C. The above loans have been distributed to the following 4 districts within the Area:

Mutserfieh	Average Distribution Share (%)
Irbid	72.2
Mafraq	12.5
Ajlun	5.9
Jerash	5.8
Ramtha	3.6

08.069 As statistical data of new housing construction in the Area for 1977 is not available, an analysis was made on the period from 1974 to 1976 for 3 years. During this period, 4,936 units were built in the Area as shown in Table 8.9 and on the other hand the total number of units financed by the H.B were 1,216 which is almost one fourth of the total and is considered as good percentage for a financial institution which was established 5 years ago.

#### 8.4 Housing Demand Projection of the Study Area

##### 8.4.1 Housing Needs

08.070 It is a most difficult matter to make a reasonable projection under such circumstances as there is virtually no dependable information on population, housing stock and the actual construction records of all the communities concerned with the Area. Jordan is still an underdeveloped country and there has been dynamic movements of population in relation with the socio-economic developments of the Country as well as with those of the neighbouring countries. This gives another complication to housing need estimation.

08.071 The wealth of the Country is found in people who are industrious and well educated. Both the Government and people know that investment in education would bring best returns in the long-run. Accordingly people try to seek higher education even by sacrificing their housing standard. As a result, the housing situation in Jordan still seems to be poor. This might suggest that there is a high housing need but not a high effective demand.

08.072 In estimating housing needs and demands, the following questions should be answered as a prerequisite. What will be the future growth rate of population? Which will be the winner in the race between income growth and rising cost of building? How many construction workers are required to build the required housing supply? And so on.

08.073 It is not easy to answer these questions even though further studies are made. But in order to see the magnitude of needs for housing and building materials, some bold judgement on these questions are made for calculation. Table 8.11 presents the results of the needs and demand calculation. From 1981 to 1985,

there will be housing needs of 21,700 units in the Area which corresponds to 70 percentage of the target units of the National total of the current Five-Year Plan.

#### 8.4.2 Demands for Housing and Building Materials

08.074 Out of the above mentioned housing needs for the forthcoming 5 years from 1981 to 1985, how many units will appear as demand is another question. Judging from the past trend of construction at the 15 municipalities of the Area, it is not probable that all of those will become effective demand. On the basis of this assumption, the three cases consist of optimistic, medium and conservative estimates giving demand percentages of 90 percent and 70 percent were tried in the calculation. Then the quantity and costs of building materials were computed based on the medium estimate for the period from 1981 to 1985 in order to give a general picture of the size of potential building material market so that the local industrialists or entrepreneurs may have some basis for planning the future investment in this field. The bill of quantity is based on a low cost unit of 60 m<sup>2</sup> of the conventional building system surveyed by the H.C. in February, 1978. The prices used are also based on retail price in the same month.

Table 8.11 Projection of Housing Needs and Demand,  
Study Area, 1980 to 2000

	1980	1985	1990	2000
1. Population (1,000 Persons)	650	752	872	1,172
2. Net Pop. Increase, 5 Years	87	102	120	300
3. Persons/Household <sup>1/</sup>	6	5.7	5.2	4.8
4. Nos. of New House- hold 5 Years	14,500	17,900	23,000	62,500
5. Replacement & Vacancy Units <sup>2/</sup> (")	3,400	3,800	5,300	7,000
6. Total Housing Needs 5 Years	17,900	21,700	28,300	69,500
7. Average Annual Needs	3,600	4,300	5,700	13,900
8. Floor Area/Person <sup>3/</sup> (m <sup>2</sup> )	10	11.2	13	17.5
9. Average Floor Area/ Unit (m <sup>2</sup> )	60	63.8	67.6	84
10. Annual Housing Demand				
a) (7) x 0.9	3,200	3,900	5,130	12,500
b) (7) x 0.8	2,900	3,400	4,600	11,100
c) (7) x 0.7	2,500	3,000	4,000	9,700
11. Annual Housing Investment Required				
a) Building <sup>4/</sup> (JD 1,000)	6,960	8,677	12,435	
Land <sup>5/</sup> (")	4,640	7,099	12,438	
b) Building (")	6,000	7,656	10,816	
Land (")	4,000	6,264	10,816	
c) Building (")	5,280	6,835	9,194	
Land (")	3,520	5,592	9,194	

(To continue)

Table 8.11 (continued)

	1980	1985	1990	2000
12. Construction Workers Required <sup>6/</sup>	4,060	5,062	7,256	

Source: Study Team.

Notes: Assumptions used in the above Projection are:

- 1/ A family size shall be decreased by 5-percent in every 5 years.
- 2/ The existing stock was 85,000 units (1975) and 4-percent of the stock shall be the replacement and vacancy units required between 1976 and 1990 and 5-percent between 1991 and 2000.
- 3/ Floor area shall be increased annually by 3-percent. The floor area of 10m<sup>2</sup> is based on the statistics shown in the Table 8.10. The average floor area per unit (1972-1976) is 62.5m<sup>2</sup>. On the other hand it is said that the national average of family size is 6.2 persons per household. (No statistic is available regarding the family size in the Study Area.) Therefore we assume that 10m<sup>2</sup> per person is realistic figure. As to the growth of floor area, we assume on the basis of Japan's experiences which show an average of 4.3 percent of growth rate when per capita income growth rate was over 10 percent per year. We feel growth rate of 3 percent used in the projection is reasonable for the Study Area.
- 4/ JD 40/m<sup>2</sup>.
- 5/ The ratio between building cost and land cost would be 60:40 from 1976 to 1980, 55:45 from 1981 to 1985 and 50:50 from 1985 to 1990.
- 6/ Number of workers is figured out only from the case a). The value added created by workers against the building cost is 35-percent, and an average annual income of worker is JD 600.

08.075 There are 52 items of building materials as shown in Table 8.12. Each low-cost housing unit requires the building materials amounting to JD 1,300 at current costs. Consequently, JD 22.1 million worth of building materials will be required to support construction of 17,000 units which is based on the medium estimate for the demands in the Area from 1981 to 1985. The National total will be 5 times as big as this amount. Breakdown of the group of materials is as follows:

Group A	Local Materials	JD 14.8 million
Group B	Imported Materials	JD 5.2 million
Group C	Electric Materials	JD 0.9 million
Group D	Window and Door Accessories	JD 0.4 million

08.076 The quantity of major industrialized materials required for the construction are roughly as follows:

(1)	Cement	300,000 tons
(2)	Steel Bars	22,000 tons
(3)	Paints	1,400 tons
(4)	Tiles Unglazed	15 million pcs.
(5)	Tiles Glazed	2 million pcs.
(6)	Wrought Iron	9,000 tons
(7)	Bergman Pipes	850 km
(8)	Galvanized Pipe 2"	170 km
(9)	Black iron Pipe $\frac{1}{2}$ "	510 km
(10)	Galvanized Pipe 1"	50 km
(11)	White Cement	4,000 tons
(12)	Glass Sheet	140,000 M <sup>2</sup>
(13)	Electric Wires	2,250 km
(14)	Lock	220,000 sets.

Table 8.12 Building Materials Required for Constructing One Unit of Low Cost Housing 1 and Their Unit Costs, 1978.

Building Material	Quantity	@ Price JD
<b>A. <u>Local Material</u></b>		
1. Coarse Aggregate	56 m <sup>3</sup>	1.5/m <sup>3</sup>
2. Fine Aggregate	46 "	1.5/"
3. Rough Stone	14 "	0.8/"
4. Cement	17 tons	18.0/tons
5. Steel Bars	1.25 "	130.0/"
6. Asphalt	0.1 "	20.01/"
7. Paints	80 Liters	0.7 /liter
8. Tiles	900 Pcs	0.09/Pcs
9. Glazed Tiles	130 "	0.03/Pcs
10. Wrought Iron	0.5 Tons	130/ton
11. Wash Basin	1 Pc.	5/Pcs
12. Water Closet	1 Pc.	6/"
13. Sink	1 Pc.	8/"
14. Plastic Tube (electric)	50/m	0.2 /m
15. Electric Box	1 Pc.	0.015/Pcs
16. Electric Board	1 "	0.25 / "
<b>B. <u>Imported Materials</u></b>		
17. Chromed Syphon	1 Pc.	2/Pcs
18. Cast "	"	2.5/ "
19. Lead "	"	1.5/ "
20. Niagara	"	6.5/ "
21. Gull Trap	"	0.5/ "
22. Cast Pipe 4"	6 m	1.5/ m
23. Galvanized Pipe 2"	10 m	1/ m
24. Iron Pipe 1/2"	30 m	0.25/m
25. Galvanized Pipe 1"	3 m	0.5 /m
26. Stop Coke	3 Pcs	0.7 /Pcs
27. Chromed Taps	2 "	1 /"

(To continue)



Table 8.12 (Continued)

	Building Materials	Quantity	@ Price JD
B.	<u>Imported materials</u>		
	28. Brass Taps	2 Pcs	0.75/Pcs
	29. Sinc Gauge	1 "	25/ "
	30. Asbestos Pipe 4"	3 m	0.75/ m
	31. Floating Valve 1/2"	1 Pc	1.25/Pcs
	32. Water Meter	1 "	8/ "
	33. Shuttering Wood	1.5 m <sup>3</sup>	70/m <sup>3</sup>
	34. Hard Wood	0.5 "	90/ "
	35. Oak Wood	0.1 "	120/ "
	36. White Cement	0.22 tons	90/ton
	37. Glass Sheet	8 m <sup>2</sup>	3/m <sup>2</sup>
	38. Putty	0.08 tons	210/ton
C.	<u>Electrical Materials</u>		
	39. Wires	150 m	0.046/m
	40. Single Switch	4 Pcs	0.15 /Pcs
	41. Double Switch	6 "	0.2 / "
	42. Fuse (ordinary)	3 "	0.15/ "
	43. Power Fuse	1 "	0.2 / "
	44. Fuses	3 "	0.1 / "
	45. Boards	1 "	0.5 / "
	46. Bell	1 "	5 / "
	47. Tape	1 Roll	0.08/Roll
D.	<u>Windows and Doors</u>		
	48. Lock Set	5 sets	2.5/set
	49. Door Hinges	10 Pcs	0.2/Pcs
	50. Window Hinges	60 "	0.1/ "
	51. Glass Support	5 "	0.4/ "
	52. Window Handles	10 "	0.3/ "

Source: The Housing Corporation

Note: 1/ This is a unit with 60m<sup>2</sup> of the conventional building system, surveyed by the H.C. in February, 1978.

Though further study is necessary as to the feasibility of setting up new factories related to the above materials in the Area, such factories as steel bar, paints, galvanization of steel and iron and electric wires could be considered to be feasible in the Area.

## 8.5 Proposals for the Future Actions and Recommendations

### 8.5.1 General

08.077 It was found that housing supply in Jordan still largely depends on its private sector. Since the majority of housing needs exist in the low and medium income groups, further efforts to supply adequate housing within their reach by private sector is much desired. In consideration of the ever widening gap between the income and the cost of housing, a pessimistic view may be raised if the supply by the private sector could meet the expectation demonstrated in the current Five-Year Plan.

08.078 The following chart shows the current housing supply mechanism in Jordan. Many parties of both the governmental agencies and private bodies are involved and they are interrelated. Housing problem can't be solved by the effort of a single party. It is desired that the Government pays more attention to the effective control of various parties involved in housing supply. Among of all, the Government should pay more attention to the control of land price either (1) by special ordinance to freeze land transaction among private sectors for the reasonable period on the area where the Government plan to develop or (2) by imposition of capital gain tax for the extraordinary profits made through land speculations. If such tax revenue is realized, it is also desired to be injected into the H.C. for further expansion of their activity.

08.079 Standardization of building materials is another imperative issue in housing in order to modernize local building material industry. The modernization will strengthen the competing power of products both in domestic and international markets. In line with the modernization program, it must be considered to give liberal credit facilities for manufacturers to purchase new equipment and testing machines. An accelerated system for such equipment may also encourage manufacturers to invest in such new equipment. Manufacturers are required to pay their best efforts to improve quality of products so that they can put "certified" stamps on each product to gain credit in the markets.

08.080 RSS should assist and encourage architects and engineers of both public and private sectors toward paying more effort in the fields of building design and building system.

08.081 As a whole, the housing supply in Jordan has to rely mainly on its private sector, but the public sector should play a major role in housing supply for low-incomes on the one hand, and should lead the housing supply industries in terms of technology, housing type development, and quality of housing on the other hand.

## 8.5.2 Housing Policies for the Low-Incomes

08.082 The Housing Corporation has made significant achievements in housing supply in Jordan, but still there seems to be a serious housing need, especially among the low income families. And the difficulties in supplying housing for the low income group is increasing. But in this respect, several suggestions can be made for further examination.

- (1) Rental apartment for the low-incomes:  
We think it is necessary to provide more housing for low income groups by building rental apartments. These housing rents per month should be below JD 10 at 1977 prices. The income of families that rent these apartments should be below JD 500 per year, but there is a possibility of this standard to increase in the future. This will be public housing, and we consider this housing as a part of pure social welfare. The monthly rent is calculated based on the assumption that the low-incomes can only spend 25 percent of their income for housing.
- (2) To make smaller houses for the low income group:  
It is apparent that we need more houses at less cost for the low income group. There must be many ways to realize this goal, but it is very difficult to find ways that are effective. We recommend supplying small size apartment houses of 45 m<sup>2</sup> in order to reduce the cost and to increase the number of apartment houses for low income people. It must have a balcony, even if it is only of 3 to 4 m<sup>2</sup>. We expect 2 rooms for this apartment house, one living and guest-room, 2 small bed rooms and one small dining kitchen. Even though it may be small compared with existing low-income housing done by the Housing Corporation, it will have more space than the apartment rooms downtown in which low income families live now.
- (3) To supply small planned lot at adequate prices through public land development, such as land readjustment, for low income group, and to supply building materials to build their houses by themselves. Site and services are already known in Jordan, but it has to be tested in many cases, especially in rural areas.
- (4) To develop low cost house:  
Many experimental projects have already been tested in the past by the Government. These studies must be continued in the future and should be much more systematic. Sun dried brick construction will be one of them. It needs a suitable water-proof roof and adequate eaves to protect outside of the wall from the erosion by rain.

- (5) To build more public housing for low-incomes by the Housing Corporation and to bring the position of the Housing Corporation to that of a price-maker of housing in Jordan.

### 8.5.3 Urban Housing Supply

#### a. Development Policy

##### i. Site Preparation

08.083 To meet the increasing housing demand around large cities, public efforts should be paid to two directions: site preparation and housing estate development. Considering the scarcity in public financial resources for housing, site preparation is the cheaper way to provide least required services to new housing consumers than housing estate development. Thus, housing site preparation around large cities and potential new cities should be warranted either by public efforts or by private efforts under the guidance from public bodies. This site preparation will be further discussed in the last part of the Urban Planning and Community Facilities of this report.

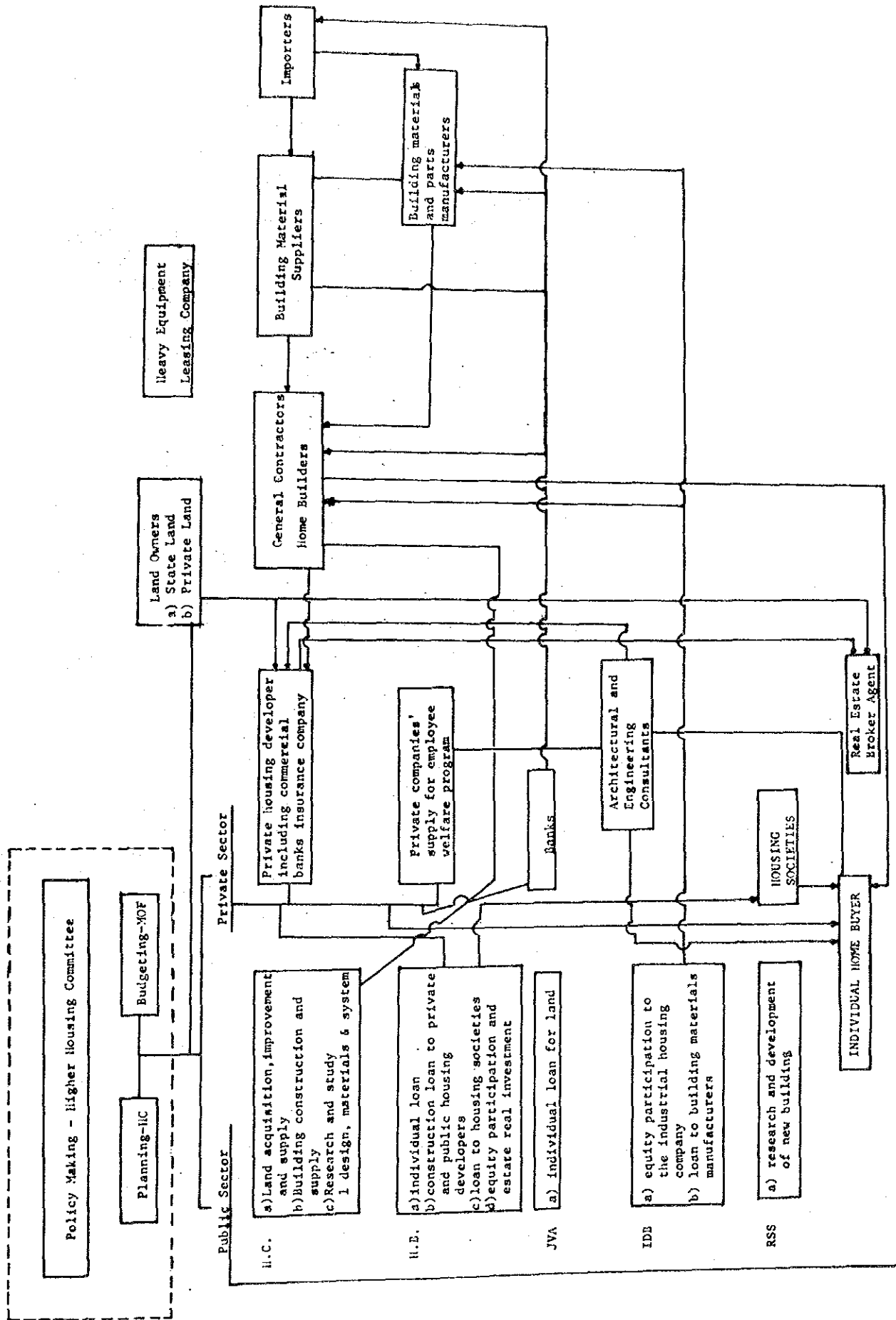
08.084 We suggest the making of a study about land readjustment development, as we have mentioned in Section 12.6.1 for urban planning in Volume 4. The Housing Corporation may join this association as a land owner, and may teach the people about planning. The H.C. can build their houses and community facilities as a core of the development. It is an ideal development for urban development.

##### ii. New Town Type Developmet

08.085 As for the housing estate development, the new town type of development by the H.C. is recommendable to attain better living environment with less costs. The new town type development allows most efficient utilization of the infrastructure and also assures contractors to have continuous job for a long period, which will result in large cost reduction in terms of labour, materials and equipments. Generally wages for construction workers for a longer employment are 20 percent less than that for a limited period. Also this will help the material and parts industries to standardize their products for mass production, which will lead to large cost reduction.

08.086 New town type development requires relatively large scale in size. A large scale housing has some merit to an existing old town, if it is located near the town. It is very difficult to renew an old town, but by having an adequate new town close to it, people in the old town can use new facilities, prepared in the new town, and also it would help in promoting renewal projects in the old town, by accepting people from the old town to the new town.

Figure 8.2 Housing Supply in Jordan



b. Building Systems

08.087 To cope with ever increasing costs of labour and materials, it is necessary to industrialize the building system. Taking account of (1) locally available materials such as cement, gravel, sand and stone, (2) climatic condition of the country, and (3) availability of local skills, a building system by concrete seems to be best suited for housing construction in Jordan. There are two major recommendable concrete building systems. One is a pre-cast panellized system and the other is a modular system using tunnel type steel concrete form on site.

08.088 The building of Abu-Nuseir New Town seem to be a very good chance to test various new mass production techniques for buildings, equipment and parts of building.

08.089 At the same time, building with concrete block should be encouraged for individual house construction.

c. Public Housing Project in the Study Area

08.090 Two new-town-type housing development projects are recommended to meet with the population growth at Irbid and Yarmouk for a period from 1981 to 1985. The total units are 4,000 which will be distributed to Irbid and the proposed Yarmouk New Town area by 2,000 and 3,000 respectively. It is noted that the H.C. finds it quite difficult to support construction of 4,000 units for the City of Irbid and Yarmouk University based on the present financial and managerial capabilities of the H.C. However, we feel that the success story of housing supply by the public sector in Singapore seems applicable to Jordan judging from the size of population, their quality and its economic development strategy and we are proposing to consider such approach as a national housing policy (ref. "Accessible City" by Wilfred Own, Brooklin Institute). In addition, the Irbid Governorate should receive high priority in public housing allocation within the Kingdom, since the shares of public housing given to the Governorate were too low being 8.8 to 12 percent (see paragraph 08.065). With these strong Governorate support and the preferred allocation to the Governorate, 4,000 can be achieved. Total investments required are JD 12 million without land:

	1981	1982	1983	1984	1985	Total
Units	800	800	800	800	800	4,000
Investment (JD million)	2.4	2.4	2.4	2.4	2.4	12.0

Land preparation cost will be covered by the site preparation project recommended by the Urban Planning and Community Facility section of this report.

#### 8.5.4 Rural Housing Supply

##### a. Development Policy

08.091 Since the rural communities are scattered around almost everywhere in the Study Area in many numbers, the housing need at each community is not large enough to attain the scale merit of the development. Hence, it is recommendable that not the H.C. but such institutions as the Agricultural Credit Corporation (A.C.C.) and the Agricultural Cooperatives (A.C.) should take primary role in promoting the housing construction in the rural area, in line with the established infrastructural improvement and development programs at village level.

##### b. Building System

08.092 Basic materials for rural housing should be the same as those for urban housing. However, due to the facts that (1) there is a chronic shortage of water supply in the rural area, (2) multi-story buildings are not necessarily required, and (3) the cooperative movement among farmers is quite actively compared with that among the people in the urban area, it is recommendable to mainly adopt a concrete block building system, which will reduce the water requirement on sites and require neither special equipment, technology, nor hired-workers except for wiring and piping. In order to promote a block building system in the rural area, it is needed to give people a sort of "do-it-yourself" type of easily understandable building manuals through either the A.C.C. or the A.C.

#### 8.5.5 Building Materials Center (BMC)

08.093 Housing construction generates substantially voluminous traffic of heavy vehicles, and some of them are unnecessary and uneconomical, which should be wisely controlled and reduced. Also a consideration must be paid towards minimizing such uneconomy as to suspend building works temporarily due to the lack of necessary materials. A housing construction requires great varieties of materials and parts from both the local and foreign, origin which must be readily available when they are required. Accordingly the facilities that allow one stop shopping for contractors, builders, jobbers and home buyers are desired to be established at the strategic points in the Area to achieve an overall economy in construction-related traffics and building activity itself. For this purpose, establishment of several Building Material Centers (BMCs) are recommended.

(1) Functions:

- 1) displaying of both local and imported building materials, parts and components;
- 2) dissemination of information and knowledge on such products as above to contractors, workers and buyers through Publication, TV and seminars;
- 3) warehousing and delivery;
- 4) consignment sale;
- 5) purchasing and merchandizing; and
- 6) financing.

(2) Business:

- 1) leasing of display space;
- 2) leasing of office space;
- 3) advertisement;
- 4) sponsorship of seminar;
- 5) warehousing and delivery;
- 6) purchase and merchandising; and
- 7) financing.

(3) Organization:

In order to have (1) closer relationship with public housing programs, (2) sound financial background and (3) effective driving force, it is desired that the organization of this BMC is newly formed as a joint venture between the public and private concerns.

08.094 It is ideal to have an industrial estate next to facilities of the BMC so that both the BMC and industries located in the industrial estate may be benefited mutually by having easy access for communication and transportation, which will result in mutual growth.

08.095 The Yarmouk University discussed in Section 8.3.4 is said that it will have own factories to make necessary building materials and furnitures within the campus in order to reduce its construction costs. From micro-economic point of view the idea has good reason, but from the regional or National points of view it will discourage new investment in these fields by private. This problem is further



discussed in the latter part of the Manufacturing and Mining of this report. In that section, it is recommended to examine an alternative idea for factories for the University construction as well as the idea of the University-owned factories. The alternative is to encourage investment by private sector in factories outside but near the campus, and to utilize these private industries for the construction of the University. If this alternative is taken as a better idea for the University construction after the examination, the first BMC should be developed in coordination with those private factories which are discussed above, and which are likely to be located at the industrial estate near the new Yarmouk campus.

08.096 Even if the original idea of the University-owned factories is taken as a better solution, it is very much likely that a BMC will be located at the industrial estate near the campus for the logistics purpose for the University construction. As a consequence, it is recommended to undertake a feasibility study for the BMC near the University so that it could become available for construction of the University without delay.

#### 8.5.6 Finance

08.097 Though many factors are involved, the successful promotion of housing supply largely depends on the ability of financing for purchaser, developers, contractors and building material industry. Among them financing for purchaser is the most important. To give an ability to purchase a housing unit to a low income family, a soft term credit becomes a prerequisite. Since the H.C. is supposed to be the prime developer and supplier of low cost housing to the most needed group, such a soft term credit must be made available to them by the H.C. However, such a resource is quite limited. To overcome this situation, it may be worthwhile to study and test the following ideas:

- (1) To create new revenue through tax on capital gain in the land speculation.
- (2) To receive commodity loan on high-tariff consumers' goods through a bilateral government agreement and the Government sell those goods to high income at market prices. This will generate funds for such a purpose and indirectly improve the income distribution.
- (3) To create a new capital market where certificate of mortgage can be traded. Oil-rich Arab countries can be invited for financing this mortgage market operation. This mortgage market operation will smoothen the recycling of the resources.



CHAPTER IX

TOURISM AND RECREATION



## CHAPTER IX

### TOURISM AND RECREATION

#### 9.1 Introduction

##### 9.1.1 Purpose of the Study

09.001 This chapter mainly attempts to provide all the information necessary for the Study Team to prepare overall development strategies for the Northern Jordan and to find out strategic development projects in the Study Area. The Study touches the recreation activities and facilities which have direct bearing on tourism and other development activities in the Study Area, although it is not the aim of the study to carry out the recreation planning. In the Phase II study, the domestic tourism will be discussed to the full extent of our power.

09.002 Therefore, the Study will be presented in three parts:

- (1) review of the present situation of tourism from national and local points of view,
- (2) review of the tourism resources and potentials in the Study Area, and
- (3) identification of programs and projects in the Study Area.

##### 9.1.2 Goals of the Study

09.003 Underlying goals of this tourism study are:

- (1) to improve the sector's contribution to the high growth of GDP,
- (2) to achieve a high level of net foreign exchange earnings, and
- (3) to minimize the negative impact by the development on natural, social and cultural resources and heritage.

## 9.2 Present Situation of Tourism

### 9.2.1 Kingdom

#### a. Contribution to the Economy

09.004 Foreign exchange receipts from tourism have increased enormously in recent years. Table 9.1 shows the foreign exchange receipts and expenditures for twenty-year period from 1957 to 1976. The three distinctive periods are shown below:

- (1) Period I (until 1966) The tourism industry grew steadily and reached the level of net income amounting to JD 6.03 million in 1966.
- (2) Period II (1967-1973) The period was heavily influenced by the War which broke out in 1967. The number of tourists decreased substantially, with plummeting of the foreign exchange receipts.
- (3) Period III (after 1974) The tourism industry recovered from the damage of the War and entered a new era of development.

09.005 In 1976, the foreign exchange receipts in tourism reached JD 68.86 million, accounting for 20.7% of the total export of goods and services. The net income, estimated by the Central Bank of Jordan, recorded JD 35.72 million. <sup>1/</sup> Therefore, it would be easy to achieve the goals of the current Five Year Plan as reproduced on Table 9.2.

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<sup>1/</sup> Department of Statistics, Statistical Yearbook, 1976, Table 132.

Table 9.1 Foreign Exchange Receipts and Expenditures in Tourism  
Jordan, 1956 to 1976.

(Unit: JD million)

Year	Receipts	Expenditures	Net income
1956	1.49	0.90	0.59
1957	1.22	1.70	- 0.48
1958	1.22	1.61	- 0.39
1959	2.85	1.93	0.92
1960	3.23	2.22	1.01
1961	4.34	2.44	1.90
1962	5.05	3.42	1.63
1963	6.00	3.20	2.80
1964	8.02	3.63	4.39
1965	9.81	4.29	5.52
1966	11.26	5.23	6.03
1967	6.60	5.35	1.25
1968	4.60	5.70	- 1.10
1969	4.50	7.98	- 3.45
1970	4.23	9.35	- 5.12
1971	3.10	7.70	- 4.60
1972	8.30	11.27	- 2.97
1973	10.71	11.28	- 0.57
1974	17.29	17.43	- 0.14
1975	35.72	33.76	1.96
1976	68.86	32.14	36.72

Sources: Dept. of Statistics, Statistical Yearbook, 1972-1976.  
Travel Statistics, 1968 and 1971.

Note: Some discrepancies are found in figures available in the sources. In such cases, the figures from the most recently published data are taken.

Table 9.2 Planned Foreign Exchange Earnings in Tourism,  
East Bank, 1976 to 1980

(Unit: JD million)

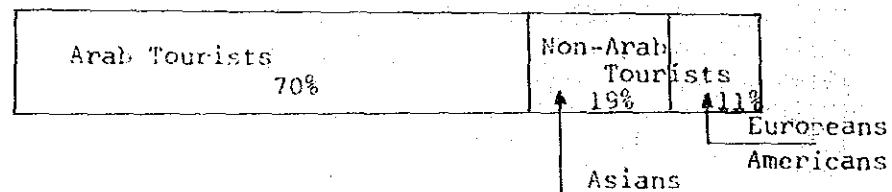
Year	Receipts	Expenditure	Surplus
1976	24	20	4
1977	28	21	7
1978	32	22	10
1979	37	23	14
1980	42	24	18

Source: NPC, Five Year Plan, 1976-1980

b. Profile of the Tourists to Jordan

09.006 The number of tourists to Jordan has been deeply affected by the political situation of the neighbouring countries and the region. After the Israeli occupation of the West Bank in 1967, the number of the tourists dropped drastically and continued to decrease until 1972. A civil war broke out in 1972 in Lebanon which used to be called "Switzerland of the Middle East", resulting in the commercial debilitation and the malfunction of tourism. The number of tourists in Jordan began to increase sharply in 1973, and reached 1,063,294 in 1976. The tourists, which total a little over one million, could be divided into three groups: Arab, non-Arab Asians and Europeans/Americans. The ratio of three groups is roughly 7:2:1 (Figure 9.1).

Figure 9.1 Tourists by Origin, East Bank, 1976



09.007 As for individual countries, Syrians account for the largest portion of 35.7 percent, counting 379,784 arrivals. Table 9.3 shows the numbers and ratios of tourists from individual countries. Top four countries, that is, Syria, Turkey, Lebanon and Saudi Arabia, account for more than three quarters of the total.

Table 9.3 Number and Share of Tourists from Top Ten Countries of Origin, East Bank, 1976

(Unit: Persons)

Country	Number of Tourists	Percentage of Total Tourists
1. Syria	379,784	35.7
2. Turkey	164,301	15.5
3. Lebanon	150,864	14.1
4. Saudi Arabia	103,676	9.8
5. U.S.A.	35,558	3.3
6. Iraq	31,778	3.0
7. Egypt	31,342	2.9
8. U.K.	15,602	1.5
9. West Germany	10,459	1.0
10. France	8,028	0.8

Source: Travel Statistics 1976, PP. 4,5,7 and 9.



09.008 As for means of transport, all kinds of transport are available for those who visit Jordan. Road transport, however, dominated in 1976, taking almost 87 percent of the total tourist arrivals. Air transport, carrying 129,127, accounts for 12 per cent, while rail and sea transport holds negligible shares. Figure 9.2 shows the ratio of the means of transport for the arrivals and the departures in 1972 and 1976. The share of air transport shows notable growth during five years.

Figure 9.2 Means of Transport of Tourists in 1972 and 1976

Arrivals

	Road	Air	Rail	Sea
1972	86.9	12.9	0.06	0.09
1976	82.9	16.1	0.9	0.1

Departures

	Road	Air	Rail	Sea
1972	86.1	13.8	0.05	0.1
1976	82.1	16.9	0.1	0.01

Source: Department of Statistics, Statistical Yearbook, 1976 Tables 42 and 43.

09.009 There are eight major points of entry to Jordan. It is notable that Ramtha, located in the Study Area has been receiving the largest number of arrivals for the past five years, sharing more than 50 percent of the total. Ramtha has a great strategic importance in terms of tourism promotion, particularly considering that most tourists have to spend a considerable amount of time for custom and passport procedures there. Table 9.4 presents number of arrivals by point of entry from 1972 to 1976.

Table 9.4 Number of Arrivals by Point of Entry, East Bank,  
1972 to 1976

(Unit: 1,000 persons)

Point of Entry	Year				
	1972	1973	1974	1975	1976
Ramtha	358.1	427.1	636.5	720.7	898.7
H-4	105.5	97.5	119.4	157.1	154.8
Train	0.4	0.9	14.5	15.4	15.2
Amman	82.2	104.4	150.5	215.3	273.5
Aqaba	0.6	0.5	0.6	0.9	2.1
Omari	2.0	3.1	6.4	9.5	65.4
Mudawara	85.1	108.0	160.2	182.4	260.7
Bridges <u>1/</u>	-	-	3.2	6.1	9.4
Others	3.4	6.3	11.5	15.8	16.5
Total	637.3	755.9	1,102.8	1,323.2	1,696.3

Source: Department of Statistics, Statistical Yearbook, 1976,  
Table 42.

Note: 1/ Non-Arabs arriving from the West Bank.

09.010 Presently the average length of stay of the tourists in the hotels is estimated to be approximately 2.6 days. There is no significant difference among the average figures of the five groups: Arabs, non-Arab Asians, European, Americans and Others. Table 9.5 shows the number of hotel lodgers and their stay by group in 1976.

Table 9.5 Arrivals, Lodgers, Night-beds in Hotels, 1976

Groups	Arrivals	Lodgers	Ratio of Arrivals	Night-beds	Average Length of stay (days)
	(1)	(2)	(3)=(2)/(1)	(4)	(5)=(4)/(2)
Arab	746,058	211,713	0.28	573,459	2.7
Non-Arab Asians	196,303	17,783	0.09	35,187	2.0
Europeans	67,956	29,187	0.43	74,454	2.6
Americans	40,281	10,971	0.27	29,805	2.7
Others	12,696	4,946	0.39	11,102	2.2
Total:	1,063,294	274,600	-	724,007	2.6

Source: Department of Statistics, Statistical Yearbook, 1976,  
Table 47

09.011 The expenditure by the tourists in Jordan was estimated to be JD 64 per person in 1976. Table 9.6 shows the result of the random sampling survey conducted by the Department of Statistics. The average expenditure of Europeans stands highest at JD 126 per person, while the average for Arabs is lowest at JD 35. Non-Arab Asians, Americans and Oceanians fall inbetween. The average expenditure per person for all groups is JD 62.32. On the other hand, the foreign exchange receipts estimated by the Central Bank of Jordan is JD 68.86 million in 1976. <sup>2/</sup> The number of tourists in the same year is 1,063,294. <sup>3/</sup> Therefore, the overall average calculated from these figures is JD 64.76 per person (JD 68.86 million/1,063,294 = JD 64.76).

09.012 Comparing the results from both the statistics data and the calculated estimate, consequently, we could safely say that the average expenditure per tourist in 1976 was somewhere around JD 64.

09.013 One of the characteristics of the tourist expenditures in Jordan is the high ratio of lodging and meals to total expenditures. Figures for non-Arab Asians and Europeans are close to 80 percent. On the other hand, expenditures on transportation is fairly low. In the case of Arabs, they spend on average 8.6 percent of their total expenditures, while Europeans and Americans spend 6.6 percent and 7.6 percent respectively. Two types of tourists can be consequently distinguished: tourists from the neighbouring countries with their own cars and tourists in the package tour from remote areas.

#### 9.2.2 Study Area

##### a. Facilities

09.014 There are 131 hotels in Jordan and the number of beds totals 5,470. <sup>4/</sup> The average occupancy rate is 56.1 percent <sup>5/</sup> as of 1976. Classified hotels, however, are located only in Amman and Aqaba, not in the Study Area. The number of beds in the Study Area totals 225, only 4 percent of the national total. <sup>6/</sup> Annual occupancy rate of hotels in Irbid is 63.3%, <sup>7/</sup> showing higher figure than the national average.

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<sup>2/</sup> Department of Statistics, Statistical Yearbook, 1976, Tab.132.

<sup>3/</sup> Travel Statistics, 1976, p.3.

<sup>4/</sup> Statistical Yearbook, 1976, Table 48.

<sup>5/</sup> Statistical Yearbook, 1976, Table 53.

<sup>6/</sup> Hotel Statistics, 1976, Table 1.

<sup>7/</sup> Statistical Yearbook, 1976, Table 53.

Table 9.6 Average Expenditure per Tourist in 1976

Tourists	No. of Samples (1)	Total Expenditures JD (2)	Average Expenditures per Person JD (3)=(2) / (1)	Details of		Expenditure Purchases %
				Lodging and Meals %	Transportation	
Arabs	4,782	169,332	35	61.4	8.6	30.0
Non-Arab Asians	617	50,963	83	79.6	4.0	16.4
Europeans	2,067	266,080	129	78.6	6.6	14.8
Americans	2,128	110,111	52	73.3	7.6	19.1
Oceanians	86	8,764	79	62.3	10.6	27.1
<b>Total:</b>	<b>9,680</b>	<b>603,250</b>	<b>62</b>	<b>72.4</b>	<b>7.1</b>	<b>20.5</b>

Source: Tourists Expenditure Survey, 1976, Tabs. 16, 18, 20, 22 and 24.

09.015 There are government Rest Houses at several locations in the Study Area: Jerash, Dibbin, Ishtafina and Ramtha. One at Ajlun belongs to the municipality, run by a private organization.

09.016 Dibbin National Park and Ishtafina Tourist Park are notable assets in the Study Area, serving for tourists as well as residents of Amman, Zarqa and other areas.

09.017 As for full-time employment, tourism industry in the Study Area contributes only nominally, although many people have some involvement in tourism e.g. having temporary shops along the road to sell fruits and vegetables in season.

b. Transportation

09.018 Tourism in the Study Area relies entirely on road transport. Moreover, tourists invariably use private automobiles because public transportation is practically non-existent. The capacities of the existing roads and parking spaces seem to be sufficient to meet the current demand. However, there is much to be desired concerning guardrails, marking of the center line, traffic signs and landscape planting which are necessary to ensure safe and comfortable travel.

c. Ongoing Projects

09.019 The most notable project under way in the Study Area is the Jerash Development Project. An independent organization under the Ministry of Tourism and Antiquities is carrying out Petra and Jerash development projects using \$ 6 million of IBRD loan and \$ 6 million of Jordanian budget. By these projects, the visitor center has been completed and a light and sound program and a new rest house with 400-seat restaurant are expected to be finished in two years.

09.020 At Dibbin National Park, construction of 32 chalets and a rest-house with 200-seat restaurant are scheduled by the end of 1980. Total capacity will then be 50 chalets and 300 seats of restaurants.

09.021 Department of Antiquities is undertaking excavation and restoration works in Um Qeis. German Evangelical Institute of Archaeology and Danish Archaeological Society are sending experts for assistance. Qalat al Rabadh, Castle of Ajlun, is in the process of restoration. The Department of Antiquities is getting assistance from UNESCO of experts and equipment and from British government of an expert. Excavation will start at Pella. The University of Sidney, Australia, and Wocester College, U.S.A., will take part in the work.

09.022 The Department of Tourism is about to launch a development study at Hemma in collaboration with the Jordan Valley Authority.

### 9.3 Resources for Tourism and Recreation

09.023 Touristic resources in the Study Area will be diagnosed to find out places of high potentialities and to identify possible projects. The diagnosis is carried out by category of resources rather than by geographical distribution, because it is necessary to compare the attractiveness of the objects of the same nature for selecting potential areas for development and for identifying suitable projects. All sites discussed in this section are shown on Figure 9.6.

#### 9.3.1 Antiquities

09.024 Archaeological objects from the Stone Age to Ottoman Domination have been collected from various parts throughout of Jordan. There are also many places of great archaeological importance in the Study Area. Value in terms of their attractiveness to tourists, however, may not be necessarily the same as that of archaeology. However precious the antiquities may be from the academic point of view, they have to be evaluated by the following criteria from the touristic point of view:

- (1) how much impression they leave on tourists, and
- (2) how many tourists they can actually attract.

Evaluation of antiquities for tourism is to be done in two ways; one concerning their present status and the other their possible attractiveness when they are fully excavated and restored.

##### a. Jerash

09.025 Jerash is a typical Roman provincial town located in a valley with a small river and one of the best preserved and the most important sites of the classical period in the Middle East and most probably in the world. Objects found in Jerash indicates the presence of people in Jerash in the Neolithic period, about 6000 B.C., although buildings as they now stand were mostly built in the first and second centuries A.D.

09.026 Triumphal Arch, South Theatre, Temple of Zeus, Forum, Street of Columns and Temple of Artemis are striking enough to collect tourists from all over the world (see Figure 9.3).

09.027 A major road, Route 15, is cutting through Jerash along the river making the city into two parts. A highway connecting Irbid to Amman is under construction with another alignment, further toward east. When the new highway comes into operation, it will lessen the load of the Route 15. However, there are still good reasons to realign the Route 15. In doing so, elements which are abandoned in the present village and not receiving attention from most tourists, could be combined together with the major part of the ancient city. And then rows of columns could be extended toward east, beyond the existing road.

09.028 Further restoration works are desired, particularly a full restoration of the Triumphal Arch and restoration and operation of the water fall should be given high priority. If remains located on peripheries, churches and Bishop Genesisius, are restored, the tour on site will be much more attractive and will take more time than it is now. A full restoration of the South Theatre will give an opportunity to have performance activities there, and even a Drama Festival, taking advantage of the proximity to Amman.

b. Um Qeis

09.029 Ruins to the north-west of Um Qeis was indentified as Gadara (see Figure 9.4), a typical Greco-Roman town which is believed to have had a university. At present prominent features are remains of two small theaters, a few standing columns of a temple and some rock-cut tombs. However, a large area of tumbled stones and column drums gives an indication of the existence of a sizable city.

09.030 Presently a certain number of people live near the ruins and there is a school not far from the houses. It might be necessary to relocate these people to another place before a full scale excavation and restoration work can be started.

09.031 Until excavation and restoration work begins, it is desirable to make a firm blockade of ruins because existing tangling barbed wire fences are not functioning at all and give only a miserable impression.

09.032 Views from the ruins are magnificent overlooking Lake Tiberias. Once the classical city of Gadara emerges through restoration, it would be attractive to people as much as or even more than Jerash. The Department of Antiquities estimates the cost of excavation and restoration of the first phase at somewhere around JD 1.6 million, including relocation of residents, while the 1978 budget allocation by the Department of Antiquities only JD 305,000. Setting aside the monetary problem, ruins of Gadara are an asset of great value not only to Jordan where it happened to be located but to the world as a whole. Therefore, the possibility of an external assistance must be sought to realize the full restoration.

Figure 9.3 Plan of Jerash

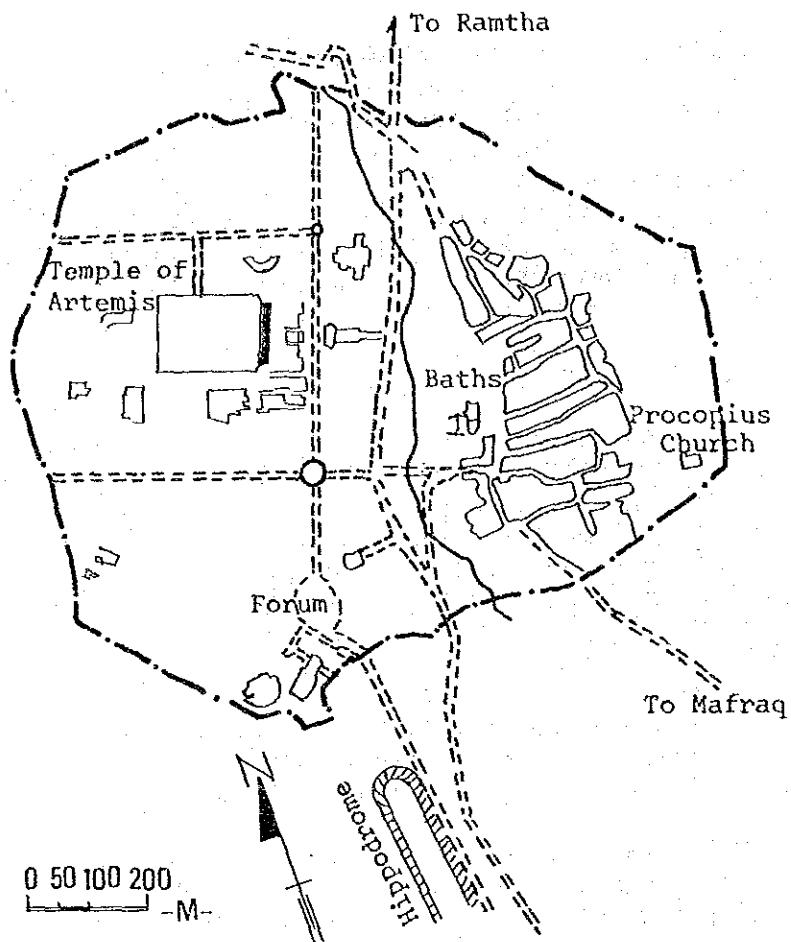


Figure 9.4 Photograph of Um Qeis

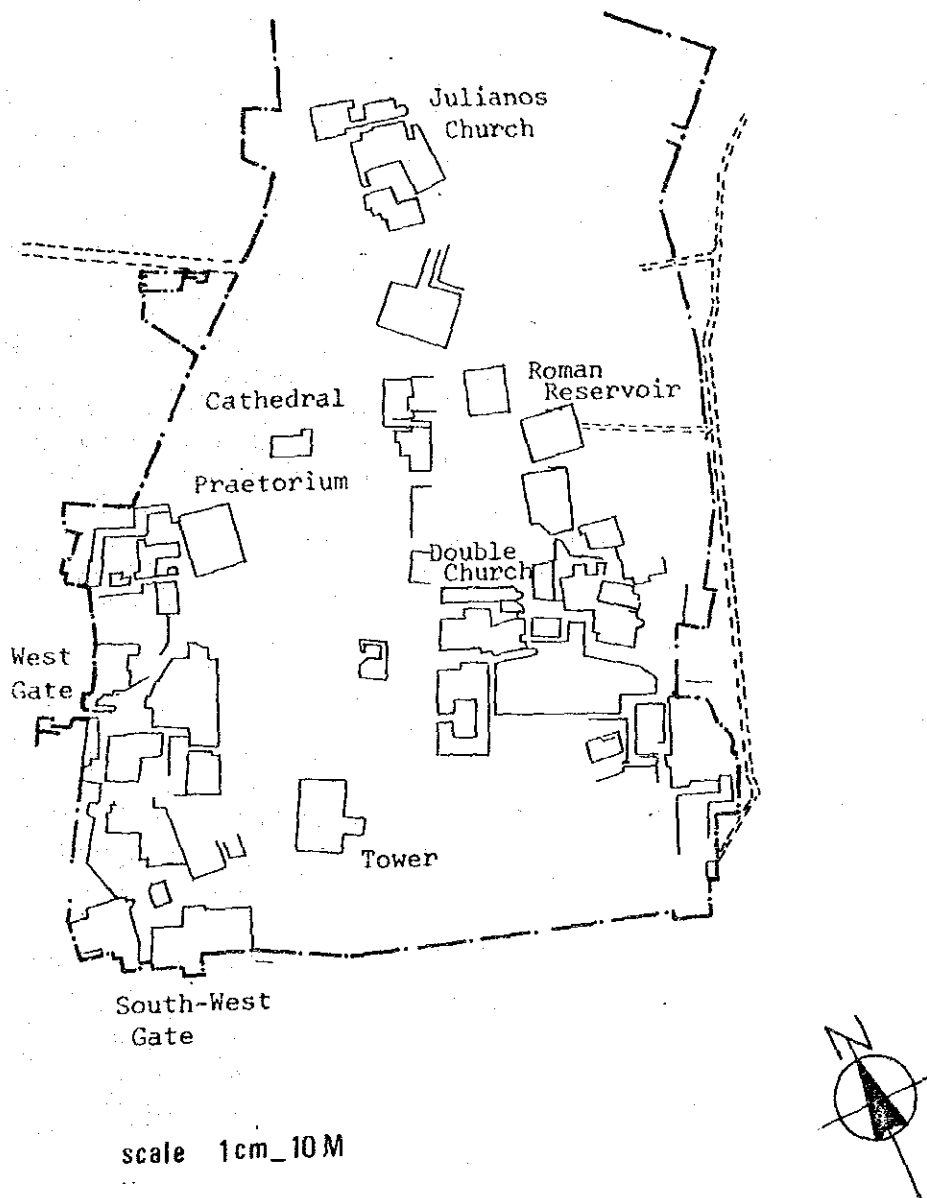




c. Um El Jimal

09.033 Um El Jimal is believed to have its origin as a Nabataean town some time in the first century B.C. Early in the second century A.D. the Romans came to this area. An inscription shows that the North-West Gate (see Figure 9.5) was built in the time of the Emperor Commodus (161-192 A.D.)

Figure 9.5 Plan of Um El Jimal



There exist some identifiable remains from Byzantine time, e.g. Julianos Church dated 557 AD.

09.034 Fortunately the ruin site is owned by the Government. Institutional arrangement, however, seems to be necessary to restrict the development activities in the surrounding area.

09.035 Um El Jimal, which used to be an important caravan staging post, is located on the dead flat desert plain. It would not conflict with tradition and culture to introduce some special features for tourists. If the circumstance allows it, an amusement centre with casinos may be introduced together with accommodations. In this case, the fund for restoration of all antiquities can be drawn from the profit of casinos.

09.036 The Department of Antiquities estimates the cost of Restoration as much as Jdl.0 million.

d. Castle of Ajlun

09.037 The Castle of Ajlun was built in late twelfth century for checking the expansion of Crusader Powers. It can, as it is, be some attraction to tourists. The Department of antiquities is undertaking its restoration with assistance from UNESCO and British government. Total cost of restoration is estimated at JD 300,000. The access road from the major local road extends three kilometers and needs improvement. If the moat and a drawbridge are restored and put into operation, the attractiveness of the castle will be considerably increased.

09.038 The grand view from the castle is a most memorable asset. Towns of Ajlun and Anjara are displayed in the verdure of the mountains.

e. Beit Ras

09.039 Beit Ras is the location of one of the Decapolis. The name of the classical city is identified as Capitoliias. The present village, Beit Ras, however, sprawls over most of the area of Capitoliias. Many structures of old days are used by residents today.

f. Rihaba

09.040 There are some mosaic works in Rihaba similar to the ones at Madaba. The Department of Antiquities is planning to provide the cover to the objects and to undertake restoration of the mosaics. The estimated cost for this operation is JD 100,000.

### 9.3.2 Natural Features

#### a. Climate

09.041 The climate in the Study Area is favorable to tourism activities, showing general character of the Mediterranean climate. Thanks to the high altitude, most of the Study Area is cool during the summer. There is, however, considerable difference between readings of annual rainfall at several places in the Study Area, Ajlun 520.0 mm vs Mafraq 125.9 mm. <sup>8/</sup> From November through February of the next year is too rainy and the spring time is the most rewarding period of the year for tourism.

#### b. Topography

09.042 The gentle undulation is the general feature of the topography in the Study Area. Occasional steep slopes are found toward rivers or wadis. The western part of the Study Area shows more intricate land forms as a result of the weathering by the rainfall. Yet, there are few places too steep to have touristic activities. Toward east, hills become more and more insignificant, and eventually merging into the flat plain of the desert. The northern boundary of the Study Area is defined by the Yarmouk River, which, with its tributaries, creates a unique land form of gorges some 400 m deep.

#### c. Vegetation and Scenery

09.043 The Study Area is endowed with the remarkable verdure in the region. The predominant species are conifers. There are two touristic parks based on this precious asset.

##### i. Dibbin National Park

09.044 Dibbin National Park, located to the south-west of Jerash, could be reached by car in about one hour from Amman. Existing facilities are a rest-house with a restaurant of 100 capacity, 18 chalets, picnic areas and parking lots. By the end of 1980 there will be another 32 chalets and a rest-house with a restaurant of 200 seating capacity. There are two points to be raised about this park. There are few places from which tourists can enjoy the flourishing verdant scenery while tourists are actually in there. Observatories or places of similar nature seem to be greatly helpful to this park. It was found in the course of the field survey that many people hold a negative impression of Dibbin, because "it is dirty and filthy," or "litter all over". It is absolutely necessary to wipe out these feelings and take Dibbin out of the association with filth and litter.

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<sup>8/</sup> Source is Dept. of Statistics, Statistical Yearbook, 1976  
Table 71.

ii. Ishtafina Tourism Park

09.045 Ishtafina Tourism Park is located off Route 20 north of Ajlun, and the whole area is covered with woods. There are a rest house and a few picnic areas, several picnic tables in each. Presently Ishtafina Tourism Park does not have many facilities, and it seems that the terrain does not allow a large-scale future expansion.

d. Hot Spring

09.046 Hot springs are important for both recreational and rehabilitational purposes. The best hot spring is at Ma'in, outside of the Study Area. There is the second best of the kind in the Study Area at Hemma. Hemma is located in the north-west corner of the Study Area. There is a pension with 32 beds, with an estimated occupancy rate of 15%. Visitors are mostly Jordanians and Syrians at present. It will stay an touristic object in the Arab world. The Department of Tourism will carry out the development planning in collaboration with the Jordan Valley Authority.

e. Other features

i. King Talal Dam

09.047 Although this \$ 35 million project was not meant for attracting tourists, the water surface of the dam became a precious asset for tourism. However, no touristic activities are presently introduced. Water seems unfavorable to support water recreation because of the development of aquatic plants. The water surface has an importance as an object which gives an interest to the scenery. Provision of observatories or scenic areas are expected to be studied.

ii. Maqarin Dam and Reservoir

09.048 The proposed Maqarin Dam will create a water surface of 7.7 KM<sup>2</sup>. The water being the key factor of recreation, Maqarin Dam and Reservoir will add an immense value to the area as a tourism and recreation resource.

09.049 The gorge carved by the Yarmouk River soars, and it will give unique feelings to the tourists when they look up escarpments during their travel by boats.

09.050 The plateau surrounding the gorge is very favourable for the resort development, showing the gentle undulation and a good size.

09.051 Maqarin Dam and Reservoir will push up the potentials of the plateau quite high. The area will become most suitable for a large scale resort development in the Study Area.

### 9.3.3 Festivals

09.052 Festivals are quite effective in raising money, and consequently in attracting visitors. The current Five Year Plan proposes the initiation of an annual art festival at Jerash as an attraction to Arab tourists and Jordanians working abroad.

09.053 An approach which will gradually lead to the establishment of festivals of international attraction, through festivals as an attraction to Jordanians and visitors from neighbouring countries, needs to be carefully elaborated.

09.054 It also seems important to consider organizing festivals which will serve to conserve other industries of the country, for example an industrial arts festival, aside from the festivals that are simply connected to tourism. This will be more important when the Yarmouk university starts at its permanent site with various academic and industrial activities.

### 9.3.4 Urban Centers

09.055 Cities themselves often serve as tourist attractions. It is therefore necessary to develop cities with local features together with safety and amenity. At present Irbid as well as other town centers in the Study Area can hardly claim to possess such quality. Irbid, being the hub of the Governorate, will receive a number of visitors. There should be an effort to enhance attractiveness of its urban center. The development of a traditional market "Suq" utilizing an open lot after some industrial establishments moved out to the proposed industrial estate will give a considerable influence over visitor's impression as well as residents' every day life.

09.056 There is practically no green space where people can freely go in. Provision of city parks will have a great impact to both visitors and residents in respect of use, not to mention the visual impact. Promotion of street planting is another item which has a great influence over the landscape of the city. Planting along the main road should be encouraged.

09.057 The Yarmouk University which will enrol 20,000 students at its completion is to be opened to the wider public under the philosophy of "inter-marriage to society". It would be very important to quantify the needs of people outside of the University.

### 9.3.5 Souvenir Industry

09.058 The purpose of tourism is not only to enjoy non-daily experience but also to appreciate products of the area, for instance, craft objects, and probably to purchase them as souvenirs. This is important since it promotes tourists consumption and leads to the acquisition of foreign currencies. The government authorities are

regarding this souvenir industry with great interest. The Government is planning to organize Jordan Craft Development Centre, Ltd. through equity participation (JD 5,000 out of the total JD 17,000). Its realization and successful result are awaited.

### 9.3.6 Potentials

09.059 Table 9.7 is the summary of the potentials discussed in this section 9.3 on Resources, and Figure 9.6 shows their locations.

Table 9.7 Summary of Potentials

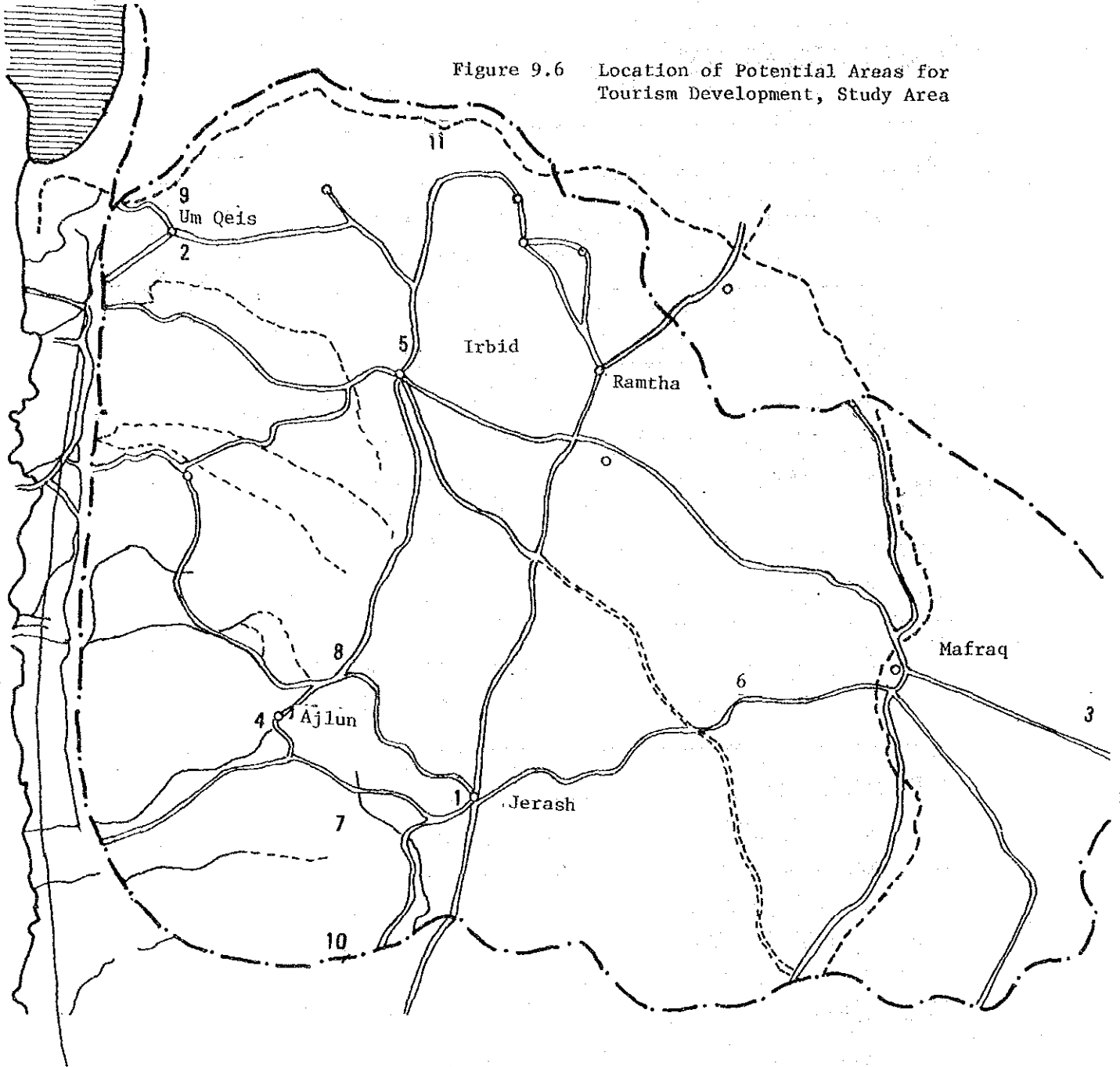
<u>I. Antiquities</u>	
a. Jerash	<ol style="list-style-type: none"> <li>1. restoration of the Triumphal Arch</li> <li>2. restoration of the waterfall</li> <li>3. restoration of more columns</li> <li>4. restoration of churches in the west of the City</li> <li>5. establishment of folklore village</li> <li>6. construction of hotel</li> <li>7. rerouting Route 15 toward West</li> </ol>
b. Um Qeis	<ol style="list-style-type: none"> <li>1. restoration of the theater</li> <li>2. restoration of the temple</li> <li>3. restoration of columns</li> <li>4. rehabilitation of rockcut tombs</li> <li>5. restoration of the city</li> </ol>
c. Um El Jimal	<ol style="list-style-type: none"> <li>1. restoration of the major structures</li> <li>2. restoration of the city</li> <li>3. rerouting the road passing through</li> <li>4. establishment of tourism complex</li> </ol>
d. Ajlun	<ol style="list-style-type: none"> <li>1. restoration of the moat and the drawbridge</li> <li>2. restoration of the structure</li> </ol>
e. Beit Ras	<ol style="list-style-type: none"> <li>1. restoration of the tombs</li> </ol>
f. Rihaba	<ol style="list-style-type: none"> <li>1. restoration of the mosaic</li> </ol>

(To continue)

Table 9.7 (Continued)

<b>II. Natural Features</b>	
a. Dibbin	1. more accommodation 2. more capacity for day trippers
b. Ishtafina	1. limited expansion
c. Ajlun	1. possible resort development
d. Hemma	1. more accommodation 2. rehabilitation facilities
e. King Talal Dam	1. Observatory or scenic area
f. Maqarin	1. resort development 2. water oriented recreation
<b>III. Festivals</b>	
a. Jerash	1. performing art festival
b. Irbid-Yarmouk University	1. industrial arts festival
<b>IV. Urban Center</b>	
a. Irbid	1. establishment of Suq 2. City Park
b. Ramtha	1. Information Centre 2. street planting
<b>V. Souvenir Industry</b>	
a. General	1. Manpower

Figure 9.6 Location of Potential Areas for Tourism Development, Study Area



Legend

- |               |                   |
|---------------|-------------------|
| 1 Jerash      | 7 Dibbin          |
| 2 Um Qeis     | 8 Ishtafina       |
| 3 Um El Jimal | 9 Hemma           |
| 4 Ajlun       | 10 King Talal Dam |
| 5 Beit Ras    | 11 Maqarin Dam    |
| 6 Rihaba      |                   |



## 9.4 Identification of Projects

### 9.4.1 Background

#### a. Market and Commodity in Tourism

09.060 There are two distinctive groups of the tourists who are coming to Jordan: the Arabs and the Non-Arabs. At present the Arabs share 70.16 % of total tourists. <sup>9/</sup> 29.84 percent of total tourists are the non-Arab tourists who come to Jordan because of Jordan's access to Jerusalem, because of the sun shine and beach, and because Jordan is packaged as part of multi-country tours. On the other hand, the Arab tourists, the most important segment of the tourists, come to Jordan because of the cool climate during the summer, because of the verdant scenery and because of the hot springs.

09.061 As to the future, features that will attract Non-Arab tourists and will be able to be easily sold as commodities in tourism market are as follows:

- (1) access to Jerusalem,
- (2) sunshine, beach and marine resources,
- (3) part of multi-country package tour,
- (4) the old caravan trade routes and staging posts,
- (5) the Biblical passage points,
- (6) the desert castles, and
- (7) the Crusader defense points.

On the other hand, features that will attract Arab tourists are just the same as they are now, as follows:

- (1) cool climate during summer,
- (2) verdant landscape, and
- (3) hot springs.

In the Study Area, therefore, there are prospective commodities of the old caravan trade route and staging posts and the Crusader defense points for the Non-Arab tourists, and commodities of cool climate, verdant landscape and hot springs for the Arab tourists.

#### b. Tourists Projection

09.062 The visit of tourists to Jordan is strongly influenced by the political situation in the Middle East. It is nevertheless

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<sup>9/</sup> Travel Statistics, 1976 P.3

obvious that Jordan does possess a potential to attract more tourists than it does today, and it is presumed that tourists will keep on increasing as long as the current political situation continues.

09.063 The past trend up to the present will be applied for the immediate future, but because of the irregular changes of tourists in the past, it is not appropriate to apply a simple regression line. Regarding the period from 1967, when the West Bank was occupied, to 1974 as "recuperating period" and thus excluding it in calculating the regression line and using the following formula, it would look as the following:

$$Y = -8045 + 117.5 X$$

$$r \times y = 0.964$$

where  $y$  = arrivals other than Jordanians in 1,000 persons,

$x$  = year (input 70 for 1970), and

$r$  = correlation coefficient.

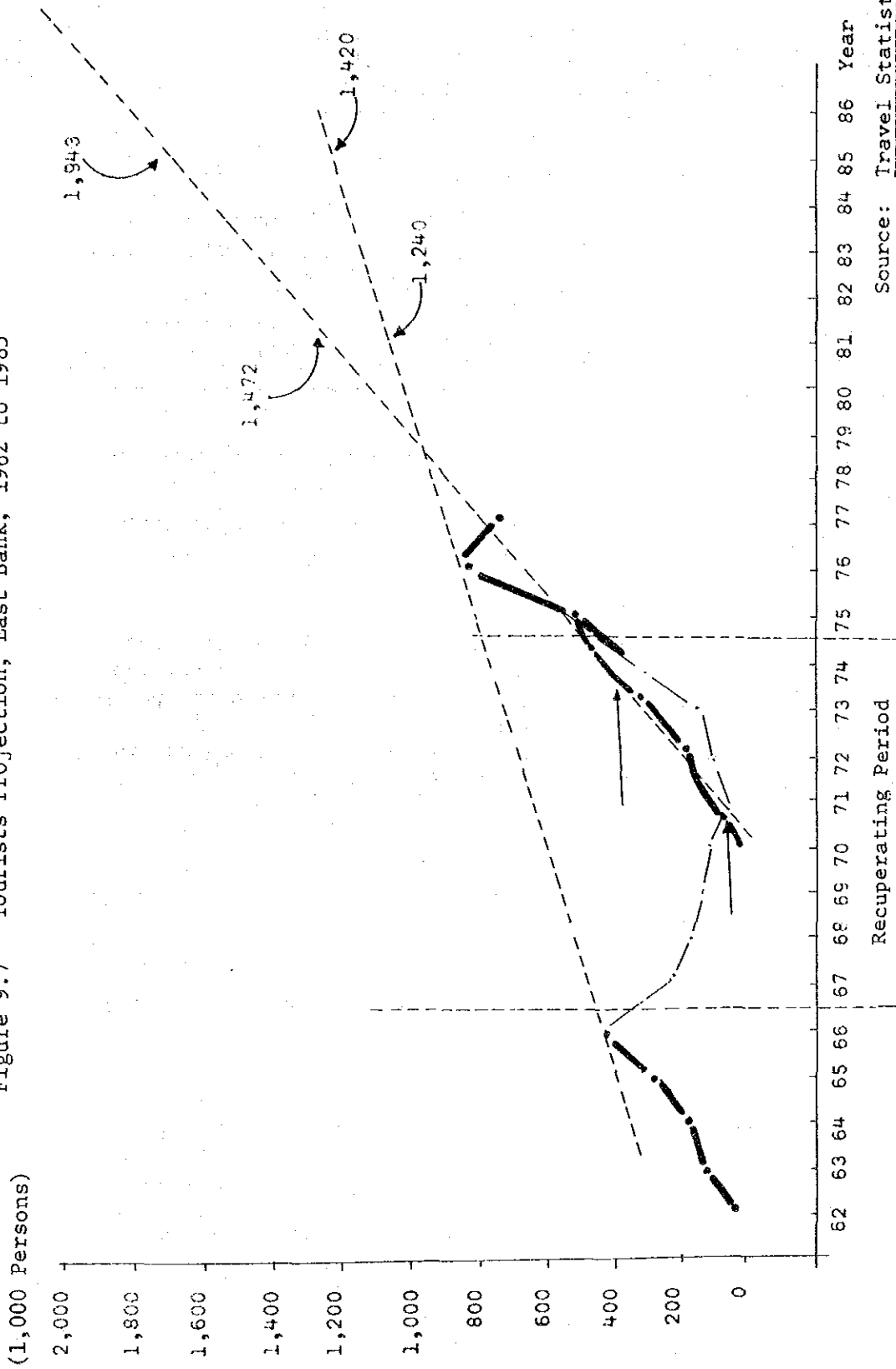
According to the above formula, non-Jordanians would be 1,472,000 in 1981 and 1,942,500 in 1985.

09.064 This estimation method, however, contains the problem that the increase after 1975 is caused by the civil war in Lebanon. Had the war in Lebanon not taken place, the number of arrivals would not have increased as it did between 1974 and 1976, thus this period needs to be treated differently from that between 1962 and 1966. Therefore, a hypothetical planning base for the Nation's total is reached by the following graphic method (see Figure 9.7):

- (1) take the value of 1966 as the highest of the period between 1962 and 1966;
- (2) take the value of 1976 as the highest of the period between 1974 and 1976; and
- (3) draw a straight line, taking those two points.

Then the value will be 1,240,000 for 1981 and 1,420,000 for 1985.

Figure 9.7 Tourists Projection, East Bank, 1962 to 1985



Source: Travel Statistics, 1976

09.065 As to the shares of the Arab and the Non-Arab tourists, the assumption was made that the increase of the Non-Arab tourists will be proportionally greater than that of the Arab tourists. The hypothetical figure for the share of the non-Arab tourists will be 35 percent compared to the present 30 percent. The tourists projection of the national total is shown on Table 9.8.

Table 9.8 Tourists Projection for 1981 and 1985

(Unit: 1,000 Persons)

Group	1981	1985
Arab Tourist	806	923
Non-Arab Tourist	434	497
Total	1,240	1,420

Source: Study Team

#### 9.4.2 Evaluation of Projects

09.066 The scoring method was applied to select the prospective projects from the items discussed in Section 9.3.6. The scores are given to the attractiveness of the resource item for three groups of visitors. Table 9.9 shows the result of the evaluation of project items. Items which got scores over 15 will be discussed in Section 9.4.4 for identifying possible projects for them.

Table 9.9 Evaluation of Project Areas, Study Area

	Attractiveness For			Score
	Arab Tourist	Non-Arab Tourist	Domestic Tourist	
<u>I. Antiquities</u>				
Jerash	+	++	+	20
Um Qeis	+	++	+	20
Um ElJimal	+	+	+	15
Ajlun	++	++	++	30
Bait Ras	.	.	+	5
Rihaba	.	.	+	5
<u>II. Natural Features</u>				
Dibbin	++	.	++	20
Ishtafana	.	.	+	5
Ajlun	++	+	++	25
Hemma	++	.	++	20
King Talal Dam	.	.	+	5
Maqarin	++	+	++	25
<u>III. Festivals</u>				
Jerash	++	+	++	30
Irbid-Yarmouk	+	.	+	10
<u>IV. Urban Center</u>				
Irbid	++	.	+	15
Ramtha	++	+	.	15
<u>V. Souvenir Industry</u>				
	.	+	.	5

Source: Study Team.

Note: ++ Good, + Fair, . Poor Weight: ++ = 10, + = 5, . = 0

#### 9.4.3 Recommended Long-Term Strategy

##### a. Development of a Touristic Site as a Final Destination

09.067 It is absolutely necessary to put an effort in developing the tourism industry so as to make tourists willing to come a long distance to visit the places in Jordan as their final destination and to stay for a longer period. Criteria of a final destination selected by the tourists are:

##### (1) Uniqueness:

The site must have something unique which makes it stand out from other places and without other

competing touristic sites in the same nature.

(2) Sizable area:

The site must be of a certain size so that various kind of functional facilities can be laid out. Thus, the site should be able to accommodate enough people that bring in and keep up various social and business activities in the area.

(3) Popularity:

The site must be well known to the potential visitors. The well known places often become the final destinations as we know from New York or Paris where many tourists flow in.

09.068 Through the examination of the potentials of the touristic sites in the Study Area, we find it unfortunate that no one site meets the above three criteria. Jerash and Maqarin areas have the closest potential.

09.069 Jerash, however, has the very strong competitors such as Petra, Baalbeck in Lebanon and Palmyra in Syria. Therefore it is advisable to combine Jerash with neighbouring sites and promote them together, rather than trying to establish a final destination by itself.

09.070 Maqarin fulfills the first two of the criteria, but not the third; the popularity, naturally because the strongest asset of the site will come to exist after the construction of the dam. However, unlike the other criteria, this qualification can be obtained through a strong promotion and publicizing efforts. Maqarin is to be developed as a final destination in the Study Area with intensive promotion activities.

b. Enrichment of Attractions

09.071 Restoration of antiquities of any kind would give some favourable influence to tourism. However, magnitude of effects will be quite different, completely depending upon attractiveness of the object. It should be, therefore, deliberately done to select the object to be restored. Once selection is correctly made, and restoration work is carried out well, its impact to tourism would be significant. There are two sites in the Study Area suitable for this purpose; Um Qeis and Um El Jimal. The ruins of both make us imagine the prominent ancient cities which will stand out after the full restoration work is done.

09.072 Um Qeis is located between Irbid and Hemma, and closer to Irbid than Um El Jimal. Views from Um Qeis across the Jordan Valley and over Lake Tiberias are much more memorable than those from Um El Jimal. Therefore, Um Qeis is to be selected as the first site for restoration of the whole ancient city.

09.073 On the other hand, Um el Jimal has an advantage of being isolated, which might give an opportunity to introduce specific touristic activities because there will be little conflict between tradition and newly introduced elements. The restoration of Um El Jimal shall be considered when the situation allows and another stop is required after restoration of Um Qeis. This is only from the touristic point of view, and there will be another value judgement from the academic point of view.

09.074 In either case, restoration work will take a long time and needs a substantial fund. It is advisable to seek the possibility of getting the external assistance, for these remains are assets not only to Jordanians but also to human beings as a whole.

c. Introducing "Active Element"

09.075 The character of the touristic activities in the Study Area can be presently generalized as "passive", i.e. tourists just look around antiquities. It is needed to develop the site where tourists will be involved in some actions since the trend of the world tourism suggests the fact that there will be a high increase of the number of world tourists during the 1980's mainly because of the reduced fare, owing to the appreciation of new aircrafts called the third generation jet aircraft. This great increase of the number of tourists simply means that there will be a wide variety of the taste toward the touristic objects. Particularly the increase of young tourists will require more "active" objects that they can participate in themselves.

09.076 There are few sites which can accommodate such activities in the Study Area. The proposed Maqarin Dam and the reservoir will be of great importance in this light. The 7.7 km<sup>2</sup> of water surface will give an opportunity to provide all kinds of water oriented recreations. The seasonal fluctuation of water surface of some 60m may create some difficulty for landing and boating. It is believed, however, that the problem will be solved technically so that the special device becomes a point of interest by itself.

d. Repeating Visitors Policy

09.077 A special effort should be put forth to make tourists come back to the same place again, because it is one of the key factors to hold the frequent visitors for making the touristic site highly successful.

09.078 There are two prospects in this light in the Study Area. One of the two possibilities is the establishment of a festival. For instance, an annual festival of performing arts at the South Theatre in Jerash will lure many people to Jerash regularly, and to let many people know about Jerash.

09.079 Another possibility is to create resort towns providing condominiums and second homes. The mild climate and leisurely

environment will attract people from severer environments like the Gulf States and Saudi Arabia. Actually second homes owned by people from those areas were found in the course of survey work.

#### 9.4.4 Projects Priorities

09.080 Project areas with high potentiality and long term strategies suitable for the Study Area were examined in the two preceding sections. This is an effort to picture prospective projects through examination of interactions of strategies and potential areas. Table 9.10 shows the result.

From the prospective projects discussed above, projects for the next Five Year Plan and projects for after the next Five Year Plan are selected. The criteria employed for allocating the priority in order to select projects for the period 1981 and 1985 and for the year 2000 are as follows:

(1) the existence of prerequisites:

Certain projects can be carried out only when some condition is fulfilled. For example, the Maqarin Resort Development Project will have no meaning before the dam is constructed and the reservoir is created. The projects which have these constraints are given lower priority in selecting projects for the period 1981 and 1985.

(2) the promptness of impact:

The projects which are believed to have prompt impact on increasing revenue from tourism industry are given higher priority.

(3) the involvement of private sector:

Certain projects require involvement of the private sector. The higher priority is given to those projects.



Table 9.10 Prospective Projects

Area	Strategy		
	Establishment of Final Destination	Enrichment of Attractions	Introducing Active Elements
Jerash Tourism Development	Excavation and restoration of (especially restoration of Triumphal Arch and Water Fall).	Excavation and restoration of route attending to the demonstration of traditional skills at the proposed Folklore Village.	Establishment of route performing Arts. Festival of Visitors
Um Qeis Excavation and Restoration	Excavation and restoration of the entire area.		Festival
Um El Jimal Restoration	Restoration of the entire area.	(Establishment of amusement centre)	
Ajlun Tourism Development	Restoration of the castle		Provision of condominiums and second homes.
Dibbin National Park	Installation of a ropeway, establishment of a botanical garden, installation of recycling streams.	Installation of a rope-way establishment of trails for hiking and horse back riding establishment of a Botanic garden.	Providing more accommodations.
Maqarin Resort Development	Establishment of a resort town.	Provision of boating facilities installation of swimming pool.	Provision of condominiums and second homes.
Irbid Development	Provision of parks, establishment of Suq, and street planting.	Establishment of Suq	Festival of Industrial Art.
Ramtha Tourism Development	Street planting.	Establishment of Information Center.	

(4) the time required for planning and implementation:

Generally speaking, the projects which require less time for planning and implementation are given the higher priority. However, in such cases where the prospective projects take a considerably long time, they are put in the period of 1981 and 1985, for implementation e.g., Um Qeis excavation and restoration.

The projects selected for the two periods are presented in Table 9.11.

Table 9.11 Project List

Name	Location
<u>I. Project for the Period 1981 and 1985</u>	
1. Jerash Tourism Development	Jerash
2. Dibbin National Park Development	Dibbin
3. Ajlun Tourism Development	At and adjacent to the castle
4. Irbid Urban Improvement	Irbid
5. Irbid Park System	In and adjacent to Irbid
6. Ramtha Tourism Development	Ramtha
7. Forest Parks	(scattered)
8. Um Qeis Excavation and Restoration	Um Qeis ruin site
<u>II. Projects for the year 2000</u>	
1. Maqarin Resort Development	Maqarin
2. Um El Jimal Restoration	Um El Jimal

9.4.5 Recommended Projects for the Period 1981 through 1985

a. Jerash Tourism Development

09.081 Jerash Tourism Development Project is meant to encourage tourists to stay on the site for a longer period of time, ultimately to stay over night. Project consists of six elements:

(1) Excavation and restoration:

Excavation and restoration is required in general. Specifically full restoration of the Triumphal Arch is desirable. The restoration and refunctioning of the Waterfall will add a marvellous effect to the site.

(2) Folklore village:

This is a group of buildings, consisting of 20 rebuilt traditional Jordanian houses or imitation of those. The exhibitions of folklore objects and demonstration of manufacturing traditional handicraft and sales of these

objects will take place. This could be combined with the Craft Center proposed in the vocational training section of Volume 3.

(3) Routing and signs :

To establish a standard route for site seeing of the area and to erect signs showing the direction of the route.

(4) Fencing and landscaping:

It is recommended to install a blockade around the western part of the classical city. In doing so, full utilization of the remaining city wall should be taken into account. General planting and installation of street furniture of good design quality is required.

(5) Rerouting Route 15:

Route 15 is cutting through the middle of the classical city, and carrying a big volume of through traffic, causing considerable disturbances in the ruin site. The rerouting of Route 15 is deeply related to tourism. However it is to be discussed in Chapter X on Transportation of Volume 4.

(6) Hotel:

The sound and light project is scheduled to be completed in two years. Then, tours in the evening will be planned. It is expected that the demand for accommodation of international standard will grow. Private sector should be encouraged to build a hotel at Jerash. The area to the south-west of the city; out of the wall toward the hill will be one of the best location for the hotel.

Size: 80 ha

Cost: JD 1.8 million (including JD 1.0 million by private sector).

b. Dibbin National Park Development

09.082 This is an expansion scheme of the existing facilities in the Dibbin National Park in order to utilize this natural endowment. Major elements of the project are as follows:

(1) Installation of a ropeway to Mt. Aqra.

The reasoning of the installation of a ropeway at Mt. Aqra is two-fold. One is to provide an observatory where tourists can enjoy 360 degree panoramic view and putting a new element for a new experience. The other is that there will be a possibility to bring tourists

of group tours to Jerash to the observatory before going to Jerash. The view of Jerash from the top of Mt Aqra is memorable, and tourists would be informed of the set-up and brief history of the classical city while they watch the entire city.

Length: 1,000 M

Rise: 250 M

(2) Construction of a stream and wading pools:

A recycling stream where tourists can get in touch with water and enjoy the sound of running water. Shorelines will make concave shapes at certain places to form series of wading pools for children to go in.

(3) Chalets:

50 chalets will be constructed.

(4) Botanical garden:

A botanical garden, presenting the collection of flora of Jordan will be visited by most school children for education purposes. Tourists and residents of Amman, Zarqa region will also enjoy it.

(5) Picnic areas and trails:

Picnic areas, hiking trails and trails for horse back riding will be laid out.

Size: 100 ha

Cost: JD 1.2 million.

c. Ajlun Tourism Development

09.083 There are two components in this project. One of the components is directly related to the castle, and the other related to the resort development in an adjacent area to the castle. Elements (1) through (3) are for the first component and elements (4) and over are for the second.

- (1) Restoration of the castle, especially the moat and a drawbridge;
- (2) upgrading of about 3 km of the access road;
- (3) expansion of the parking lot;
- (4) construction of 2 km of access road;
- (5) installation of the water supply system;
- (6) Subdivision of 100 lots;

- (7) construction of 20 villas; and
- (8) construction of condominiums/hotels.

Size: 100 ha

Cost: JD 1.2 million (including JD 0.6 million by private sector).

d. Irbid Improvement

09.084 This project is meant to enhance the urban attractions of the Municipality of Irbid. The Municipality, being the administrative and commercial center of the Governorate, is expected to collect a sizable number of visitors. Major elements are:

(1) Planting street trees for about 70 km of roads.

(2) Establishment of a Suq.

This is an attempt to establish a neat market for tourists as well as for residents, utilizing one of the open lots after industrial establishments move out to the proposed industrial estate.

(3) Hotel.

A city hotel with 80 to 100 rooms.

Size: 10 ha

Cost: JD 0.7 million (including 0.5 million by private sector).

e. Irbid Park System

09.085 This is closely related to the preceding project and also to the Wadi Warran experimental dam project proposed by Water Resource Section of this report. The idea is to provide city parks in the peripheries of the existing built-up area and to connect these parks and the grove at the experimental dam with the green ribbon, which might be called as Promenade. Major elements are:

(1) city parks at 5 locations, and

(2) promenade.

Promenade will accommodate walk way, bike-path, planting strips and occasional sitting area.

Size: 150 ha

Cost: JD 3.0 million.

f. Ramtha Tourism

09.086 This project is aimed to make Ramtha a more impressive point of entry and to let all the visitors know touristic objects and facilities in Jordan to promote more intensive use. Major elements are:

- (1) planting street trees on total 10 km of roads; and
- (2) information centre and rest house.

Size: 2 ha

Cost: JD 0.18 million.

g. Forest Parks

09.087 This project actually is a group of 20 parks mostly located on tops of the hills. Some place looking down to the reservoir of the King Talal Dam should be included. The average site will be 6 ha. There will be a parking lot, an observatory and picnic areas in each park. A portion will be allocated for temporary shops of fruit and vegetable by local people.

Size: 120 ha

Cost: JD 1.2 million.

h. Um Qeis Excavation and Restoration

09.088 This is a complete excavation and restoration work of the old city of Gadara. The cost estimation was done in close collaboration with the Department of Antiquities.

Size: 100 ha

Cost: JD 1.6 million.

9.4.6 Program and Budgetary Allocation for the Period 1981 through 1985

09.089 Eight projects listed above are expected to be executed during the period of 1981 through 1985. Adding to the criteria mentioned in section 9.4.4, following conditions are taken into account.

- (1) Installation of chalets at Dibbin are scheduled in later years, because it takes a certain period for the demand to grow after the completion of the construction of 32 chalets under the current Five Year Plan.

- (2) Those projects which require large sites and require much landscape planting work are stretched for long periods and put in later years in order to give some allowance for collecting and raising plant materials.
- (3) Extension of the period for excavation and restoration would be taken into consideration if the scarcity of manpower, archaeologist, architect and skilled labour, hinders the progress of the work, rather than carrying out a mediocre work on schedule.

Table 9.12 shows the budgetary program for the public sector during 1981 - 1985.

Table 9.12 Budgetary Program During 1981 to 1985, Study Area  
(Unit: JD million)

Project	1981	1982	1983	1984	1985	Total
Jerash Tourism Development	0.3	0.5				0.8
Dibbin National Park Development				0.5	0.7	1.2
Ajlun Tourism Development	0.2	0.4				0.6
Irbid Improvement	0.2					0.2
Irbid Park System	0.5	0.6	0.7	0.6	0.6	3.0
Ramtha Tourism	0.2					0.2
Forest Parks			0.4	0.4	0.4	1.2
Um Qeis Excavation and Restoration			0.5	0.5	0.6	1.6
Total	1.4	1.5	1.6	2.0	2.3	8.8

Source: Study Team

#### 9.4.7 Recommended Projects for Year 2000

09.090 The projects listed in this section are judged as major projects for the period between 1986 and 2000. However, it should be considered flexible to shift some of them to earlier or later years if the situation requires and allows.

##### a. Maqarin Resort Development

09.091 This will be a large resort development related to the

proposed Maqarin Dam and its reservoir, aimed mainly at the Arab nationalities and those who live in the region.

09.092 The greatest attraction will be the water itself. All sort of water oriented recreation will be enjoyed in summer time. It will also become a winter resort with its mild climate. In spring and autumn the scenery will be rewarding to tourists. Thus, Maqarin Resort has a great possibility of collecting people all year around.

09.093 There will be a wide variety of accommodation facilities, from camping site to hotels of international standard. The layout of these functional facilities needs to be done with delicate care because people who bring their families together to spend whole summer there may not want to be mingled with transients. Major elements of the project will be as follows:

- (1) marina,
- (2) hotel of international standard,
- (3) hotel of semi-international standard,
- (4) condominiums,
- (5) rental villas,
- (6) land subdivision for second homes,
- (7) camp site,
- (8) swimming pools,
- (9) tennis courts,
- (10) multi-purpose field,
- (11) commercial center, and
- (12) clinic.

b. Um El Jimal Restoration

09.094 This is a project to restore the whole old town of Um El Jimal and to make a point of interest to tourists. There are two options to this scheme.

(1) Option 1:

There are four similar, but smaller in scale, remains in the vicinity of Um El Jimal. Sama as Sirhan, Um Surab, Sabha and Subhia are names of these towns. A very attractive tour will be designed from Amman or from Irbid when five towns are restored. The tour



will visit one town after another spending a whole day.

(2) Option 2:

It might be suitable to establish an amusement center at Um El Jimal if the cultural, social and political circumstances are favorable to it. On this scheme there will be a hotel-casino complex. A portion of profit from casinos will be used for further restoration of ruins of the Country.

9.4.8 Recommendations Related to Implementation

a. Recommended Study

09.095 Jordan will receive a large number of tourists unless any destructive occurrences rise in the Arab region. Demand for the touristic facilities will be pushed up greatly, quantitatively as well as qualitatively.

09.096 The increase of population and the increase of free time and mobility, brought by the economic development, will cause a big thrust of the demand for recreational facilities.

09.097 If it were not for a framework for tourism development for the Country, there would be exploitative investments and unnecessary competition, leading to the destruction of the resources, and eventually the destruction of the tourism market. And those procedures are mostly irreversible.

09.098 Therefore, it is strongly recommended for the Ministry of Tourism and Antiquities to establish a National Master Plan of tourism and recreation. The master plan should contain:

- (1) inventory of resources
- (2) inventory of facilities
- (3) future demand of international and domestic tourism and recreation
- (4) policy of development
- (5) priority of development
- (6) implementation program.

The private investment would be encouraged more easily with the master plan.

b. Institutional Arrangement

09.099 Some conflicts between the maintenance of antiquities and the modern activities were observed in the course of the survey. Institutional arrangement seems necessary for establishing conservation areas around historic objects. Restriction over land use or development activities should be done in accordance with the importance of the respective antiquities. There will be three levels of restriction:

- (1) Special Conservation Area: The Government will obtain the ownership of land.
- (2) Conservation Area: The Government will designate areas where the alteration of land use and certain activities require permission from government.
- (3) Controlled Area; The Government will designate areas where some activities require permission from government.







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