

THE HASHEMITE KINGDOM OF JORDAN

INTEGRATED REGIONAL DEVELOPMENT STUDY

OF

THE NORTHERN JORDAN

PHASE II

INCEPTION REPORT

JUNE 3, 1979

JAPAN INTERNATIONAL COOPERATION AGENCY



LETTER OF SUBMITTAL

H.E. Dr. Hanna Odeh
President
National Planning Council
Amman, Jordan

June 3, 1979

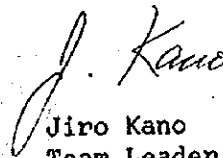
Excellency:

We are pleased to submit to you the inception report for the studies to be carried out in Phase II stage for preparation of pre-feasibility studies and planning for the three selected projects: Irbid Industrial Estate, Irbid Ring Roads, and Irbid Tourism Project/ Jerash-Dibbin-Ajlun projects in accordance with the agreement between the governments of the Hashemite Kingdom of Jordan and Japan.

The report describes the objectives and outputs of the studies, overall methods of works, work schedules, and tentative organization and staffing of the study team which is to be dispatched toward the end of July 1979.

We would highly appreciate your kind perusal and comments to us if any.

Respectfully yours,



Jiro Kano
Team Leader
Contact Mission and Study of
Integrated Regional Development
of Northern Jordan

JICA LIBRARY



1028247[2]

國際協力事業團	
受入 年月	54. 7. 4
発行 年月	84. 8. 27
登録No.	08198
	PLC

LIST OF ABBREVIATIONS

<u>Abbreviations</u>	<u>Full Spelling</u>
IURPG	Irbid Urban Regional Planning Group
MMRA	Ministry of Municipality and Rural Affairs
NPC	National Planning Council
GOJ	Government of Jordan
IIE	Irbid Industrial Estate
IE	Industrial Estate
GDP	Gross Domestic Product
CBD	Central Business District
JDA	Jerash-Dibbin-Ajlun

TABLE OF CONTENTS

Letter of Submittal

List of Abbreviations

Chapter I Background and Format of the Report

- 1.1 Background
- 1.2 Projects Selected for the Phase II Study
- 1.3 Relationship of the Selected Projects with Phase I Study
 - 1.3.1 Decentralized pattern and Combined Pattern
 - 1.3.2 Relation of the Three Projects to Phase I Study
- 1.4 Format of this Report

Chapter II Objectives and Outputs of the Study

- 2.1 Objectives of the Study of the Selected Projects
- 2.2 Outputs of the Study

Chapter III Overall Method of the Study

- 3.1 Pre-feasibility Study of Two High Priority Projects
- 3.2 Development Planning Study on Tourism
- 3.3 Outline of Investment programs

Chapter IV Study Methods for Each Project

- 4.1 Irbid Industrial Estate
 - 4.1.1 Background and Objectives
 - 4.1.2 Outline of the Project and Study Framework
 - 4.1.3 Review of Existing Reports and Studies
 - 4.1.4 Alternatives to be considered
 - 4.1.5 Work Flow and Study Method
 - 4.1.6 Possible Forms of Recommendation
- 4.2 Irbid Ring Road Projects
 - 4.2.1 Background and Objectives of the Project
 - 4.2.2 Outline of the Project
 - 4.2.3 Review of Existing Studies
 - 4.2.4 Work Flow and Method of Analysis
 - 4.2.5 Alternatives to be considered
 - 4.2.6 Conclusion
 - 4.2.7 Possible Forms of Recommendation
- 4.3 Irbid Tourism Project Jerash-Dibbin-Ajlun Tourism Project
 - 4.3.1 Objectives
 - 4.3.2 The Area to be Studied
 - 4.3.3 Review of Existing Reports and Studies
 - 4.3.4 Evaluation of the Present Situation

- 4.3.5 Tourists Projection
- 4.3.6 The Proposed Tourism Development Plan
- 4.3.7 Implementation Schedule and Investment Program
- 4.3.8 Conclusion

Chapter V The Work Schedule

- 5.1 Overall Work Schedule for the Entire Study
- 5.2 Work Schedule for the Phase II Study

Chapter VI Organization and Staffing

Appendix A Minutes of Discussion

- A.1 Introduction
- A.2 Minutes of Discussion

CHAPTER I

BACKGROUND AND FORMAT OF THE REPORT

1.1 Background

As the Mission's most privileged, His Highness Crown Prince Hassan led the conference on presenting the Phase I Draft Final Report for the Study of Integrated Regional Development of Northern Jordan on October 28, 1978.

After the above presentation, the Government of Hashemite Kingdom of Jordan has made an effective and voluminous effort to promote the study towards further steps, including establishment of the Steering Committee, headed by H.E. The Prime Minister, other two organizational measures, and office and related accommodation for the Irbid Urban Regional Planning Group; preparation of arabic edition of the Phase I report and other documents; map-making works by IURPG; preliminary discussion by Dr. Tell in Tokyo on the Phase II study and comments to the Phase I study and comments to the Phase I study; and preparation of formal comment and proposal in the form of a letter dated May 15, 1979 signed by H.E. Minister for MRA, Mr. Ibrahim Ayoub.

After the above preparation by the GOJ and the related efforts by the Japanese side, the Japanese Phase II Contact Mission has been sent to Amman between May 15 and June 4, 1979. Several discussions between both sides resulted in a consent described in the Minutes of Discussions. (Appendix).

Thus, the Phase II study is going to be held in the latter half of this year 1979.

In the Minutes of Discussion, besides the main work of decision on three projects for the Phase II study, several complementary consents were added to the original Scope of Work made in May 1978.

1.2 Projects Selected for the Phase II Study

As a result of discussion on the Jordanian proposal of four

projects, three projects were agreed upon for Phase II study by both parties. They are:

- (1) Irbid Industrial Zone,
- (2) Irbid Ring Roads, and
- (3) Irbid Tourism Project: Jerash-Dibbin-Ajlun Tourism Project

The third project which is listed here, however, is not a type of pre-feasibility study but a type of planning study. Even though the third project does not fit the 1978 Scope of Work, it will be studied in the Phase II since it is strongly recommended by the Government of Jordan.

1.3 Relationship of the Selected Projects with Phase I Study

1.3.1 Decentralized Pattern and Combined Pattern

Adoption of the Decentralized Pattern in planning was decided by the Ministerial Development Committee, as included in the formal comment signed by Minister for Municipal and Rural Affairs. This decision can be understood in the way that the recommendation in Chapter III, Phase I Report, was adopted, since the recommended strategy of the Combined Pattern is a combination of Decentralized Pattern by 1985 and the Duo-Centric Pattern by the year 2000.

1.3.2 Relation of The Three Projects to Phase I Study

The Irbid Industrial Estate and the Irbid Ring Road projects will obviously contribute to create a development core for the Irbid region at the Municipality of Irbid. On the other hand, the Jerash-dibbin-Ajlun will contribute to enhance the decentralization of economic activities in the region. Both of them in total will support the Combined Pattern of development strategy.

1.4 Format of this Report

In this inception report for the Phase II Study, overall and common problems such as purpose, objectives, study method and schedule will be presented. Later, individual projects will be referred to.

CHAPTER II

OBJECTIVES AND OUTPUTS OF THE STUDY

2.1 Objectives of the Study of the Selected Projects

As mentioned in Chapter I, the Government of Jordan has selected the three priority projects to be studied in Phase II stage. They are:

- (1) Irbid Ring Roads
- (2) Irbid Industrial Zone Project, and
- (3) Irbid Tourism Project/Jerash-Dibbin-Ajlun Project.

The objectives of the study in Phase II are to carry out pre-feasibility studies for Irbid Ring Road project and Irbid Industrial Estate project and to prepare a tourism development plan for Irbid tourism project/Jerash-Dibbin-Ajlun project.

The purpose of the pre-feasibility study to be carried out is to provide the Government and external lending agencies with informations and guides necessary to determine that the projects are sound investments without paying unnecessary time and expenses for it would be a grave mistake to spend large amount of money on a feasibility study if there were serious problems in carrying out these tentative projects that could be detected by a brief, but efficient study. The study, therefore, will cover considerations on technical, institutional, financial and economic aspects within limited perimeters.

As for Irbid tourism project/Jerash-Dibbin-Ajlun project, the study will be carried out to prepare a general tourism development plan for these districts. The study is aimed at preparation of appropriately phased long term tourism plan and more in detailed first phase plan which leads to a feasibility study in the following stage.

2.2 Outputs of the Study

The outputs of the pre-feasibility studies to be carried out for Irbid Ring Road project and Irbid Industrial Estate project will be expected as follows:

- (1) conceptual design of appropriately selected projects, based on alternative comparison
- (2) cost estimates of the above designed projects,
- (3) financial and economic evaluation, and
- (4) recommendation of implementation arrangement.

The output of preparation of a tourism development plan for Irbid Tourism project/Jerash-Dibbin-Ajlun project will be as follows:

- (1) An appropriately phased long term tourism plan up to the year 2000,
- (2) The first phase tourism plan studied more in detail comprising:
 - (a) conceptual design of projects to be implemented,
 - (b) cost estimates of the designed project,
 - (c) implementation schedule, and
 - (d) investment program.

CHAPTER III

OVERALL METHOD OF THE STUDY

As mentioned above, two types of studies will be undertaken: pre-feasibility study and planning study. The two types have different methods to be used, and they are explained separately in the following.

3.1 Pre-feasibility Study of Two High Priority Projects

For the Irbid Industrial Estate and Irbid Ring Road projects, pre-feasibility study will be applied. These are the two of major leverages to build up one of the regional cores, that is the Irbid Municipality, for the Irbid Region.

As a consequence of the objectives of pre-feasibility discussed above, a pre-feasibility study is a kind of "small and brief feasibility study" with the basic purpose of quickly evaluating areas essential to the project decision. Thus, many areas such as market, technical, institutional, financial and economic aspects will be quickly considered. Pre-feasibility study of a project involves following steps so that alternatives for the project may be systematically explored toward the expected feasibility study.

- (1) At first, it will be confirmed that the Government and directly involved agencies of Jordan are willing and able to undertake the project. Also, it will be examined whether or not necessary institutional arrangements are already or potentially available.
- (2) Alternatives of the project design at preliminary level will be generated after the technical consideration and examination have been made.
- (3) Calculation of approximate costs and benefits of the alternatives will be made in terms of financial and economic points of view. However, the highway project cannot accept the financial benefit calculation.
- (4) Through the above process many aspects of the project can be examined, and based on their results it will be decided whether the project is a sound investment or not.

3.2 Development Planning Study on Tourism

In making a tourism development plan for Jerash-Dibbin-Ajlun area, our focus will be on bringing these three districts into one organic complex in terms of tourism.

The method for development planning study on tourism consists of four major steps as follows:

- (1) Examination of geographic and socio-economic aspects of the Jerash-Dibbin-Ajlun areas,
- (2) Examination of the existing main utilities and potential resources,
- (3) Plan making and project finding; and
- (4) Proposal of a general tourism development plan for the area.

3.3 Outline of Investment Programs

An outline of investment program up to 1985 will be proposed for each of the projects for which pre-feasibility studies have been undertaken. The program will include time schedule, amount of investment required, and specifications of significant points which should be considered prior to implementation of the project.

At the same time, crude investment schedule up to 1985 for the tourism development projects will be prepared.

CHAPTER IV

STUDY METHODS FOR EACH PROJECT

4.1 Irbid Industrial Estate Project

4.1.1 Background and Objectives

(a) Background

The Phase I Report recommended four industrial estate projects, among which Irbid Industrial Estate (IIE) was given the first priority. The Government of Jordan, also, recognized the importance of IIE project, and on March 4, 1979 assigned IIE as the first project for Phase II pre-feasibility study. Japanese Team agreed to take up IIE for pre-feasibility study and visited several potential sites for IIE around the Irbid Municipality on May 22, 1979.

(b) Present Situation

At present, only one industrial estate exists in the Irbid Municipality. It is located about 3 km to the north-east of the city center and accommodates auto-repair industries and plastic goods producers. The sketch map of this industrial estate is shown in Figure 4.1. Its size is reported to be about 12 ha in total, of which about two thirds are owned by the Irbid Municipality leased to mainly auto-repair industries and one third was sold to individual industries including plastic goods producers. The proposed IIE is the expansion project of this existing industrial estate by 20 ha.

(c) Interviews to Jordanian Officials

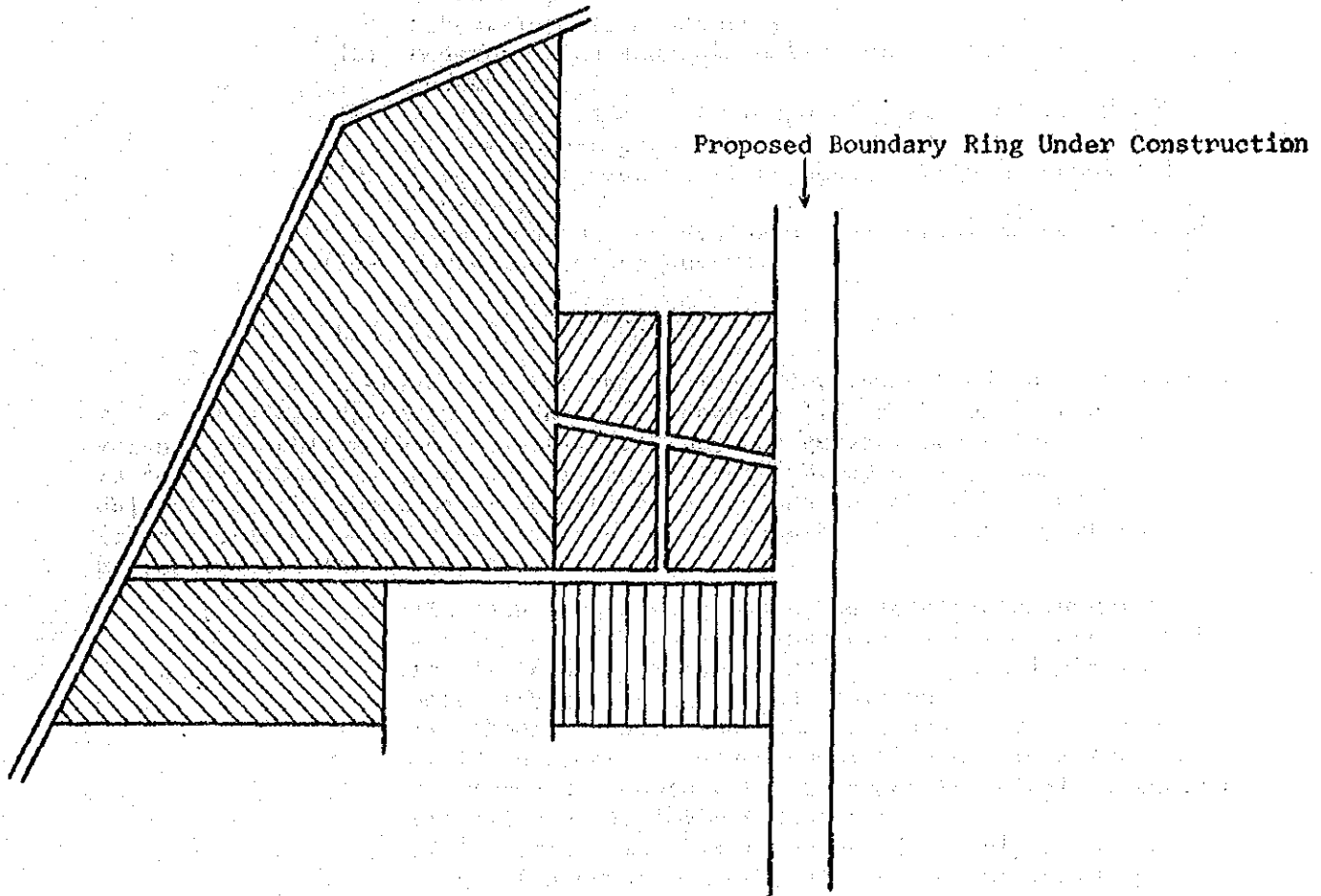
Several interviews and questions were made to Jordanian Officials to clarify the image of IIE.

- (1) Director of IURPG and Head of Regional Planning Department, MMRA:
Objective of IIE to promote industrial development in the Irbid Municipality. Industries accommodated will be either relocated industries from the city center or newly incoming industries. The Irbid Municipality lacks places for buses and trucks, thus it might be useful to locate parking spaces for buses and trucks near IIE.
- (2) Several Officials at the Municipal Government of Irbid:
It is alright to undertake a study on Irbid Industrial Estate which is assumed to be an expansion of the existing industrial estate. The size of 20 ha to satisfy the additional demand by 1985 seems to be enough. Industries likely to be invited to IIE are expected to be existing workshops in the downtown of Irbid.

(d) General Objectives of an Industrial Project

Industries to be expected at IIE will be small and medium scale industries. It is worthwhile to refer here to the general objectives of developing small and medium-scale industries in a lagging region. They are:

Figure 4.1 Sketch of Existing Industrial Estate in Irbid Municipality, 1979



Legend



Industrial Estate, Owned by Municipality, Leased to Industries under Construction - About 8ha



Industrial Estate, Sold to Private Industries- About 4ha



Zone for Industrial Use

- Source: 1. Discussion with City Officials on May 30, 1979
2. Site investigation on May 22, 1979.

- (1) Reducing regional income disparity and increasing regional GDP,
- (2) Employment creation,
- (3) Import substitution,
- (4) Export promotion,
- (5) Export substitution,
- (6) Utilization and high level processing of regional resources,
- (7) Labour-intensive industry,
- (8) Modernization and rationalization of existing industries,
- (9) Production to satisfy regional demand and the demand of low income people,
- (10) Level up of industrial structure through industrial linkage,
- (11) Promotion and increasing of industrial investment, and
- (12) Nurturing entrepreneurs.

(e) Objectives of the Project

Overall objectives for the regional development of the Irbid region are already discussed in the Phase I Report. IIE is the one strong measure to achieve those objectives. Thus the general objective of IIE is to contribute to those overall objectives. Based on (1) those objectives, (2) the general objectives described in section d, and (3) analysis made by Phase I Report, it is possible to specify particular objectives for IIE. They are:

- (1) IIE should work as a moment to accelerate industrial development in the Irbid Municipality and consequently the Irbid Governorate in order to reduce its income disparity against the other governorate;
- (2) IIE should support and enhance urban development of Irbid in order to reduce population outmigration from the Irbid Governorate to the Amman Municipality through provision of employment opportunity;
- (3) At the same time, IIE is expected to help reducing congestion problem at the city center of Irbid by relocating industries existing in the city center to it;
- (4) IIE should be designed so that merits of industrial integration and conglomeration could be fully exploited;
- (5) Necessary facilities including land plot, roads, water and sewerage, electricity, telephone, and access to housing should be fully secured for incoming industries; and
- (6) IIE should fully exploit the resource potentialities of the Irbid region such as relatively abundant and inexpensive manpower, relatively rich agricultural production and good access to the international transportation network.

4.1.2 Outline of the Project and Study Frame Work

(a) Outline of the Project

Outline of the Irbid Industrial Estate (IIE) was proposed in the Phase I Draft Final Report in the following way:

Projects recommended to be implemented in the period (note: the period through 1985) include the expansion of the existing industrial estate in the Irbid Municipality by 20 ha with improved internal road, electricity and other services. This will cost about JD. 0.2 million for construction and JD. 0.6 million for purchasing the land. This project may grow up to the 100 ha after 1985, and an additional industrial estate might be necessary by the year 2000. The Municipality is not expected to afford the costs of construction. The central Government development budget will have to be allocated to cover a large portion of the cost of the development.

The Phase II study of this project, at first, starts from this outline. However, since this was proposed based on general study in the Phase I of the industrial sector in the region, it is necessary to undertake a deeper study in order to specify the size and location of IIE more precisely, and to know the preliminary feasibility of IIE in terms of finance and economy. By this study, we will evaluate and redesign the project and finally recommend whether the project is viable or not.

(b) Framework of the Study

In order to recommend (1) whether the project is viable or not, (2) if viable, which alternative type is the best, and (3) if not, what conditions are required to make the project viable, the following studies will be undertaken on the IIE project at a preliminary level:

- (1) Industry selection,
- (2) Size selection,
- (3) Location selection,
- (4) Preliminary site design,
- (5) Financial and economic appraisal, and
- (6) Investment program.

4.1.3 Review of Existing Reports and Studies

No printed material on the IIE is detected at this moment. Only available material are few maps of the existing industrial estate and the city of Irbid.

4.1.4 Alternatives to be Considered

Alternatives to be considered for the pre-feasibility study originate generally from two aspects : size and location :

(a) Size

Although the size for IIE was proposed to be 20 ha, this size is of tentative nature to show the magnitude of the required size. It is required to reexamine and reestimate the size more precisely. In addition, besides the IIE project, two more industrial estates were proposed by the Phase I Report in the vicinity of the Irbid Municipality. They are the Ramtha Industrial Estate and the Yarmouk Industrial Estate, which follow :

- (1) The Municipality of Ramtha has a plan to construct an industrial estate, which would be worth undertaking even in a small scale at first. The Phase I Report proposed 5 ha IE at a cost of JD. 0.2 million.
- (2) The Yarmouk Industrial Estate was proposed to have a scale of 150 ha at a cost of JD 3.8 million.

These two industrial estates and the Border Free Industrial Zone, will be competitive to IIE, and thus it is necessary to reconsider the size of IIE.

(b) Location

The location of IIE was proposed to be at a site next to the existing industrial estate. However, two other sites in the Irbid Municipality are now under consideration for industrial zone, and they might be alternative locations for IIE. Besides these, potential locations for industrial estate will be searched for by industrial experts. Some of these alternative locations are shown in Figure 4.2.

4.1.5 Work Flow and Study Method

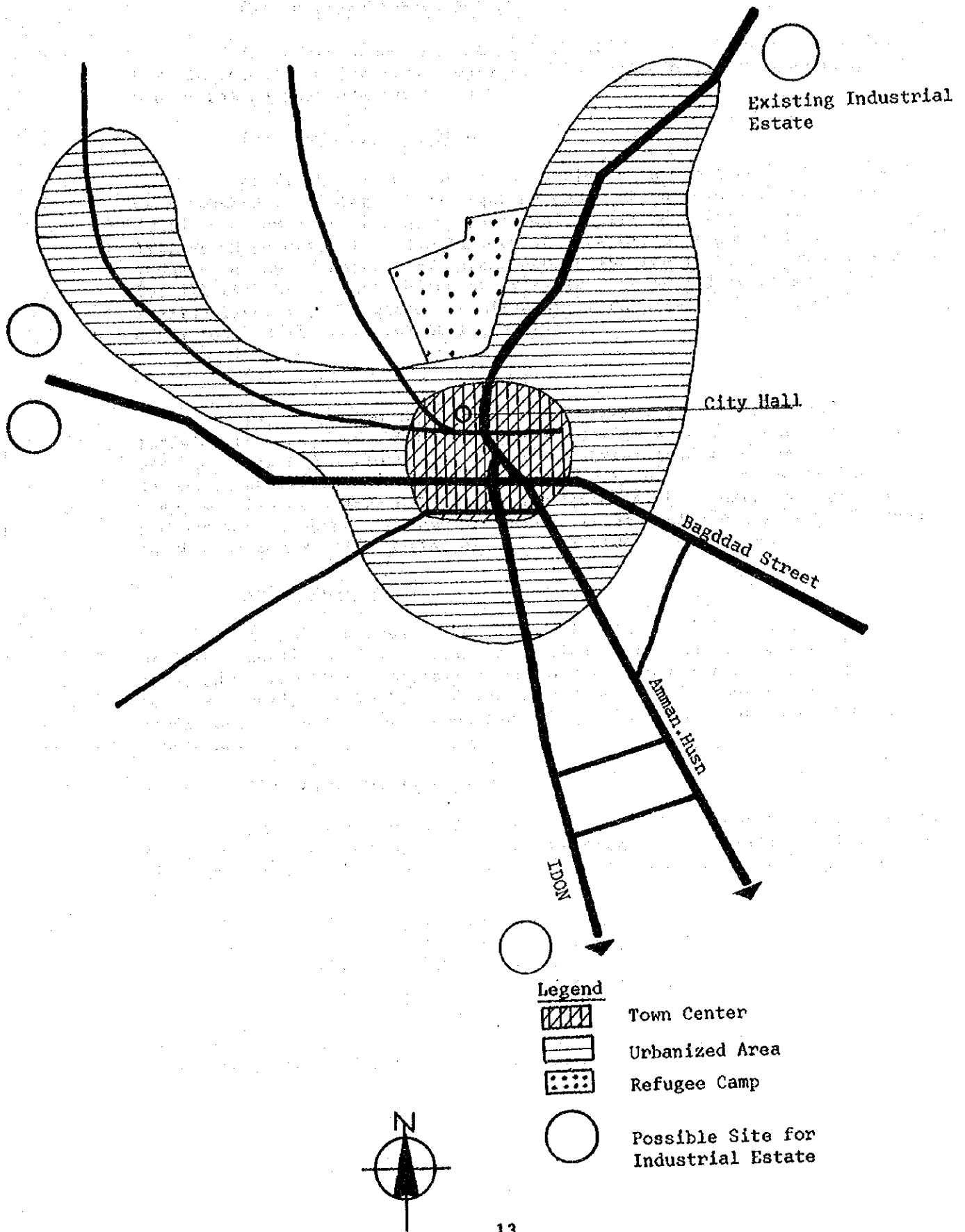
The following work flow will be employed to achieve the above mentioned study. The heart of the work is the industry selection for the purpose of identifying potential industries to be invited to IIE. Also, the study methods to be used in any of the steps are described in the followings :

(a) Diagnosis

In this step, potentiality of the Irbid Municipality as a site for an additional industrial estate will be examined. The examination will be undertaken in terms of:

- (1) Natural condition such as topography, weather and natural resources;
- (2) Human condition such as population and labor force;
- (3) Economic condition such as sectoral value added;
- (4) Urban condition such as urbanization trend and land use pattern;
- (5) Infrastructure condition with respect to current situation and future development potentialities; and
- (6) Administrative and political conditions such as political agreement for IIE and opinions of the private sector.

Figure 4.2 Conceptual Map of the City of Irbid, at present



(b) Project Scheme Design

The basic scheme of the project will be examined and redefined here in terms of objectives, implementation and management agency, sales and rental policy, and target year.

(c) Industry Selection

At first, all potential industries to be invited to IIE will be exhausted in a list. They might be those which relocated from the Irbid city center to the site, those which will move from other cities into IIE, or those which is a new factory as a result of expansion of an existing industry or new undertaking. After completing the list, suitable industries for IIE will be selected based on criteria such as (1) input material availability, (2) locational requirement of each industry, (3) market condition and (4) environmental condition.

(d) Size

There are two approaches to size selection: overall and individual approaches. Overall approach estimates the required size by breaking down the national demand of industrial land into the land demand in the Irbid Municipality. Individual approach estimates the required size by adding up the land demand of each industry selected in the previous section. Either of these will be employed for the IIE study. In this step, the life-period of IIE will also be discussed.

(e) Location

As being discussed in the section on possible alternatives, at first, possible sites for an industrial estate development will be surveyed. From these possible sites, one or two sites will be selected for IIE. Criteria to be used for selection will include traffic condition, infrastructure condition, geographic condition, and land use condition.

(f) Preliminary Design

After selecting a site for IIE, preliminary design will be made. For this purpose, necessary physical components of IIE will be identified and their size will be roughly estimated. The physical components might include :

- (1) Land for industrial use,
- (2) Land for road and transportation,
- (3) Standard factories,
- (4) Central management facilities, and
- (5) Utilities.

Based on required sizes of these facilities, alternative preliminary plans of IIE will be generated.

(g) Sales and Leasing Policy

In order to know the financial feasibility, it is necessary to decide the sales and leasing policy. This will be made mainly based on policy maker's decision and private sector's opinion.

(h) Cost Estimate

Following the preliminary plans, rough capital cost will be estimated, and based on the sales and leasing policy, rough cost of operation will be estimated.

(i) Financial Analysis

This will be the analysis of financial feasibility of IIE itself at the preliminary level. Method to be used is the discounted cash flow analysis. Basis of this analysis lies in the revenue projection of IIE project.

(j) Economic Analysis

On the contrary to the financial analysis, economic analysis concerns the impact of this IIE on the regional or national economy. In this case, value added which will be produced by the industries in IIE has to be estimated. This is a hard task to be done in a short period. Thus, the very rough estimation of the value added to be generated in IIE as a whole will be made. And this value added will be compared to the crude estimate of all the cost.

4.1.6 Possible Forms of Recommendation

As a result of the above analysis works, recommendations will be made in the following three forms: conclusion, investment program, proposals for the next step.

(a) Conclusion

Based on results from the diagnosis, financial analysis and economic analysis, a conclusion will be made on whether this project is recommended or not, and which type of development is recommendable. Conclusion also includes recommendation on necessary arrangement of organization and institution.

(b) Investment Program

For the recommended type of development, an investment program will be recommended by utilizing the results of cost estimate and financial analysis.

(c) Recommendations for the Next Step

At the end, those works still remaining for further elaboration before the project implementation will be suggested. For example, confirmation of availability of necessary infrastructures will be one of them. At the same time, specific points to be addressed in the feasibility study will be discussed.

4.2 Irbid Ring Road Projects

4.2.1 Background and Objectives of the Project

(a) Background

The transportation system in Jordan needs, on the whole, expansion of overall physical capacity and improvement of operational efficiency, in order to cope with future traffic demands specially in the Study Area. For an expansion of the transportation system to service intensified economic activities, the current Five-Year Plan lists 28 projects in the sub-sector of roads. Taking note of these projects, the Phase I Draft Final Report recommended for the Irbid Governorate the following projects for implementation through 1985:

- (1) Improvement of Existing Roads,
- (2) Development of Village Roads,
- (3) Construction of a New Road Between Zarqa and Irbid,
- (4) Construction of a New Road By-Passing Jerash,
- (5) Construction of a Ring Road Around Irbid City, and
- (6) Construction of a New Road Connecting Route 11 and the Industrial Free Zone.

Through deliberations with the Jordanian counterpart, top priority has been assigned to (5) the ring road around Irbid City.

(b) Objectives of the Project

Objectives of the Irbid Ring Road project are twofold :
To mitigate the traffic congestions anticipated in the near future at the city center by diverting through-traffics from the city center to the Irbid Ring Road, and to provide the city with the adequate arterial road as one element of urban structure in order to serve to rapid urbanization of the city and to stimulate the economic development of the city consequently building the strong urban core for the Irbid region. Furthermore, Irbid Ring Road is expected to provide more efficient linkage between the Irbid Municipality and the rest of the region through region-wide transportation network. In particular, it is expected that the Irbid Ring Road and the Irbid Industrial Estate strengthen each other in terms of efficiency and economic effects.

4.2.2 Outline of the Project

The Irbid Ring Road Projects comprise two components :
One new ring road around the Irbid Municipality which can tentatively be called "Outer Ring" and two other ring roads. The Irbid Municipality has a plan to construct two ring roads ——— tentatively called Inner (First) and Municipality Boundary (Second) ——— some parts of which are now under construction. At the same time, the Irbid Municipality is also considering the third ring road which is very close to the second. Taking these ring

roads into consideration, the Japanese Team extended the idea of the third ring to be the ring reasonably apart from the second. This new third ring road can be called "Outer Ring" since it will be located outside of the city boundary. Japanese Team discussed with several officials of the Jordan Government on this Outer Ring, and they favoured the idea. Therefore, the Team recognize this Outer Ring be the potential ring road to be studied in the Phase II Study, and will concentrate study efforts on Outer Ring.

At the same time, an official requested us to study the other two rings ----- Inner Ring and Boundary Ring ----- and the Phase I Report recommended the Inner Ring to be studied. Thus, the two other rings will also be examined to see their future potentiality. However, it is said that the Inner Ring will face grave difficulty in its construction on account of high price of land in residential area. The Outer Ring seems to have difficulty in construction in the western part of the city because of the same problem of high land price and of its topography. This should be studied further.

The Outer Ring would be connected to Route 23 in the north and Route 16, 11, and 23 in the south and eventually will join the second ring road in the western part of the city. The eastern part of the Outer Ring has a radius of around 4 km from the city center. Major portion of the Phase II work will be used for creation of alternative alignments and their evaluation.

4.2.3 Review of Existing Studies

Existing studies and data have to be examined at the first stage of the study. In examination, interviews to experts and officials in the Municipality of Irbid, the Ministry of Public Works and other public/private organization should be utilized.

Only one and major study existing at this moment concerning transportation development is "Master Road Plan in Jordan 1977" jointly prepared by Wilber Smith and Associate, and the Ministry of Public Works. Aerophotographies taken at the end of 1978 and maps developed by authorities concerned will also be available for our reference.

4.2.4 Work Flow and Method of Analysis

(a) Examination of Pre-conditions

Before starting technical and economic pre-feasibility study, we will examine political and institutional aspects of the project in advance. The main issues in this step are the Municipal Government's willingness to commit and support the project and institutional and financial arrangement to support the project.

(b) Preliminary Design and Technical Feasibility

(i) Population & Urbanization Projection

The population of the Irbid Municipality has shown a high rate of increase for these 15 years. Under an assumption that this tendency will continue for the concerned period, the rough demographic forecast has to be done taking account of rate of urbanization. This inclination will be a major element which will have much influence on future traffic volume.

(ii) Traffic Projection

The expected total performance of the project will be derived from (1) estimation of transportation demands in terms of expected growth of GRDP and population in the Study Area, (2) estimation of the effects of the proposed project on the traffic volume and pattern and (3) estimation of the modal split of the projected traffic. The estimation of the traffic volume and pattern in the Municipality of Irbid will take into account expected changes of through traffic, related traffic and intra-city traffic due to the implementation of the proposed project.

(iii) Preliminary Design

The purpose of the preliminary design is to make alignment plans to cope with an increased traffic volume in the future, caused by an inter regional economic activities, matching an expansion of urbanized area. As a northern center of this country, it will be indispensable to this study to envisage the effects of the proposed project on the traffic volume and pattern in the total alignment planning of the Municipality.

On the technical side of the project, we have to be sure whether the alternatives are adequately considered and the correct technical solution found. It has to be investigated that the width of the road, location of the road, and the length of the road are appropriate to the traffic. All features of the project design, the cost estimates and the construction schedule will be examined and confirmed or revised as necessary.

(c) Economic Evaluation

(i) General

Ensuring that right technical solutions have been found is a major focus of the work of the Study Team. It ties in very closely with the economic dimension of the appraisal. We will discuss the relationship between the project, the sector, and the economy, on the basis of an evaluation of the above-mentioned transportation demand as an output of the project (benefits) and supply as economic costs.

(ii) Economic Cost and Benefits

Economic costs of the proposed project are roughly defined as follows :

- (1) Capital cost
 - 1) land cost, which should be measured by opportunity cost.
 - 2) construction cost,
 - machine, equipment, and material, from whose costs custom duties, sales taxes should be deducted,
 - labor, which should be measured by shadow wage.
- (2) Maintenance cost
 - machine, equipment and material,
 - labor.

Economic benefits are basically defined as follows :

- (1) Vehicle operation cost saved
- (2) Time saved
- (3) Infrastructure cost saved
- (4) External effects.

However, usually only (1) and (2) are calculated as economic benefits. Also, under certain circumstances, we will have to avoid excessive concentration on benefit calculation because of the uncertainty of their fruits.

4.2.5 Alternatives to be Considered

In order to attain optimum project effects, the Study will examine selected alternatives about outer ring road project in terms of design standards, alignment, location and other factors including related transportation improvements, such as widening of streets within the city. Existing alternatives considered by Ministry of Public Works and also the Municipality of Irbid must be investigated.

4.2.6 Conclusion

Based on these investigations described in 4.2.4, we will recommend the first priority from the alternatives in the light of size, starting period of construction and so on.

4.2.7 Possible Forms of Recommendation

Final step to be taken is to know whether it is recommendable for the proposed project to advance in the form of Feasibility Study, Detailed Design or implementation. In doing so, there will arise some conditions needed for the specification of the project.

If the proposed project appears to be viable, an investment program for the project will be recommended.

4.3 Irbid Tourism Project: Jerash-Dibbin-Ajlun Tourism Project

4.3.1 Objectives

The study to be carried out in the present stage, Phase II, is to develop discussions more in-depth on Jerash-Dibbin-Ajlun(JDA) Tourism project which was selected by the Government of Jordan from among several tourism projects identified during the course of Phase I stage.

The objectives of the study, therefore, is to prepare in a report a development plan of JDA tourism project for the area below specified up to the year 2000 in phases.

The study includes evaluation of the present tourism conditions including the on-going projects, preparation of a long term plan of tourism for the area up to 2000, recommendation of the first phase projects up to the year 1985 with cost estimates and preparation of the implementation schedule together with the investment program of the project.

4.3.2 The Area to be Studied

The study covers the cities of Jerash and Ajlun, and their environs inclusive of Dibbin National Park, King Talal Dam, Wadi El Yabis, and Eshtafina Tourism Park areas. The study also covers such roads as to take access to the above study areas and to connect organically these areas such as the old Route No. 15, access to King Talal Dam from Amman, the road from Ajlun to King Talal Dam through Sakib and Dibbin and the road from Jerash to Ibbin through Suf, all of which are necessary to establish the integrated tourism plan of this region.

4.3.3 Review of Existing Reports and Studies

It was informed by the Government of Jordan that there were some reports and studies so far made by either public or private sector in respect to tourism developments for the study area. However, these reports and studies were prepared independently and therefore any of these reports and studies have not taken into account correlations of each other. We, therefore, will review and evaluate these reports and studies in order to establish a consistent scheme of the tourism development in the study area.

4.3.4 Evaluation of the Present Situation

(a) Potential Resources

(i) Antiquities

Jordan has a number of ruins and remains of archeological importance all over the country. Among others, the ruins at Jerash and Petra are predominant in their beauties and scales. Inside the study area,

there are also many places which will attract tourists with their historical values and beauties. In Ajlun, for example, there is the Castle called "Qulat Al Rabadh" which was built in late twentieth century for combatting the Crusader powers. We will therefore identify these kinds of archeological remains, some of which might be still buried underground and evaluate them in order to take into account such evaluation in planning of the tourism.

(ii) Natural Resources

There are many places in the study area where the natural resources are most attractive to tourists either in their natural or artificial sceneries. Dibbin National Park and Eshtafina Tourism Park, both of which are developed by the public sector will provide tourists with unexpected and magnificent landscapes covered with the green all around there. In addition, there is the highest mountain called Ras El Aqra at the vicinity of Dibbin National Park on which tourists can enjoy 360 degrees of panoramic view.

Far from the cities of Jerash and Ajlun, King Talal Dam and the way to the Dam site from Sakib through Dibbin are also overwhelming providing with vast mountainous landscapes which can never be seen in countries other than Jordan, because of which they are quite attractive to foreign visitors.

Taking into consideration these natural advantages in this region, we will make plan of tourism to be most attractive to domestic and international tourists.

(iii) Festivals

There was no outstanding festival observed in the study area by the mission during its stay. However, it is considered that indigenous folk festivals will exist in villages having historical backgrounds of ancient times. We will therefore identify these festivals which are worth considering to be promoted for attracting tourists both from domestic and international sources and integrate them into the planning.

(iv) Urban Centers

At present, both cities of Jerash and Ajlun do not pay much role in tourism because of insufficient facilities for tourists. However, once the tourism is further developed the cities themselves should serve as the places to provide with hotel accommodation and food supply and be attractive to tourists in shopping and so on. In this sense the present condition of the cities should be evaluated.

(v) Souvenir Industry

There is no sizable souvenir industry nor souvenir shops existing the study area at present, except some vendors on streets. Since the shopping of souvenirs is another interest for tourists and it leads to the acquisition of foreign currencies the development of this industry should be encouraged to a large extent.

(b) Existing Utilities

(i) Recreational Facilities, Hotels and Restaurants

The Ministry of Tourism and Antiquities has currently built one or two resthouses together with some benches and so on, inside Eshtafina and Dibbin National Parks. However, these existing facilities inclusive of hotels and restaurants of private sector are still far from the actual demand. We will, therefore, survey these existing facilities in their qualities and quantities in order to make plan of facilities realistic to meet the future demand.

(ii) Transportation

The condition of roads is fairly good all over the country. The way to Jerash from Amman provides tourists with comfortable driving of less than one hour on the new Route No. 15. However, roads other than the new Route No. 15 will not be satisfactory in capacity once the tourism is developed although they suffice the present demand. We will, therefore, evaluate the present condition of roads which will be of use to the tourists.

There is no public transportation to lead tourists to the study area at present. Foreign tourists rely only on taxies and chartered sightseeing buses which are not sufficient in number while local tourists use their own cars. It should be necessary, therefore, to survey the need of transportation both for foreign and local tourists and recommend transportation system which can facilitate tourists to take all the way to places.

(iii) Water and Electricity Supplies

Water and electricity supplies are vital necessity for the city development. The present condition of water and electricity supplies is not satisfactory from the quantitative view point. Since the exploitation of more water and electricity is not necessarily promising, it is necessary to consider most seriously these elements when the tourism development is planned.

(c) On-going Projects

It was observed during the Mission's site visit that excavation and restoration works in Jerash and Qulat al Rabadh and construction of rest-houses and accessories at Dibbin and Eshtafina Parks are under way by the Ministry of Tourism and Antiquities. However, it seems that they lack concrete organic plans. We will therefore evaluate the on-going projects and study how to incorporate efficiently these to the integrated tourism planning of the study area.

4.3.5 Tourists Projection

(a) The Present Tourists Market

While the Phase I Draft Final Report refers to the profile of

the tourists to Jordan, we will carry out more in-depth study in this stage, particularly placing emphasis on the study area. Although the feature of study area is similar, as a whole, to that of the Country it is in fact true that each region has its own characteristics which might result in variation of profile of tourists.

(b) The Future Tourists Market

Projection of the future tourists market is one of the important prerequisite to prepare the tourism development plan. The Phase I Report showed that the majority of tourists were Arab people coming from nearby countries such as Syria, Turkey and Lebanon. It is considered that these tourists have visited this country simply because they wanted to enjoy the green landscapes which are seldom in such countries. The tourists from the other regions such as non-Arab Asian, European and American countries are considered to have visited this Country to see the ruins and remains of the old times.

Therefore, in making the plan of tourism development, consideration will be made on each of the tourist sectors which will have different interest.

4.3.6 The Proposed Tourism Development Plan

(a) The Long Term Development Plan Up To Year 2000

In general the tourism project includes many components as referred in section 4 Evaluation of the Present Situation, and such components can be classified into two categories. One is the objects to which tourists pay visits, and the other, facilities through which they can enjoy their tours. And both of them should be considered on the same level at the same time in planning the tourism development.

In the present study area the objects to be studied will be as follows:

- (1) Antiquities,
- (2) Natural resources,
- (3) Festivals and other attractions,
- (4) Urban Centre, and
- (5) Souvenir Shop.

The facilities to be studied will be as follows:

- (1) Recreational facilities, hotels, restaurants, etc.,
- (2) Transportation, and
- (3) Water and electricity supplies and other utilities.

As referred in section 4, these components have been already developed to a certain level. However, it seems that they are not satisfactory in function as an integrated tour zone as a whole. Accordingly we will pay most effort for example, to study development of roads which can serve

most efficaciously for connecting each place in the study area. The road study might include the following:

- (1) Improvement of the road from Suf to Ibbin through Ibillin;
- (2) Improvement of the old Route No. 15 from the cross point at the new Route No. 15 to King Talal Dam, and
- (3) Construction of a new road from Sakib to King Talal Dam through Mt. Aqra and Dibbin.

The development plan will be prepared in phases up to the year 2000 according to the value of need from the professional point of view.

(b) Proposed Development Plan Up To Year 1985

Based on the long term development plan proposed, we will propose the first phase development plan to be implemented up to the year 1985.

The proposal will include more in-depth study with conceptual designs and drawings and cost estimates by which the Government, lending agencies or private investors can know the magnitudes of projects in monetary terms.

4.3.7 Implementation Schedule and Investment Program

The implementation schedule of the projects proposed by the development plan up to year 1985 will be prepared and accordingly the investment program be established year by year. Since the projects will require a considerable amount of money it is necessary to prepare such investment program for consideration by the Governments or external lending agencies.

4.3.8 Conclusion

The present study is to prepare the tourism development plan for area covering Jerash and Ajlun inclusive of their environs. Although the area has geographic advantage located between Amman and Irbid, the development of the area has been rather retarded in comparison to the others. It is, therefore, expected that the projects will play an important role for decentralization plan which the Government of Jordan decided to adopt for the next five year plan once it is materialized.

As mentioned in the previous section, the study of a tourism development plan will require a considerable amount of time considering the variety of components to be studied. We, therefore, intend to put a focus on the subject more important for this particular area as referred.

While our study will cover almost all components relevant to development of tourism, there are still some factors to be considered such as environmental impacts etc.. They are excluded from our study due to time constraint. We, therefore, like to advise the agency to settle such issues in the future.

CHAPTER V

THE WORK SCHEDULE

5.1 Overall Work Schedule for the Entire Study

The original work schedule was proposed in June, 1978, where the Phase II Main Mission was scheduled to start its work in Jordan in April 1979. However, the delay in receiving comments by 6 months from the Government of Jordan made us postpone the starting date. The revised work schedule is proposed in the following Table 5.1:

Table 5.1 Revised Overall Work Schedule

Works	Time	Status
(1) Initial discussion with the National Planning Council, the Government of Jordan, for setting the Scope of work and counter part fund and personnel arrangements.	February/March 1978	Finished
(2) Starting of the Phase I Mission works in Jordan.	June, 1978	"
(3) Submission of the Inception Report for discussion of the report between the Team and the Steering Committee.	July, 1978	"
(4) Phase I field works by the full members of the Study Team.	June-October, 1978	"
(5) Submission of the Phase I Draft Final Report to the Steering Committee	October, 1978	"
(6) Receiving comments from the Steering Committee.	May, 1979	"
(7) Initial Discussion with the NPC, MMRA, IURPG, for Phase II work.	May-June 1979	"
(8) Starting of the Phase II Mission work and submission of Inception Report to the Steering Committee.	June, 1979	"
(9) Phase II field works by the full members of the Study Team.	July-September 1979	"
(10) Submission of the Phase II Interim Report	Oct. 1979	"
(11) Submission of the Phase II Draft Final Report to the Steering Committee	Nov., 1979	"
(12) Presentation and receiving comments	Jan., 1980	"
(13) Submission of the Final Report	March, 1980	"

5.2 Work Schedule for the Phase II Study

The work schedule for the Phase II is shown in Figure 5.1. The explanation of the Overall Method of the Study appeared already in chapter III of this Inception Report.

Figure 5.1 Phase II Main Mission Work Schedule

June 3, 1979.

	AUGUST				SEPTEMBER				OCTOBER	
	1	2	3	4	1	2	3	4	1	2
1. Discussion w/Jordan Government	_____									
2. Population and Land Use	_____									
3. Market Analysis	_____									
4. Major Steps	_____									
a. Field survey	_____									
b. Data collection	_____									
c. Technical study	_____									
d. Alternative study	_____									
e. Financial study	_____									
f. Economic study	_____									
g. Institutional study	_____									
5. Planning	_____									
6. Selection and Refinement	_____									
7. Investment Program	_____									
8. Preparation of Report	_____									
9. Presentation	_____									

CHAPTER VI

ORGANIZATION AND STAFFING

An organizational structure for the Japanese Study Team and the Jordanian Group is shown in Figure 6.1 out of which the experts of Japanese Team are listed in Table 6.1 with manmonths in Jordan.

A detail of the manpower inputs from Japanese Team to the Phase II Study can be seen in Figure 6.2 with time frame.

Table 6.1 List of Experts with Manmonths in Jordan

Specialists	Japanese Fiscal Year 1979
1. Project manger	1.5
2. Deputy Project manager	3.0
3. Industry Estate	
1) Engineer	1.5
2) Planner	2.5
3) Economic Appraiser	3.0
4. Transportation	
1) Engineer	1.5
2) Planner	2.5
3) Economic Appraiser	3.0
5. Tourism	
1) Planner	2.5
2) Planner	2.0
3) Planner	2.0
6. Urban Planner	2.0
Total	27.0

Figure 6.1 Organizational Chart

Administrative Section	
Jordanian Government Steering Committee	Japanese Government Japan International Cooperation Agency

Executing Section	
<p><u>Jordanian Group</u></p> <p>Project Director: Dr. Sufyan A. Tell</p> <p><u>Full-time Counterparts</u></p> <p>Muhammad Zaghari (Engineer) Muhammad Butoosh (Assistant Administrator) Samir Joudeh (Engineer) Tamim Musmar (Statistics Expert) George Sweidan (Engineer) Ali Adat (Engineer) Taher Pharaon (Geographer) Ali Abu Rabeeha (Engineer Geology)</p> <p><u>Part-time Counterparts</u></p> <p>Economist Industrial Estate Industry Transportation City Plan Tourism Plan Antiquity</p>	<p><u>Japanese Team</u></p> <p>Project Manager: Deputy Project Manager:</p> <p><u>Specialist</u></p> <p>Industry Estate 1) Engineer: 2) Planner: 3) Economic Appraiser: Transportation 1) Engineer: 2) Planner: 3) Economic Appraiser: Tourism 1) Planner: 2) Planner: 3) Planner: Urban Planner:</p>

<u>Supporting Staff</u>
2 Surveyors
2 Draftmen
<u>Non-Technical Supporting Staff</u>
5 Typists/Secretaries
2 Drivers
2 Office Boys

Figure 6.2 Manning Schedul for Phase II Main Mission

Professionals	M/M	AUGUST							SEPTEMBER			OCTOBER			
		1	2	3	4	1	2	3	4	1	2				
Project Manager	1.0														
Deputy Project Manager	2.5														
Urban Planner	2.0														
<u>Project (IIE)</u>															
Engineer	2.5														
Planner	1.5														
Economic Appraiser	2.5														
<u>Project (Ring Road)</u>															
Engineer	2.5														
Planner	1.5														
Economic Appraiser	2.5														
<u>Project (Tourism)</u>															
Market Planner	1.5														
Physical Planner	2.5														
Financial Planner	2.0														
Total	24.5														

Source: Study Team.

APPENDIX A

MINUTES OF DISCUSSION

A.1 Introduction

The Japanese Phase II Contact Mission (hereinafter referred to as "The Mission") organized by the Japan International Cooperation Agency (hereinafter referred to as JICA) and headed by Mr. Jiro Kano, visited Amman between May 15 and June 4 1979 for the purpose of working out the detail for the Phase II of the Study of Integrated Regional Development of Northern Jordan.

During its stay in Amman, the Mission exchanged views and had a series of discussions with representatives of NPC, Ministry of Municipal and Rural Affairs, IURPG and authorities concerned as to the desirable measures to be taken by both Governments for the successful execution of the above-mentioned Phase II. In addition, two meetings with the Minister of Tourism, Director General of Tourism and their staffs were held to finalize the contents of the tourism project to be studied in the Phase II study.

As a result of discussions, the Mission and the representatives of MMRA and IURPG agreed to recommend to their respective Governments the matter referred to in the following Minutes of Discussion. The Minutes of Discussion was signed by Mr. Jiro Kano, the head of JICA Mission and Mr. Ibrahim Ayoub, Minister of MMRA in Amman, Jordan on May 31, 1979.

Main members who participated the discussions are :

(1) The Japanese Delegation :

Mr. Jiro KANO, Head of the Team
Mr. Kensuke YUSA
Mr. Hiroshi UENO
Mr. Tadayuki KANAZAWA
Mr. Kenshiro ORI

(2) Representatives of MMRA and IURPG

Mr. Ibrahim Ayoub (MMRA)
Mr. Ibrahim Attour (MMRA)
Dr. Sufyan Tell (IURPG)

A.2 Minutes of Discussion

The main points agreed upon are :

I. Projects to be Studied

1.1 The three projects to be studied for pre-feasibility by the Japanese Study Team during the Phase II (hereinafter referred to as the Team) will be the followings :

- (1) Irbid Industrial Zone
- (2) Irbid Ring Roads
- (3) Irbid Tourism Project: Jerash-Dibbin-Ajlun Tourism Project.

Above-mentioned Irbid Ring Roads means the several old and new ring roads for the Irbid City to be studied. But one from them will be proposed by the Team for the further study.

II. Scope of Work for the Phase II

2.1 The scope of work for the Phase II will be governed by the document "The Hashemite Kingdom of Jordan, Scope of Work for the Study of Integrated Regional Development of Northern Jordan" approved by both Governments on May 11 and May 16, 1978.

2.2 The above-mentioned 1978 Scope of Work states that projects, not exceeding three, will be selected for pre-feasibility study in the Phase II. The third project which is listed in the section 1.1, however, is not a type of pre-feasibility study but a type of planning study. Even though the third project does not fit the 1978 Scope of Work, it will be studied in the Phase II since it is strongly recommended by the Government of Jordan.

2.3 In addition to the above-mentioned 1978 Scope of Work, the followings specified in III will be particularly provided by both Governments.

III. Others

3.1 One Urban planner will be provided by the Japanese Government as a member of the Phase II Team to assist IURPG in preparing land use master plan for the area around Yarmouk University new site, but not to make the plan itself.

3.2 IURPG will continue to cooperate fully with the Japanese Team during their stay in Jordan, and will provide typists in English and draftmen.

IV. Addition

4.1 Representatives of the Government of Jordan stressed the importance of land use planning by the Japanese Government as the Phase III, and the Japanese Team agreed to convey this message to the Japanese Government. The Government of Jordan will specify the scope of work and land use planning in due time.

