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INTERIM EVALUATION OF STAGE I
OF THE JORDAN VALLEY DEVELOPMENT PLAN:
A PROPOSED SCOPE OF WORK

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INTERIM EVALUATION OF STAGE I
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1. THE SETTING

1.1. The Jordan Valley, a down faulted rift, lies in the westernmost part of the Hashemite Kingdom of Jordan and extends from Lake Tiberias (Sea of Galilee) at 200 meters (650 ft) below sea level to the Dead Sea, lowest spot on earth at 400 meters (about 1300 ft) below sea level. The Valley is approximately 105 km (about 63 miles) long and 4-16 km (2.5-10 miles) wide, and is shown in Figure 1. The Government of Jordan (GOJ) recently declared that the rift land area from the north end of the Dead Sea down the Wadi Araba to Aqaba is also a part of the Jordan Valley. The JVA has been made responsible for its development as well. However, for the purposes of these evaluations, the term Jordan Valley will refer to the area from the Yarmouk River to the north end of the Dead Sea, unless otherwise specified in the Project Paper. The Southern Ghors and Wadi Araba are shown in Figure 2.

1.2. Agriculture, including livestock production, accounts for about 14 percent of the Gross Domestic Production in Jordan, and it is the main source of livelihood for about 20 percent of the country's labor force. Nevertheless, local agricultural products meet only 40 percent of the country's food needs; the rest is imported. With its temperate climate, good soils and availability of water through irrigation, the Jordan Valley is the richest potential source of agricultural production in Jordan and offers great opportunities for varied and intensive agricultural production.

1.3. Prior to 1948, the Jordan Valley was sparsely populated and of minor significance in term of agricultural production, although its potential had already been noted in several studies. Lack of irrigation needed to bring additional Valley land under cultivation held the population level at about the 37,000 mark (many of them Palestinian refugees) from the early 1950's until the mid-1960's. Without question, the most important factor in opening the Jordan Valley to both greater population and greater productivity was the construction of the GOJ/AID-financed 70 kilometer East Ghor irrigation canal in the northern sector of the Valley in the 1960's. Also playing a role was a major, totally successful malaria control program mounted by the GOJ with AID assistance. By 1967 some 97,000 people were living in 53 scattered settlements in the Valley.

1.4. Progress toward development was halted in the Valley when the area became a battlefield during the 1967 war with Israel and the following period of internal strife, which lasted through 1971. Most of the civilian population left the Valley. It is estimated that more than 60 percent of the homes in the Valley were destroyed during that time, some 7,000 dwellings. As people gradually returned and began to rebuild, major development projects were planned and put into operation.

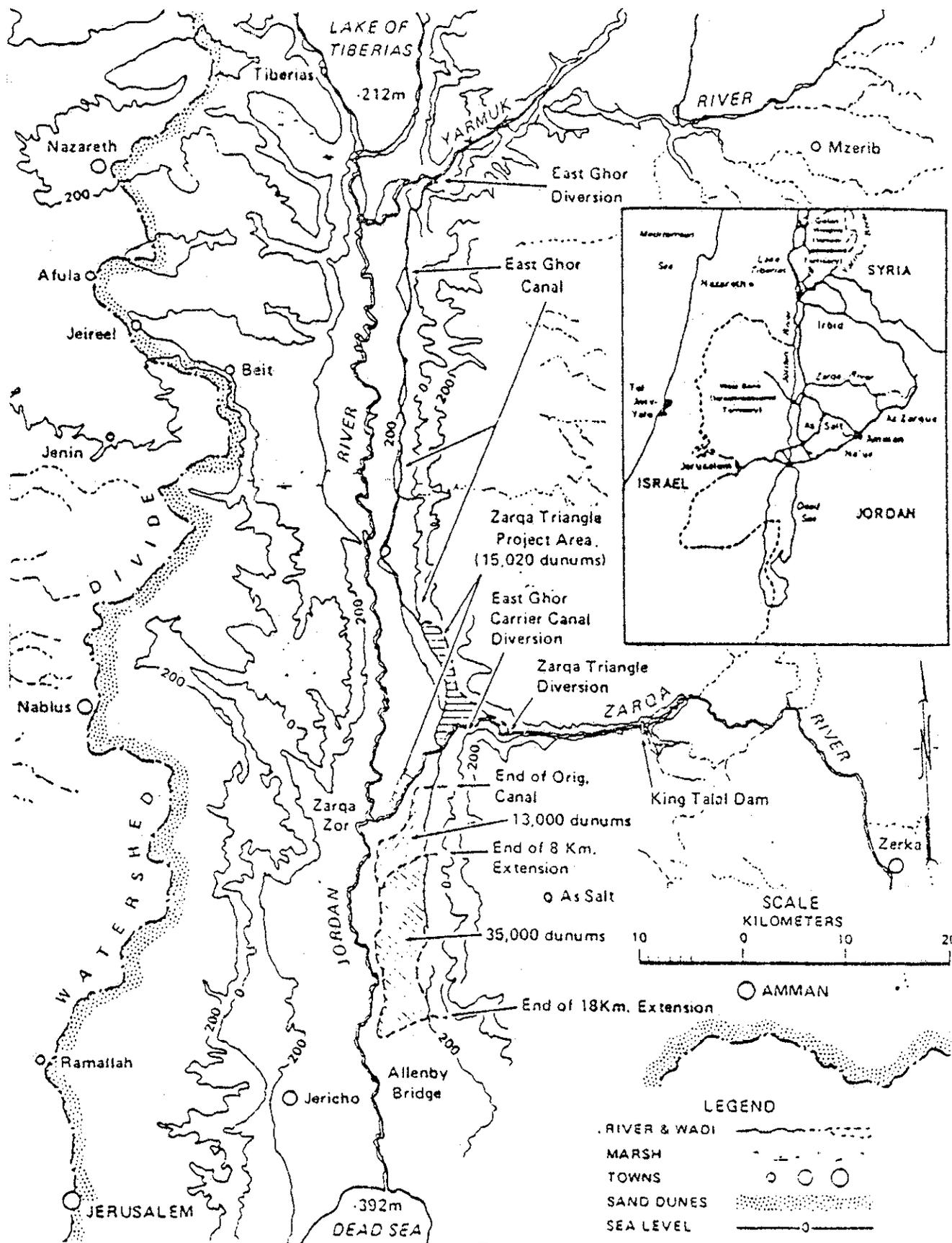


Figure 1: Jordan Valley

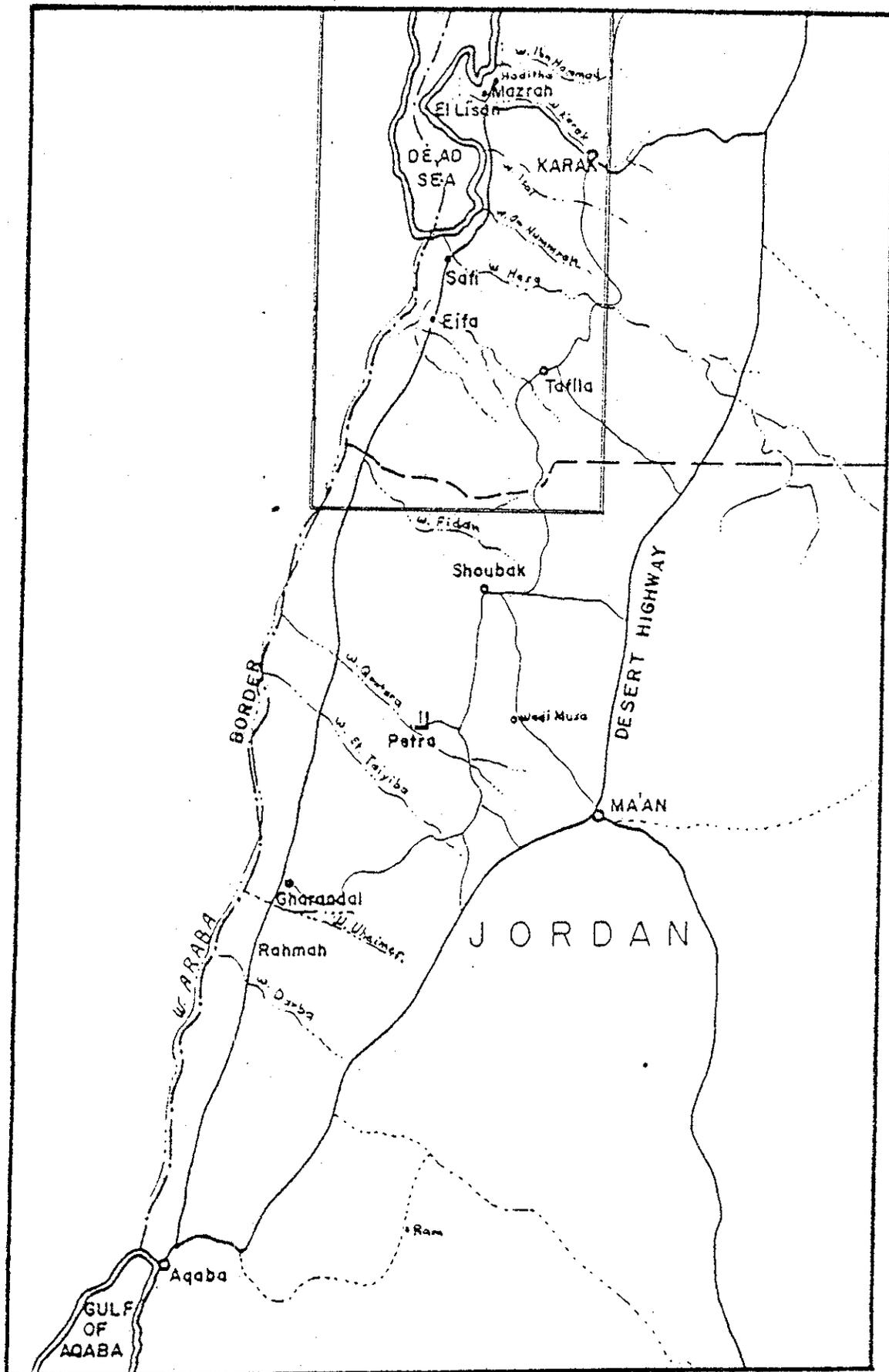


Figure 2: The Southern Ghors and Wadi Araba

2. DEVELOPMENT PLANS AND PROJECTS/ALL DONORS

2.1. In an effort to realize the substantial agricultural production potential of the Valley envisioned by previous studies and to raise farmers' incomes and living standards, which are low in comparison to national averages, the Government of Jordan (GOJ) in 1972 established the Jordan Valley Commission, granting it a mandate for "economic and social development of the Jordan Valley". With increased powers, personnel and responsibilities, that organization became the Jordan Valley Authority in May, 1977. To avoid confusion, the term JVA will be used throughout this document in discussing activities of that agency or its predecessors.

2.2. A three-year plan for the "Rehabilitation and Development of the Jordan Valley (East Bank), 1973-75," was proposed by the JVA in 1972. A number of donor governments and agencies were attracted, and the plan led directly to the design and implementation of many development projects, currently underway or recently completed. It soon became evident that achievement of the ambitious objectives of Valley development should require a much longer time-frame than originally envisioned. Therefore a follow-on plan, "Jordan Valley Development Plan, 1975-1982" was prepared to incorporate both the activities of the three-year plan (stage I) and a scheme for construction of Maqarin Dam and irrigation facilities (stage II).

2.3. Projects of the first stage are estimated to cost nearly \$225 million, with Maqarin Dam and the remainder of stage II expected to add more than one billion dollars. Donor organizations have so far contributed more than \$165 million in Stage I (the U.S. investment through AID is about 30 percent of the total) to projects of stage I, beginning with financing for the King Talal Dam.

2.4. Project activities devised to carry out Jordan Valley development plans can perhaps best be described in the aggregate as one large, integrated rural development program with numerous donors, each of whom supports discrete projects which contribute directly to the others. Objectives for Valley development as a whole are to increase agricultural production and improve the quality of life by:

Increasing the irrigated area to 36,000 hectares.

Carrying out social service and public utilities activities (schools, clinics, roads, potable water, electricity, etc.) to make the Valley a pleasant, desirable place to live and attract the population necessary to make optimum use of the newly irrigated lands. And

Developing organizations to promote efficient use of land and equity for Valley residents (the Farmers Association, training and extension services, etc.)

3. OBJECTIVES OF PROPOSED EVALUATION

3.1. The objective of the proposed study is to evaluate seven (7) USAID funded projects, within the context of the overall Valley Development effort.

These projects are all part of stage I of the Valley Development Plan. They are (a) East Ghor Canal Extension (Project No. 278-0193), (b) Zarqa Triangle Irrigation (278-0194), (c) Sprinkler Irrigation Equipment (278-0195), (d) Yarmouk-Dead Sea Road (278-0176), (e) Three Village Development Project, (278-0183, 278-0205, and 278-0221). The evaluation is to review, not only the separate activities of each project, but also the interrelationships among the projects and their contribution to the overall Jordan Valley Development effort. A description of each of these seven (7) projects, and a copy of its Logical Framework, whenever such exists, are provided in the Appendix to this Scope of Work. This evaluation is intended to emphasize the socio-economic impacts of the projects, as expressed at the "Goal" and "Purpose" levels of the Logical Frameworks.

3.2. The seven (7) projects listed above are at different stages of development. The physical works involved in the Canal Extension, Zarqa Triangle, and the Yarmouk-Dead Sea Road are virtually complete. Village Development I is close to completion, while the other two Village Development Projects have just started. The Sprinkler Irrigation Projects has also not been completed. With the exception of the Yarmouk-Dead Sea Road, sufficient time has not elapsed to allow an evaluation of the final socio-economic impacts of these projects. Neither have projects undertaken by other donors or by GOJ been completed within a time-frame allowing for a final assessment. It is thus clear that the proposed evaluations will be of an interim nature, providing (i) an initial assessment of the projects' impacts to date, (ii) a baseline for future evaluations, (iii) suggestions for benefitting from lessons learned to date in order to implement mid-path corrections to these projects, (iv) suggestions and lessons learned to date in order to affect change in ancillary organizational and institutional factors influencing, but not included in the project, (v) the expected impacts of projects which have not yet been completed, in the light of more recent developments; and (vi) lessons to be learned for future and similar AID projects.

4. DATA SOURCES

4.1. Many of the data which are required to undertake the proposed evaluation are available in a variety of documents and studies. Among the main primary sources are the Agricultural Census of the Jordan Valley, undertaken in 1975 and 1978; and the Census of Population and Housing, undertaken in 1973 and 1978. Another major source of information is the set of Project Papers and their Annexes, as well as other AID/Jordan file documents and studies.

4.2. Another major source of information is the JVA's Planning and Analysis Unit. The Unit is developing and maintaining data files on agricultural production, village services, and land tenure. It has also conducted a variety of studies, both independently and in cooperation with other national and international donor teams, on a variety of topics.

4.3. Two recent studies which may provide useful insights about "Control" situations in other parts of the Jordan, are the study by Dajani and Murdock, Basic Human Needs in Rural Jordan, September, 1978; and Dajani, A Socio-Economic Baseline Study of the Southern Ghors and Wadi Araba, April, 1979. Both were completed under contract to the U.S. Agency for International Development.

4.4. Although the above sources, together with the many available reports on the different aspects of development in the Jordan Valley will provide the bulk of the information needed for the analysis, some special studies involving surveys and field interviews will undoubtedly be needed. This is due to the fact that many projects are taking place in the valley and that there exists a seemingly quick response by the private sector to public initiatives in the production and social sectors; and the fact that some social and economic phenomena which are becoming more significant, have been traditionally understudied, and are thus data-short.

5. A CONCEPTUAL FRAMEWORK

5.1. All seven projects which are included in the proposed evaluation, like all other Valley Development projects, have as their goals one or both of the frequently stated goals of increasing agricultural production and improving the quality of life. These two goals will be taken as the point of departure for the evaluation. The "Quality of Life" goal is defined to subsume all the "equity" considerations, including equitable access to income, services, and opportunities. Three of the projects under consideration are explicitly designed to increase agricultural production. These are the Zarqa Triangle Irrigation Project, the East Ghor Canal Extension, and the Sprinkler Irrigation project. Three other projects, namely the Village Development series, are directed toward improving the general quality of life in the Valley, although their farm road component contributes to the production goal. The Yarmouk-Dead Sea road project addresses both of these goals, since it improves both farm-market access and resident mobility. The contribution of one project, however, to the attainment of one goal or another, is not mutually exclusive. This is true since (1) the projects themselves are interrelated, (2) they are interrelated with other development activities in the Valley, and (3) strong feedbacks between the two goals exist. This last reason is indeed at the heart of the comprehensive rural development strategy.

5.2. Figure 3 is a graphic representation of the Conceptual Framework which is proposed for the evaluation of the projects under study. It shows the four major parts of the exercise which relate to the extent of achievement of each goal, at both the "project" and "Valley" levels. The latter refers to the overall development effort. The evaluation will be concerned with changes which have occurred since the initiation of the Development Plan in 1973, or since the subsequent initiation of the particular project being considered. Each of these four parts (Numbers 1, 2, 3 and 4 in Figure 3) can be related to particular indicators measuring the extent of goal achievement, which are discussed in a subsequent section. The Figure also shows four (4) feedback and/or interaction linkages between these four major components. They generally represent how projects interrelate with each other, with projects of the GOJ and other Donors, and how the two basic goals reinforce each other. Linkages 5 and 7, for example, relate to the contribution of the project to overall Valley Development and to conflict and/or complementarity with other projects. Linkages 6 and 8 relate to the mutual interaction between the two expressed goals, at the "project" and "Valley" levels, respectively. These two pairs of linkages are designed to address and organize the host of questions which are frequently raised in the context of the Jordan Valley Development Plan.

5.3. The objectives of the evaluation exercise which are spelled-out in Section 3.2. above are reiterated in Figure 2. This is done in order to emphasize the fact that the proposed evaluation is of an interim nature, that it is directed toward the assessment of a number of uncompleted projects, and that it will thus have to provide baseline data for future evaluations. The evaluation will, nevertheless, be expected to provide lessons to be learned for both the future path of the Valley development effort and for projects elsewhere.

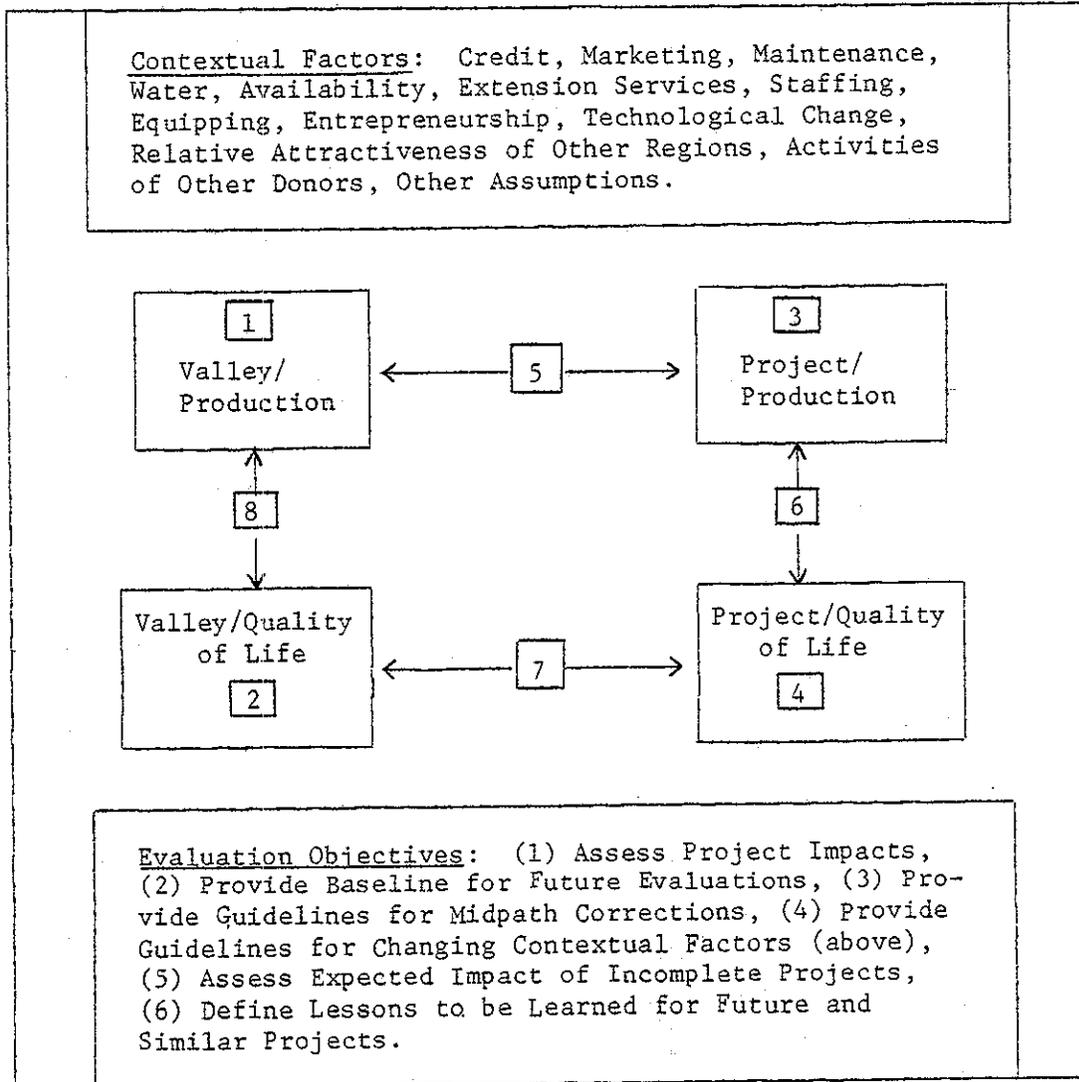


Figure 3: A Conceptual Framework

5.4. Figure 3 also emphasize that the success of the projects to be evaluated is often dependent on the materialization or success of a variety of ancillary activities which are not necessarily part of these projects. Such activities are often taken as assumptions at the project development stage, and thus may affect the outcomes of both the project and the overall development scheme in a variety of ways. These include such activities as the availability of, and eligibility for, credit; marketing mechanisms and institutions; maintenance of facilities; availability of water; effectiveness of extension services; assumptions concerning the staffing and equipping of facilities; assumptions about local entrepreneurship and technological change, economic and residential attractiveness of other agricultural and urban parts of Jordan; and activities of other donors. Any evaluation of valley projects must be undertaken with particular attention to the role and impact of these contextual factors and assumptions.

6. INDICATORS AND STUDIES

6.1. This section will outline some of the indicators to be used, and questions to be answered, in order to evaluate both the components and linkages shown in Figure 3. The proposed evaluation is expected to (1) assess the level of achievement of the goals and purposes specified in the "Logical Framework" for each project, through the use of the objectively verifiable indicators given in that Framework, (2) evaluate the extent to which the assumptions given in the Framework were necessary, and the extent to which they have materialized and succeeded in assisting to achieve project goals, and (3) use the scheme given in Figure 2 and the indicators and studies suggested below to complete a comprehensive interim evaluation of the components of, and linkages in, the overall program. Whenever possible, comparisons with changes in other parts of the country should be made. It is also imperative that special attention be paid to the identification and evaluation of unintended impacts, both desirable and undesirable. Each of the following subsections will deal with a subset of these components and linkages.

6.2. Whenever, in the following paragraphs, the beneficiaries of a project are mentioned, this will be interpreted to cover the various types of beneficiaries common in the Jordan Valley. These include:

- Absentee land-owners
- Owner-operators of farms
- Tenants or sharecroppers
- Farm wage labor
 - Resident Jordanian labor
 - Commuter Jordanian labor
 - Foreign labor
 - Female labor
- Non-farm wage labor, including those in project construction, maintenance, services, government and the private sector.
- Private non-farm businesses, including banks, commission agents, professionals, salesmen, shopkeepers, truckers, and service providers.

6.3. The components dealing with the "production" goal of both the projects and the Valley (Items 1 and 3 in Figure 2), are to be evaluated on the basis of the following:

- Changes in cropping patterns, with respect to both crops, land allocations, and the timing of different crops.
- Changes in total quantities of production.
- Changes in productivity, which is defined as the total product per unit of land (yield), water, labor or capital.

- What are the maximum possible yields, what constraints prevent their achievement, and how can they be overcome?
- Changes in labor needs, by type and duration.
- Changes in farm-gate prices and variations in these prices resulting from different marketing conditions.
- Variations in productivity resulting from different planned and unplanned changes in farming or irrigation technology.
- Variations in productivity resulting from different farm sizes and land-tenure arrangements.
- Changes in land-holding patterns.
- Changes in the contributions of the "project" or the "Valley" to the overall domestic food demand of the country and to its balance of payment.
- Comparisons of production and productivity levels with other areas of Jordan such as the highlands or the Southern Chors.
- Unintended changes in productivity not targeted by the projects(i.e. irrigation by groundwater wells) which have indirectly resulted from the projects included in the development plan.
- Cost of facilities per beneficiary.

6.4. The assessment of the "Quality of Life" component of both the project and the valley, is to be undertaken on the basis of the indicators listed below. Changes in these indicators must be analyzed as to both their cause and social, economic and cultural effects:

- Change in elementary, preparatory and secondary school enrollments by sex.
- Change in the extent and type of adult education programs.
- Changes in the number and quality of teachers, classrooms, courses and school facilities (laboratories, libraries, workshops, water, playgrounds, etc.).
- Changes in the quality of health care, as measured by the relative number of physicians, nurses and basic health care practitioners; the number of clinics, and pharmacies and accessibility to them; infant mortality rates; the use and effectiveness of the health care delivery system.

- Changes in the number of houses with water connections, in the source and quality of drinking water, in plumbing fixtures in homes, and in the quantity of water used.
- Changes in the number of houses connected to the electrical system and in the existence of, and benefits derived from, various electrical appliances, (refrigerators, heaters, ovens, television, etc.).
- Changes in the quality of housing and in the levels of satisfaction with both existing and proposed housing, by types of beneficiaries.
- Changes in the supply of housing by the private sector, which are stimulated by a public commitment to Valley Development.
- Changes in access to governmental administrative services and to local government, and in levels of public participation in decision-making.
- Changes in the availability of privately provided services, trades and professions, and in the amount, type and quality of employment provided by the private sector.
- Changes in the levels of private investments resulting from public commitments in the Valley.
- Effectiveness of the implementation of the Jordan Valley Development Plan with respect to the hierarchy of settlements and service centers. The impact of the strategy on population distribution and access to services. The impact on the growth or decline of both "official" and "non-official" settlements.
- Changes in total population, in population distribution by settlement type, and the sex and age distribution of the residents of the Valley and/or the project area.
- Cost of facilities per beneficiary. Comparison to similar facilities elsewhere in Jordan.

6.5. Linkages represented by numbers 6 and 8 in Figure 2 are intended to capture the interactions which take place between the two basic goals. They relate mainly to growth and incomes, to the translation of increased production to an improved quality of life, and to the attraction of new residents and trained personnel to live in the Valley. These changes must also be analyzed with view to their causes and their actual and expected social, economic and cultural effects. These linkage include:

- Changes in the household and per capita incomes of the different types of beneficiaries, as measured by farm budgets, employer records, and sample surveys and interviews.

- Changes in the income distribution of households and individuals.
- Access to credit, eligibility and ability to pay for farm improvements, farm supplies, agricultural inputs and housing, by types of beneficiaries.
- Ability to pay for such services as water, electricity, health care, and other services, by type of beneficiary.
- Ability of the Valley or the project area to retain existing residents and to curb outmigration, particularly of young school and college graduate.
- Ability of the Valley or the project area to attract farmers, laborers, trained personnel, tradesmen, businessmen, professionals and entrepreneurs to reside in the valley. Comparisons with other rural areas in Jordan.
- Changes in the local tax base and in the ability of local governments to undertake both service and productive projects. Comparisons with other rural areas in Jordan.
- The impact of population changes and of changes in the type and composition of the labor force on the capacity and effectiveness of schools, clinics, mosques, and other public services.
- The social and economic impacts of the influx of foreign labor to the Valley.
- The impact of increased production and services, and of population changes, on traditional life-styles, family structures, the role of women and the expectations of young men and women.
- The source of in-migrants and the impacts of the out-migration on their original locations.

6.6. Linkages represented by numbers 5 and 7 on Figure 2, are intended to capture the relationships between a particular project or set of projects and the total Valley Development effort. Link 5 deals with the "production" goals, and with such issues as:

- What percentages of the total valley production is attributable to the project?
- Are there differences in cropping patterns and farming, irrigation or harvesting technologies between the project area and the rest of the Valley? Why?

- Are there differences in productivity by crop, with respect to land, water, labor or capital? Why?
- Are there differences in labor needs, in the composition of the labor force required, or in wages? Why?
- Are there differences in the sizes of agricultural holdings or in ownership patterns between the project area and other parts of the Valley? Why?
- How is the project or projects influenced by the activities of GOJ or other national and international donors in the vicinity of the project? In other parts of the Valley?
- Are there differences in marketing practices, farm-gate prices, transportation costs or the costs of supplies and agricultural inputs? Why?
- Is there any competition in production, timing or marketing between the project area and other areas in the Valley? What is the impact of such competition on different types of beneficiaries? What about competition with production of the same crops in different parts of Jordan?

6.7. Linkage number 7 deals with the relationship between the project or projects and the total development of the Valley, with respect to the "Quality of Life" goal. This includes such questions as:

- What proportion of the total educational needs in the Valley as measured by school enrollments by sex, are provided by the project? What percentage of the change in major educational indicators are provided by the project? Are the educational facilities and services provided by the project different from those provided by the GOJ or other donors? Why and how?
- What proportion of the total health care delivery system in the Valley is provided by the project? What percentage of the changes in major health delivery indicators is attributable to the project? Is the quality of health-care facilities and services provided by the project different from that provided by GOJ and other donors. How and why?
- What proportion of the total domestic water supply or electric power in the Valley is provided by the project? How does the level of service (cost, quality, accessibility, etc.) provided differ from that in existence in, or proposed for, other parts of the Valley.

- What proportion of the housing needs in the Valley are provided by the project, by type of beneficiary. How does the quality and cost of housing provided by the project compare to the quality and cost of other public and private housing in the Valley. What is the significance of these differences?

- How has the private sector responded to the need for commercial, trade, and professional services in the project area; and how does this response compare to other parts of the Valley? To other parts of Jordan? What is the significance of the conclusions?

7. THE EVALUATION TEAM

7.1. The completion of a comprehensive interim evaluation which will also serve as a baseline for future evaluations, along the lines described above, will require an interdisciplinary team, whose members are thoroughly familiar with, and have prior experience in, the Jordan Valley. A possible team might be composed of four such individuals in the following disciplines:

- Agricultural Economics/Agricultural Engineering
- Labor Economics/Migration Studies
- Rural Development/Regional Planning
- Rural Sociology/Development Anthropology.

7.2. The success of the effort is highly dependent on the extent to which the members of the team cooperate with the Planning and Analysis Unit in the Jordan Valley Authority. The Unit has already conducted some of the studies indicated herein, and its staff are very familiar with the background, issues, geography and data and information sources. Close cooperation between the team and the Unit, will achieve the dual purpose of assisting in the conduct of the study and of providing opportunities for additional training and experience to the staff of the Unit.

7.3. It is estimated that each member of the team might require 6-8 weeks in the field, for the successful completion of the study. In order to maximize both the benefits to be obtained from this time, and the involvement of the staff of the Planning and Analysis Unit, it is suggested the PAU proceed immediately to collect, obtain and analyze data and information available in their records and addressing the questions and issues described above. During a period of 2-3 months, they should be able to assemble a good part of such information, especially if they work closely with one of the members of the designated team. With this information in hand, the team could then assemble, and spend three weeks in the field. During this period, each team member will have a counterpart from the PAU. The joint team can, at this time, initiate and design any field studies which are to be undertaken and completed by the PAU, during the following 2-3 month period. The team will then reassemble for another 3 week period, during which each member prepares a final report covering the particular issues which he addresses. A designated team leader will be responsible for assigning responsibilities to the members, and for editing and organizing a single final report.

7.4. It is possible to simultaneously conduct an evaluation which satisfies the requirements specified by the Administrator for the series of evaluations which he has requested (the "Bennett Exercise"). It is believed that the proposed evaluation described above will provide most of the information needed for that exercise. Fieldwork can thus be conducted by adding one or two direct-hire non-bureau personnel to the evaluation team described above.

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Annex I

PROJECT DESCRIPTIONS^{*}

* These descriptions are taken from the respective Project Papers, and are included in this report in order to provide a quick overview of the project package which is to be evaluated.

1. SPRINKLER IRRIGATION

Project Description

The project consists of the procurement of portable on-farm irrigation equipment for 93,100 dunums of land by the sprinkler method. The materials to be procured include portable pipes, filters, pressure gages, couplers, valves, fittings and sprinkler heads to be distributed to farmers in the project areas described in Section A above. The National Resources Authority (NRA) will store, manage and distribute the equipment to farm owners approved by the Jordan Valley Commission (JVC) as eligible recipients following the execution of credit or cash sale agreements between the Agricultural Credit Corporation (ACC).

Funds realized from the sale of the irrigation equipment will be maintained in a separate account by the ACC for relending to Jordan Valley farmers for procurement of additional and/or replacement sprinkler equipment. The precise terms governing credit sales have not been established; however, the portable terms are 7 percent interest with an 8-year payment period including a 1-year grace period.

Technical assistance to assure proper handling, use, and repair of equipment will be provided by five members of the NRA who have recently completed participant training in sprinkler technology and by the supplier of the sprinkler equipment whose equipment supply contract will include a requirement for the services of one man for six months to provide demonstrations to eligible recipients and to participate in the production of a video taped training film in Jordan.

In addition, it is proposed to initiate a Technical Assistance project during FY 77 aimed at establishing a program of adaptive research on sprinkler operations for the equipment, crops and localities now under development. The facilities to be established will also be used to effect technology transfer to establish good irrigation system operation practice at the farmer level.

AID will require from the JVC a plan showing the precise distribution of responsibilities between all parties involved. These include in-country transportation, type and location of storage facilities, staff for managing the records and allocations of equipment. Financial planning will also be necessary with procedures established for the sale of equipment to individual farmers and the utilization of payments received for the equipment. These plans and procedures will be formal by the executed agreements between JVC and NRA and JVC and ACC. Submission of such plans and executed agreements will be a condition precedent to disbursement of AID loan funds.

2. ZARQA TRIANGLE

Project Description

The proposed loan will assist the GOJ in its program to increase the utilization of farm land in the project area by the installation of sprinklers to replace the existing gravity flow canal system. About 3,718 acres of land will be irrigated by sprinklers as a result of this project. Figure 1 of this report shows the Zarqa Triangle Project area and the location of the previously AID financed East Ghor Canal (Project 278-12-120-086), the GOJ financed 8 kilometer extension of the East Ghor Canal, the Kuwait Fund financed King Talal Dam and the recently AID loan funded 18 kilometer extension of the East Ghor Canal (Loan 278-H-009). As shown on the map, the Zarqa Triangle project area consists of two distinct locations, with the larger section of 2,753 acres adjacent to the east of the existing East Ghor Canal and the smaller section of 965 acres downstream from Canal near the confluence of the Zarqa and Jordan Rivers. A diversion weir will be built on the Zarqa to permit the gravity flow of water to the areas on either side of the Zarqa River above the Canal and a pipeline will be installed from the East Ghor Canal to the smaller area near the Jordan River.

There will be 29.6 kilometers of primary transmission pipeline leading to the 31.2 kilometers of secondary pipeline which will deliver water to the estimated 376 farms which will benefit from the project. A spacing of 12 meters by 12 meters was selected for the sprinkler layout on the individual farms based on a standard size for farm units of 180 meters by 216 meters.

The implementation of the project will be the responsibility of the Natural Resources Authority. Implementation of the project will consist of the redistribution of farmland in the project area, as provided in Law No. 12, and the actual construction phase. Subsequent to completion of the project, the Authority will operate and maintain the system up to and including the meter at the individual farm. Authority personnel will be trained, under AID grant funded participant training and by other international lenders in the operation and maintenance of a sprinkler system. Farmers will be instructed in the operation and maintenance of their individual systems by Authority and Ministry of Agriculture personnel at the Deir Alla Agriculture Station located in the project area.

Project Purpose and Justification

The purpose of the total Valley irrigation program, and this project, is the upgrading of irrigation facilities in the Jordan Valley to take maximum advantage of the Valley's unique soil and climate conditions which offer the opportunity for off season production of high value fruits and vegetables. Because of its topography, the Valley is best described as a natural hot house which lacks only the necessary irrigation to permit Jordan to capitalize on its location to produce high value produce for the European and Gulf States markets during the off season. The second compelling rationale to maximizing the agricultural production in the Valley is the need to meet Jordan's indigeneous food requirements thereby reducing the present heavy import of food stuffs.

Development of the Jordan Valley is not limited to the agricultural sector. Several other donors, notably A.I.D., the United Kingdom, Kuwait, Federal Republic of West Germany and the World Bank, have or are in the process of providing grants and loans for improvements in the Valley's communications, highways, electric power, housing and educational facilities. About \$70 million has been committed to this effort by these organizations and the GOJ. An additional \$25 million is expected to be made available from the above sources during the next two years to permit attainment of the GOJ's plan for the Valley.

3. EAST GHOR CANAL EXTENSION (18 kms)

Project Description

The project as implemented contained 2 elements.

1. An 18-kilometer extension of the East Ghor Canal.
2. An associated network (the "lateral network") of pressure pipes and service roads.

According to the final plan, all available flows are diverted into the main canal. From the main canal water is pumped into pressure pipe lines. From these, water is turned out into the Headgate Unit distribution lines which connect with individual farm turnouts. 36,000 dunums receive sprinkler irrigation as a result of this project.

Project Purpose and Justification

This project is related to the utilization of the presently uncontrolled waters of the Zarqa River to augment the flows of the Yarmouk River in the existing East Ghor Canal by approximately 11 miles and the irrigation of an additional 12,000 acres of the East Ghor lying below the canal.

The Jordan Valley is the single best agricultural asset of Jordan and its continued development can both reduce the current substantial imports of agricultural products as well as increase the exports of specialized agricultural products to Jordan's immediate neighbors and to Europe during the winter months.

4. VILLAGE DEVELOPMENT I

Project Description

The Government of Jordan has as its long-term objective the development of 36 settlements, distributed in linear fashion along the main north-south Road of the East Bank of the Jordan River Valley. The Jordan Valley Commission, assisted by an AID grant-financed consultant, Planning and Development Collaborative International (PADCO), has prepared the design criteria and physical plans to be followed in the redevelopment of 26 existing communities and development of ten new communities. These plans establish the location of existing and planned community facilities and boundaries of existing communities, the boundaries of proposed new villages, the location of the planned community facilities, and the areas of new residential construction in new and existing villages. The JVC has completed the initial planning objective of determining settlement boundaries, design criteria and physical plans for the 17 so-called "priority one" villages and, in addition, has established the immediate requirements for municipal facilities, classrooms, clinics and water supply in all 36 settlements. The proposed AID loan will, in conjunction with sub-projects of the IDA financed North East Ghor project and the KFW financed Southern Ghor project, permit the Jordan Valley Commission to meet the initial demands for municipal facilities, potable water, schools and clinics in established settlements throughout the Valley.

In summary, the AID project will permit: (a) the construction of 9 clinics, 170 classrooms, 8 municipal buildings, 11 commercial buildings, one social development center; (b) installation of water distribution systems for 13 communities in the central sector; (c) grading and graveling of about 50 kilometers of farm roads and asphalt paving of 28 kilometers of settlement streets to a width of 4 meters on both 12 and 18 meter rights of way; (d) surveying, grading and leveling of about 900 housing plots; (e) establishment of erosion control areas and soil conservation activities in and around the 17 priority settlements; (f) provide mortgage funds to facilitate the construction or rehabilitation of approximately 900 homes and (g) the supply of furniture and equipment for the schools and clinics to be built.

In addition to the physical construction activities, technical assistance, on a grant basis, is proposed to assist the JVC in monitoring, scheduling and implementation of this project's activities and the several other projects being, or to be, implemented in the Valley. Technical assistance in loan mortgage administration will be made available to the Housing Bank, the financial institution selected to administer the mortgage financing aspect of the project. The JVC will fund the architect and engineering services associated with all aspects of construction.

5. VILLAGE DEVELOPMENT II

Project Description

The project consists of: (a) construction of 23 schools (300 rooms, including 233 classrooms), four health centers, two regional and one local government administration centers; (b) provision of furniture, books and equipment for the units constructed; (c) paving of 9 kilometers of village streets; (d) grading and paving of 43 kilometers of farm roads; and (e) provision of U.S. \$2.0 million in home mortgage loan funds.

Project Purpose and Justification

This project is essentially a follow-on activity to Village Development I and an important element in the integrated economic and social development of the Jordan Valley. The purpose of this project, as of its predecessor, is to provide selected Jordan Valley communities with the facilities needed to develop adequate public services and improve living conditions for Valley residents. The project is designed to: (1) assist in meeting basic human needs of the Valley population and (2) provide a social infrastructure investments, particularly in employment opportunities expected to be generated by them. Improved living and working conditions in the Jordan Valley are expected to greatly help current residents and attract new ones, ensuring wider distribution of benefits and contributing to increases in agricultural productivity. Although it is expected that new residents will be attracted the facilities and services provided under this particular project have been selected primarily to meet the needs of the present population.

6. VILLAGE DEVELOPMENT III

Project Description

The planned project, Village Development III, includes construction of: (a) 8 schools in the Jordan Valley, 10 schools in the Southern Ghors and 4 in Wadi Araba; (b) 2 government administration centers in the Jordan Valley; (c) 1 health facility in the Southern Ghors and 1 in Wadi Araba; (d) 46 houses in the Southern Ghors and 4 in Wadi Araba to house the staff of the schools and health facilities; (e) water supply facilities for communities in Southern Ghors and (f) 20 kilometers of village streets and access roads (constructed and/or rehabilitated).

Project Purpose and Justification

The Village Development project series' objectives are consistent with the AID mandate for emphasizing and directing projects toward satisfaction of basic human needs. They are also consistent with the high priority assigned by the GOJ to the Jordan Valley, Southern Ghors and Wadi Araba.

Sub-programs implemented under this project series are part of the overall Jordanian development plan for the project area. Village Development III represents the third tranche of assistance in the Jordan Valley and the first major investment by AID/JVA in the Southern Ghors and Wadi Araba.

Allocation of funds criteria of the Foreign Assistance Act for AID programs necessitates consideration of the "commitment and progress" as well demonstrated by statistics developed by the GOJ in support of the 1973-75 plans and by the recent work of Dr. Dajani in his basic human needs study of the Southern Ghors and Wadi Araba. Success of the program has been validated by Valley inhabitants, the interim AID evaluation and the AID/GOJ preliminary education sector analysis. The school portion (which was the only functional aspect of the project at the time) has been highly praised by Arthur D. Little in the Maqarin Dam and Jordan Valley Environmental Assessment.^{1/} In the project series GOJ has demonstrated a large financial commitment (53%-\$17 million equivalent) to Village Development I and (47%-\$7.0 million equivalent) to Village Development II. Village Development has been assigned the highest priority with endorsement by the Prime Minister, National Planning Council and Jordan Valley Authority. Furthermore MOE personnel commitments have been made to assure all school facilities constructed to date are fully staffed. Regarding the remaining major facilities (health centers), the Ministry of Health has already prepared a list of personnel to be assigned to staff these facilities when they are completed. The progress and success to date has served to cause other communities (which have not yet received tangible, physical benefits) to demand facilities for themselves. The farm road program has proved such a success that JVA reacting to public pressure, has hired a contractor to survey all Valley farm road and has established a

^{1/} Arthur D. Little, Inc., Environmental Assessment for the Proposed Maqarin Dam and Jordan Valley Irrigation System Project, Contract No. AID/NE-C-1591, Draft Final Report, July 15, 1979.

program for priority development for another 100 kilometers. These concerns and demands have been made known to JVA directly by individuals and through the various Ministries and Governorates.

7. YARMOUK-DEAD SEA ROAD

Project Description

The improvements proposed will consist of reconstructing, widening and resurfacing of the Yarmouk-Dead Sea Road in accord with the design and construction standards and specifications adopted by the Ministry of Public Works. Establishment of these standards was a direct result of technical assistance mission from the US Bureau of Public Roads. The project area is between Adasiya in the North and the Amman-Naur-Jerusalem junction in the South. (See Figure 1) The objective is to improve this road to cope with the present and future traffic generated as a result of implementation of the Jordan Valley Development Plan, especially the expansion in the irrigated land area.

The road to be constructed under this project will be 104.83 kilometers long. The roadway surface will be 7.2 meters wide with 2.0 meter shoulders on both sides. The roadway will have a 5 centimeter thick wearing surface and the shoulder will have a single seal surface treatment.

The existing single lane bridge over the Zarqa River, (Section II Stations 8 + 920) will be replaced with a two lane bridge 31.48 meters long. The bridge will have a reinforced concrete deck supported by steel girders.

Between Kufrein junction and the Amman-Naur-Jerusalem highway, the highway will be relocated to pass close to the existing Kufrein Dam. This relocation will be 7.66 km long and will reduce the traveled distance between Kufrein and Amman by 3 km.

Project Purpose and Justification

The purpose to which this project will contribute is stated as:

"To provide the only north south route in the Valley for the transportation of the inputs of goods and services for its development and for the export of the agricultural produce from the valley".

Data from the Wilbur Smith, Roads Master Training Plan Study and data provided by the GOJ Department of Statistics have been used to test the degree of progress, if any, towards End-of-Project-Status Conditions (EOPs) listed below.

- a. Commercial traffic on 104 kms. of new road increases at 5% a year.
- b. Commodity transport costs per kilometer lowered.

While no estimate of the cost of transporting agricultural commodities was available at project inception, we will attempt to gather surrogate data from the final Wilbur Smith report. We are assuming that lowered maintenance and driver time costs will lead to a lowering of commodity transportation costs.

- c. Savings result on maintenance and operation of the Valley irrigation system due to more economical access.

N.B. Maintenance in the East Ghor Canal and the gravity irrigation system has continued throughout construction of the road. However, until all of the Valley pressure irrigation systems are completed and in operation, it would be meaningless to attempt an evaluation of any possible reduced cost in systems maintenance which could be attributed to this project. In any event, compared to the potential benefits accruing under the other EOPs conditions, we recommend that this EOPs condition be deleted from any future evaluation.

- d. Decrease vehicle operating costs.

Based on average speeds of 30-50 k/ph in 1973, and 70 k/ph in 1980, vehicle operating costs were expected to decrease as follows:

	<u>From 1973</u> <u>(107.1 km)</u>	<u>To 1980</u> <u>(104.1 km)</u>	<u>Decrease</u>
<u>Passenger Vehicles</u>			
Fils per kilometer	25.23	23.76	5.8%
Fils per trip	2,702	2,473	-228 fils
<u>Trucks</u>			
Fils per kilometer	62.80	60.00	4.5%
Fils per trip	6,725	6,240	-479

Annex II

LOGICAL FRAMEWORKS*

*These Logical Frameworks are taken, whenever they existed, from the respective Project Papers. They are included in this report in order to provide quick access to the original expectations of the designers of the projects to be evaluated.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: _____
From FY 1977 to FY 1979
Total U.S. Funding: \$ 0 million
Date Prepared: _____

ANNEX IV
Page 1 of 1

Project Title & Number: Sprinkler Irrigation Equipment

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <ol style="list-style-type: none"> Increase availability of produce for domestic consumption and export. Improved standard of living in project areas. 	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> Quantity of produce available in city markets, principally in Amman and increase in exports of Jordan Valley produce. Increase in farmer's disposable income. 	<ol style="list-style-type: none"> Records of produce sales from Jordan Valley to city markets and export statistics. Surveys of farmer income and sales of consumer goods to farmers in project areas. 	<p><u>Assumptions About Linkage Between Project Purpose and Program-Sector Goal:</u></p> <ol style="list-style-type: none"> Increased crops will be marketed rather than consumed on the farm. Net returns to farmers on investment in sprinklers will be greater than without sprinklers.
<p>Project Purpose: Improve yields of agricultural crops in project areas.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status. Increased sales of produce by farmers in project areas.</p>	<p>Sales records and city market statistics.</p>	<p><u>Assumptions About Linkage Between Outputs and Project Purpose:</u></p> <ol style="list-style-type: none"> Training of farmers in use of sprinkler equipment will be successful; Expected increase in crop yields will be realized;
<p>Outputs:</p> <ol style="list-style-type: none"> Sprinkler irrigation system installed; Farmers trained in operation and maintenance of sprinkler equipment; Functioning credit system for purchase of sprinklers by farmers. 	<p>Magnitude of Outputs:</p> <ol style="list-style-type: none"> Sales of sprinkler equipment sufficient to irrigate 48,150 dunams by fall 1977; additional 38,050 dunams by fall 1978; additional 6,900 dunams by fall 1979. 3,000 farm operators using sprinkler irrigation by FY 1979. 	<ol style="list-style-type: none"> Physical inspection and JVC reports; Physical inspection, records of water sales and JVC reports; 	<p><u>Assumptions About Linkage Between Inputs and Outputs:</u></p> <ol style="list-style-type: none"> Timely construction and effective performance by contractor building irrigation water delivery system; Timely allocation of funds and timely delivery of on-farm sprinkler equipment.
<p>Inputs:</p> <ol style="list-style-type: none"> Land; Sprinkler equipment; Technical assistance in use and maintenance of sprinkler equipment; Farmer Credit. 	<p>Implementation Target (Type and Quantity)</p> <ol style="list-style-type: none"> 3,000 sets of sprinkler equipment together with spare parts, purchased and availability for distribution in Jordan Valley; Farmer credit availability. Warehousing and distribution of sprinkler equipment functioning. 	<ol style="list-style-type: none"> Suppliers invoices and shipping documents; JVC reports and warehouse records; Records of loans made by AAC 	<ol style="list-style-type: none"> Technical assistance and training will be available when needed.

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ANNEX IV
Page 1 of 1

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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY _____ to FY _____
Total U. S. Funding _____
Date Prepared: _____

Project Title & Number: Jordan Valley Village Development

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>Jordan Valley Development Goal: Improved welfare and productivity of present and future residents of the East Bank of Jordan River Valley</p>	<p>Measures of Goal Achievements: % of persons in sub-standard housing reduced, even as population increases. Scattered settlements minimized. 100% people have specified social services available in 19 villages -Water -Health facilities -Classrooms Residents indicate they are pleased with new arrangements.</p>	<p>Demographic survey. Demographic survey. Community records, demographic survey. Survey interviews</p>	<p>Assumptions for achieving goal targets: Village resettlement plan completed.</p>
<p>A.I.D. Project Goal: Stable, self-sustaining communities with basic social services established in villages supported under AID loan plus complement investments previously made by the Government of Jordan.</p>	<p>Measures of Project Goal Beneficiaries repay debts. Social services maintained at the national standard. Homes and community facilities maintained.</p>	<p>Housing Bank and GOJ records. Community and GOJ records; observation. Observation</p>	<p>Assumptions for Project Goal: Mid-East peace maintained. Employment opportunities and income opportunities of new production infrastructure adequate to stabilize settlers. An average person receiving fair share of production gains (income).</p>
<p>Project Purpose: Population locates itself in specified, serviced settlements.*</p> <p>* - Evaluation to concentrate on settlements where housing aid and sites available.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status. 900# housing sites sold by 1977. 600# housing units completed or effectively underway by 1977. 100% children attending school in 17 villages. 13 villages provided with potable water Government services % health facilities are available to residents of 7 villages.</p>	<p>Housing Bank and GOJ records*, on-site studies by AID * -includes JVC and local government records.</p>	<p>Assumptions for achieving purpose: Valley residents willing to locate. New settlers will go to planned areas. Income levels of population sufficient to purchase sites; build homes. Population can afford water connections. Employment opportunities attract settlers from outside Valley.</p>
<p>Outputs: Housing sites developed and financing available. Village streets. Health facilities constructed and operational. Municipal buildings constructed and in use Classrooms constructed and operating. Commercial buildings constructed and in use. Water supply, mains and distribution system. Improvements to concrete panel plant. Social Development Center Houses constructed or remodelled.</p>	<p>Magnitude of Outputs: 898 plots 28 kilometers 9 villages 8 in specified villages 175 classrooms in 17 villages. 8 villages, as listed. 13 villages, as listed. 1 at Damiya. 1 at Kreilyneh \$2 million in loans</p>	<p>Housing Bank records, reports and Mission/AID-W inspection of sites (monitoring information).</p>	<p>Assumptions for achieving outputs: GOJ provides budget and staff to operate facilities effectively. Housing finance arrangements satisfactorily established.</p>
<p>Inputs: Technical Assistance to JVC (Grant Financing) for project implementation/monitoring. Technical Assistance to the Housing Bank (Grant Financing) to establish Administrator's accounts. Provision of budget funds by GOJ to permit JVC to acquire land. Additional technical staff hired by JVC. Additional technical staff hired for DESA. Housing Bank purchases mobile bank unit. AID/GOJ loan & National Budget Funds</p>	<p>Implementation Target (Type and Quantity) 3 experts--engineering & urban planning 1 expert--financial management Staff as required when facilities Staff as required by project progress. 1 BI and 1 local hire during half 1977. Accomplished June 1975. Loan Agreement</p>	<p>A.I.D. records A.I.D. records GOJ records, site visits by AID Personnel A.I.D. Monitoring A.I.D. records A.I.D. inspection A T D</p>	<p>Assumptions for providing inputs: Execution of Grant Agreement and technical assistance is secured. Execution of Loan Agreement and conditions precedent are met. A law is passed permitting acquisition of land by JVC. JVC issues a building code for the Valley.</p>

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX 4

Life of Project:
From FY 1978 to FY 1982
Total US Funding \$ 8 million
Date Prepared August 15, 1978

Project Title & Number Jordan Valley Village Development II, 278-0205

Page 1

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program of Sector Goal: The broader objective to which this project contributes: (A-1)	Measures of Goal Achievement: (A-2)	(A-3)	Measures for achieving Goal targets: (A-4)
<p>Jordan Valley Development Goal: Improved welfare of present and future residents of the East Bank of Jordan River Valley.</p>	Percentage of persons in sub-standard housing reduced, even as population increases.	Demographic and housing survey.	Village Development plans continue to be implemented. Other infrastructure (particularly irrigation) is in place and functioning effectively. Rainfall is adequate for system operations.
<p>AID Project Goal: Stable, self-sustaining communities with basic social services established in target villages.</p>	100% of residents of target villages have access to basic education, health, and other public services. All facilities functioning, maintained, and fully utilized.	Demographic, socio-economic surveys.	Mid-East peace is maintained. Employment and income opportunities are sufficient to encourage current residents to remain and new ones to arrive. Other Valley development projects, particularly those dealing with electricity and water, proceed as scheduled.

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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1978 to FY 1982
Total US Funding \$ 8 million
Date Prepared August 15, 1978

Project Title & Number Jordan Valley Village Development II, 278-0205

Page 2

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS		MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purpose: (B-1)	Conditions that will indicate purpose has been achieved: End-of-project status: (B-2)		(B-3)	Assumptions for achieving purpose: (B-4)
Provide selected Jordan Valley communities with the facilities needed to develop adequate public services and improve living conditions for Valley residents.	Schools, clinics and government buildings are staffed and in operation and occupied by locally residing students. 250-300 mortgages executed with eligible borrowers in equitable manner according to established procedures and regulations.		Ministries of Health and Education records and population census. Sample Surveys. Observations. Housing Bank records. Sample survey.	GOJ provides budget and staff to operate facilities effectively. Population desires facilities and is willing to use them. People desire and are able to afford to take out home mortgages.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1978 to FY 1982
Total US Funding \$ 8 million
Date Prepared August 15, 1978

Project Title & Number Jordan Valley Village Development II, 278-0205

Page 3

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Outputs: (C-1)	Magnitude of Outputs: (C-2)	(C-3)	Assumptions for Achieving Outputs: (C-4)
Health facilities	1 Type A clinic, 3 Type B clinics.	Mission monitoring. Engineer and contractor reports. Observations.	Contracting procedure results in an acceptable bid by a qualified contractor with competent staff.
Schools	23 school buildings (300 rooms including 233 classrooms and numerous libraries, laboratories, etc.) in 17 villages.		Construction materials are ordered and arrive in a timely, efficient manner.
Government buildings	2 regional, 1 local facility.		Land acquisition is readily accomplished under the law.
Village streets	9 kilometers.		
Farm roads	43 kilometers.		
Housing mortgages	\$2 million in loans	Housing Bank records.	Surveying of house plots proceeds. Housing finance arrangements satisfactorily established.
			Expenditure of \$2 million in housing mortgage funds from Village Development I program.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1978 to FY 1982
Total US Funding \$ 8 million
Date Prepared August 15, 1978

Project Number & Title Jordan Valley Village Development II, 278-0205

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NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Inputs: (D-1)	Implementation Target (Type and Quantity): (D-2)	(D-3)	Assumptions for providing Inputs: (D-4)
AID Loan Funds for:	Adequate JVA and AID staff as required by project progress for effective plann- ing, monitoring, and super- vising.		Execution of loan agreement, and conditions precedent are met. Expected funds are forth- coming from GOJ budget.
1. Construction of community facilities including schools, clinics, and adminis- tration buildings.			
2. Housing mortgages			
JVA Funds from GOJ Budget for:			
1. Construction of community facilities including schools, clinics, administrative buildings, village streets and farm roads.			
2. Land acquisition, engi- neering and supervision, and furnishings for item 1.			

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

(INSTRUCTION: THIS IS AN OPTIONAL FORM WHICH CAN BE USED AS AN AID TO ORGANIZING DATA FOR THE PAR REPORT. IT NEED NOT BE RETAINED OR SUBMITTED.)

Life of Project: Page 1 of 4
From FY 1979 to FY 1983
Total U.S. Funding: \$ 7 million
Date Prepared: August 1, 1979

PAGE 1

AND 1020-10-11-79
SUPPLEMENT 1

Project Title & Number: Village Development III, 278-0221

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes: (A-1)</p> <p><u>Jordan Valley Development</u> Goal: Improved welfare of present and future residents of the East Bank of Jordan River Valley, Southern Ghors and Wadi Araba.</p> <p><u>AID Project Goal:</u> Stable, self-sustaining communities with basic social services established in target villages.</p>	<p>Measures of Goal Achievement: (A-2)</p> <p>Percentage of persons in sub-standard housing reduced.</p> <p>100% of residents of target villages have access to basic education, health, and other public services. All facilities functioning, maintained, and fully utilized.</p>	<p>(A-3)</p> <p>Demographic and housing survey.</p> <p>Demographic, socio-economic surveys.</p> <p>Observation reports of relevant GOJ ministries or agencies. Special studies.</p>	<p>Assumptions for achieving goal targets: (A-4)</p> <p>Village Development plans continue to be implemented. Other infrastructure (particularly irrigation) is in place and functioning effectively. Rainfall is adequate for system operation.</p> <p>Mid-East peace is maintained. Employment and income opportunities are sufficient to encourage current residents to remain and new ones to arrive. Other Village Development projects, particularly those dealing with electricity and water, proceed as scheduled.</p>

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: 1979 to 1983
From FY 1979 to FY 1983
Total U. S. Funding: \$ 7 million
Date Prepared: August 1, 1979

AFD 1029-28 (11-73)
SUPPLEMENT 1

Project Title & Number: Village Development III, 278-0221

PAGE 2

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose: (B-1)</p> <p>Provide selected Jordan Valley, Southern Ghors and Wadi Araba communities with the facilities needed to develop adequate public services and improve living conditions for the residents.</p>	<p>Conditions that will indicate purpose has been achieved: End-of-Project status. (B-2)</p> <p>Schools, clinics and government buildings are staffed and in operation.</p>	<p>(B-3)</p> <p>Ministries of Health and Education records and population census. Sample Surveys. Observations.</p>	<p>Assumptions for achieving purpose: (B-4)</p> <p>GOJ provides budget and staff to operate facilities effectively.</p> <p>Population desires facilities and is willing to use them.</p>

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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: _____
From FY _____ to FY _____
Total U.S. Funding _____
Date Prepared: _____

Project Title & Number: _____

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Outputs: (C-1)	Magnitude of Outputs: (C-2)	(C-3)	Assumptions for achieving outputs: (C-4)
Health facilities	Type A clinic, Type C Clinic	Observation.	Contracting procedure results in an acceptable bid by a qualified contractor with competent staff.
Schools	22 school buildings (320 rooms including classrooms and numerous libraries, laboratories etc.)		Construction materials are ordered and arrive in a timely, efficient manner.
Government Buildings	1 regional, 1 local facility.		Land acquisition is readily accomplished under the law.
Access Roads	20 kilometers.		
Potable Water Supply	Installation of 4 kilometers of transmission and 20 kilometers of distribution pipe.		

AID 1020-28 (1-73)
SUPPLEMENT 1

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY 1979 to FY 1983
Total U. S. Funding \$7 million
Date Prepared: August 1, 1979

Project Title & Number: Village Development III, 278-0221

PAGE 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Inputs: (D-1)</p> <p>AID Loan Funds for :</p> <p>Construction of community facilities including schools, clinics, and administration buildings.</p> <p>JVA Funds from GOJ Budget for:</p> <ol style="list-style-type: none"> 1. Construction of community facilities including schools, clinics, administrative buildings, village streets and farm roads. 2. Land acquisition, engineering and supervision, and furnishings for item 1. 	<p>Implementation Target (Type and Quantity) (D-2)</p> <p>Adequate JVA and AID staff as required by project progress for effective planning, monitoring, and supervising.</p>	<p>(D-3)</p>	<p>Assumptions for providing inputs: (D-4)</p> <p>Execution of loan agreement, and conditions precedent are met.</p> <p>Expected funds are forthcoming from GOJ budget.</p>

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PROJECT DESIGN SUMMARY

LOGICAL FRAMEWORK

Project Title & Number: Yarmouk-Dead Sea Road Project A.I.D. Loan No. 278-W-01

Agreement signed July 1, 1974

PAGE 1

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>To assist the Government of Jordan to improve the livelihood of the residents of the East Ghor Valley and to resettle the Valley by means of an organized program which will provide the essential social services and economic infrastructure.</p>	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> 1. East Ghor settlers increase from _____ to _____ by 19__ 2. Exports of agricultural goods from East Ghor increases by ___% by 19__. 3. Per capita income rises. 4. New industries, handicrafts and increased opportunities for gainful employment. 	<p>Assumptions for achieving goal targets:</p> <ol style="list-style-type: none"> 1. Security conditions remain stable. 2. Other East Ghor development projects proceed on schedule (irrigation, housing, schools, etc.). 3. Viable marketing conditions and moderate inflation rate. 4. GOJ policies encourage new enterprises and industries.
<p>PROJECT PURPOSE:</p> <p>To provide the only north-south route in the Valley for the transportation of the inputs of goods and services for its development and for the export of the agricultural produce from the Valley.</p>	<p>END OF PROJECT STATUS.</p> <ol style="list-style-type: none"> 1. Commercial traffic on 104.83 km new road increases 5% a year. 2. Lower Transport costs per mile for commodities. 3. Savings result on maintenance and operating irrigation system in Valley due to more economical access. 4. Lower vehicle maintenance cost. 5. Increased transportation time saving. (user savings). 	<p>ASSUMPTIONS FOR ACHIEVING PURPOSE:</p> <ol style="list-style-type: none"> 1. Weight limit on trucks enforced. 2. Adequate GOJ budget for maintenance of roads and equipment and new road is properly maintained. 3. Moderate rate of inflation and moderate rise in cost of fuel.